

## NOTES CRITIQUES

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### WAR ECONOMIC PREPARATIONS OF THE 3rd REICH

Burton H. Klein, *Germany's Economic Preparation for War*, 1959, 630 pages.

In 1959, Burton H. Klein published in the United States a book entitled "Germany's Economic Preparation for War." The book deserves attention for many reasons, of which I shall mention only two here. H. B. Klein is the assistant editor of the valuable publication *The Effects of Strategic Bombing on German War Economy*, issued in October 1945. This publication is analysing the economy of the 3rd Reich and the influence which the bombings of the Allies had on it. Klein's book constitutes, to a large extent, a development of theses presented in *The Effects of Strategic Bombing*. Both this publication and B. H. Klein's book are based on extremely rich, so far unpublished sources. Another source of interest in Burton's work is his interpretation of certain theses. The American historian, professor H. E. Barnes tries to find in this work arguments which would back the huge 900-page work by professor David Hogan, issued in 1961 in the German Federal Republic and entitled *Der erzwungene Krieg*. Hogan states that according to adequate studies, it is Britain and Poland and not Hitler who bear responsibility for the outbreak of World War II. B. H. Klein's conclusions that till 1939 Hitler did not prepare for a long war, that he was not economically prepared to conduct long and active war activities against Britain and France, served professor Barnes for formulating another conclusion, namely, that before Hogan's book was published, it had been already obvious that World War II was not Hitler's work.<sup>1</sup>

B. H. Klein's work consists of two parts. Part one gives an analysis of German armaments in the years 1933—1938, part two deals with the German war economy in the years 1939—1944. The latter part is an attempt at determining the German war effort in the years 1939—1942 and its intensification in the years 1942—1944. This does not bring many changes to the prevailing views, the author's opinions are in general conformity with the views expressed either in *The Effects of Strategic Bombing* or in *Die deutsche Kriegsindustrie im Kriege 1939—1945*. The same concerns part one, where Klein is strongly opposing the rather wide-spread view that the national-socialist Germany made its best to prepare for the war and that these preparations were enormous.<sup>2</sup> The opposite thesis stating that Germany started war "with guns and butter" originates from *The Effects of Strategic Bombing* and can be also found in *Die deutsche Kriegsindustrie*.

<sup>1</sup> Europe Nation H. 2, 1962, interview of the editorial board with prof. Barnes.

<sup>2</sup> The book by René Erbe, *Die national-sozialistische Wirtschaftspolitik 1933—1939 im Lichte der modernen Theorie* (1958), appeared in Zürich almost simultaneously with Klein's work. Erbe considers the following to be the main results of a quantitative analysis: "2. The budgetary deficit was already from 1934 the sole consequence of armaments expenditure. 3. Armament needs dominated in the economic policy and economic activity. 4. Nazi Germany before World War II had a war economy in time of peace" (p. 4). According to Erbe, armaments expenditure in 1934 constituted already 50% of all public investments (p. 162).

According to Klein, in the years 1933—1938, the armaments level was moderate, the expenditure for armaments constituted less than 10% and later 15% of Germany's national income. The latter index considerably differs from the figures quoted in *Die deutsche Kriegsindustrie*, relating to the years which followed 1938/39, and amounting to 22%.<sup>3</sup> This index, as well as many others, is illustrating the development, immediately before the war, of the armaments boom which Klein appears not to perceive. He is, on the other hand, strongly concerned with the question of what stopped the 3rd Reich from further armaments before 1939. In answer he mentions the fear of deficit, of inflation, the loss of trust in money, certain symptoms of anarchy in the economy, the fact that the activities of various NSDAP groups (*Deutsche Arbeitsfront*, municipal authorities), were not subordinated to the system of war economy, as well as the raw materials supply situation.

Klein considers the two first factors to be the most important. Arguments justifying such an evaluation of motives do not seem to be convincing either. He considers, that, both before and during the war, the level of the economic capacity of the 3rd Reich did not ensure in the least high effectiveness of economy. Klein points to certain symptoms of anarchy rather typical for the capitalist economy, but does not analyse them. Klein confirms the opinion that the raw material supply situation of the 3rd Reich did not allow it to conduct long-lasting war activities. Hitler's strategy of *blitzkrieg* was not incompatible with this situation. Nevertheless, when addressing generals on 22 August 1939, he admitted that the economic situation of Germany made it possible for it to stand war for five months. Mussolini was not so optimistic at that time and he considered that for this reason the 3rd Reich should not risk war. A part of the generals, including the chief of the Armaments Office, general Thomas, were of similar opinion. They demanded the undertaking of earlier preparations for the eventuality of conducting a long war on many fronts and the limiting of civil economy. The leaders of Nazi Germany did not consider it necessary. Nazi propaganda did not stop repeating that the war would be a short one. It is true that an order on economic mobilization was issued on 3 September 1939, but it contained far reaching restrictions. On the 13 November 1939 conference, exclusively busy with measures aiming at quicker converting of the peace-time economy into war economy, General Thomas, in the opening address, informed those gathered that Hitler was thinking about the shape of war economy:

"For the time being there does not exist any war economy, but rather a kind of change-over economy. Bigger battles in the West and the resulting huge consumption of material will impose the introduction of a war economy".<sup>4</sup>

Klein gives considerable attention to the German steel production. The steel works of the Saar remained closed from the outbreak of World War II till the Spring of 1940. This was due, according to Klein, not to the vicinity of the front but to the shortage of ore. The reader is not fully convinced of it. The closing of steel works was due, perhaps, to both considerations. Wasn't this proved by the pre-war plans of immobilising the Saar industry in case of an armed conflict? Besides, it would be necessary to make it clear how much more advantageous it proved for the Reich to limit steel production on the menaced frontier territories of the Saar Basin and the Rhineland, and even to close part of the steel works recompensating it in 50% with the production of occupied Polish<sup>5</sup> and to some extent also of German<sup>6</sup>, Upper Silesia. In 1938, steel production in Poland amounted according to the "Small Statistical Year-Book" to 1,441 thousand tons and attained 1,010 thousand tons<sup>7</sup> between January and 1 June 1939. In the first three months of

<sup>3</sup> *Ibidem*, p. 17.

