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**Roads without Cars  
The HAFRABA Association and the  
Autobahn Project 1933-1943 in Germany**

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# 1 Introduction

The topic of *Autobahn* construction during the era of National Socialism seems unusual, considering that Germany was barely motorized in 1933. Repeatedly, it has challenged theorists to interpretation. Stommer and Philipp have designated motorways as “pyramids of the Third Reich” in order to emphasize the character of National Socialism.<sup>1</sup> Mom highlights the visionary character of the project as anticipation of mass motorization.<sup>2</sup> Furthermore, the project can be interpreted by a formal analysis with the aim of evaluation research, as has been carried out by the author (see below).<sup>3</sup>

All of these approaches can be integrated demonstratively if the *Autobahn* project is related to the politics of folk products – an approach, which was developed by Wolfgang König as follows:<sup>4</sup> Germany had to make up for a backlog regarding important indicators of a consumer society, compared to the United States, with the help of a federally-controlled economy under conditions of scant resources, shortage of foreign exchange and frozen wages. A “National Socialism consumer society” was to be developed by providing inexpensive infrastructure, consumer goods, and services in different fields in the form of “folk” products for the broad mass of the population. This would correspond to the socialist self-concept of the Nazi-state. This approach has been elaborated by Wolfgang König. He analyzes the political fields:

1. folk broadcast receivers
2. folk television receivers
3. folk accommodations
4. folk refrigerators
5. folk vehicles
6. Tourism offers by the organization “Kraft durch Freude” (Power through Joy).

König describes how different power centers of the NS-regime picked up these topics in order to expand their influence. Frequently, there was tension between different authorities on how to define folk products, about the needs of a working-class family, and finally about competences. Furthermore, conflicts arose with regard to how limited resources such as human labor and raw material are to be allocated to the production of folk products or how they had to be reduced in

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<sup>1</sup> R. Stommer und Claudia Gabriele Philipp (Hersg.): *Reichsautobahnen – Pyramiden des Dritten Reiches*, Marburg 1982

<sup>2</sup> Gijs Mom: *Roads without Rails – European Highway-Network Building and the Desire for Long-Range Motorized Mobility*, in: *Technology & Culture*, no. 4, vol. 46 (2005), p. 745-772

<sup>3</sup> Vahrenkamp, Richard: *Der Autobahnbau 1933-1939 und das hessische Autobahnnetz*, in: *Zeitschrift des Vereins für hessische Geschichte und Landeskunde*, Vol. 109, 2004, Verlag PH.C.W. Schmidt, Neustadt an der Aisch, p. 225-266

<sup>4</sup> Wolfgang König: *Volkswagen, Volksempfänger, Volksgemeinschaft – Vom Scheitern der nationalsozialistischen Konsumgesellschaft*, Paderborn 2004

favor of armaments. However, the construction of the *Autobahn* could be achieved until 1938 almost without limiting the production of armaments. In addition to the construction of the *Autobahn*, a successful implementation of those political products was only achieved for the folk broadcast receiver and the tourist packages of the KDF. All the other approaches were restricted to pilot schemes and to post-war visions. This visionary approach of Nazi policies for a consumer society denotes similarly the *Autobahn* project, which had to provide an infrastructure for mass motorization. However, the war in 1939 put an end to further implementation of all those concepts, with the exception, surprisingly, of the construction of the *Autobahn*. The KDF package tours were stopped. The Volkswagen factory was completed but was then used for war production, not automobiles. The implementation was superseded by visions, which were further thought up. This was done all the more as a war victory was only assumed. The end of the war would set off a period of abundance of resources by exploiting Poland and Russia, and would thereby provide the political and economical foundation of a National Socialist-consumer-society.

After the downfall of the Third Reich in 1945, something which the *Autobahn* constructors only expected to happen centuries later actually occurred: The *Autobahn* project became a symbol of National Socialism. In the postwar period of the 1950s and 60s, the truncated *Autobahn* network was regarded as a genuine justification for the National Socialist-state in the divided German nation.

In addition to the backward idealization, the *Autobahn* network has developed at the same time a path-breaking function for the 20<sup>th</sup> and 21<sup>st</sup> century – and not only for mass motorization. During the 1950s, US President Dwight Eisenhower promoted an analogous motorway project for the USA, arguing that the motorway provides a decentralized possibility of escape for the population of big cities in case of a nuclear war. But this argument was only supplementary in order to implement the project.<sup>5</sup> However, the individualization of motorized transport on the highway network in the 1970s was an example for the creation of a failsafe communication network of the Pentagon. Data packets would autonomously find their way through a network analogous to individual motor vehicles. The network could be constructed largely failsafe, in the event of a nuclear war thanks to manifold cross connections. This basic model of a failsafe communication network combined with a developed data transport protocol called TCP/IP became the basis for the development of the Internet. The integration of personal computers

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<sup>5</sup> *Phil Patton*: Open Road – A Celebration of the American Highway, New York 1986, p. 89, see also: *Mark M. Rose*: Interstate – Express Highway Politics 1939-1989, Tennessee UP, 1990, 2<sup>nd</sup> improved edition, Chapter 6 und *Bruce E. Seely*: Building the American Highway System–Engineers as Policy Makers, Philadelphia 1978, p. 213

into the Internet as “vehicles of the spirit” led to the Internet-boom which intensified in the 1990s. In the 21<sup>st</sup> century, the Internet continues to shape both business and personal communication.

Antoine Picon called attention to integrating the planning- and construction-histories of the motorways into a general theory of infrastructure.<sup>6</sup> Airports, container harbors, shopping centers and blocks of offices seem to be facilities without featuring a specific location (called non-locations) just as motorways do. Herewith, he refers to the differentiation of generic and specific spaces of the architectural theory.<sup>7</sup> He describes the motorway as being generic because it endlessly reproduces the space of the lane. At the same time, he describes the motorway as being specific because of its adaptation to the respective national and scenic conditions.

In the past, research on Nazi autobahn construction in the years 1933-1939 has focused on topics such as the background, the decision-making process, the landscaping of the autobahn, the organization and financing of autobahn construction as well as the project's importance for job creation and the military.<sup>8</sup> There appeared a number of studies so that the historian Ludwig already in 1995 raised the question, that this field of research would be overcrowded.<sup>9</sup>

However, a number of questions remain unanswered, such as the specific routing of the roads in certain parts of the country, the work of the project company GEZUVOR or the role played by road-rail rivalry in the decision-making processes. Neither have the Chancellery files of the Hitler government that have been published in recent years been evaluated. In particular, this study will focus on the routing of the autobahn in central Germany taking into account the relationship between local and long distance traffic in the general decision-making process for autobahn construction.

To avoid giving the impression that autobahn construction was a specifically Nazi project, the author has also included the transport policy debates before 1933 and followed their impact on autobahn construction. For this purpose, the HAFRABA-project as a forerunner will be evaluated and an assessment of the HAFRABA association including the latest research results of Bortolotti is given. Further, articles on transport policy are screened published in the following German journals

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<sup>6</sup> *Antoine Picon: Towards a history of Infrastructure*, in: *Michele Bonino und Massimo Moraglio: Inventing Movement – History and Images of the A6 Motorway*, Turin 2006, p. 13-17

<sup>7</sup> *Jean Attali: The Roman System, or the Generic in All Times and Tenses*, in: *Rem Koolhaas (Editor): Mutations*, Barcelona 200

<sup>8</sup> See appendix 1

<sup>9</sup> *Karl-Heinz Ludwig: Politische Lösungen für technische Innovationen 1933-1945 – Eine antitechnische Mobilisierung, Ausformung und Instrumentalisierung der Technik*, in: *Technikgeschichte*, Bd. 62, 1995, p. 333-344

- ADAC Motorwelt,
- Der Deutsche Volkswirt,
- Deutsche Wirtschaftszeitung – Organ des DIHT
- Die Reichsbahn
- HAFRABA-Mitteilungsblatt (after 1932: Die Autobahn)
- Verkehrstechnische Rundschau
- Wirtschaftsdienst,
- Zeitschrift für Verkehrswissenschaft

between 1930 and 1932 to explore the transport policy debates. Moreover, the collection of press cuttings on transport policy of the *Deutsche Handlungsgehilfenverein* in the archive of the Federal Republic of Germany was also evaluated. In addition, various archives have been evaluated.

The German autobahn project reflects many aspects of the National Socialist regime's policies, in particular its unbridled use of force both internally and externally. The head of the autobahn project, Fritz Todt, was not only a road construction engineer, but also a convinced National Socialist who had joined the party as early as 1923 and who cannot, therefore be regarded as an apolitical technocrat. On the contrary, Hitler took pleasure in introducing him as an old comrade. It was he who conducted the forced recruitment of the unemployed for autobahn construction as a National Socialist political project and organized the labor camps for construction workers strictly in accordance with the principles of National Socialist ideology. In the first year, Labor was compulsory and workers were unable to escape the heavy physical labor, which in the first year had to be carried out with virtually no help from machinery.<sup>10</sup> For that reason, autobahn labor camps had much in common with concentration camps. The autobahn project closely followed Hitler's expansionary foreign policy. Planning for autobahn construction in Austria was started in 1938, immediately after that country's annexation.<sup>11</sup> And the planning for Czechoslovakia and Poland was started in 1939, the year these states were invaded.<sup>12</sup> Finally, it should be remembered that the autobahn project was also one of Hitler's favorite projects and he enjoyed being presented with the details and then making final decisions about routing and construction himself<sup>13</sup>.

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<sup>10</sup> See *E. Schütz und E. Gruber*, *Mythos Reichsautobahn*, Berlin, 2nd edition 2000

<sup>11</sup> See Kreuzer, Bernd: *Tempo 130. Kultur- und Planungsgeschichte der Autobahnen in Oberösterreich*, Linz 2005

<sup>12</sup> The expansion is documented in "Die Strasse" in the years 1938 till 1942. For the projected route Breslau-Brünn-Vienna through Czechoslovakia see the treaty between Germany and Czechoslovakia on 19<sup>th</sup> of November 1938, in: *RG 1938, II*, p. 236f.

