

Economics of Nazi Tunnels:

Economy of the Third Reich leading to the underground dispersal projects

Ammon Shepherd

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In August 1944, Heinrich Himmler, the Chief of the German Police and Reichsführer of the Schutzstaffel (SS), wrote to his second in command, Oswald Pohl, the Chief of Administration in the SS, about a recent discovery that “we as people of the 20<sup>th</sup> Century can hardly fathom.”<sup>1</sup> Five years of war in and around Warsaw, Poland led to the discovery of a massive cave and catacomb system underneath part of the city. “I am convinced,” continued Himmler, “that we have many cities that were once old fortresses with such caverns, which can be used, in my opinion, without any further changes as manufacturing facilities.”<sup>2</sup> Himmler was excited about this find, and having spoken with Minister Neubacher in Vienna, learned that this Austrian city also had extensive underground catacombs, sometimes two or three stories deep. Pohl was then given the command to investigate Prague, Wroclaw, Schweid, and Hohentwiel.<sup>3</sup> Himmler’s excitement over the discovery of massive underground caverns suitable for manufacturing factories was understandable considering the widespread destruction caused throughout that year by Allied bombing raids.

Allied air raids were intended to destroy important German factories and demoralize German citizens through the destruction of populated cities. After the turn of the War in 1942, protection of key manufacturing facilities fell initially to Albert Speer, minister of the Reich Ministry for Armaments and War Production (Reichsministerium für Rüstung und Kriegsproduktion, RMfRuK). As the bombing and destruction increased, and labor for repairs and rebuilding was scarce, the Waffen-SS branch of the Schutzstaffel

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<sup>1</sup>“Records of the Reich Leader of the SS and Chief of the German Police (Part I),” n.d., Frame 2563066, T175, Roll 50, National Archives Microfilm Publication.

<sup>2</sup>Ibid.

<sup>3</sup> Hohentwiel is a tenth century castle on an extinct volcano in southern German city of Singen.

became involved in the project. Under the guidance of Heinrich Himmler and under the direct supervision of SS-Gruppenführer Dr. Hans Kammler, the Waffen-SS used forced labor to build numerous tunnels under terrible circumstances. Plans for protecting German factories in underground bunkers, caves, tunnels and mines began as early as 1943, but intensive efforts for subterranean dispersal only began in the summer of 1944. Plans for underground production facilities, which were enthusiastically encouraged by Hitler, were to be completed by 1946 with a completion ratio of six bunker systems every seven months, and a total combined floor plan of over 1,864 square miles<sup>4</sup>, larger than the State of Rhode Island.<sup>5</sup>

While there are many books and articles that discuss the German war economy and German businesses during the war, there are few that describe in detail the efforts of protecting German armaments factories. More rare are those that focus explicitly on the underground dispersal projects.<sup>6</sup> The dissertation, of which this essay will be a part, attempts to fill that gap. Captured Nazi documents available in the Goudsmit Collection at the United States Holocaust Memorial Museum provide a fuller understanding of the role of armaments production and protection during the last two years of World War II. The Goudsmit Collection locates at least 22 different existing tunnels, mines, or new excavations, complete with architectural sketches and measurements. Uncovering the history of these planned and functional underground factories and the Nazi leaders

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<sup>4</sup>"The Samuel and Irene Goudsmit collection, 1944-1985 (bulk 1944-1945) Finding Aid," n.d., 2, RG-10.228, United States Holocaust Memorial Museum Archives.

<sup>5</sup>Timothy S. Parker and USDA Economic Research Service, "ERS/USDA Rhode Island Fact Sheet: RI," n.d., <http://www.ers.usda.gov/stateFacts/RI.HTM>.

<sup>6</sup> As of April 2009, I have not found any scholarly book or article that deals solely with the dispersal of German armaments factories let alone one that focuses on the underground projects.

responsible for the dispersal will expand on the historiography of the armaments programs of the Third Reich, while literally showing the lengths and depths the Nazis were willing to go to sustain the war effort even as the prospects for winning the war were decreasing dramatically. These sources will be supplemented with reports from the United States Strategic Bombing Survey (USSBS), published memoirs from Nazi officials and industrial leaders, as well as works dealing with Nazi war economy and armaments production. Results of the in-depth research will expose, to some extent, disconnect between Nazi policy and strategy and the realities as seen by military leaders.<sup>7</sup> Additionally, this research will highlight the tendency among certain Nazi leaders to propose grandiose building plans and to put their hopes for winning the war in wonder weapons.

This essay provides an introductory survey into the history and historiography of Germany's war economy and German businesses involved in rearmament and later dispersal. After a brief introduction to the background history leading up to underground dispersal, this essay will discuss the historiography of German's Third Reich war economy in order to provide proper placement of the Nazi dispersal program within this wider framework. Such a study as this reveals a dearth of scholarly works relating to the dispersal of German armaments factories underground.

### **Sources Available**

Documents in the Goudsmit Collection contain architectural drawings of numerous underground factories, letters to or from individuals such as Speer, Himmler, and Pohl, and

<sup>7</sup>I am by no means a military historian, but some aspects of military history must be taken into account with this project. The tunnels were a response to failed strategy. In terms of strategy, operations and tactics, the tunnels were a tactical maneuver employed to make up for the strategic failure to control German airspace.

reports detailing tunnel progress and material and slave labor use. It is hoped that these documents will uncover the importance that underground dispersal played in protecting Germany's armaments production. Memoirs of Nazi leaders and German businessmen, although not without limitations, will provide this research with another level of depth to the understanding and interpretation of government records. Often, the memoirs from those who wrote or drafted the documents expound upon the reasoning or purpose for a document, reveal the hidden meanings, motives and intentions behind the document, and occasionally uncover the "behind the scenes" drama or consequences that otherwise remain concealed. Looking at the documents through the eyes of their creator brings the stuffy archival copies to life.