<sup>4</sup> Microfilm of National Archives — Washington T—77, roll No. 94, cl. 819,295.

<sup>5</sup> I use the name of "Upper Silesia" similarly to German statistics, that is in the meaning covering the Dąbrowa Basin and the area beyond the Olsa River.

<sup>6</sup> As it results from the *Statistisches Handbuch von Deutschland 1928—1944* (1949 Munich) steel production in the German Silesia amounted in 1939 to 455 thousand tons, in 1940 — to 987 thousand tons and in 1941 — to 567 thousand tons.

<sup>7</sup> Report of the Chief Organization of Steel and Iron Industry of 19. 7. 1939. Central Military Archives, Acts of the SeKOR 7.

1940 it amounted in Upper Silesia to 496 thousand tons, the corresponding figure for the whole of 1940 being 2,145 thousand.<sup>8</sup>

I am dealing with the problem of the steel production potential for still another reason. The publication *The Effects of Strategic Bombing* analyses in a very penetrating manner the share of occupied Polish Upper Silesia in the extraction of hard coal by the Reich. It results from the data included therein that in the years 1938/39 it produced 41,650 million tons of coal and from October 1939 to March 1940 — 19,500 million tons. These figures grew in the years 1943—1944 to 70 million tons annually.<sup>9</sup>

The extraction at that time in Polish Upper Silesia constituted 1/4 of the whole quantity of hard coal extracted in Germany and in the territories annexed by it. The annexation of Silesia brought a no smaller advantage as regards coke. The editors of *The Effects of Strategic Bombing* made, however, a regrettable mistake as concerns the Silesian output of steel and pig iron because in the tables concerning steel and pig iron output (pages 250, 258) and in the text, they spoke of Polish Upper Silesia annexed by the Reich as of a pre-war province of the old Reich ("pre-war Germany")<sup>10</sup>. Consequently, they overlooked the fact that the output of steel in the Big Reich was influenced not only by the annexation of Austria (a potential of some 3/4 million tons) and of Bohemia (some 1,600 thousand tons in the Protectorate + the Sudeten), but also of Polish Silesia which produced as much as over 2 million tons already in the first year of the Nazi occupation.

This omission recurs unfortunately in B. H. Klein's work and it results again in an incomplete analysis of the role of the occupied territories as concerns steel output.<sup>11</sup>

The third observation on the margin of Klein's views on the situation in the German steel industry at the beginning of the war, concerns Polish problems only. In my opinion, investigators should look, also from this point of view, for an explanation of the genesis of the policy of the 3rd Reich in Silesian territory as concerns population. It is not improbable that one could find here the key to the explanation of the curious fact that Poles living in these territories were treated with much less brutality than Poles living in the Poznań, Łódź or Pomeranian regions, with less ruthlessness than the inhabitants of Alsace-Lorraine.

<sup>8</sup> This is not the total steel production. The General Government production should be added to it. Data in this respect are available only for the year 1941. It amounted at that time to 219 thousand tons.

<sup>9</sup> This high production was attained both due to the utilization of the entire potential and to a wasteful economy.

<sup>10</sup> On the margin of statistical publications issued so far and concerning the 3rd Reich during the war, general postulates should be considered such as an unambiguous determination of such areas as the *Reichsgebiet*, *Grossdeutschland* and the correction of German statistical tables in accordance with the existing situation. These tables treat as occupied areas: the GG, Belgium, Holland, Northern France, the departments of Meurthe and Moselle, while the remaining occupied territories: Austria, Alsace and Lorraine, Luxembourg, the annexed Polish territories and often also the Czech Protectorate are generally included in the *Reichsgebiet*. Elsewhere the *Reichsgebiet* embraces only the 1937 Germany. Let us compare German statistical data on steel output in the Reich and in the occupied countries in thousand tons in the years 1941—1942 and the data corrected by us in accordance with the real state of affairs.

Year	German statistical data		Amended statistical data	
	occupied countries	Big Germany	occupied countries	Germany with Austria
1941	3,587	28,233	10,690	21,129
1942	3,382	28,744	11,246	20,856

<sup>11</sup> This concerns not only the period up to Spring 1940 but also the following period when the value of the Silesian coal, mainly coking coal, will grow in connection with the shortage of coal and the necessity of covering by the Reich the coal shortage in Western Europe.