<sup>13</sup> Speer reports on excursions of Hitler to the building sites of the autobahn, in: *Richard Overy: Interrogations – The Nazi Elite in Allied Hands*, London 2001, p. 229. *Windisch-Hojnacki*, (cf. appendix 1), documents the selection of the designs in the cases of the Mangfall bridge and of recreation area Chiemsee by Hitler, p. 97, 147

## 2 The HAFRABA-Project as a forerunner<sup>14</sup>

In the years between 1923 and 1933, a lively debate about the future of the road systems took place in Germany. Several proposals were launched to construct highways between Germany and Italy designated for automobiles only (in the following: autobahn). The shining example of the highway initiative of the entrepreneur Puricelli in Milan, who constructed privately-operated autobahns between Milan and northern Italy, stimulated the German debates. On 11<sup>th</sup> of January 1927 a conference was held in Leipzig to discuss an autobahn route Berlin-Leipzig-Munich-Roma.<sup>15</sup> Among other initiatives the association "HAFRABA" was most important,<sup>16</sup> being founded in the town hall of Frankfurt(Main) on 6<sup>th</sup> of November 1926.<sup>17</sup> The abbreviation HAFRABA means Hamburg-Frankfurt-Basel and denotes the aim of the association: to promote an autobahn from the ports at the northern sea, i.e. Hamburg, via Frankfurt as an important place of commerce in western Germany to southern Germany at the border of Switzerland, i.e. Basel. From the beginning the association had the concept to extend the autobahn from Basel to the Italian port of Genoa. Figure 1 shows the projected course of the autobahn.<sup>18</sup>

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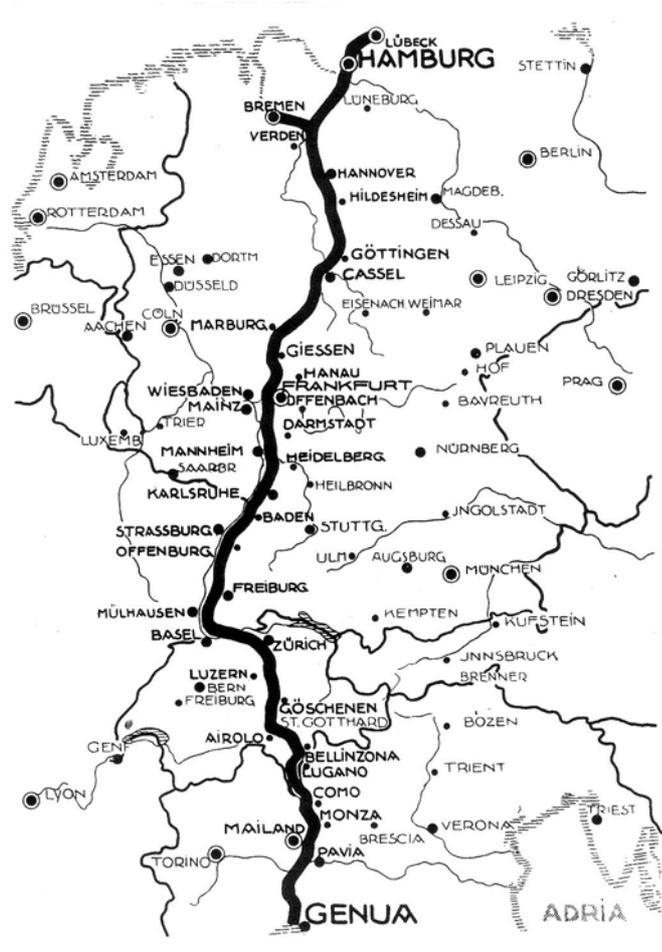
<sup>14</sup> See also my working paper: The HAFRABA and forerunners of the German autobahn project, Working Paper in History of Mobility 9/2006, in the internet resource [www.ibwl.uni-kassel.de/vahrenkamp/History\\_Mobility/History\\_Mobility.htm](http://www.ibwl.uni-kassel.de/vahrenkamp/History_Mobility/History_Mobility.htm) and my book: Auto-Mobilität - Die Hafraba und der Autobahnbau in Hessen 1933 bis 1943, Darmstadt 2006

<sup>15</sup> Robert Otzen: Die Autostrasse Hansestädte-Frankfurt-Basel, Ziele und Zweck des Vereins „Hafraba“, Hannover 1927, p. 11 (cf. Appendix 2)

<sup>16</sup> Verein zur Vorbereitung der Autostrasse Hansestädte-Frankfurt-Basel (The Society for the Promotion of the Autobahn Hansestädte-Frankfurt-Basel)

<sup>17</sup> Report of the first meeting of the board of Hafraba on 10<sup>th</sup> of February 1927, Hannover 1927 (cf. Appendix 2)

<sup>18</sup> Otzen, op.cit., p. 7



**Figure 1: The Route from Hamburg to Genoa through Germany with its turn-off to Bremen**

When one explores the political and social forces being brought together in the HAFRABA association, one comes to the conclusion that there have been influences from the construction and the transport business. These were complemented by the transport administrations of states and cities. As a mix of entrepreneurs and public agencies, the HAFRABA association was a private initiative and not part of a state administration. One can identify two groups among the 32 members of the advisory board and among the 6 members of the executive board of the HAFRABA association.<sup>19</sup> One group consists of

- leading officials, even mayors, of the urban administrations of the cities along the route from Hamburg to Basel (cf. Figure 1): Bremen, Hamburg, Hanover, Göttingen, Kassel, Giessen, Marburg, Mainz, Frankfurt(Main), Wiesbaden, Darmstadt, Mannheim, Karlsruhe, Freiburg, and
- leading officials of the transport administration of the federal states along the route Hamburg-Basel, as e.g. Arthur Zierau, representing the federal state of Baden, Becker from the Prussian province of Hesse-Nassau and Krebs from the federal state of Hesse-Volksstaat.

<sup>19</sup> The list of the board members is published in Report of the first meeting of the advisory board of Hafraba on 10<sup>th</sup> of February 1927, op. cit., p. 28-29

- Robert Otzen as professor for railroad construction from the Technical University of Hanover.

The second group consists of 10 directors from the construction and the transport business, for example Vogel and Dykerhoff from the Portland Cementwerke in Amöneburg and Heidelberg, Milke from the Strassenbau AG in Cologne and Meisenheimer from Wygass+Freytag in Frankfurt(Main), and further five representatives from the chambers of commerce. The speaker of the advisory board was Landmann, the mayor of the city Frankfurt(Main). The secretary of the HAFRABA association was Willy Hof.

The most important member in the executive board was the Italian autobahn promoter Piero Puricelli. He spoke German fluently and served therefore as an important link of ideas and experiences between Italy and Germany. This exchange has been explored by Bortolotti.<sup>20</sup> Puricelli often made proposals for an European autobahn network, so done at the 7<sup>th</sup> International Congress on Road Construction in Munich in 1934. Figure 2 shows this idea. The speaker of the executive board of HAFRABA, Robert Otzen, often underlined the strong impetus of Puricelli leading to the foundation of the HAFRABA association.<sup>21</sup> Otzen reported in 1926, on an excursion as a guest of Puricelli with an automobile on the Italian Autobahn that it gave him for the first time the impression of a motor ride on a road without obstacles.<sup>22</sup> At the first meeting of the advisory board in 1927, Puricelli gave a lecture in German language.<sup>23</sup> Not only the idea of constructing autobahns, but also the concept of mixing entrepreneurs with public agencies in order to promote this idea was transferred from Italy.

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<sup>20</sup> Bortolotti, L.: *Fra Politica, Propaganda e Affari: L'Autostrada Roma-Berlino 1927-1942 (Between Politics, Propaganda and Business: The Autobahn Rom-Berlin)*, in: *Storia Urbana*, Vol. 81, 1997, p.47-79.

<sup>21</sup> Robert Otzen: *Die Autostrasse Hansestädte-Frankfurt-Basel, Ziele und Zweck des Vereins „Hafraba“*, Hannover 1927, p. 15.

<sup>22</sup> Report of the first meeting of the board of Hafraba on 10<sup>th</sup> of February 1927, op. cit., p. 13

<sup>23</sup> Vorträge gehalten anlässlich der 1. Verwaltungsrat-Sitzung am 10. Februar 1927 in den Räumen der Frankfurter Gesellschaft für Handel, Industrie und Wissenschaft in Frankfurt a/M/, von Piero Puricelli und Robert Otzen, Schrift Nr. 3 – Hellerdruck Frankfurt 1927

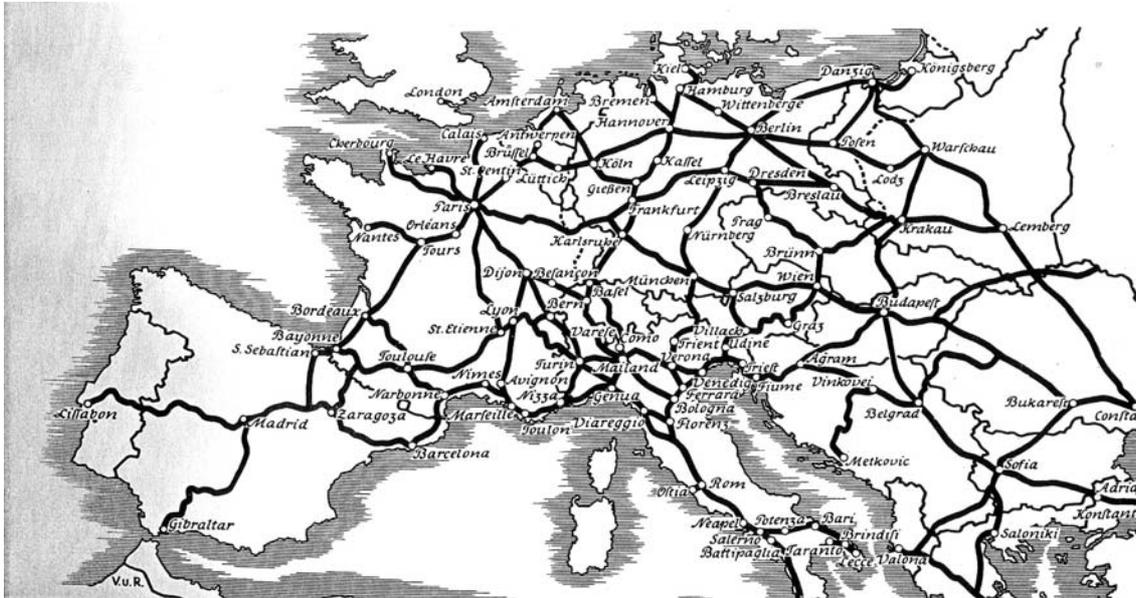


Figure 2: The European Autobahn Network of Puricelli in 1934<sup>24</sup>

The HAFRABA association published numerous papers to spread its ideas. Already in the year 1927, eleven publications appeared as shown in the list of appendix 2. From 1928 on, the newsletter “HAFRABA – Mitteilungsblatt des Hafraba e.V.” has been published with 12 issues per year. Figure 3 depicts a front page of the newsletter, a layout in the functional manner of the 1920s. Since 1932, the newsletter was entitled “Die Autobahn”. In 1933, the editors of the newsletter politically switched to Hitler as the most important promoter of the autobahn idea. The July edition of 1933 showed Hitler on the front page. In the year 1934, the number of issues nearly doubled from 12 to 22. When on 18<sup>th</sup> of August 1933 the HAFRABA association was compulsorily dissolved and incorporated into the project company GEZUVOR - *Gesellschaft zur Vorbereitung des Reichsautobahnbaus* (company for the Preparation of Autobahn Construction)<sup>25</sup> the GEZUVOR became the editor of “Die Autobahn”. The chief editor of the newsletter, Kaftan, remained in his function until the end of the year 1934,<sup>26</sup> when publishing was stopped and the head of the autobahn project, Todt, published his own journal “Die Strasse” with 24 issues per year and with a reduced number of issues from 1940 until 1942. This journal started being published already in August 1934 so that for the residual months of 1934 both journals, “Die Strasse” and “Die Autobahn”, appeared simultaneously. From the year