Not only was the state of the economy an important factor for Nazi war plans, but also an understanding of Germany's economy was necessary for Allied military leaders. Allied interest in German war economy did not end with the war, though. Throughout the US involvement in World War II and directly afterwards, the United States Strategic Bombing Survey (USSBS), under direction of the United States Secretary of War, conducted intensive and thorough surveys of thousands of German political, military and civilian leaders, as well as engineers, scientists and anyone with important information.<sup>8</sup> One goal of the USSBS was to determine the effectiveness of the combined Allied bombing raids

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<sup>8</sup>United States Strategic Bombing Survey, *Underground and Dispersal Plants in Greater Germany*, 2nd ed. (Washington, 1947), Foreword. Members of the USSBS, some 1150 individuals, were often right behind the front lines of fighting in order to secure vital documents before they could be lost or destroyed. Documents were found in a variety of places, from secure vaults, to private homes, barns, hen houses, and even coffins. Several survey members were injured and four agents killed gathering this information. For further study on the USSBS, two books have been written (neither of them recently), James Beveridge, *History of the United States Strategic Bombing Survey (Pacific), 1945-1946* (Washington D.C.: Library of Congress. Microfilm Preservation Program, 1976), and David MacIsaac, *Strategic bombing in World War Two : the story of the United States Strategic Bombing Survey* (New York: Garland Pub. Co., 1976).

conducted against Germany throughout the war. Extensive and thorough in their gathering of data, the United States Strategic Bombing Survey has provided a rich repository for historians of Nazi Germany in many more ways than the effectiveness of Allied bombing. Many historical arguments are based upon the results of the Bombing Survey. This work will also make use of the USSBS, but will attempt to adhere to certain cautions and limitations that are noted below.

### **Why Underground Factories?**

Beginning with their entrance into the war in 1939, British air forces began a strategic bombing of German targets. After the United States entered the war in 1941, they added their air force to the British offensive and bombing efforts intensified in 1942. The Allied hope was that such terror bombing would weaken soldier and citizen moral and slow down German war goods production. British and American forces determined that their air offensives, if planned correctly and executed accurately, would significantly damage German war production, thereby leading to an early end of the war. Allied plans were to seek out factories important to the Nazi war machine and destroy them. In early summer of 1943, as the Allies successfully damaged many German factories during the combined bomber offensives, Nazi leaders realized the need to more aggressively protect their war industries from air attack. American air forces limited, at least strategically and intentionally their attacks to non-civilian targets. British forces, in retaliation for *Blitzkrieg* bombing of England, felt no compulsion to limit bombing targets to military and industrial sites. By some accounts, the total Allied air offensives dropped almost two million tons of

bombs on Germany. Bombing raids destroyed over sixty cities, killing 583,000 Germans and 80,000 aircrew.<sup>9</sup>

Allied bombing also hurt German industries. Daimler-Benz, manufacturer of airplane engines, trucks, and other military vehicles and parts, suffered almost complete annihilation of several factories. The bombing of Germany had a greater impact on economy than production numbers suggest, as seen in the example of Daimler-Benz. Before any of their factories had been targeted by Allied bombings, Daimler-Benz executives were very reluctant to participate in the dispersal of their factories. They quickly reconsidered the value of underground facilities after their Mannheim plant was hit by an air raid in April 1943.<sup>10</sup> Although the damage did little to stop production, they were suddenly able to see the value in dispersing factories to avoid destruction. After two months of bombing in late 1944, nearly all of Daimler-Benz's plants were forced to shutdown because almost all buildings had been destroyed.<sup>11</sup>

After the War, Allied intelligence officers interviewed Albert Speer. As they asked him about the effect of the Allied air raids, he responded that they had missed a great opportunity. Speer stated that if they had used their 1500 bombers in concentrating on just a single industry, the destruction would have been so complete, that rebuilding would be impossible, and the war would have ended within eight weeks.<sup>12</sup> During the war, Speer was not convinced that underground shelters would be able to sufficiently save the war

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<sup>9</sup>Randall Hansen, *Fire and Fury* (Doubleday Canada, Limited, 2009), 279.

<sup>10</sup>Neil Gregor, *Daimler-Benz in the Third Reich* (New Haven, CT: Yale University Press, 1998), 219.

<sup>11</sup>*Ibid.*, 103.

<sup>12</sup>"Records for the Reich Ministry for Armaments and War Production," n.d., Frames 3406546 and 3406547, T73, Roll 193, National Archives Microfilm Publication.

economy. "Bombers [can] not be combated with concrete,"<sup>13</sup> wrote Speer, who was supportive of spending effort and money on fighters to combat the Allied bombers, instead of wasting precious resources on fanciful designs, like the V-1 and V-2 vengeance rockets, converting their jet powered fighter into a short-range bomber, and various other massive building projects.

Initially, Hitler did not fear the Allied air raids even though Albert Speer and Luftwaffe General Galland wrote numerous memos and had many conversations in an effort to convince Hitler that the air raids did indeed contribute to the destruction of the military's economic machine.<sup>14</sup> Hitler thought the Allied bombings were implemented merely as a terror tactic, and felt that this actually benefited Germany by building morale and causing the Germans to fight more fiercely for their homeland. Ironically, the purpose of the Nazi bombing of England was meant to instill fear and demoralize the English. "I can only win this war," Hitler supposedly said, "if I destroy more of the enemy's [cities] than he destroys of ours, by teaching him the terrors of war."<sup>15</sup> Hitler's air raids had the opposite effect on the English, the same effect he was hoping for with his Germans. In the first years, the air raids were merely terror tactics to Hitler, for he could not see how they would damage the war economy.<sup>16</sup> As the bombings grew more destructive, plans were developed for proactively sheltering factories. Hitler, in typical fashion, jumped on this new bandwagon that he hoped would become a tide in turning the war in his favor.

With Allied air raids increasing, Hitler, Himmler and other Nazi leaders envisioned

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<sup>13</sup>Albert Speer, *Inside the Third Reich: Memoirs* (New York: Collier Books, 1981), 336.

<sup>14</sup>*Ibid.*, 350-351.

<sup>15</sup>Quoted in R. J. Overy, "Hitler and Air Strategy," *Journal of Contemporary History* 15, no. 3 (July 1980): 411.