Consumption and production of ammunition in Germany from September 1939 to July 1940 (according to Kazimierz Sobczak)

The table has been established on the basis of "Verlust- und Verbrauchszahlen der Wehrmacht" Oberkommando der Wehrmacht No. 1814/40 g. Kdos. WFSt (Abt. L/IM<sup>2</sup>) from 8.10.1940; No. 1997/40 g. Kdos. WFSt (Abt. L/IM<sup>2</sup>) from 9.11.1940; No. 2215/40 g. Kdos. WFSt (Abt. L/IM<sup>2</sup>) from 10.12.1940; No. 1366/41 g. Kdos. WFSt (Abt. L/IM<sup>2</sup>) from 10.1.1941; No. 268/41 g. Kdos. WFSt (Abt. L/IM<sup>2</sup>) from 10.2.1941; No. 532/41 g. Kdos. WFSt (Abt. L/IM<sup>2</sup>) from 8. 3. 1941; No. 801/41 g. Kdos. WFSt (Abt. L/IM<sup>2</sup>) from 9.4.1941; No. 1056/41 g. Kdos. WFSt (Abt. L/M) from 8.5.1941; No. 1360/41 g. Kdos. WFSt (Abt. L/M) from 10.6.1941

Type of ammunition	September — October 1939			January 1940	3 Sept. 1939— 9 May 1940	10 May — 20 June 1940	Reserve for 1 VII
	reserve for 1 IX	consumption from 1 IX — 31 X	production 1—30 IX	production	consumption in the West	consumption in the West	
<b>A. Land forces</b>							
rifles and machine-guns	7,377,000,000	406,159,505	142,611,300	237,079,000	24,690,800	194,307,000	139,617,186,000
sub-machine-guns	90,500,000	19,969,460	728,000	10,763,000	57,320	18,693,000	168,900,000
20 mm. machine-guns	5,174,000	1,978,935	870,500	650,000	8,000	565,400	10,619,000
20 mm. special shells (demolish- ing)	18,419,000	2,111,937	9,600	1,295,000	19,380	678,500	26,244,000
37 and 50 mm. anti-tank shells	12,980,000	1,793,200	678,200	34,800	15,075	948,500	19,864,170
37,50 and 75 mm. shells for tank guns	1,071,900	326,340	340,000	96,400	—	151,200	3,283,200
20, 37, 88, 105 and 128 mm. anti-aircraft guns	73,255,000	510,700	1,541,300	3,091,060	1,512,420	2,349,475	88,321,530
mortar and grenade-thrower shells	5,537,000	1,426,680	745,960	651,630	21,400	1,007,500	29,453,700
210 and 305 mm. mortar shells	23,500	3,795	11,725	12,000	10	21,400	132,000
75 to 150 mm. artillery H. E. shells	23,512,570	3,657,770	492,915	239,255	100,480	2,794,500	33,181,300
mines	—	—	—	—	—	—	—
hand grenades	—	—	—	—	—	—	—
<b>Total ammunition in land forces</b>	<b>7,607,472,970</b>	<b>437,938,322</b>	<b>176,381,200</b>	<b>253,912,745</b>	<b>26,424,885</b>	<b>221,516,475</b>	<b>139,997,184,900</b>

Type of ammunition	September — October 1939			January 1940	3 Sept. 1939— 9 May 1940	10 May — 20 June 1940	Reserve for 1 VII
	reserve for 1 IX	consumption from 1 IX — 31 X	production 1—30 IX	production	consumption in the West	consumption in the West	
<b>B. Airforce (<i>Luftwaffe</i>)</b>							
10 and 50 kg. bombs	2,200,000	380,800	38,260	62,150	18,900	473,530	2,264,000
250 kg. bombs	47,300	16,050	9,275	4,800	2,980	31,640	276,425
500 kg. bombs	9,500	1,650	230	1,900	340	3,710	17,555
1,000 kg. bombs	—	—	—	—	15	120	1,450
1,400 kg. bombs	—	—	—	—	—	15	110
1,700, 1,800 and 2,500 kg. bombs	—	—	—	—	5	70	130
Air torpedoes	—	100	—	60	100	1,120	1,470
<b>Total in airforce</b>	<b>2,256,800</b>	<b>398,600</b>	<b>47,765</b>	<b>68,910</b>	<b>22,340</b>	<b>510,250</b>	<b>3,161,140</b>
<b>C. Navy (<i>Kriegsmarine</i>)</b>							
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\* Section "A" includes also ammunitions destined for aircraft and anti-aircraft troops.

\*\* Section "B" under "production" includes also a certain part of ammunition mainly bombs purchased (according to the above sources) in Italy, Rumania, Bulgaria and Hungary.

In 1939/40 Hitler was fearing first of all the Allies' invasion of Belgium and Holland and the destruction of the Ruhr. In November 1939, he expressed his apprehension in a speech addressed to the *Wehrmacht* commanders. He stated that Britain and France, after having occupied Belgium and Holland, could paralyse the German resistance force. After the invasion of Belgium by the French army with the intention to attack Germany, it would be too late for preventing it. This is why Hitler insisted on a rapid, preventive German attack. It is not improbable that German generals who were opposed to this argumentation at the end of 1939, yielded to it later due to a lack of initiative in war activities on the part of the Allies ("funny war").

The easiness of the victories in the West explains, according to Klein, the reasons for which the war against the Soviet Union and the United States did not induce the authorities of the 3rd Reich to make a bigger effort. One can only partially agree to this thesis. The military preparations of the 3rd Reich were not limited to the development of the potential of the armaments industry. The extent of these preparations is shown not only by production indices, but also by such factors as the amount of ammunition and military equipment consumption in the hostilities, as well as the quantity and value of military equipment together with ammunition taken in the defeated countries and used by the 3rd Reich. Klein leaves aside the German experience concerning the quantities of weapons and ammunition consumption in military campaigns. These data are given in the *List of consumption and production of ammunition in Germany in the period between 1 September 1939 and July 1940*, made by colonel Dr. Sobczak (see Table). A brief glance at the list is sufficient to make understand that the Nazis were surprised by the incredibly low consumption of war material in the *blitzkrieg*. According to the *Effects of Strategic Bombing* the war in Poland was extremely cheap for Germany as concerns losses of military material. In his book *Die Blitzkriege 1939—1941* (vol. II: *Das Heer 1933—1945*) Burkhart Müller-Hillebrand, military expert, corrects this opinion. He shows that in the war against Poland the consumption of both explosive material and ammunition was high. As much as 82,5% of gun powder produced in November 1939 and 167% of the November production of explosive material were spent at that time. A document from general Thomas<sup>12</sup> archives quotes still higher consumption indices. The campaigns in Norway, France and in the Balkans brought different experiences.<sup>13</sup> The consumption