<sup>24</sup> Puricelli, P: Entwurf für ein europäisches Autostrassennetz, in: Die Strasse, issue 2, 1934, p. 42s. Puricelli presented this concept at the 7<sup>th</sup> international Congress on Road Construction in Munich on 3<sup>rd</sup> till 8<sup>th</sup> September 1934.

<sup>25</sup> Die Autobahn, issue 9, 1933, p. 7-9

<sup>26</sup> In Todt's journal “Die Strasse” Kaftan had no influence furthermore. Only once, at the opening of the first autobahn route from Frankfurt(Main) to Darmstadt in May 1935, he was allowed to publish a retrospect: „Hafraba“ – Ein Rückblick, in: Die Strasse, issue 9, 1935, p. 321s. This was the only time when the HAFRABA project was mentioned in Todt's journal. Kaftan published his memoirs about the autobahn project in 1955: Kaftan, K.: Der Kampf um die Autobahnen, Berlin 1955

1935, on the front pages of "Die Strasse" the nomination "Die Autobahn" also appeared as a subtitle.

In its publications, the HAFRABA association showed the weakness of the existing road network in Germany. It claimed highways for automobiles only in order to meet the growing demand of road capacity due to increasing motorization and to connect important cities. Although the HAFRABA association presented a plan for an autobahn network for the whole of Germany as early as 1927,<sup>27</sup> its publications largely focused on the north-south route Hamburg-Hanover-Kassel-Frankfurt-Basel or the section Frankfurt-Mannheim as a showcase and demonstration project. By doing so, the HAFRABA association already addressed the issue of local transportation with the "small HAFRABA" for the Frankfurt-Mannheim region.

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<sup>27</sup> R. Otzen: Die Autostrasse Hansestädte – Frankfurt – Basel. Zweck und Ziele des Vereins "Hafraba", Schrift Nr. 1, Hannover 1927, p. 13f

# HAFRABA

Mitteilungsblatt des Hafraba e.V.

VEREIN ZUR VORBEREITUNG DER AUTOSTRASSE HANSESTÄDTE-FRANKFURT-BASEL

Das Mitteilungsblatt wird an Mitglieder, Verwaltungsrat und Ausschüsse kostenlos versandt. Abonnementspreis: 6 RM. im Jahr Einzelnummer 50 Pfg.

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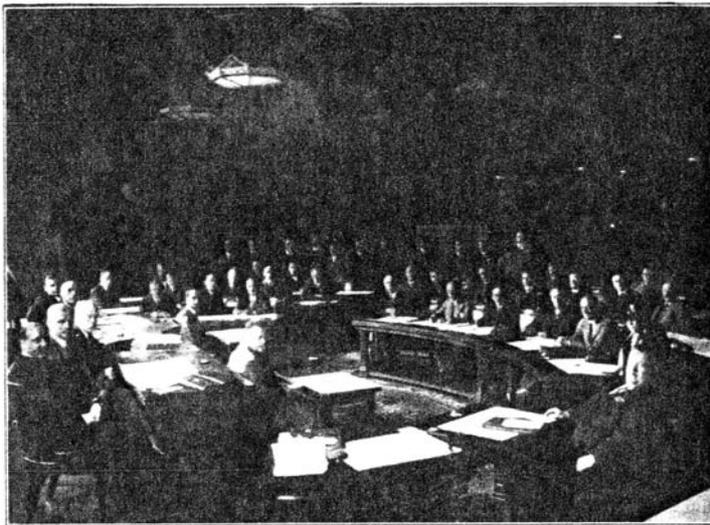
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Aufnahme einer Sitzung des 1. Internationalen Autobahn-Kongresses im Verwaltungsrats-Sitzungssaal des „Internationalen Arbeitsamtes in Genf“

## I. Internationaler Autobahn-Kongreß in Genf

(Sonderbericht für das »Hafraba-Mitteilungsblatt«)

Der Kongreß tagte vom 31. August bis 2. September im Gebäude des „Internationalen Arbeitsamtes“ in Genf. Eröffnet durch eine Ansprache des Direktors des Internationalen Arbeitsamtes, Herrn Albert Thomas, der die Gründung eines Autobahnkongresses im Interesse der Behebung der internationalen Krise sehr begrüßte, denn dieser sei nicht nur in verkehrstechnischer, sondern vor allem auch in wirtschaftlich-sozialer Hinsicht von Bedeutung. Die Tatsache, daß der Kongreß im Verwaltungsratsaal des Arbeitsamtes tagte, sei schon Beweis dafür, welches persönliche Interesse Herr Thomas selbst an den aufgeworfenen Fragen habe und wie eng

die Beziehungen, die zwischen dem Zweck der Tagung und den Zielen seines Arbeitsamtes beständen, seien. Er ermutigte die Teilnehmer an dem Kongreß, vor der öffentlichen Meinung die Begründung ihrer Bestrebungen darzulegen und ihre Ideen zu entwickeln, wobei in den gegenwärtigen Zeiten auch der moralische Faktor betont werden dürfe, denn hier seien ja Mittel zur Bekämpfung der Arbeitslosigkeit gegeben, um so mehr, da der Gedanke der Autobahnen geeignet wäre, für das internationale Kapital eine Verlockung zu sein.

Zum Ehrenpräsidenten des Kongresses wurde Herr Dr. Ing. Puricelli, Königl. Italien. Senator, Er-

Figure 3: The Front Page of the HAFRABA Newsletter in 1931, reporting on the First Autobahn Congress in Geneva.

Germany had only a small density of cars per capita in comparison with other countries,<sup>28</sup> but there was a relatively high volume of local traffic leading to excessive burden being placed on country roads. Therefore expressways were more urgently needed to link neighboring towns than to serve long distance traffic.<sup>29</sup> Thus, the road link of Düsseldorf-Cologne-Bonn has been discussed as early as the 1920s and the Cologne-Bonn autobahn opened in 1932.<sup>30</sup> Moreover, the creation of the LEHA association in 1927 marked the start of efforts to link Leipzig and Halle by means of an autobahn. Discussions about linking Heidelberg with Mannheim were also started in 1927.<sup>31</sup> But the need for local transport links played no role in the discussion about the autobahn network after 1933, as this was a long distance network that covered the entire Reich<sup>32</sup> and was presented in the propaganda as a gigantic project.

Besides proposing routes and networks for autobahns, the HAFRABA association focused on the following subjects in its publications:

1. The question of how to finance the autobahn projects.<sup>33</sup> As in Italy the north-south route, Hamburg-Hanover-Kassel-Frankfurt-Basel was to be financed by private capital and refinanced by a toll fee. However, to build privately financed roads was difficult in Germany. This procedure would not be in compliance with the laws of the financial constitution of the Reich. Furthermore, the Transport Administration did not support privately financed roads.<sup>34</sup> A motion of the HAFRABA in Parliament to get an exemption failed in the confusion at the end of the Weimar Republic.<sup>35</sup>

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<sup>28</sup> The vehicle density per 100 inhabitants was only one quarter of that of France or England, see Statistisches Jahrbuch für das Deutsche Reich 1933, p. 84\*.

<sup>29</sup> Various numbers of the Hafraba Mitteilungsblatt ( in the following: Mitteilungsblatt) contain reports about traffic counts to support the argument of traffic congestion. So issues 2 and 3 in 1929 report on the traffic of the arterial roads of Frankfurt (Main).

<sup>30</sup> *Grossjohann*: Der Beginn einer neuen Epoche in Deutschland – Zur Eröffnung der Autobahn Köln-Bonn am 6. August 1932, in: Die Autobahn, issue 8, 1932, p. 1-5.

<sup>31</sup> Mitteilungsblatt, issue 8, 1930, p. 19, *Elsaesser*: Städte an den Hafraba-Strassen – III. Mannheim, in: Mitteilungsblatt, issue 5, 1930, p.7-9, reports on an increase of 60% of the numbers of cars moving between Mannheim and Heidelberg in the years 1926 and 1930 amounting to 1585 cars per day. He shows that the 16km of road connection between the cities Mannheim and Heidelberg contains 6km of passing villages to support his claim for an express highway. *Usinger* claims in his report „Wie denken Sie über Nur-Autostrassen?“ to separate the slow road users from car traffic, in: Mitteilungsblatt, issue 3, 1929, p.1-2. The argument to separate traffic modes appears again in 1933, with the reasons for the law on establishing the company Reichsautobahn, in: Die Autobahn, issue 7, 1933, p. 2. *J. Huck* u.a.: Vergleichsfahrten auf Reichsautobahn und Reichsstrasse, zweiter Bericht: Diesel-Lastzug, in: Die Strasse, issue 4, 1938, p. 460-465, supplies empirical data on the number of intersections of a highway in comparison with the same connection on an Autobahn.

<sup>32</sup> The official grounds for the law about the establishment of a Reichsautobahn company specify that one of the tasks of the autobahn is to "take up traffic over long distances", see: Die Autobahn, issue 7, 1933, p. 2.

<sup>33</sup> See the file Autostrasse Hamburg – Frankfurt – Basel 1930-1934, MA6289, Institut für Stadtgeschichte Frankfurt(Main)

<sup>34</sup> Record of the conference of the HAFRABA with the Transport Administration on 18<sup>th</sup> of August 1928, in: Thüringisches Hauptstaatsarchiv Weimar, C233, p. 22

<sup>35</sup> *Kornumpf*, p. 41, see appendix 1.