<sup>16</sup>*Ibid.*, 411f.



moving important factories underground as early as 1943.<sup>17</sup> In fact, the German military already had plenty of ammunitions and chemical warfare stored in caves and mines. But moving whole industrial plants required a much greater magnitude of effort. Undertaken by the Reich Ministry for Armaments and War Production (RMfRuK) as well as a special section of Himmler's Waffen-SS, which was also in charge of concentration camps and building projects, the search for adequate underground space was begun in early 1944. The searches and inspections of existing tunnels, caves and mines were completed with such secrecy that the two competing groups often inspected the same sites without the other knowing.<sup>18</sup>

The government required several major companies to undergo a process of dispersal, wherein sections of the factories were physically moved far apart so that Allied bombing did not destroy all of a company's assets. These industries included Daimler-Benz, Messerschmitt, BMW, IG Farben, Bosch, and Junkers. The two main dispersal methods were to physically separate factory buildings, sometimes hiding them within the dense German forests, and to seek underground protection.

### **Historiography of German War Economy and Businesses**

There are a plethora of works detailing the history of German businesses in Nazi Germany,<sup>19</sup> but few of them, if even involved in the subterranean dispersal project, discuss

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<sup>17</sup>Bertrand Perz, *Projekt Quarz: Steyr-Daimler-Puch Und Das Konzentrationslager Melk*, Industrie, Zwangsarbeit und Konzentrationslager in Österreich (Wien: Verlag für Gesellschaftskritik, 1991), 136.

<sup>18</sup>*Ibid.*, 142.

<sup>19</sup>Berenice A Carroll, *Design for Total War. Arms and Economics in the Third Reich* (The Hague: Mouton, 1968); Rolf Wagenführ, *Die Deutsche Industrie Im Kriege 1939-1945*, 2nd ed. (Berlin: Duncker & Humblot, 1963); Dietrich Eichholtz, *Krieg Und Wirtschaft: Studien Zur Deutschen Wirtschaftsgeschichte 1939-1945*, Nationalsozialistische Besatzungspolitik in Europa 1939-1945 Bd. 9 (Berlin: Metropol, 1999); Gregor,

the plans to move underground. Neil Gregor's work on Daimler-Benz, and others like it, provide a sure foundation for understanding the underground dispersal project from both the Nazi regime's as well as a business's perspective. Additionally, it demonstrates the limited attention focused on the dispersal program. Similar books, focusing on a single industry or company, understandably only tell the history of one tunnel project, and describe the relationship with the RMfRuK and Waffen-SS as far as the business was concerned. Determining what is available shows the need for a work that spans multiple companies and building projects in order to gain a broader and deeper understanding of the underground dispersal project.

In order to understand the reasoning and hopes behind an underground dispersal program, it is beneficial to take a few steps back and look at the war economy as a whole, and the events leading to the underground plans. As the purpose of this essay is simply to

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*Daimler-Benz in the Third Reich*; Peter Hayes, *Industry and Ideology: IG Farben in the Nazi Era* (Cambridge [Cambridgeshire]: Cambridge University Press, 1987); Paul Jaskot, *The architecture of oppression: the SS, forced labor and the Nazi monumental building economy* (London; New York: Routledge, 2000); Nicholas Kaldor, "The German War Economy," *The Review of Economic Studies* 13, no. 1 (1945): 33-52; Wolfgang König, "Adolf Hitler vs. Henry Ford: The Volkswagen, the Role of America as a Model, and the Failure of a Nazi Consumer Society," *German Studies Review* 27, no. 2 (May 2004): 249-268; Arnold Kramer, "Fueling the Third Reich," *Technology and Culture* 19, no. 3 (July 1978): 394-422; Jiří Křivský, *Richard - unterirdische Fabrik und Konzentrationslager bei Litoměřice : Mahnmahl Terezín* (Terezín: Památník Terezín, 1967); Alfred C Mierzejewski, *The Collapse of the German War Economy, 1944-1945: Allied Air Power and the German National Railway* (Chapel Hill: University of North Carolina Press, 1988); Alan S Milward, *The German Economy at War* (London: University of London, Athlone Press, 1965); R. J. Overy, "Transportation and Rearmament in the Third Reich," *The Historical Journal* 16, no. 2 (June 1973): 389-409; R. J. Overy, "Mobilization for Total War in Germany 1939-1941," *The English Historical Review* 103, no. 408 (July 1988): 613-639; R. J Overy, *War and Economy in the Third Reich* (Oxford: Clarendon Press, 1994); Perz, *Projekt Quarz*; Raymond G. Stokes, "The Oil Industry in Nazi Germany, 1936-1945," *The Business History Review* 59, no. 2 (Summer 1985): 254-277; Jochen Thies, "Hitler's European Building Programme," *Journal of Contemporary History* 13, no. 3 (July 1978): 413-431; J. Adam Tooze, *The Wages of Destruction: The Making and Breaking of the Nazi Economy*, 1st ed. (New York: Viking, 2007); E. R Zilbert, *Albert Speer and the Nazi Ministry of Arms: Economic Institutions and Industrial Production in the German War Economy* (Rutherford, [N.J.]: Fairleigh Dickenson University Press, 1981); Albert Speer, *Industrial Mobilization and Design and Development of aircraft in Nazi Germany* (Aircraft Industries Association [distributor], 1945); Enno Georg, *Die Wirtschaftlichen Unternehmungen Der SS* (Stuttgart: Deutsche Verlags-Anstalt, 1963); Willi A Boelcke, *Deutschlands Rüstung Im Zweiten Weltkrieg* (Frankfurt am Main: Akademische Verlagsgesellschaft Athenaion, 1969); Rolf Wagenführ, *Die deutsche Industrie im Kriege 1939-1945*, 2nd ed. (Berlin: Duncker & Humblot, 1963).

provide a basic framework for understanding the underground dispersal program, the scope will only briefly cover the topic of Germany's economy and businesses during the Third Reich, and will be limited to the period roughly between 1932 and 1942.