<sup>12</sup> B. Müller-Hillebrand, *Die Blitzkriege 1939—1941*, Frankfurt 1956, p. 54. The September consumption can be referred only to November production. "A memo from the conference of general Thomas with representatives of the industry, concerning the war economy on December 18th, 1939", mentions a still higher consumption of current production. "b. *Der Munitionsverbrauch des Polenfeldzuges bestätigte die Warnungen des W[irtschafts] ST[a]b[es], der stets eine bestimmte Tiefe der Rüstung, insbesondere eine bessere Munitionsbevorratung gefordert hatte. Der Verbrauch ging überall über den gleichzeitig erfolgenden Anfall aus der Fertigung zum Teil weit hinaus. Um einige Ziffern herauszugreifen, betrug er bei*

Pistolenpatronen	etwa 3	Monatsfertigungen
Infanteriepatronen	„ 11/2	„
2 cm Munition	„ 21/2	„
3,7 cm Kw. K	„ 21/2	„
s. Gr. W	„ 21/2	„
1. J. G.	„ 4	„
s. J. G.	„ 4	„
7,5 cm Kw. K	„ 3	„
1. F. H.	„ 5	„
s. 10 cm Kanone	„ 8	„
s. F. H.	„ 21/2	„

*Diese Erfahrungen ergaben stark gesteigerte Forderungen mit denen der bisher geplante Ausbau der Pulver-, Sprengstoff- und K.-Stoff Erzeugung nicht mehr Schritt halten kann.*" (Microfilm National Archives Washington T—77 roll No. 94 cl. 819,378.) This considerable consumption of ammunition is not exclusively the result of the intensiveness of hostilities. The psychological factor is also involved; during the early hostilities, soldiers unhardened in battles use as a rule much more ammunition.

<sup>13</sup> Müller—Hillebrand, op. cit., p. 91.

of ammunition was surprisingly low.<sup>14</sup> It is to this fact that Müller-Hillebrand ascribes the reduction of ammunition production rate after the campaign in France,<sup>15</sup> a fact which surprised Klein. In the last quarter of 1940 and the first quarter of 1941 the production of ammunition was lower by 1/3 as compared with July 1940 and showed a strong downward tendency till the end of 1941.

Another omitted aspect of the question is the military equipment taken in the defeated countries or produced there to meet German requirements. Among the sources used by *The Effects of Strategic Bombing*, the *Beuteübersicht*, Marshal Keitel's reports on artillery, mortars and corresponding ammunition taken in the defeated countries are mentioned. An analysis of this documentation could prove useful. The author of the review, who did not know the document, availed himself of other data included in Müller-Hillebrand's work. Already at the time of preparation of the offensive in the West, which necessitated an increase of the army by 50 divisions, the material gaps were bridged by the arms taken from the Czechoslovak and Polish troops despite the inconvenience due to the lack of spare parts or the type of ammunition. The French industry of motor vehicles and French reserves of these vehicles were largely mobilized against the U.S.S.R. 88 infantry divisions, 3 motorized divisions and 1 armoured division were mostly equipped with vehicles produced by the French industry or taken.<sup>16</sup> The 3rd Reich supplied Rumania with a large part of the military equipment taken in Poland. After its occupation by Nazi troops, Norway was compelled to bear the burden of the construction of coastal fortifications, strategic roads, landing fields, and to supply not only financial means but also materials necessary for this construction.<sup>17</sup>

Taking into consideration of different components of the war potential in this analysis, led Klein to stress that the first three years of war witnessed a surprisingly low armaments production. While B. Müller-Hillebrand states, perhaps too cautiously, that the situation as regards the armaments economy was, however, slightly better in June, 1941 than in May, 1940.<sup>18</sup>

Passing next to the description of the period of war with the Soviet Union, Klein repeats the thesis of a number of historians including A. Dulling, that Hitler decided to attack Russia because of food and raw materials shortage which he intended to get there at all costs. Such an opinion which omits other important factors, if only to mention the expansiveness of German monopolies, the ideological goals of German fascism (anti-communism, racialism, *Lebensraum*), the attitude towards the Soviet policy which became ever more critical starting from the middle of 1940, and Hitler's view that Great Britain's resistance was linked with the hope that the Soviet Union would enter war, leads to a far-reaching simplification of the problem. Besides, Klein himself expresses to a certain extent a controversial view by saying simultaneously that the raw materials supply situation of the Reich was not bad after its victories in the West and conquest of the Balkans.

B.H. Klein stresses on repeated occasions that Hitler completely underestimated Russia and its resistance forces.<sup>19</sup>

Already the work *Die deutsche Kriegsindustrie*, published in 1945, drew attention to the regression of armaments production in the second half of 1941, without analysing, however, the reasons for this tendency. The analysis was undertaken by Klein. A detailed analysis of the development of the German economy and of economic policy of the 3rd Reich made it possible for him to establish a fact known only to a small number of historians and mentioned only by the *Effects of*

<sup>14</sup> The production of ammunition for anti-aircraft guns constituted an exception.

<sup>15</sup> Müller-Hillebrand, op. cit., p. 41.

<sup>16</sup> *Ibidem*, p. 105.

<sup>17</sup> *Aktstykker om den tyske finanspolitik i Norge 1940—45*, Oslo 1958.