2. The economic importance of the automobile industry for the economic development of a country.<sup>36</sup>
3. Technical questions of the construction of autobahns and the layout of junctions.<sup>37</sup>
4. The experiences with express highways from abroad, especially USA and Italy<sup>38</sup>.

When on 23<sup>rd</sup> of May 1933 Alfons Woerner became member of the advisory board of the HAFRABA,<sup>39</sup> a confidant of Todt were placed in the association. Woerner was the owner of the Munich-based building company Sager&Woerner – where Todt was employed as chief engineer – and member of the NS party.<sup>40</sup> On 18<sup>th</sup> of August 1933 at an extraordinary assembly, the HAFRABA association was compulsorily dissolved and incorporated into the project company GEZUVOR - *Gesellschaft zur Vorbereitung des Reichsautobahnbaus* (company for the Preparation of Autobahn Construction).<sup>41</sup> Most of the old members of the executive board were taken over to the new company. Woerner became the head of the Bavarian section of the GEZUVOR. The personal records and portrait photos of the members were published in issue 9 of “Die Autobahn” in 1933. The head office was shifted from Frankfurt(Main) to Berlin. As the GEZUVOR consisted of 12 regional sections with only regional responsibility, the closure of the HAFRABA platform led to an increase of Todt’s power. He kept the exclusive authority for planning the overall network. So short after the date 18<sup>th</sup> of August 1933, on 24<sup>th</sup> of August 1933 he could announce a new route to be built without any discussion of the HAFRABA experts: the route Munich – Salzburg.<sup>42</sup> This was after the route Frankfurt(Main) – Darmstadt the second route which was officially determined.

Although the HAFRABA association conducted activities to a great extent – e.g. exhibitions in the cities on the route Hamburg-Basel as in Kassel in 1928 - , it did not receive great attention in public or even a breakthrough. Not very convincing was the argument in the HAFRABA propaganda that there would be a need of the north-south-route. As traffic counts conducted in

<sup>36</sup> See *August Müller*: Das Auto als Konjunkturhebel, General-Anzeiger, Frankfurt a.M., on 11<sup>th</sup> of July 1930, quoted from the Mitteilungsblatt, 1930, issue 8, p. 19. E. *Neumann*: Straßenverkehr und Straßenwesen in Amerika, in: Mitteilungsblatt, issue 1, 1931, p. 4f. See also the results of a study tour of the Studienkommission des Deutschen Industrie- und Handelstages and the Berliner chamber of commerce, in: *W. Feilchenfeld*: Kraftverkehrswirtschaft und Kraftfahrzeugsteuern und Landesstrassenfragen in den USA, Berlin 1929, for more on this see also the report by Dr. *Krebs*: Kraftverkehrswirtschaft in Amerika, in: Mitteilungsblatt, issue 2, 1930, p. 3-6.

<sup>37</sup> 1. Sitzung des Technischen Ausschusses am Dienstag, den 5. April 1927 in Frankfurt am Main, Schrift Nr. 5 - Hellerdruck Frankfurt 1927

<sup>38</sup> Report on the Second International Congress on Express Highways in Milano, in: Mitteilungsblatt, issue 5, 1932, p. 1 and note 36

<sup>39</sup> Die Autobahn, issue 6, 1933, p. 7

<sup>40</sup> Anton Woerner: Die Reichsautobahn München – Salzburg, in: Die Autobahn, issue 9, 1933, p. 10-12, containing a personal record of Woerner and a portrait photo.

<sup>41</sup> Die Autobahn, issue 9, 1933, p. 7-9

<sup>42</sup> Münchener Neueste Nachrichten on 25<sup>th</sup> of August 1933, Town archive Munich, press cuttings collection ZA Autobahn, München-Salzburg 1933-1934

1924 and 1925 were shown, the main long distance traffic of cars on the existing roads flowed in the direction Berlin – Cologne, but the north-south-traffic was weak.<sup>43</sup>

The low public opinion of the HAFRABA ideas can be evaluated by exploring the issues of the journals of the years 1930 to 1932, as mentioned in the introduction above. In most of the journals the HAFRABA project was not mentioned at all. It is conspicuous that between 1930 and 1932, ADAC-Motorwelt – the leading journal for automobilists - with 52 issues per year, only mentions the HAFRABA project in two tiny notices<sup>44</sup>. This deficit can be explained by the differing interests within the automobile industry. As most German car engines were not designed for the permanent stress of use on autobahns,<sup>45</sup> the German automobile industry had no interest in autobahn construction.

### **3 The Goals of Autobahn Construction Within the Context of Transport Policy**

The goals of autobahn construction will be examined using the methods of evaluation research. The explicit and the hidden goals are evaluated and the change of the priorities of the goals during the implementation of the autobahn project is considered. A study of the goals pursued by the National Socialists in connection with the autobahn project reveals that there were a number of differing interests that could be bundled in the project:

- Job creation,
- Propaganda,
- Promotion of motorization
- Economic policy and
- Military policy.

As these goals are so closely linked, it is difficult to establish an order of priority or even to declare any single one of them the dominant factor. On the contrary, one could say it was precisely because the autobahn project allowed the bundling of so many different interests that it became the "ideal" National Socialist project – not least of all, as a means of establishing the regime's reputation at the beginning of its rule. These individual points will be examined below,

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<sup>43</sup> Pflug, F.: Der Kraftfahrzeugverkehr, in: B. Harms (Ed.): Strukturwandlungen der Deutschen Volkswirtschaft, Berlin 1928, vol. 2, p. 251

<sup>44</sup> ADAC-Motorwelt, 1931, Nr. 25, p. 17-19, ADAC-Motorwelt, 1932, Nr. 19, p. 2-3

<sup>45</sup> For more on this see also: A. *Dinkelage*: Autobahnen verlangen andere Motoren, in: Die Autobahn, issue 14, 1934, p: 638 and W. Kamm and H. Goll: Einfluß der Reichsautobahn auf die Gestaltung der Kraftfahrzeuge, in: Die Strasse, issue 3, 1936, p. 67.

whereby the author will also try to demonstrate the continuity of the individual goals of the debates of the 1920s.

In the NS autobahn project many interrelated goals were formulated so that it appeared as an ambivalent project. The lack of a democratic debate in public arenas, which should result in certain priorities, makes it difficult to assess the importance of the goals. But, one can observe some tensions between the autobahn project and other fields of policy. The use of the resources labor and steel was in rivalry to the demand of the four year plan of rearmament since 1936. Second, the supply of a network of high performance roads was used for cargo transport only to a small extent, because the transport administration restricted the use of trucks and run in a transport crisis in 1938.<sup>46</sup>

### 3.1 The Goal Political Propaganda

When in 1933 the National Socialists adopted the planning of HAFRABA, and started detailed planning and construction of the autobahn network, they were able to combine two goals. Job creation and propaganda. Autobahn construction could be presented as a magnificent measure to create jobs in the spring and summer of 1933 following the six million unemployed that had been registered in January of that year. The Nazis therefore strongly emphasized the goal of job creation in their propaganda. In his speech on 1<sup>st</sup> of May 1933, Hitler announced, "We will continue to endeavor to realize large public job creation schemes this year," and referred to "our new road construction program, a gigantic task that requires billions."<sup>47</sup> After the act to establish the "Reichsautobahn" Company in June 1933, the autobahn construction project was announced to the public by the media.<sup>48</sup> Between 25<sup>th</sup> of June 1933 and 22<sup>th</sup> of July 1933 the party press "Völkischer Beobachter" had four front-page reports on the project, including one on 12<sup>th</sup> of July 1933 about the "great Reichsautobahn that, at the suggestion of the Führer Adolf Hitler, will be created to combat unemployment and promote the automobile industry."<sup>49</sup> The pompous ceremony on 23<sup>th</sup> of September 1933 to mark the start of construction on the section Frankfurt-Mannheim with Hitler turning the first sod of soil was massively exploited by the media

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<sup>46</sup> Heidi Rohde: *Transportmodernisierung oder Verkehrsbewirtschaftung?*, Frankfurt 1999

<sup>47</sup> Compare Hitler's speech on 1<sup>st</sup> of May 1933, in *M. Domarus: Hitler – Reden und Proklamationen*, volume I, Wiesbaden 1973, p. 263.

<sup>48</sup> "Das neue deutsche Autobahn-Netz – Ein Teil des neuen Arbeitsbeschaffungsprogramms," was the headline on page 3 of the *Kasseler Post* on 22<sup>th</sup> of June 1933 (Library university Kassel, Hessischer Lesesaal). "Der gigantische Autostraßen-Plan" was the headline on the front page of the *Hessischen Volkswacht*, the newspaper of the NS Gau Kurhessen, on 26<sup>th</sup> of June 1933 (Library university Kassel, Hessischer Lesesaal). The front page of *Der Völkische Beobachter* on 25<sup>th</sup> of June 1933 (Ausgabe A) reported: "Riesenprojekt der Reichsregierung: Kabinett Hitler beschließt Bau von Reichsautobahnen,," (Deutsche Bücherei, Leipzig).

<sup>49</sup> Ausgabe A, Deutsche Bücherei, Leipzig

for propaganda purposes.<sup>50</sup> The propaganda goal of portraying the autobahn project as a job creation program must have had a far-reaching effect within the Third Reich. The files on autobahn construction in the *BA* contain countless letters from *Gauleiter* (leader of a Gau of the NS party) and *Landräte* (administrative leader of a district) written to Todt and the Reichsautobahngesellschaft in the years 1933 and 1934 requesting a rapid start to construction because the regions concerned were suffering great poverty.<sup>51</sup>

Regarding the propaganda aspect, it should be noted that Hitler assumed that the planning of these major roads would have a psychological impact on the population and serve to build up trust<sup>52</sup> - an important consideration for safeguarding Nazi rule in 1933. Furthermore, propaganda for the autobahn project could combine such diverse intentions as concealing the backward-looking ideas and aggressive objectives of National Socialism with the modern transport concept of the autobahn, while also providing a project to satisfy those parts of the Nazi movement that were pushing for modernization. For this combination of a backward ideology and modernization Herf coined the term "reactionary modernism".<sup>53</sup> Todt, the "General Inspector for German Roads," appointed by Hitler can be considered a representative of this modernizing segment of the movement. He had already brought out a memorandum about the inadequacies of the German road network in December 1932.<sup>54</sup> Furthermore, autobahn construction enabled the propagandists to demonstrate the government's determination to push through new projects with an apparently endless concrete ribbon that was visible to all and to use the autobahn's claim to modernity to proclaim the dawn of a new era.<sup>55</sup>

The goals of job creation and propaganda received significantly greater weight because Hitler presented the autobahn concept as a **network**.<sup>56</sup> This approach differed from the HAFRABA

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<sup>50</sup> *Schütz und Gruber*, cf. appendix 1, p. 41-43.