This essay will view the German economy during World War II through two lenses. As a first lens, this essay will describe the recent historical debate about whether Germany had a total war economy before 1942, or if German citizens enjoyed a “peace-like war economy” wherein armaments production existed, but did not impact everyday life. Determining what kind of economy Germany had before 1942 will help explain why armaments production was neglected until after 1942, and why underground dispersal was not implemented until 1944, five years after Germany entered into war. A second lens through which to view the German war economy is the relationship between the Nazi regime and German businesses. This has obvious import to the outlined topic, for it was exactly this interaction between Nazi leaders and businessmen that led to underground factories. Historiography about German industries in the Third Reich shows that reactions to Nazi requests were diverse.

### **A War Economy Before 1942**

The early 1930s saw extreme economic and political hardships. Hyperinflation, food shortages, and an unstable government during the 1920s led many to believe Germany was on the brink of destruction. Historian R. J. Overy, in his book *War and Economy in the Third Reich*, argues that Hitler planned from the start to introduce rearmament as a means of economic recovery. Overy writes that Hitler must have considered a combination of a re-

establishment of German industry and a push for rearmament as the best method for economic improvement once he became chancellor. According to Overy, both "direct and indirect rearmament played some part in the investment-led recovery in Germany, but it was one element in a cocktail of causes, and was by no means the main ingredient."<sup>20</sup> Overy points out that in the first years of the Nazi government, many of the policies were intended to help civilian problems like building a transportation infrastructure and creating jobs through massive building projects. Recovery and rearmament were mutually supportive, sustaining each other and legitimizing each other's efforts. Building the most modern roadway system had as much to do with the ideology of building a "new Nazi age" with Hitler as master planner, as it did with providing an improved method of transportation that could be used by civilians as well as for military purposes. Rearmament and economic recovery existed together, and both began well before 1942.

Hitler wanted a localized war with Poland, and had reason to believe England and France would not intervene. The Nazi-Soviet Pact assured Hitler of the Soviet abstinence in Germany's forceful takeover of western Poland. That a general European war was a long-term goal is evident, argues Overy, but discoveries of once missing entries from Goebbels' diary show that the hope was that Germany would have several years after taking Poland to strengthen German industry for war production. An earlier than planned intervention by England, France, and Russia left the economy and Nazi regime with a loss of plans. In the early years of the war, Hitler and his military leaders argued about whether to strengthen the industrial economy or create more weapons.<sup>21</sup> It is not within the scope of this essay to

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<sup>20</sup>Overy, *War and Economy in the Third Reich*, 9.

<sup>21</sup>*Ibid.*, 24-25.

come to a definitive answer to the debate here outlined, but only to describe the varying outlooks on German economy in the early years of World War II.

Berenice Carroll takes Overy's argument a step further, stating that the Nazi plan for recovery lay solely in building up the armed forces. Carroll describes how Hitler's writings show that he knew practically nothing about economics. Hitler's economic recovery plan was to get more food for his people, and this was to be done by forcefully taking land from Russia and Germany's border states. War was to be a large part of Nazi Germany's economic recovery plan.<sup>22</sup>

J. Adam Tooze supports this argument with insight found in the unabridged and undelivered version of the Nuremberg rally speech prepared by Hitler in 1936. Tooze shows that Hitler's unabridged address, though couched in the typical euphemisms found in his earlier manifesto *Mein Kampf*, was all about giving armaments production the utmost importance, even over economic issues. The version given at the Nuremberg rally in 1936 left out mention of war, but the uncirculated original document clearly supported a four-year rearmament plan, followed by war. Rearmament could not be "too large, nor its pace too swift," wrote Hitler in the secret document. "If we do not succeed in bringing the German army as rapidly as possible to the rank of premier army in the world... then Germany will be lost!"<sup>23</sup> Hitler wanted militarize Germany from the very first years of his ascension to leadership in German government. "All other tasks must cede precedence to the task of rearmament," stated Hitler in a 9 February 1933 meeting.<sup>24</sup> "Never before had

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<sup>22</sup>Berenice A Carroll, *Design for Total War. Arms and Economics in the Third Reich* (The Hague: Mouton, 1968), 97.

<sup>23</sup>Tooze, *The Wages of Destruction*, 219-220.

<sup>24</sup>*Ibid.*, 38. Source from Bundesarchiv Lichterfelde Branch R43II 536, 20.

national production been redistributed on this scale or with such speed by a capitalist state in peacetime," writes Tooze, and continues that "the Third Reich shifted more resources in peacetime into military uses than any other capitalist regime in history."<sup>25</sup> 1936 saw the German military plan exorbitant figures for personnel and vehicles. There was no mistake that Germany was planning for war, and the economy was soon put into motion to support that plan.

Part of the debate in determining *if* Germany had a war economy before 1942, is defining *what* a "war economy" is. Until the mid 1990s, most works on German economy during World War II subscribed to the idea that Nazi leaders planned for a quick war, and therefore did not engage industry in a wartime economy during the first three years of the war. Carroll looks at Germany's GNP before and after 1939, as compared to England, to show that England increased their military expenditures 31% to over 50% of their national income. Germany, on the other hand, did not draw equal to England until 1943.<sup>26</sup> Carroll also examines the GNP of England, the United States, and Germany to define exactly what a "war economy" might be. She surmises that the term is quite nebulous and susceptible to interpretation, but while the three economies were not engaged in war, they spent only up to three percent of their GNP on war production, but when engaged in total war they spent over fifty percent. Anything more than 25% can, according to Carroll, be termed a "war economy."<sup>27</sup>

Carroll concludes that Germany had experienced a peace-like war economy through 1936, and from 1938 until 1942 the economy could be described as a war economy, but

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<sup>25</sup>Ibid., 659, 660.

<sup>26</sup>Carroll, *Design for Total War. Arms and Economics in the Third Reich*, 185.