<sup>18</sup> Müller-Hillebrand, op. cit., p. 90 "Insgesamt gesehen war die rüstungswirtschaftliche Lage zu Beginn des Feldzuges gegen die Sowjetunion etwas besser als vor dem Westfeldzug 1940."

<sup>19</sup> *The Effects of Strategic Bombing* expresses the view that the underestimation of Soviet forces was the biggest strategic error of Hitler.

*Strategic Bombing* and in Allan Bullock's well-known book *Hitler*. The publication *Strategic Bombing Survey* states that Hitler considering at the end of September 1941 that war had been already won, ordered a marked reduction of armaments production. Although his order was only partly executed, reserves were considerably reduced.<sup>20</sup> A. Bullock gives a slightly different version of the same fact, saying that already on July 14th, 1941 the Führer issued directives for a considerable reduction of the forces of the army in the near future and the direction of the main effort in armaments to the airforce.<sup>21</sup> Klein adds to this: Hitler's directive of 14 July 1941 recommended: the military domination in Europe after the defeat of Russia will make it possible in the near future considerably to reduce the forces of the army.<sup>22</sup> Klein writes that the copy of a plan of demobilization envisaging that the later would be linked with a reorganization of the army, was found in the archives of the German High Command (*Oberkommando der Wehrmacht*). It was planned to reduce the formations of infantry by 66 divisions and to increase the number of motorized divisions by 5.<sup>23</sup> With these plans were linked measures concerning economic demobilization. Already two months after the beginning of the campaign in the East, the Nazis started demobilization of the war industry. At the end of July, 1941, Hitler ordered reduction of the production of the main 3 types of arms: equipment of the army, ammunition and aircraft.

From August to December 1941, the production of ammunition, military equipment and military aircraft dropped by 30%.<sup>24</sup> This decrease was compensated to some extent by the growth of production of explosive materials by 20%, as well as by the production of anti-aircraft arms and ammunition which, in my opinion, was connected with activities against Britain and did not have any major importance for the campaign against the Soviet Union. The total drop of armaments production from August to December was slightly smaller and attained 13%.<sup>25</sup> The increase of the total value of armaments production was small. In 1941 this value amounted to 12,1 thousand million marks against 12,0 thousand million in 1940,<sup>26</sup> while the armaments production of that time in the Soviet Union, the United States, and Great Britain almost doubled.

What guided the Nazi leaders when starting preparations for the economic demobilization? According to Klein, war activities against the Soviet Union took place during the first two months according to the *Blitzkrieg* plans. Till the end of July the "Centre" Army Group led by marshal von Bock covered 2/3 of the distance to Moscow. Another commander of the "South" Army group, marshal von Rundstedt, who conducted the offensive in the Ukraine, advanced at a slower rate in the direction of Kiev, but the Germans underestimated the importance of the delay. The losses of the Wehrmacht in tanks, aircraft and other weapons were lower at that time than the supplies from current production. These results achieved after the sudden attack against the Soviet Union were considered by Hitler as an expression of a breakdown of its resistance forces. He cherished the hope that Mussolini's visit on the Eastern front and in the General Headquarters at the end of August would take place already at the end of the campaign or if the worst came to the worst — during its final stages. Beginning with October 1941, however, when the resistance of the Soviet troops grew, and mainly during the Soviet Winter offensive, the situation of the 3rd Reich as regards military equipment unexpectedly deteriorated. It appeared in December that the stockpiles of certain types of ammunition were practically nearly exhausted. For the first time during the war conducted since September 1939, the losses of nearly all types of arms surpassed

<sup>20</sup> *The Effects* . . . , p. 6.

<sup>21</sup> A. Bullock, *Hitler, A Study in Tyranny*, London 1952, p. 600.

<sup>22</sup> B. H. Klein, *Germany's Economic Preparation for War*, 1959.

<sup>23</sup> Klein enumerates only these reorganizational plans. Other plans are mentioned in general Thomas' talk with general Fromm on 14 July 1941. Hitler gave an order to increase the number of armoured divisions from 20 to 36 and Speer — to reorganize armaments production in favour of the new programme of the construction of lorries (Microfilm National Archives — Washington No T-77 roll No. 94 cl 819,493).

<sup>24</sup> Klein, *op. cit.*, p. 190.

<sup>25</sup> *Die deutsche Kriegsindustrie* also gets the reduction at 9%.

<sup>26</sup> Klein, *op. cit.*, p. 193.



the current production of the 3rd Reich. *Die deutsche Kriegsindustrie* brings a number of interesting details in this respect. It says, among other things, that between October and December 1941, 2,500 German tanks and motor-carriage guns were either destructed or abandoned to the enemy, which surpassed twice the current production.