<sup>51</sup> For example the letter from the *Gauleitung* of Kurhessen on 6<sup>th</sup> of July 1935 to the Direction of the Reichsautobahn requesting a rapid start to construction in Knüll, as the population there was extremely needy, in BA R4601, volume 4043

<sup>52</sup> In a discussion concerning the financing of the autobahns on 18<sup>th</sup> of September 1933 Hitler referred to "the psychological effect that the construction of these large roads would have. Work on such a massive scale as this would have a confidence-building effect," see: Akten der Reichskanzlei, Regierung Hitler 1933-1938, published by *Konrad Repgen*, Teil I: 1933/34, volume 2, edited by *Karl-Heinz Minuth*, p. 742, Boppard am Rhein 1983.

<sup>53</sup> Jeffrey Herf: *Reactionary Modernism. Technology, Culture, and Politics in Weimar and the Third Reich*, Cambridge, 1984, Chapter 8

<sup>54</sup> *Todt's* study was titled "Straßenbau und Straßenverwaltung", BA, R 4601, volume 3001/A

<sup>55</sup> On this interpretation see also *Shand* 1984, cf. appendix 1

<sup>56</sup> The picking up of the network idea is documented in an annotation by *Ministerialrat* Willuhn concerning a discussion between the Chancellor and the director of the HAFRABA e.V., *Hof*, about the planning and financing of autobahn construction on 6<sup>th</sup> of 1933, in: Akten der Reichskanzlei, Regierung Hitler 1933-1938, published by *Konrad Repgen*, Teil I: 1933/34, volume 1, edited by *Karl-Heinz Minuth*, p. 305, Boppard am Rhein 1983, and a report of the director of the HAFRABA e.V., *Hof*, about his discussion with the Chancellor about the planning and financing of autobahn construction on 6<sup>th</sup> of April 1933, op. cit., p. 308. Also on the network idea, the Chancellor's discussion with leading industrialists on 29<sup>th</sup> of May 1933, op. cit., p. 511.

publications having largely focused on the north-south route Hamburg-Hanover-Kassel-Frankfurt-Basel. Hitler recognized that autobahn construction could be presented as a primary measure to create jobs and as the dawning of a new age far more effectively in propaganda if a network could be extended over the entire Reich instead of merely a north-south route from Hamburg to Basel<sup>57</sup>. Hitler also explained his preference for the network on the grounds that it would be easier to push through a large project than a road section against the opposition of particularistic interests.<sup>58</sup> The network concept also had the advantage that construction could be started simultaneously at several different places within the Reich, thus providing a far greater number of propaganda opportunities than, for example, constructing two large hydroelectric power plants in order to create jobs.<sup>59</sup>

According to Schütz and Gruber, the autobahn project gave the National Socialists an opportunity to orchestrate the presentation of the Third Reich.<sup>60</sup> Thus, 90,000 members of Nazi mass organizations were commandeered to line the streets for Hitler's triumphal procession from Frankfurt to Darmstadt when he inaugurated the first section of the autobahn on 19<sup>th</sup> of May 1935.<sup>61</sup> One year later, the inaugurations of other sections throughout the country were coordinated to coincide with special occasions. On 17<sup>th</sup> of August 1936, 5 sections were opened simultaneously at the end of the Olympic Games in Berlin, whereby propagandists were relying on the international press corps that had gathered in Berlin to cover the Olympic Games.<sup>62</sup> On Sunday 27<sup>th</sup> of September 1936, the third anniversary of Hitler first cutting the ground with a spade for autobahn construction, 17 sections were opened, thus completing the first 1000 km.<sup>63</sup> Autobahn construction was also incorporated into the program of National Socialist party congresses. In 1937 and 1938 Todt gave performance reports about the goals that had been

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<sup>57</sup> For propaganda reasons on 21<sup>st</sup> of March 1934 the autobahn project was started at 22 sections simultaneously, *Die Autobahn*, 1934, p. 168. This start was conducted by Goebbels, see the letter on 12<sup>th</sup> of February 1934 from the Thüringen section of the propaganda administration in Berlin to the President of the state Thüringen, in: Thüringisches Hauptstaatsarchiv Weimar, C234, p. 19

<sup>58</sup> See the discussion with the director of the HAFRABA, *Hof*, on 6<sup>th</sup> of April 1933 and with the director general of the Deutsche Reichsbahngesellschaft, *Dorpmüller*, on 10<sup>th</sup> of April 1933, in: Akten der Reichskanzlei, Regierung Hitler 1933-1938, op. cit., p. 305, and p. 331

<sup>59</sup> *Kaftan, K.*: Der Kampf um die Autobahnen, Berlin 1955, makes this comparison, p. 154

<sup>60</sup> Schütz and Gruber, op. cit.

<sup>61</sup> See archive of the city Kassel, *Kasseler Neueste Nachrichten* on 20. 5. 1935, p. 1. Hitler arrived in Frankfurt by air accompanied by Goebbels, Schacht and head of the Press Officer Dietrich and gave Todt a Mercedes cross-country vehicle as a sign of his appreciation.

<sup>62</sup> *Statistisches Jahrbuch für das Deutsche Reich*, 1936, p. 198. *Todt's* press statement in the *Kurhessischen Landeszeitung* on 18<sup>th</sup> August 1936 (Library University of Kassel, Hessischer Lesesaal), in which he referred to the traffic induced by the Olympic Games. The issue 14, the 2nd issue in July 1936, of the journal "Die Strasse" focuses on the Olympic Games.

<sup>63</sup> *Statistisches Jahrbuch für das Deutsche Reich*, 1936, p. 198. "Deutschland dankt jubelnd dem Führer – 1000km Autobahn fertig" was the headline on the front page of the *Kasseler Post* on 28<sup>th</sup> September 1936 (Library University of Kassel, Hessischer Lesesaal)

achieved in autobahn construction from the speaker's podium at the National Socialist party congress in Nuremberg, the Third Reich's center stage.<sup>64</sup>

When evaluating the job creation argument one should remember that the National Socialists were not the first to use it and that it had been put forward in debates ever since the 1920s. Investments in the transport sector, be they canal construction projects, procurement for the Reichsbahn or road and autobahn construction projects, had been repeatedly discussed by the Brüning and von Papen governments as means of creating employment during the Great Depression.<sup>65</sup>

### 3.2 The Goal to promote Motorization

The National Socialists also cited a further economic policy goal for autobahn construction, namely to increase the degree of motorization in Germany, which in an international comparison was clearly underdeveloped.<sup>66</sup> In discussions in the Chancellery Hitler explicitly linked autobahn construction with the promotion of the automobile industry, that he accurately predicted would be "the most formidable and successful of the future."<sup>67</sup> Undoubtedly the existence of high-speed roads provides a strong incentive in the medium term for private households and businesses to purchase vehicles, as the use of this road system promises significantly reduced traveling times and greater flexibility compared to rail transport.<sup>68</sup>

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<sup>64</sup> *F. Todt*. The General Inspector for German Roads presented a report at the Nazi party convention in Nuremberg 1937 about "Bau und Verkehr auf den Strassen Adolf Hitlers", in: *Die Strasse*, issue 18, 1937, p 518-520. and *F. Todt*. Der Generalinspekteur für das deutsche Strassenwesen berichtet auf dem Parteitag Großdeutschlands über die Strassen des Führers als Schrittmacher der deutschen Bauwirtschaft, in: *Die Strasse*, issue 19, 1938, p.600-603. In both speeches he legitimises autobahn construction with a reference to traffic over the Whit holiday.

<sup>65</sup> See e. g. the cabinet meeting on 19<sup>th</sup> of May 1930 in: *Akten der Reichskanzlei Weimarer Republik*, published by *Karl Dietrich Erdmann*, Kabinette Brüning I u. II, volume 1, 30.März 1930 bis 10.Oktober 1931, edited by *Tilmann Koops*, Boppard am Rhein, 1990, p. 137-140, or the cabinet meeting on 5<sup>th</sup> of June 1930, where the construction of the HAFRABA line was discussed, *op. cit.*, p.188-192. See also *H. Marcon*: *Arbeitsbeschaffungspolitik der Regierungen Papen und Schleicher*, Frankfurt 1974

<sup>66</sup> Vehicle density per 100 inhabitants was only one quarter of that of France or England, see *Statistisches Jahrbuch für das Deutsche Reich 1933*, p. 84\*. The promotion of the automobile industry is stated in the grounds for the law of 27<sup>th</sup> of June 1933 for the establishment of a Reichsautobahn Company, in: *Die Autobahn*, issue 7, 1933, p. 2.

<sup>67</sup> See his meeting with leading industrialists on 29<sup>th</sup> of May 1933, *Akten der Reichskanzlei, Regierung Hitler 1933-1938*, *op. cit.*, p. 511, p. 513. He also argued that multiplier effects would stimulate the economy, a very modern, sounding argument for this period. Interesting because the fixation upon war from the very beginning is documented - during this meeting Hitler already anticipated air attacks against the autobahn and recommended reinforcing the concrete, *op. cit.*, p. 511.

<sup>68</sup> *Woerner* estimates that it took 1.5 hours to travel from Munich to the famous ski region Reit im Winkl by car on the autobahn, compared to 5 hours by rail, see *Anton Woerner*: *Die Reichsautobahn Munich – Salzburg*, in: *Die Autobahn*, issue 9, 1933, p. 10-12, containing a personal record of Woerner and a portrait photo. Although a promoter of car transport Woerner did not exaggerate the long travel time of 5 hours from Munich to Reit im Winkl by rail as a screening of the schedule of the year 1934 in the archive of the German Railroad in Nuremberg revealed.

The promotion of the automobile industry should also be seen in terms of the demand for cars in early 1933. On 1<sup>st</sup> of July 1932 there were 497,000 cars and 157,000 trucks licensed in the Third Reich – a low level of motorization, particularly compared to the USA, where there were 25 million vehicles. Car production in Germany fell from 108,000 in 1928 to a low of 43,000 in 1932 during the Great Depression, before rising again to 92,000 and then 147,000 in 1933 and 1934.