<sup>27</sup>Ibid., 189.

only after 1942 could it be termed a “total war economy.”<sup>28</sup> In further support of a peace-like war economy in the early war years, Carroll cites memoranda from Hitler dating to early 1944, stating that the time for partial mobilization was over, and that army production was to now have first priority.<sup>29</sup>

In disagreement with Carroll, Overy looks at the percentage of male labor involved with military production to determine the status of Germany's war economy. Overy writes that the military claimed 40-50 percent of non-food civilian production by 1941.<sup>30</sup> Throughout 1940, an increasing percentage of male labor was used for direct and indirect military production. Overy cites figures such as 55 per cent of the laborers in the clothing industry were employed for armaments production, rather than consumer production. Other industries faced similar statistics: 47.5 per cent in the leather industry, 43.6 per cent in the textile industry, and 34.5 percent in the glass industry.<sup>31</sup> "Such a situation made it difficult to supply even the 'economic requirements essential for the war', or exports, or goods needed by organizations such as the Organization Todt or the Arbeitsdienst (Labor Service), while it left very much less for the ordinary consumer."<sup>32</sup> Overy's research shows that nearly fifty percent of the labor force was engaged in military armaments production.

German's war economy, if not total, was definitely at a state to be noticed by the “ordinary consumer.” Tooze's research agrees with Overy, and shows that Germany's economy was geared for war in 1935. Nearly half of the growth in the national output

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<sup>28</sup>Ibid., 190.

<sup>29</sup>Ibid., 231. Carroll cites a memoranda from Hitler sent on 10 January 1942 giving war production the first priority, reversing an order from 20 June 1940. She argues that this memoranda implies an end to partial mobilization. Carroll does not cite the source for this memoranda.

<sup>30</sup>Overy, *War and Economy in the Third Reich*, 289.

<sup>31</sup>Ibid.

<sup>32</sup>Ibid.

between 1935 and 1938 was direct spending by the military. Over 70 percent of the Reich's purchases of good and services after 1935 were by the Wehrmacht.<sup>33</sup>

The German military tactic of a *Blitzkrieg* (lightning war) during the first years of the war is an essential element in the argument that Germany had a “peace-like war economy.” As explained by Alan S. Milward in *The German Economy at War*, a *Blitzkrieg* would secure a quick victory for Germany, and negate the need for German economy and businesses to mobilize for war. Under this theory, as presented by Milward, it was considered a myth that Germany was prepared and geared for war from the beginning of Nazi take over, and was only subscribed to by the contemporary public and Allied political leaders.<sup>34</sup> The occupation of the Rhineland, the Anschluss<sup>35</sup>, and occupation of Sudetenland, Bohemia, and Moravia all led credence to this belief of a military economy, but were, as Milward argues, merely a bluff.<sup>36</sup> The *Blitzkrieg* was more than a military tactic, but an economic one as well.<sup>37</sup> It was to be a quick military victory, employed to remove the need for German citizens and the economy to participate in war. Milward's conclusion is that the “impact of the war on the German people over these years was very small.”<sup>38</sup> Not until the war turned

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<sup>33</sup>Tooze, *The Wages of Destruction*, 207.

<sup>34</sup>Milward, *The German Economy at War*, 1.

<sup>35</sup> The Anschluss was the forceful but accepted annexation of Austria in 1938.

<sup>36</sup>Ibid., 3.

<sup>37</sup>Ibid., 8. Although not central to my thesis, Milward's explanation is important to this interpretation of the *Blitzkrieg*: "By basing military strategy on a short war, starting with surprise, and ending with a quick victory, the failures of the First World War would be avoided. At the same time as Germany's better preparedness for war could be made to tell against her opponents, her weaknesses in the event of a long war based on mass-productive resources would not be disclosed. The *Blitzkrieg* allowed Germany to play the part of a great power, which she no longer was. It was a method of avoiding the total economic commitment of a 'total war'. It was the *Blitzkrieg* in its profoundest sense for which Germany and Hitler were prepared in 1939. For such a policy 'armament in width' rather than 'armament in depth' was necessary" (8). Milward's statement shows all the classic aspects of the *Blitzkrieg* theory: military strategy that was thought to overcome weaknesses seen in WWI strategy; a quick strike to produce a short war; and avoiding a total war economy by rearming in many ways, but none of them with many reserves.

<sup>38</sup>Ibid., 29.



sour in 1942 did Nazi officials feel it necessary to begin the process of turning the German economy from peaceful production to war production.

Overy most forcefully explains the critique of this argument in his book *War and Economy in the Third Reich*. First, Overy urges caution to historians when using the results from the USSBS, which, he warns, is largely based on "raw data on weapons output and consumer production" without the use of information about the wider economy and Nazi policy on economics and war.<sup>39</sup> Earlier works also rely on the writings of Rolf Wagenführ, an official from the German Statistical Office, in particular his post-war book reflecting statistics of German industry, *Die deutsche Industrie im Kriege 1939-1945*. What is discouraging with Wagenführ is that much of his testimony was in contradiction to other witnesses, many of whom were in a better position to grasp the reality of Germany's war economy, such as Albert Speer. This brings to point one persistent issue with the USBSS and Wagenführ's work, which is that they cite and use each other for reference, without question of the argument or theory presented. Wagenführ's work was cited and used for the basis of the overall report from the U.S. Bombing Survey, which in turn was cited by Wagenführ in his later works.<sup>40</sup> Later historians take their summaries and evaluations at face value.

The debate lies in the sharp contrast between armaments output before 1942, versus the output seen afterwards. In contrast to the "business as usual" theory of pre-1942 German economy, Albert Speer, the Reich's Armaments Minister, testified that rearmament had begun at the outbreak of war in 1939. Supporting the debunking of the

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<sup>39</sup>Overy, *War and Economy in the Third Reich*, 26.

<sup>40</sup>*Ibid.*, 259f.

"peace-like war economy" where civilian life was little affected by the war, Tooze shows that German civilians were indeed quite aware of the constraints the war presented. As one point of contention, Tooze cites the affect of rationing on individual savings bank accounts. As resources became sparse, deposits into savings accounts increased and withdrawals decreased. This shows that Germans had money to spend, but due to the shift in economic production to war goods, the shops had nothing to sell.<sup>41</sup>

Tooze also argues against the traditional stance that Germany did not utilize women in its war economy as much as the British and United States in comparison. Such notions are based on the consistent number of women in the work force in Germany, compared to a significant increase in working women in Britain and the US. This is misleading, contradicts Tooze, because percentage wise, the German maintained (even as early as 1939) nearly 50 percent of its women in the war economy, whereas Britain, by comparison, went from 25 percent in 1939 to 41 percent in 1944.<sup>42</sup> Not only does Tooze's research show that women were vital to the war efforts in Germany, but they certainly played a role before 1942.