In December 1941, after the unsuccessful attempt at taking Moscow and facing the Soviet offensive, Hitler came to the conclusion that the planned conquest of the Soviet Union must be postponed. Instead of already planning the post-war economy, plans were made again concerning preparations for a final attack on the U.S.S.R. Nevertheless, the defeat near Moscow was not a shock for the 3rd Reich, which would result in a considerable increase of the military effort. Bad weather continued to be considered as the main obstacle. The masterly skill with which the Soviet authorities evacuated factory equipment, the extremely well improvised defence of Leningrad and Moscow, and finally the Winter offensive, were ignored. In December 1941, it is true, orders were issued to increase the production of all types of arms. It will appear, however, that excluding ammunition, the production of which grew rapidly, the index of global armaments production was higher in March — April 1942 only by 6% than in March 1941. According to Klein, the reasons for this should be looked for not in technical raw material difficulties or in want of man power, but in the attitude of responsible Nazi, civil and military authorities who considered the situation satisfactory. At the end of July 1942, when the German armies approached Stalingrad and the Caucasian oil fields, Nazi leaders estimated once more that war, practically speaking was already won. Hitler himself, on July 29th, at a conference with his economic advisers, proposed a reduction of armaments production in order to release industrial potential and workers for civil production. His opinion met with objections and he decided to postpone it for a few months. Klein stresses that it was Stalingrad which gave a new impetus to the Nazi war machine.<sup>27</sup> Equipment for 15 divisions was lost at Stalingrad. Between November 1942 and February 1943, German losses reached 500 thousand officers and men,<sup>28</sup> 5,000 aircrafts, 3,600 tanks and 15 thousand guns. After the proclamation of total war the supplies of military equipment rapidly grew, despite the sea blockade and bombings. The biggest amount of arms was delivered during the period of the invasion in Normandy. In 1944, three times more armoured cars and fighter-bombers, and eight times more night fighters were produced, than in 1942. In June 1944, the German armies were better equipped than ever before. This, however, could not make turn the tide of the war.

Klein effected an interesting analysis of the German industrial potential from the angle of preparations for the war. I shall only draw the attention of the reader to some aspects of this analysis. According to the author of *Germany's economic preparations* the entire German industry, apart from a few exceptions, is characterized by a potential surplus evaluated at 50%. Economists are unanimous in this respect. In the work published immediately after the war *L'économie allemande sous le nazisme (Un aspect de la décadence du capitalisme)*, the French economist Charles Bettelheim, links the limitation of production of consumer goods in the pre-war period (1933—1939) with the limited capacity of the market, with the attempt of monopolies supported by the State not to cross the limits of the market, to avoid excessive production and a drop of prices for these products. This factor has been completely omitted by Klein in his analysis. *Die deutsche Kriegsindustrie* gives still more obscure reasons. The high degree of non-utilization of the industrial potential was alleged to have been caused by the raw material supply situation. This opinion, however, does not seem to fit with the evaluation of this situation as given by other sources. Klein views on the continued non-utilization of the industrial potential during the war are confirmed

<sup>27</sup> The systematical production increase is slightly earlier and dates back to October 1942.

<sup>28</sup> The figures on human losses given by Klein, were taken from general Thomas' report. Another document, namely the annex to the memorandum of the Chief of Supplies and Commander-in-Chief of the Military Reserve — Headquarters II No. 840/44/top secret/ of 2 February 1944 quotes a still higher figure for the period between 1 October 1942 and 3 March 1943, namely 1,326 thousand.

by the studies of a Polish investigator Z. Nowak.<sup>29</sup> The low utilization of production capacities is linked, according to him, with the call-up of skilled workers, as well as with the intervals caused by air raids. Klein himself refers to the opinion of the minister of armaments and ammunition, Dr. Fritz Todt, that the German investments in the years 1939—1941 considerably exceeded German needs. It is true that building investments made in Germany during the war rapidly decreased, but in spite of that there was an increase in the production potential through the growing investment of capital into machines,<sup>30</sup> and the modernization of machine reserves. The *Economic Survey of Europe since the War* sets the increase of factory machines in 1938—1943 at 3/4.

Klein states as concerns indices of non-utilization of the production potential of industry — that the three-shift employment was very low. In Spring 1942, 90% workers of basic industrial branches worked on the one shift system. In the aircraft industry — 25% were employed on the second shift and 10% on the third shift. In the engineering industry 10% of the workers were employed on the second shift. This situation can be explained only to a limited extent by difficulties due to the shortage of steel.

Let us go back to the reasons explained already before of the drop of armaments production in the second half of 1941 and the Spring and Summer of 1942. Although he does not say it explicitly, Klein's views are a crushing polemic with the definition of these reasons given by *Die deutsche Kriegsindustrie im Kriege*. These reasons should consist in raw material difficulties, lack of man power due to mobilization, non-limitation of the production sector of consumer goods, reduction of industrial building from 51 million square meters in 1939 to 36 million square meters in 1941, as well as in the underestimation of the armaments potential of the Soviet Union.<sup>31</sup> Klein analyses the raw material situation, mainly that of steel,<sup>32</sup> the mobilization of man-power, investments and the utilization of production potential, shows the groundlessness of this statement and proves that all these difficulties could have been overcome. There is no difference of views only where the underestimation by the 3rd Reich of the economic forces of the Soviet Union is stressed.

The analysis of the mobilization of man-power in the Reich, enclosing, among other things, the determination of changes in the vocational and nationality structure, can be complemented. Klein showed that Germany had at its disposal during the war great reserves of man-power. This was expressed in a low average weekly employment, in the small change of the percentage of employed people as compared with the whole population of the Reich in the years 1939—1942, in the pre-war level of employment in German agriculture in 1942, in the drop of the number of employed German women, in the high level of employment of maid-servants, in the plan of plenipotentiary Sauckel to supply 400—500 thousand Ukrainian<sup>33</sup> women as maid-servants for German families. These women were eventually to be also germanized.

These data pass over in silence one detail which seems to be of utmost importance and deserves consideration in spite of the fact that it does not concern the Reich itself. It is the extermination of the Jewish population and of the Soviet war prisoners, the development and ever larger use of means of mass annihilation in concentration camps. These criminal activities particularly intense at the turn of 1941/42, had also economic effects and influenced the balance of man-power in the "Big Reich."

In 1941, the balance of man-power given by Klein includes, as one of its components — foreigners and prisoners in a number of 3,070 thousand. Numerous Polish workers and prisoners

<sup>29</sup> Z. Nowak, *Sources and Dynamism of Industrial Production Development of Western Germany*, „Przełęcz Zachodni”, 1961, No. 3, p. 10.