The desire to stimulate demand for cars can be seen in the context of the transport policy debates between 1930 and 1932. An analysis of the journals between 1930 and 1932, aforementioned in section 1, shows that repeated reference was made to the economic importance of the automobile industry.<sup>69</sup> This was particularly true in connection with the experiences of the much more highly developed automobile industry in the United States,<sup>70</sup> where the materials and components industries accounted for a large percentage of those employed in the automobile industry. This argument was applied to Germany and demands were made that more be done to stimulate the automobile industry. When Henning<sup>71</sup> asks why Hitler, who was an economic layman, used promotion of the automobile industry as a means of stimulating the economy, attention should be drawn to this transport policy debate. The tax exemption announced in April 1933 for the purchase of new vehicles, to take effect retroactively from March 1933, should also be viewed against the background of this debate.<sup>72</sup>

The policy of motorization in the NS-state is also to be evaluated in the context of the discussion about mass production and rationalization in Germany in the 1920s.<sup>73</sup> The German automobile industry was underdeveloped in production engineering compared to the USA whereupon a discussion sparked off about the need of a folk vehicle. Yet, there was a strong movement favoring the implementation of assembly line production. The concept of the Fordism, which connected mass production and mass wealth, was widely known.<sup>74</sup> That is illustrated by the

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<sup>69</sup> See also for instance *August Müller*: Das Auto als Konjunkturhebel, General-Anzeiger, Frankfurt a.M., 11<sup>th</sup> of July 1930, quoted from the HAFRABA-Mitteilungsblatt, 1930, issue 8, p. 19. See also; Reichsverband der Automobilindustrie (Editor): *Tatsachen und Zahlen aus der Kraftfahrzeugindustrie*, Berlin 1931

<sup>70</sup> ADAC-Motorwelt had 14 reports about the USA in 1930, e.g. about the prevalence of cars in the USA in issue 1, p. 22-24. *Die Automobilwirtschaft in den USA*, in: *Wirtschaftsdienst*, 16. Jahrgang 1931, p. 1079-1081, and compare the sources of note 20.

<sup>71</sup> *Henning*, see appendix 1, p. 221

<sup>72</sup> Dr. H. *Kruse*: Die Notlage der Kraftverkehrswirtschaft, in: *Auto und Wirtschaft*, Nr. 1, Berlin 1932, p. 1

<sup>73</sup> *Reiner Flik*: Von Ford lernen? Automobilbau und Motorisierung in Deutschland bis 1933, Köln 2001, also: *Richard Vahrenkamp*: Taylorismus und Massenproduktion – Geschichtliche Entwicklung und konzeptionelle Probleme, Primärbericht der Abteilung für Angewandte Systemanalyse, Kernforschungszentrum Karlsruhe, 1981

<sup>74</sup> *Kurt Becker, Frank*: Autobahnen, Auto-Mobilität. Die USA; Italien und Deutschland im Vergleich, in: *Politische Kulturgeschichte der Zwischenkriegszeit 1918-1939*, Göttingen 2005 (*Geschichte und Gesellschaft Sonderheft 21*), p. 23-59.

large number of editions of Henry Ford's autobiography "My life and work" which was published in German since 1923. In 1940 in the 33<sup>rd</sup> edition appeared. Hitler adopted the concepts of industrial mass production and folk motorization from Ford and founded the Volkswagen factory in 1938 despite all opposition from the German automobile industry.<sup>75</sup> In the same year, he decorated Ford with the Großkreuz of the German Adlerorden (a medal). Furthermore, the ideology of anti-Semitism connected Hitler to Ford. Hitler could use Ford's pamphlet about alleged endangerment of "international Judaism", which was released in German in 1921 in Leipzig, in his book "Mein Kampf".<sup>76</sup> Likewise, this personal closeness of Hitler to an automobile businessperson is to be found with the chief executive officer of Daimler-Benz, Jakob Werlin, who Hitler appointed to his handler of automobile policies and with whom Hitler celebrated the ceremony of completion the first 1,000 km of the autobahn in Breslau on September 27<sup>th</sup>, 1936. Hitler mentioned explicitly Werlin, in addition to Porsche, to be an important promoter of the Volkswagen-project in his speech to the laying of the foundation stone of the Volkswagen factory on May 26<sup>th</sup>, 1938.<sup>77</sup>

The furthering of the motorization during the NS-time until 1939 was in constant conflict with the scanty resources for armament. However, it was not only an unsubstantial statement but was realized with different instruments. Those instruments, which contributed to a vehicle-friendly atmosphere, were the 1933 tax exemption on a car purchase, the autobahn construction, the touring exhibition "The Street" ("Die Strasse"), and the activity of the National Socialistic automobile corps.<sup>78</sup> In many cases, big events were staged under the conditions of motor sports such as the 2,000km journey in July 1933 and the rally to Tannenberg and Königsberg at the end of August 1933 which was advertised by Goebbels to be the "Eastern journey of loyalty" ("Ostland Treuefahrt") on the occasion of the 19<sup>th</sup> anniversary of the battle of Tannenberg. 1,045 automobiles and 483 motorbikes from National Socialistic groups and automobile clubs from throughout Germany took part.<sup>79</sup> The promotion of automobile racing was reviewed by Reuss.<sup>80</sup>

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<sup>75</sup> *Hans Mommsen und M. Grieger*: Das Volkswagenwerk und seine Arbeiter im Dritten Reich, Düsseldorf 1996, sowie: *Wolfgang König*: Volkswagen, Volksempfänger und Volksgemeinschaft, Paderborn 2004

<sup>76</sup> *Baldwin, Neil*: Henry Ford and the Jews, New York 2001, Chapter 12. *Hans Mommsen und M. Grieger*: Das Volkswagenwerk und seine Arbeiter im Dritten Reich, Düsseldorf 1996. In the 33th edition of the autobiography of Henry Ford is shown a photo of Ford decorated with the Großkreuz of the German Adlerorden. The role of the American and German Ford plants in the motorization of the German Army is described in the official report (without an author) of the Ford Motor Company „Research Findings about Ford-Werke under the Nazi Regime“, p. 26-28, 2001 in: [www.Media.Ford.com](http://www.Media.Ford.com).

<sup>77</sup> *Hans Pohl, Stephanie Habeth und Beate Brüninghaus*: Die Daimler-Benz AG in den Jahren 1933 bis 1945. Eine Dokumentation, Zeitschrift für Unternehmensgeschichte, Beiheft 47, Stuttgart 1986, and: Kasseler Post on 28. September 1936, UBK, Völkischer Beobachter on 27. May 1938, in: *Pohl u.a.*, op. cit., document 21

<sup>78</sup> *Dorothee Hochstetter*, Motorisierung und Volksgemeinschaft, München 2005

<sup>79</sup> Frankfurter Nachrichten on 23. July 1933 and 26. August 1933, Institut für Stadtgeschichte, Frankfurt. Zur Ostland Treuefahrt see my paper: Die Zentrallage Kassels - Verkehrspolitik und Autobahnbau in Nordhessen

The multiple criticism of the Volkswagen project, that it had only raised unfulfilled hopes on an automobile-future, fails to appreciate the dimension of motorization promotion. The intensity of motorization policy becomes apparent by exemplarily referring to the development of the vehicle population of Frankfurt on the Main.<sup>81</sup>

Year	Automobiles and buses	Automobiles and buses per 10,000 inhabitants	Motorcycles	Motor vehicles overall (including trucks)	One motor vehicle per ... inhabitants
1927	4,278	90.2	3,655	9,484	50
1932	7,912	148.0	6,411	16,705	32
1938	18,542	334.4	11,226	34,658	16
Increase 1932-1938 (percent)	134.4		75.1	107.5	
Increase 1927-1932 (percent)	84.9		75.4	76.1	

**Table 1: motorization in Frankfurt on the Main from 1927 until 1938**

The data in table 1 shows the increase of the vehicle population and the registered motorcycles. In both periods, 1927 until 1932 and 1932 until 1938, which can be compared, the increase of the vehicle population was clearly above the one of registered motorcycles. In the second period, the process accelerated even from 84.9% to 134.4% concerning the vehicle population. That indicates the success of motorization policy even though the automobile density did not come up to the one in France or Britain. The growth rate of automobiles with regard to the one of motorcycles is remarkable which expresses the strong desire for an automobile. Likewise, the growing number of driving tests emphasizes the implementation of the motorization policy. Within the license class 3 the number of tests taken rose from 339 thousand in 1935 to 377 thousand in 1938.<sup>82</sup>

One aspect of motorization is the development of the forwarding of goods by truck transportation as an alternative and complement to the Reichs-railroad (Reichsbahn). Todt has always pointed out this aim. He emphasized that 38,000 communities did not have any railroad connection. However, Todt's freight vehicle-plans could not come true because of resistance from Dorpmueller, the Reich-railroad president (Reichsbahnpräsident) – see below.

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1920 bis 2000, in: *H. Ptak: Betriebswirtschaftlicher Wandel in Deutschland*, Hamburg 2006 (see also my Working Paper in History of the Mobility 10/2006).

<sup>80</sup> *Eberhard Reuß: Hitlers Rennschlachten*, Berlin 2006

<sup>81</sup> Quellen: Statistische Jahrbücher für das Deutsche Reich, 1928 to 1938

<sup>82</sup> Statistisches Jahrbuch für das Deutsche Reich, 1937, p. 203 und 1939/40, p. 237

### 3.3 Goals of Military Policy

Much doubt has been cast on the military benefit of the autobahns for Hitler's conduct of the war. Ironically, the autobahn served other purposes in military conflicts. In 1945 it facilitated the advance of western allied troops from the Rhineland to the river Elbe<sup>83</sup> and served as the route for civilians fleeing Berlin before the advancing Soviet troops.<sup>84</sup> Finally, the autobahn Hanover-Berlin, that had been in use since 1939, was vital for the ability of Western troops to hold their position in Berlin during the Cold War.