Attitudes about the war and subsequent economy affected how businessmen planned in the long and short terms. Relationships between German businesses and the Nazi Regime will be discussed in the next section, but a look at several business reactions to the pre-1942 economy will enlarge our understanding about the economic atmosphere of the Third Reich. Peter Hayes writes that under the Four Year Plan, established under Herman Goering in 1936, IG Farben was encouraged to focus on fuel, rubber, and chemicals

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<sup>41</sup>Tooze, *The Wages of Destruction*, 354-355.

<sup>42</sup>Ibid., 358-359.

production. Their leaders suspected rearmament leading to war, but hoped to delay conflict in favor of protecting their commercial future.<sup>43</sup> Neil Gregor adds further insight into the chaotic economic atmosphere of Germany, stating that the Daimler-Benz Company was quite concerned about rearmament plans. Company officials complained of an inefficient war economy apparatus with "no clear organizational structure with clearly defined areas of jurisdiction on the one hand, nor a comprehensive and unified mobilization plan on the other."<sup>44</sup> The Nazis just were not ready for war. They further cited competition between the military and civilian leaders for preparing for war, and raw materials under Goering and his Four Year Plan, which was also inefficient.<sup>45</sup> Whether or not the "total war economy" began after 1942 or before, German businesses were required to consider the possibility of war. It is this view of the German war economy that is most important to this study, for it shows that industries were aware of the possibility of war from the early years of the Third Reich, and were prepared to increase machinery and buildings as they restructured for rearmament output, but there does not seem to be any discussion of defensive measures for their newly acquired assets.

As industrial and Nazi leaders were finally forced to address the issue of defending their factories, they found their efforts, particularly in relation to underground dispersal, severely inhibited. In his study of Daimler-Benz, Gregor argues that much of the effort to move several factories underground ended up in vain as each project was continually beset by technical failures and overly ambitious plans. In most cases, tunnels were expected to be completed months after initial locations were chosen, but it usually took that long simply to

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<sup>43</sup>Hayes, *Industry and Ideology*, 172.

<sup>44</sup>Gregor, *Daimler-Benz in the Third Reich*, 76.

<sup>45</sup>*Ibid.*, 77.

finalize building plans, gain official approval, and begin actual work. The Daimler-Benz projects suffered from lack of building material, laborers (both civilian and military skilled workers as well as slave labor provided by the SS), and, as Gregor aptly stated, "the lack of realism."<sup>46</sup> Gregor surmises that the underground dispersal program as a whole "was based on assumptions which were initially at least optimistic and increasingly the product of fantasy."<sup>47</sup> As is seen in many other aspects of military preparation and planning, Nazi leaders had falsely led themselves to believe in grandiose plans for salvation in the face of defeat.

In analyzing the underground dispersal of Daimler-Benz, Gregor asks if the process was successful. Did the underground factories spare machinery from destruction and keep production running? Gregor concludes that statistical records do not provide enough information to determine how many machines were destroyed in each of Daimler-Benz's plants specifically, but does show that the overall productive capacity of the majority of the factories were usable after the war. This may be a reason that Daimler-Benz put so much money and effort into dispersal, even as late as January and February of 1945. Obviously, no one knew how long the war would last at that time, but it was certain to many that it might be ending soon. Why then would business owners waste time, money and effort on moving factories? Practically put, business owners wanted to stay in business after the war. In order to do so without large rebuilding costs, they would need to have machinery that worked. As seen with the example of officials at the Daimler-Benz company, decisions to disperse were as much a desire to have the ability for post-war production, as they were to

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<sup>46</sup>Ibid., 230 Gregor's description of the tunnel projects is found on pages 218-244.

<sup>47</sup>Ibid.

supply armaments during the war.<sup>48</sup>

1938 marked the limit of the Germany economy's ability to expand both militarily and privately at the same time. One limitation was unemployment resources. In 1933 German unemployment was nearly 6 million, and until 1938, expansion in military and civilian economies could be maintained concurrently.<sup>49</sup> This would have explicit repercussions for later underground dispersal projects. As all able-bodied German men were employed in the military or technical fields, brute physical labor was to be handled by concentration camp inmates. The result was that underground factories were built and often staffed with labor from nearby concentration camps. Reparations were the other limit. With military spending increasing to 70 percent by 1938, and only 8 percent increase in output, German civilian economy was substantially hindered.<sup>50</sup> Nazi leadership was not unaware of the struggles rearmament were placing on the private economy. Goering, in the summer of 1938, remarked to concerned representatives to the army, that they "should not concerns themselves with the fate of the economy... [that] the collapse of parts of the economy was irrelevant." Not only was the Nazi leadership aware of the economic situation, they were willing to sacrifice the civic sector for the increased production in the military sector.

Attitudes to support the military economy at any cost later benefited the businesses involved with the underground dispersal as well. With the war beginning earlier than expected, the economy seemed to be continually playing catch-up. As the industrial and military leaders focused on producing, they neglected to consider the practical need to

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<sup>48</sup>Ibid., 245-246.

<sup>49</sup>Tooze, *The Wages of Destruction*, 254.

<sup>50</sup>Ibid.

defend their factories. Perhaps for this reason the possibility of underground factories did not seem practical as a means of dispersing armaments factories at the beginning of the war. But once Allied bombings began destroying production capabilities, the German war economy was once again forced to play catch-up in protecting manufacturing plants.

### **German Businesses and the Nazi Regime**

German business owners, especially the leaders of large industries like chemicals, steel, and coal, had dealings with the Nazi government from the very beginning. In February 1933, Hitler brought together a select number of businessmen and explained to them his “policies.”<sup>51</sup> He expounded his vision for the future of Germany and in nationalist overtones offered them an end to communism and a restriction on the democratic politics that the businessmen believed would not be able to sustain private enterprise. After which, Hermann Goering spoke to them about the possibility of ending the political conflicts between left and right which hampered business, to which all the attendant businessmen agreed. Financial Minister Hjalmar Schacht then explained the reason for which the business leaders had been assembled. The following March would hold the deciding election that would determine if the Nazi regime would remain in power, or if politics would again be embroiled in bickering and instability. Schacht suggested an election fund, supported by German industry, to help the Nazi party gain political victory in the coming election. The assembled businessmen agreed, and over the next few weeks, companies such as IG Farben, Deutsche Bank, Krupp Steel, and the Vereinigte Stahlwerke, supplied the

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<sup>51</sup>Ibid., 99.