<sup>30</sup> *Die deutsche Kriegsindustrie...*, p. 160.

<sup>31</sup> *Ibidem*, p. 38.

<sup>32</sup> Klein points out that the French and Belgian potential of high-quality steel production was only partly utilized up to the middle of 1943. In July 1942, certain steel works were immobilized.

<sup>33</sup> It is unknown from where the author obtained the information that it was not Ukrainian, but Polish and Russian women who were to be used.

were among those who were directed to work. The so-called *Grüne Mappe* including economic directives for the occupied Soviet territories, envisaged the deportation to Germany of civil population only, but after the expected rapid fall of Moscow. In November, Goering came forward with his first proposals to direct prisoners from the East to the Reich. The question took the form of a decision in February 1942 when Hitler, together with the minister of armaments and ammunition Speer, decided to recruit at a single swoop 627 experienced workers from the occupied Soviet territories where they absolutely didn't want to reconstruct industry. Sauckel, who put in practice this decision together with other leaders of the Reich according to the best colonial patterns, stressed the cheapness and easiness of feeding this man-power. One million workers from Soviet territories were deported to the Reich in the course of 6 months. Soviet prisoners were treated much worse than Polish ones. Till February 1942, Soviet prisoners were executed in mass. This period is also marked by the intensification of the extermination of Soviet prisoners by starvation. On 20 February Erwin Mansfeld, a high official in the Ministry of Labour declared that out of 3,900 thousand Soviet prisoners only 1,100 thousand were still alive. Half a million of these prisoners perished during the period of German defensive, when the number of new prisoners was insignificant, that is between November 1941 and February 1942. From those who kept their lives only 400 thousand were able to start work at once.<sup>34</sup> In April 1942, Sauckel stated that only 70 thousand Soviet prisoners had been employed in Germany. An agreement was concluded then between the *Wehrmacht* and the Ministry of Labour, providing that further war prisoners directed to the Reich would be sent to the countryside in order to be better nourished and regain strength.<sup>35</sup> They were to be transferred next to work in the heavy industry.<sup>36</sup>

The extermination of Soviet prisoners, as well as the starving of the population of towns and the extermination of European Jews confirm Klein's thesis that the situation with regard to man-power constituted absolutely no brake to armaments production. At least till Spring 1942, let's add. For later, parallelly to the further mobilization, the Nazis will deport to the Reich an increasing number of "Eastern" workers and prisoners. Nevertheless, during a certain time (roughly till 1943) the work and food conditions show that their treatment was intended for their extermination by means of work. It was to replace the mass physical extermination of Soviet citizens from occupied areas, including a large percentage of skilled workers, which was contradictory even to a purely colonial exploitation.

Klein explains the low employment level of German women only by the programme attitude of Nazi leaders, the stubborn clinging to doctrines. He overlooks, however, the importance of such an economic anti-stimulus as the good financial situation of families of mobilized Germans.<sup>37</sup> High allowances caused a 500 thousand drop in the number of employed women between September and March 1940.

Does B. H. Klein's book allow the thesis that Germany made no preparations for the war, a war for the conquest of the world, as suggested by Prof. Barnes, mentioned at the outset of this article?

Hitler hoped in 1939 to make good his claims towards Poland without the necessity of a long war. It resulted from information received by the 3rd Reich by various channels that France was reluctant towards the war and Britain was not prepared for it. Hitler's strategy after the failure of the policy applied in 1937—1939 of isolating the adversary and obliging him to surrender without the use of arms, consists in a series of isolated wars and rapid victories. The chancellor of the Reich did not expect the Polish conflict to result in a world war, he disposed of a considerable superiority both in material and men so as to be able to rapidly stifle the resistance of the Polish army, profiting from Poland's poor preparation for the war. Till 12 October 1939, he was hoping

<sup>34</sup> G. Reitlinger, *The House Built on Sand*, London 1960, p. 119.

<sup>35</sup> German farmers were promised that prisoners would work on their farmsteads till the end of the war.

<sup>36</sup> Reitlinger, *op. cit.*, p. 120.

<sup>37</sup> Attention was drawn to this in *Die deutsche Kriegsindustrie*.

that Great Britain would make it up with aggression against Poland. Admiral Raeder states that Hitler planned that the Reich would be ready to face a conflict with Britain in the years 1944—1945.<sup>38</sup> The “funny war” seemed to confirm to some extent Hitler’s suppositions as to the military readiness of Britain and France, irrespective of the fact how much he feared the attack of the Allies on the Ruhr Basin and the consequences of this fact for the economy of the Reich. From October 1939 till April 1940, the war was funny indeed, as far as the use of war material and human losses were concerned.<sup>39</sup> It greatly facilitated for Hitler the continuation of *blitz* attack. And the later, Klein states, did not require any long-range military effort. It results from the work of the American economist that economic mobilization in the case of *blitzkrieg* must not necessarily constitute the main element of the military force. Nazi Germany entered war with a huge production potential which could be easily adapted to war requirements, with a better equipment than the Allies, but also with a military production lower than these of the Allies. It defeated various countries in turn before the Allied counteraction. Also with regard to the U.S.S.R., Hitler expected, basing himself on the information of his Intelligence Service and on his own evaluation of Soviet forces, that his aggression would end in a flash — first, he thought, in Summer 1941, then in Summer 1942. The German High Command considered this to be attainable. With such plans and experience as to the consumption of war material, along with underevaluation of war potential possibilities of the U.S.S.R. and of the United States, a bigger effort in the field of armaments production was irrational from the economic point of view. Colonel of the reserve G. Zastavyenko considers the lack of preparations by the Reich to Winter 1941/42 to be a consequence of the complete certainty of the German Command that war with the Soviet Union would end in a flash.<sup>40</sup> It was only Stalingrad which compelled the Reich to full mobilization to a total war. Klein gives an excellent account of this fact. But the results of Klein’s analysis of Germany’s war economy do not give ground for solving the question raised by Pierre Renouvin as to what was the role of the needs and economic interests of the 3rd Reich in taking the decision of starting the war.<sup>41</sup>