The general promotion of motorization was also linked to the military policy goal of being able to equip the army with an adequate number of cars and trucks in the event of war. The goal of military motorization stands in the context of the policy of motorizing the armed forces that prevailed throughout Europe between 1920 and 1940. As the degree of military motorization was still low, the military saw private motorization in terms of requisitioning.<sup>85</sup> And in fact, to prepare the German Army for campaign against French 16 thousand truck were confiscated from the German economy.<sup>86</sup>

Numerous statements by Hitler in the Chancellery point to the goal of requisitioning.<sup>87</sup> At a meeting with leading industrialists on 29<sup>th</sup> of May 1933, Hitler linked autobahn construction with the vision of a "Volkswagen," or "peoples' car" that would compensate for the disadvantages of a heterogeneous vehicle fleet for mobilization. In the event of mobilization, soldiers would be able to travel on the autobahn to their operational areas in a kind of standardized "Volkswagen." In order to implement this idea, the Reichsbahn was to manage the entire transport system as a centralized transport company. It was supposed to order large series of the "Volkswagen" from industry, own the autobahns and by means of toll fees regulate competition between the road and rail sectors in a manner that would allow the transition from rail to road traffic, (that Hitler regarded as inevitable), to take place in a controlled form that would not impair the efficiency of

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<sup>83</sup> See for example the diary entry on 29<sup>th</sup> of March 1945 of the US Division Artillery, 6<sup>th</sup> Armored Division on the Internet at <http://members.aol.com/super6th/divarty/SignificantDates.htm>

<sup>84</sup> See for example, Erich Kästner's flight out of Berlin, in: E. Kästner: Notabene 45, Zurich 1961

<sup>85</sup> *Henning*, op. cit., p. 232

<sup>86</sup> *Hans-Adolf Jacobsen*: Der Fall Gelb, Wiesbaden 1957, p. 195.

<sup>87</sup> On requisitioning see the discussion between the Chancellor and transport experts on the question of autobahn construction on 18<sup>th</sup> of May 1933, Akten der Reichskanzlei, Regierung Hitler 1933-1938, op. cit., p. 464, and: Memorandum of Oberregierungsrat *Willuhn* about a lecture by the Director General of the Deutsche Reichsbahngesellschaft on the issue of competition between the Reichsbahn and road freight traffic on 16<sup>th</sup> of March 1933, op. cit., p. 229.

the Reichsbahn as a company.<sup>88</sup> The idea developed here of a centralized large transport company was first raised in the debate about road-rail competition and was repeatedly brought up by the Reichsbahn after 1930 (see below).

To discuss the conflict between railway and truck entrepreneurs regarding truck transport, Hitler summoned the Director General of the *Deutsche Reichsbahngesellschaft*, Julius Dorpmüller, to the Chancellery on 16 March 1933 for a lecture about competition between the Reichsbahn and road haulage.<sup>89</sup> Dorpmüller put forward the arguments contained in the Reichsbahn memorandum.<sup>90</sup> It made economic sense to use revenue from the transport of high quality goods to subsidise the transport of bulk goods by rail,<sup>91</sup> and thus eliminate price competition from independent road haulage companies that mostly transported high quality goods. Moreover, he argued, the provisions of the Rail Transport Ordinance compelled the Reichsbahn to transport all goods and treat them equally, which put the company at a disadvantage with independent trucking companies who could choose the lucrative contracts. Hitler opposed Dorpmüller insofar as he said that the Reichsbahn would have to accept that the transport of high quality goods was increasingly being switched to heavy trucks as these permitted door-to-door transport. Promotion of truck traffic was also desirable in order to ensure that Germany had a sufficient number of vehicles in the event of their being needed for national defence and to permit technical progress in engine construction. The Reichsbahn could not therefore be allowed to let road transport wither. Hitler initially demanded that the Reichsbahn undertake freight transport with trucks as a monopoly itself,<sup>92</sup> thus taking up the idea of a large centralised transport company of the kind the Reichsbahn had proposed in its memorandum of 1930. However, he focussed more on Reichsbahn operations with its own trucks that would replace unprofitable railway lines.

Considering that Hitler was actually an advocate of competition, one might wonder why he was so concerned with protecting the Reichsbahn from competition with the road haulage industry. One indication that he wished to keep a technical and financially well equipped Reichsbahn as a

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<sup>88</sup> See the Chancellor's meeting with leading industrialists on 29<sup>th</sup> of May 1933, Akten der Reichskanzlei, Regierung Hitler 1933-1938, op. cit., p. 511f. However, the military leadership was divided about the suitability of the autobahn for moving troops, see *Henning*, op. cit., p. 233, *Lärmer*, see appendix 1, p. 114, p. 138 and Shand, see appendix 1

<sup>89</sup> Annotation by Oberregierungsrat *Willuhn* about a lecture given by the General Director of the Deutsche Reichsbahngesellschaft on the question of competition between the Reichsbahn and motorised traffic on 16 March 1933, op cit, p. 225-231.

<sup>90</sup> Reichsbahn und Kraftwagenverkehr, published by the Deutsche Reichsbahngesellschaft, Berlin 1930

<sup>91</sup> Op cit, p. 64

<sup>92</sup> Annotation by Oberregierungsrat *Willuhn* about a lecture by the General Director of the Deutsche Reichsbahngesellschaft on the question of competition between the Reichsbahn and motorised traffic on 16 March 1933, Akten der Reichskanzlei, Regierung Hitler 1933-1938, published by *Konrad Repgen*, Teil I, op cit, p. 229.

logistical instrument for the war effort is the speech he made on 29 May 1933 to leading industrialists, where, in the context of a discussion about military mobilisation, he explained that if the Reichsbahn were not protected, it would "be useless for other tasks that cannot be carried out by motor vehicles."<sup>93</sup> These statements can be interpreted to mean that he believed a dense network of autobahns combined with mass motorisation would only be available as a substitute capacity for rail transport after the point in time at which he planned to start the war. Replacing railway transport, that was based on the domestic fuel source coal, with motor vehicles was, from a military perspective, precarious in that the necessary materials rubber and petrol were extremely scarce in Germany and in Hitler's plans had to be reserved for military offensives.<sup>94</sup> These considerations could also indicate that Hitler wished the Reichsbahn to undertake tasks that he did not believe could be performed by motor vehicles.

If one assumes that the important role of the Reichsbahn for the logistics in the planned war had been recognized, then one had to notice on the other hand, that investment for maintenance and improvement in the railway did not take place until 1939, as Kopper had shown in his study<sup>95</sup>. In the sector of transportation nearly all the investment had been made in the autobahn and road network. So the war had been started with an insufficiently prepared railway. In this point one can recognize a bad fit of policies in the NS political system.

### 3.4 The lack of the Goal Truck Transport

However, the law on long distance freight transport enacted in 1935 did not create a Reichsbahn monopoly because Hitler feared that competition would later be eliminated completely.<sup>96</sup> Instead, independent trucking companies had to apply for compulsory membership of the "*Reichs-Kraftwagen-Betriebsverband*" (Council of Truck Operators), which in consultation with the Reichsbahn laid down tariffs for transport which were then approved by the Ministry of Transport. The intention behind this supervision by the Ministry of Transport was to prevent the tariffs from being undercut. Long distance trucking transport companies were relieved of the elementary entrepreneurial functions of issuing invoices and handling payments, which were instead carried out by the *Reichs-Kraftwagen-*

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<sup>93</sup> Akten der Reichskanzlei, Regierung Hitler 1933-1938, op cit, p. 511

<sup>94</sup> Henning, op cit

<sup>95</sup> Kopper, a.a. O., p. 408-411

<sup>96</sup> F. Hartmansgruber: Einleitung zu Akten der Reichskanzlei, Regierung Hitler 1933-1945, published by H.G. Hockerts, volume II: 1934/35, edited by F. Hartmansgruber, Munich 1999, p. LX, and Document 143, op cit, p. 531-535, as well as the official grounds for the law set out by the Minister of Transport in: Die Strasse, issue 15, 1935, p. 565.

*Betriebsverband*.<sup>97</sup> This made it significantly harder to evade the set freight rate. Although Dorpmüller could actually have been satisfied with the weak position of the commercial road haulage industry, he continued the battle against trucks after his appointment as transport minister in 1937 and the re-incorporation of the Reichsbahn into his ministry as a state run company.<sup>98</sup> The number of trucks employed in private sector long distance haulage fell from its highest level of 13,400 in 1933 to 11,400 in 1937, thus falling even below the figure of 11,500 in 1932, notwithstanding the greater demand for transport services caused by rearmament.<sup>99</sup>

With regard to autobahn construction, transport policy was highly contradictory. On the one hand, a network of 3,000 km of high-speed roads was created in the years before 1939. On the other, truck transport by private road haulage companies was drastically curtailed.<sup>100</sup> And also the strategies in the transport policy does not fit to the goal of armament. Neither there have been incentives for the diffusion of trucks at private enterprises so the army could requisition trucks nor served the autobahn the deployment of troops. The following figure summarizes the contradictions of the NS transportation policy.