Nazi party with 3 million Reichsmarks.<sup>52</sup> To a cash-strapped political party, the funds supplied by German businesses allowed the Nazi party to fund their election campaign and come off conquerors. As this episode shows, German big businesses supported the Nazi regime from the beginning. It must be remembered that there was no mention of an upcoming war or genocide, but it was their financial support that kept the Nazi regime in power during the very influential elections of 5 March 1933, and their continued support that allowed Germany to bring war to Europe.

Under the direction of Goering, the Nazi regime set up a Four Year Plan in 1936, a committee to organize the incorporation of industry in an effort to slowly rearm German military. Businessmen were diverse in their response, but most were opposed to a plan that reeked of autarky, for they relied on trade and materials outside of Germany. They feared "large-scale war production" and economic independence on other nations would decrease the profits and weaken their autonomy. As a result they sought for ways to lessen the growing economic and social control of the Nazi Party. Any resistance to Nazi ideas, Overy reminds us, must be seen with the background of earlier conflicts where German government had "flirted with socialization and economic intervention."<sup>53</sup> A turn towards German economic self-sufficiency and a state run economy concerned German businessmen, for it threatened financial stability, foreign trade, and weakened the private sector. German businessmen wanted to be left alone, and had no desire to mobilize their factories for war production. As a result of resistance, and because Hitler wanted a "quick economic recovery, he gave businessmen considerable freedom of action."<sup>54</sup>

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<sup>52</sup>Ibid., 100.

<sup>53</sup>Overy, *War and Economy in the Third Reich*, 93.

<sup>54</sup>Ibid., 94.

In 1933, German businesses entered into select partnerships with the Nazi regime. IG Farben and Junkers, the largest aircraft producer, provide just two examples of the different types of relationships between the early Nazi government and German businesses. In some cases, businesses were the active agents in creating a business relationship with the government. IG Farben directly sought a business arrangement with the Third Reich government first. With a desire to maintain research and development of synthetic chemicals, businesses leaders at IG Farben convinced government officials that certain projects at their company were not only beneficial, but also necessary for maintaining German self-sufficiency, a policy important to Hitler. Relationships with Nazi government eventually led IG Farben to become willing participants in Hitler's war and genocide.<sup>55</sup>

IG Farben, the largest chemical company in Germany, provides an example of how the government was able to influence and strengthen their relationship with businesses essential to the war economy. Officers at IG Farben only reluctantly joined the Four Year Plan, and only did so to maintain control of competition and reign in the impending chaos of rearmament under the regime.<sup>56</sup> Before Germany entered war in 1939, IG Farben's interests were more often different than the military's, so wherever possible they tried to separate their civilian and military contracts and plants.<sup>57</sup> After the Anschluss, though, the Nazi regime became more intimately involved with German businesses. Nazi officials were required to be appointed to the boards of all industries, especially those important to rearmament. IG Farben wanted to buy out many Austrian companies, and had so far resisted appointing political representatives, but in order to gain approval to increase their

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<sup>55</sup>Tooze, *The Wages of Destruction*, 115-117.

<sup>56</sup>Hayes, *Industry and Ideology*, 177.

<sup>57</sup>*Ibid.*, 185.



ownership, IG Farben reluctantly began hiring Nazi politicians as middle managers and supervisors.<sup>58</sup>

IG Farben seemed to follow the national flag, as it were, in their expansion efforts, although their motives and intent were different from their governmental models. From a mainly economic concern, IG Farben sought to purchase and control only those industries from annexed countries which would interfere with their business or would weaken their political pull as one of Germany's largest businesses. "In nearly every instance of acquisition, [IG Farben] sought to control and shut down potential intruders on its domestic spheres of interest... and at every stage... had to make major concessions to government representatives in order to achieve even a portion of its objectives."<sup>59</sup> As IG Farben's officials sought to increase their economic situation they found it necessary to increase their relationship with the Nazi regime. Once entangled within the webs of National Socialism, industries like IG Farben found it easier to accept unconventional, and even repulsive, business practices such as slave labor.

Other companies were the recipients of government attention that oftentimes led to unwanted transactions. The Junkers aircraft company had the unfortunate position of being the largest manufacturer of military aircraft in Germany. Under the direction of Secretary of State Erhard Milch, the Nazi government expropriated the firm after detaining Dr. Hugo Junkers, the owner of the company and Germany's leading aviation engineer, on false charges of treason, until he relinquished ownership of his company to the government. Thus, in 1933, Junkers became the core of Germany's Air Ministry

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<sup>58</sup>Ibid., 229-230.

<sup>59</sup>Ibid., 264-265.

conglomeration of airplane manufacturers, aimed at rearming Germany's air forces.<sup>60</sup>

Daimler-Benz is another typical company that at first dealt with the Nazi regime with some hesitation and skepticism. Initial reactions to rearmament were tempered by a "high degree of caution and uncertainty, and by a reluctance to commit itself to long-term decisions in a war in which short-term events could very rapidly change the position of the Reich and with it the company."<sup>61</sup> Expectations of Daimler-Benz officials, and within industry in general, were that they hoped the war would be short and business would soon return to normal. They therefore had no desire to spend their money and effort to re-tool and reconfigure machinery and facilities for war production. Daimler-Benz held to this practice even until the summer of 1940.

During 1936 and 1937, with the economy more stable than in recent past, Hitler was able to slowly wrest control of the economy through subterfuge and a general break up of big industrial alliances. As businesses adopted an "every man for himself" attitude, Hitler was able to gain power over the economy by seducing businesses to join with the regime in return for business.<sup>62</sup> The government gained more prestige and influence within established industrial circles, and began to rely less on the old industrial elites. Traditional family run businesses gave way to industry managers and industrial bureaucrats who were much more amenable to Nazi assistance and influenced by their organization and regimentation as they sought economic security and stability after nearly two decades of turmoil.