Some remarks on the research method. First on the comparative method. The comparison of German and British armaments in 1939—1942 may prove to some extent delusive. For apart from quantitative indices, the easiness with which they could be used is important. The possibilities of the use of this material by the Reich — concentration on the striking direction, possible due to having the necessary initiative — were different from those of Great Britain which had scattered this material for the defence of the Empire. Besides, the pre-war adaptation of the peacetime economy of the Reich for military needs, mentioned on page 106, deserved greater attention.

A subject for analysis in this book under discussion is the *Rüstungsproduktion im engeren Sinne*, that is strictly armaments production. At times, the author is using a broader definition — the German economic war effort. It may give rise to various misunderstandings, mainly due to the lack of clarity what is understood by the word “German.” Anyway, the list of expenditure quoted by Klein as German expenses for armaments should not be taken as an index of general armament costs or as an index of the total armaments effort. In his book published still during the war, *Nazi War Finance and Banking*, Otto Nathan analysed the veracity of Hitler’s information that the outlays of the 3rd Reich for armaments amounted in the years 1933—1939 to as much as 90 thousand million R. M.<sup>42</sup> He did not conceal the difficulty of such a verification due to the lack of definition where was the beginning and where was the end of war expenditure. The figures can be accepted provided armaments are considered in the broadest sense of the word. The Ger-

<sup>38</sup> F. M. Hinsley, *Hitler’s Strategy*, Cambridge 1951, p. 10. Reader’s letter of 11 June 1940, to officers of the navy.

<sup>39</sup> Cf. the item “consumption in the West, 3 IX 1939 — 9 V 1940 in the enclosed “table”.

<sup>40</sup> G. Zastavenko, *Razvertvyane voennogo proizvodstva fašistskoj Germanii posle provala “mohniensnoj vojny”* [“Vojenno-istoričeskoj žurnal”, 1962, No. 12, p. 41.

<sup>41</sup> *Histoire des relations internationales*, vol. VIII: *Les crises du XXe siècle*, part II: *De 1929 à 1945*, p. 192.

<sup>42</sup> O. Nathan, *Nazi War Finance and Banking*, vol. IV, 1944, p. 84—88.

man cost of the war was estimated in 1942 at more than 80 thousand million R. M.,<sup>43</sup> while, as we have already quoted after Klein, the value of strictly war production reached 21.1 thousand million R. M. in 1941.<sup>44</sup>

B. Müller-Hillebrand and B. H. Klein, mentioned already before, did not avoid one-sidedness which, though different, was negative in both cases for the clearing up of the problem. Müller-Hillebrand gives much space to war economy and armaments. He bases his estimates on figures representing the optimum quantity of equipment for military units, taking at the same time into consideration experience as concerns consumption, and the results of war conquests. He shows, however, no interest in problems of military potential and repeats traditional appraisals. Klein has analysed this potential with a truly German thoroughness but he omitted nevertheless, as has been already mentioned, the consumption indices, the significance of war conquests, and did not take into consideration the role of occupied areas as a whole in the German armaments policy. It is stated in the introduction to the Soviet edition of *Die deutsche Kriegsindustrie* that the total sum of material property plundered by Germany in the occupied countries amounted to 9 thousand million pounds in 1941, that is twice the pre-war annual national income of the Reich. Müller-Hillebrand gave a number of concrete information on the important raw materials and military equipment taken in the occupied areas. It is a well-known fact that the Reich did not make use of the France-Belgian potential, the potential of the so-called *General Gouvernement* and the occupied Soviet areas. Till the end of 1942, the authorities of the 3rd Reich showed interest exclusively in oil and agricultural products of the occupied Soviet areas, completely ignoring the destroyed Soviet industry there. It was only the perspective of a long war which induced Hitler to set into exploitation a number of schemes, e. g., in the Donets Basin where German ammunition was to be produced. It will appear in September 1943 that the production of that Basin did not attain 1/10 of the pre-war production.

While the already mentioned book *Die deutsche Kriegsindustrie* focussed its attention on an analysis of the "Speer era", Klein is fascinated by the period 1941—1942. He differs also in his dates. It is generally considered that a sudden increase in the German armaments during the war took place already at the beginning of 1942 together with Speer's appointment. Klein showed that the leap took place in the last quarter of 1942 nearly coinciding with the Stalingrad defeat. This research into the development of armaments production itself was linked with studies on the characteristics of reorganization of the military production of the Reich. It did not, however, take into consideration the influence of this reorganization on strengthening the position of monopolies in the economic life of Germany. This aspect is discussed by colonel G. Zastavyenko, already mentioned before.

The work *Germany's Economic Preparation for War* leads to so many different reflections and complementations because a valuable contribution to studies on the German policy of armaments.

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<sup>43</sup> "Wochenbericht des Deutschen Institut für Wirtschaftsführung", 1942, p. 39 (quoted after Otto Nathan, op. cit., p. 1).

<sup>44</sup> These figures are relatively comparable, for the German war expenditure probably envisaged the contribution of the occupied countries, and the value of strictly military production embraces only a part of the occupied areas.