After 1942, as a continuation of a program initiated by Fritz Todt, the first minister

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<sup>60</sup>Tooze, *The Wages of Destruction*, 125-127.

<sup>61</sup>Gregor, *Daimler-Benz in the Third Reich*, 78.

<sup>62</sup>Overy, *War and Economy in the Third Reich*, 106.

of the Reich Ministry for Armaments and War Production, Albert Speer implemented the creation of “Rings” for each major type of industry. Within this framework, each firm supplied a representative, with the largest firm in the industry supplying the leadership for that “Ring.” It was the Ring's responsibility to oversee the coordination of production and rationalization (or reorganization and streamlining) of all plants within the Ring.<sup>63</sup> The system of Rings allowed the Nazi regime yet another sphere of influence over German businesses.

The economy was moving toward one similarly established by the Soviet Union, an economy "controlled by the party through a bureaucratic apparatus staffed by technical experts and dominated by political interests."<sup>64</sup> Indeed the new breed of technical managers, engineers, chemists, and scientists were attracted to the Nazi party for the big state projects where money was no longer an issue. As the war progressed, and Nazi desire for short-term solutions increased, the desires of industry and regime became increasingly divergent. Nazi short-term goals had taken on a self-destructive bent, while industries with the motivation of profit, sought self-preservation in the short- and long-term.<sup>65</sup>

During 1944 and after, Nazi leaders reached for increasingly drastic measures. Underground factory dispersal, seen as unnecessary and extreme in 1942 and 1943 when plans were first developed, became a saving solution. In June of 1944, Himmler approached Hitler with the idea of creating a “large-scale SS business enterprise” that would take care of everything from raw materials to manufacturing of armaments production.<sup>66</sup> One of the

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<sup>63</sup>Gregor, *Daimler-Benz in the Third Reich*, 116-117.

<sup>64</sup>Overy, *War and Economy in the Third Reich*, 118.

<sup>65</sup>Gregor, *Daimler-Benz in the Third Reich*, 101.

<sup>66</sup>Speer, *Inside the Third Reich*, 372.

greatest benefits, touted Himmler, of an SS enterprise, was the seemingly endless supply of free labor from numerous labor and concentration camps. Usage of foreign, unskilled, and forced laborers was not always the first choice for many companies. Throughout the rest of the war Himmler and the SS began acquiring businesses to build their secret enterprise.

As was seen in this section, many German businesses were reluctant to enter into a relationship with the Nazi regime. Concern sprang from contention with political ideology as far as it concerned the economy. Businesses, in general, were in favor of those practices and policies that expanded their markets and therefore their pockets. Nazi business plans, they feared, would limit international exchange, and conversion to military production would be costly and leave them with machinery and facilities that would be useless, or at the least, hard to sell, at the end of what was to be a very short war. German businesses and the Nazi government were often initially at odds, as Nazi short-term goals for armament clashed with businesses long-term goals of self-preservation. But "big business was an active partner in many key facets of Hitler's National Revolution," writes Tooze, and "in virtually every context, even settings in which one might have expected some resistance, the regime's political representatives found active collaborators in German business."<sup>67</sup> As Allied air raids destroyed factories, German businesses actively and anxiously sought government protection. Some businesses, therefore, were willing to overlook the slave laborers who built their tunnels and bunkers, as long as it saved their machinery from being destroyed.

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<sup>67</sup>Tooze, *The Wages of Destruction*, 134.

## Conclusion

One important aspect about the dispersal program, especially the underground projects that was not covered in this essay, is the use of slave labor. Concentration camp inmates became the major source of labor for the underground projects after Himmler and the SS became involved. During 1944, the Luftwaffe suffered incredible losses. Destruction of fighter aircraft and pilots hovered around 50 per cent.<sup>68</sup> In another desperate move to save the Luftwaffe, the Reich Air Ministry joined with Albert Speer and his Armaments Ministry to increase aircraft production. Speer, with the involvement of Himmler and his SS, created a Jägerstab (Fighter Staff) to contract labor from concentration camps for the express benefit of the Luftwaffe and contributing businesses. Messerschmitt's Regensburg factory is an example of a dispersal project benefitting from collaboration with SS sub-contractors. Inmates of the nearby Flossenbuerg concentration camp were now producing parts for airplane engines and frames .

The Jägerstab broke many rules, political and ideological, in order to conduct business. International laws on treatment of prisoners were subjugated to the principle that increased production was paramount. They even employed Jewish inmates for the production of aircraft, an ideological taboo ignored for the sake of higher output.<sup>69</sup> Jägerstab projects employed thousands of workers. Just two weeks after the Jägerstab was formed, 36,000 laborers from concentration camps were employed in its factories, with the hope to increase the number to 90,000 soon thereafter.<sup>70</sup> Slave labor, then, was critical to the underground dispersal projects, as most of the laborers were used to excavate tunnels,

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<sup>68</sup>Ibid., 627.

<sup>69</sup>Ibid., 630.

<sup>70</sup>Ibid.

clean up old mines, and even produce Germany's weapons. This topic will be discussed more fully in the dissertation.

This brief historiography of the German economy and German business involvement with government programs shows a dearth of scholarly work about dispersal plans for German armaments factories during World War II, specifically the efforts to move factories underground. Several major players in the underground dispersal project lack any form of bibliography. Hans Kammler and Oswald Pohl, two SS leaders directly involved in the underground dispersal projects, are mentioned only briefly in many of the books addressing German businesses and Nazi organizations, and would benefit from a more complete look into their involvement in the Nazi regime.

While Hitler saw underground dispersal as an important and war changing project, other Nazi and military leaders, like Speer, thought it a futile waste of resources. Further research in this area will determine if subterranean factories were able to increase production while decreasing destruction, more fully reveal the relationship between businesses and the Nazi regime, expose the actions of some Nazi leaders, and describe the efforts German businesses and the government were willing to take to win the war.

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