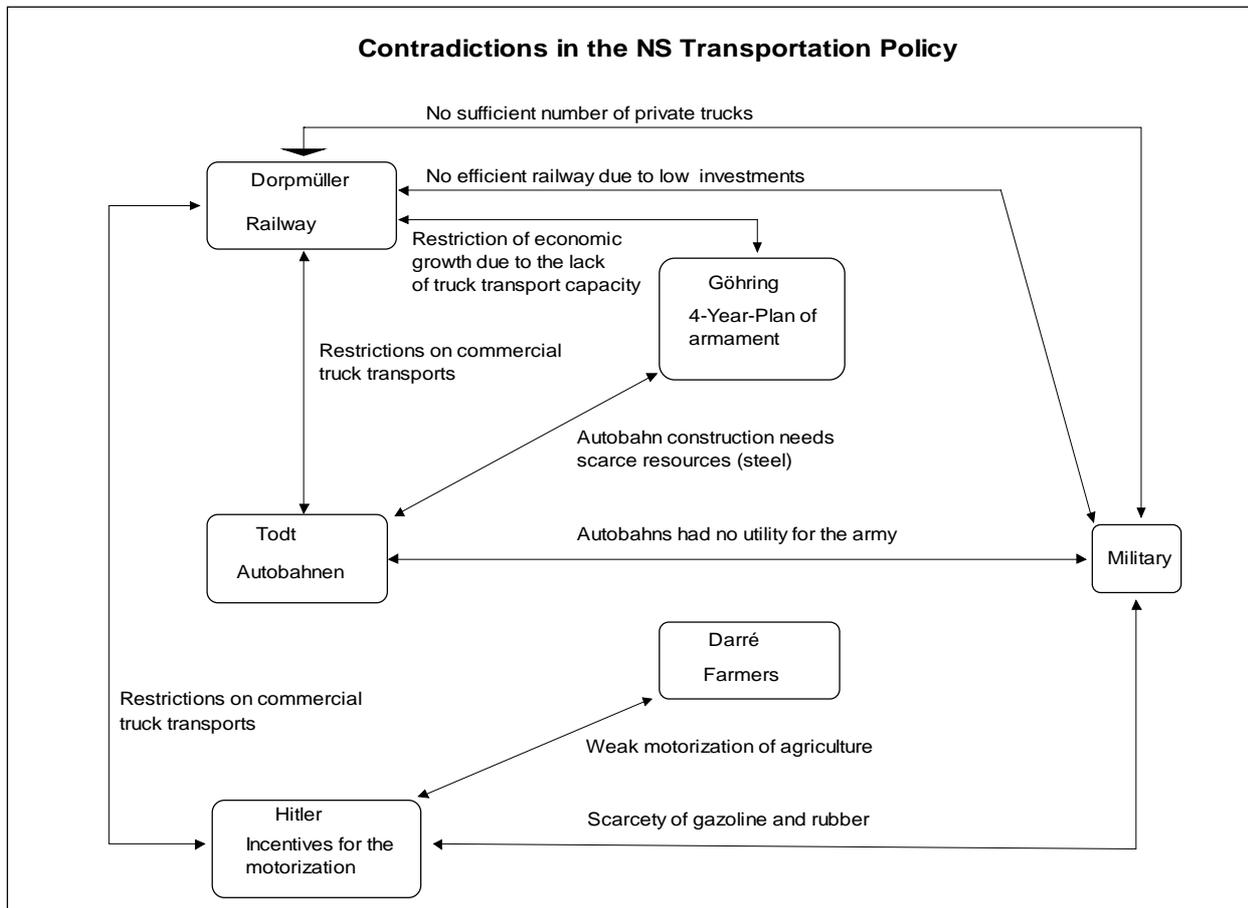
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<sup>97</sup> Law on Long Distance Goods Transport with Motorised Vehicles on 26 June 1935, in: RG, Teil I, 1935, p. 788-793, as well as Ordinance for Implementation, in: RG, 1936, Teil I, p. 320-326. On the prior history of this law see note 5 of the editor *Minuth* on document No. 64, in: Akten der Reichskanzlei, Regierung Hitler 1933-1938, op cit, p. 320f. Until the enactment of this law the Brüning government's Overland Ordinance remained in force. For the further development of restrictions on private road haulage up to 1945 see also *Franz. W. Seidler*: Fritz Todt, Bublies Verlag, Beltheim-Schnellbach 1986, p.144-152.

<sup>98</sup> In a letter to Dorpmüller on 22 February 1938 *Todt* complained of the continued subsidisation of cartage and the Reichsbahn's purchase of capacity on the market for commercial long distance transport, see BA, R5, volume 8125, sheet 84-89. Todt cites Order No K2.566 issued by the transport minister on 2 February 1938 on the emergency programme to remedy the desperate situation in the long distance transport industry, see *Die Strasse*, issue 5, 1938, p. 161. On obstacles to road haulage see also *Schütz* and *Gruber*, op cit, p. 139f

<sup>99</sup> W. Scholz: Die Entwicklung des Kraftfahrzeugbestandes im gewerblichen Güterfernverkehr, in: *Die Strasse*, issue 4, 1938, p. 106-108, here p. 106.

<sup>100</sup> See also Oswald Lutz: 3000 Kilometer Reichsautobahn für den gewerblichen Kraftverkehr, in: *Die Strasse*, 1938, issue 24, p. 772



Contradictions in the NS Transportation Policy

### 3.5 The Visions of Future use of the Autobahn

One factor, which decisively influenced the autobahn project, but which evades a formal discussion of goals, is Hitler's megalomania. Hitler predicted the shift in traffic away from the railway to autobahn and air transport networks with astounding precision. In an analogy to Henry Ford's T-model, some 15 million of which were produced between 1908 and 1927, he also recognized that German industry was not meeting demand for a standardized entry-level model for mass motorization. However, an international comparison of German transport policy, raises the question of why autobahns were constructed in under-motorized Germany and not in Great Britain or the USA, which in per capita terms had a 15 times greater level of motorization than Germany. Evidently, there was initially no need for them even in the USA. Instead, in the 1920s multi-lane arterial roads led out of the large cities Chicago, Detroit and New York<sup>101</sup>. Just like the construction projects planned by Speer at Hitler's order for the party congress stadium

<sup>101</sup> Siehe *Mark Foster*: From streetcar to Superhighways: American City Planners and Urban Transit 1900-1940, Philadelphia 1981. *Neumann* reports on multi lane arterial roads in San Francisco and of parkways in Chicago and Detroit, in: *Mitteilungsblatt*, issue 1, 1931, p.4. See also: Die neue Automobilhochstrasse zu Neuyork, in: *ADAC-Motorwelt*, 1930, issue 43/44, p. 4-5 and *Vilbig*: Bericht über den VI. Internationalen Straßenkongreß in Washington, *ADAC-Motorwelt*, 1931, issue 1, p. 22

in Nuremberg and in the capital Berlin, the autobahn project also has a tendency to the gigantic.<sup>102</sup> While the architectural abnormality of the construction projects is immediately apparent, the gigantic nature of the autobahn is not obvious in the individual sections, but in the planned network of 7000km and also in the bridge constructions.

### 3.6 The Autobahn and Local Traffic

The question of arterial roads leading from large cities is associated with the relationship between local and long distance traffic. So far, research on National Socialist autobahn construction has paid little attention to how it met the need for efficient local transport conditions for the road haulage industry in spite of the fact that this had not initially been explicitly stated as a goal. The autobahn network was regarded purely as a long distance transport network. However, in a subsequent interpretation of its work in 1937, the GEZUVOR referred to the goal of decentralization into the suburbs that was related to the autobahn project. Autobahns were supposed to "compensate for the urban planning predominance given to large railway stations in the center of cities, the main railway stations and main freight stations"<sup>103</sup> – a clear dig at the Reichsbahn that reveals the tensions between the two transport systems. However, this argument of decentralization into the suburbs is not very convincing, as here the need is less for autobahns that are a long way from the cities than the kind of multi-lane arterial roads out of towns that could already be found in the USA in the 1920s. The example of the Berlin autobahn circle shows that – apart from the western approach over the AVUS – the Berlin ring could only be reached from the city center over narrow country roads as no arterial roads were built.<sup>104</sup> Incidentally, this was to remain the case until 1995.

The first construction measures carried out after 1933 were to link neighboring towns:<sup>105</sup> Frankfurt with Darmstadt, Mannheim with Heidelberg, Leipzig with Halle, Kassel with Göttingen, and Cologne with Düsseldorf. The Chiemsee autobahn was also built, making this recreational area more accessible from Munich<sup>106</sup>. The following table summarized the openings of the first

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<sup>102</sup> Compare Joachim Fest: Speer – eine Biographie, Berlin 1999

<sup>103</sup> Gesellschaft zur Vorbereitung der Reichautobahnen (Ed.): Die Planungsarbeiten für die Reichsautobahnen – Zweieinhalb Jahre GEZUVOR, Berlin 1937, p. 128

<sup>104</sup> See the report, "Vom Potsdamer Platz zur Reichsautobahn Berlin-Stettin," in: Die Autobahn, 1936, p. 168f

<sup>105</sup> This is shown by the map of the autobahn sections started from 1935 onward, see Die Strasse, issue 4, 1935, p. 104.

<sup>106</sup> See my Working Paper on History of Mobility No. 4/2005: Touristic Aspects of the German Autobahn Project 1933-1939 on my web site:

[www.ibwl.uni-kassel.de/vahrenkamp/History\\_Mobility/History\\_Mobility.htm](http://www.ibwl.uni-kassel.de/vahrenkamp/History_Mobility/History_Mobility.htm) and in Journal of Transportation History, Vol. 27, 2006

route segments from 1935 until 1936 in the Reich.<sup>107</sup> However, the support of local traffic was not a dominant principle of National Socialist autobahn construction, as will be shown later.

Route	Lenght km	Date of Opening
Frankfurt a.M. - Darmstadt	22,0	19 <sup>th</sup> of May 1935
München - Holzkirchen	25,0	29 <sup>th</sup> of June 1935
Darmstadt - Mannheim (Heidelberg)	61,0	3 <sup>th</sup> of October 1935
Holzkirchen - Weyarn	7,0	11 <sup>th</sup> of January 1936
Leipzig - Halle	26,5	25 <sup>th</sup> of April 1936
Köln - Düsseldorf	24,5	21 <sup>st</sup> of May 1936
Weyarn - Rosenheim	33,0	24 <sup>th</sup> of May 1936
Rosenheim - Siegsdorf	35,0	17 <sup>th</sup> of August 1936

Table: Opening of the first route segments of the autobahn from 1935 till 17<sup>th</sup> of August 1936

## 4 Implementation and Legitimizing of the Autobahn Project

If one follows the decision-making process as documented in the Chancellery files, one has to conclude that Hitler was the decisive promoter of the autobahn project within the government apparatus. This fits to the intentional concept in the historical research on NS system.

On the other hand, according to the structural approach to the study of National Socialism<sup>108</sup> it can be assumed that he utilized the structures of the situation in 1933 and bundled them together to form a single project:

- The need for job creation measures,
- The existence of the fully developed HAFRABA plans for the section Frankfurt-Mannheim
- Players who were already attuned to one another from the attempts of the Brüning cabinet to implement the HAFRABA plans.

In spite of this, he had to overcome a great deal of resistance before he could commence autobahn construction with the founding of the *Gesellschaft Reichsautobahnen*. He then left implementation of the project to Todt. Due to the visionary character of the autobahn project, that contrasted sharply with the low level of motorization in Germany, there was resistance from a number of quarters and the lack of urgent transport or military goals for autobahn construction revealed a legitimacy deficit. Some simple comrades rejected autobahn construction on the grounds that it only served the motoring pleasure of the rich. The Reichsbahn opposed the autobahn project because it disliked anything that would promote competition from cars. Specialists from the ministries doubted the economic benefit and financing feasibility of the project. The controversy with the experts centered on whether funding would be better

<sup>107</sup> Data from Statistisches Jahrbuch für das Deutsche Reich, 1936, p. 198

<sup>108</sup> See *Ian Kershaw: Der NS-Staat*, Hamburg 1988

employed expanding the existing road network or constructing new autobahns. Hitler argued that the existing road system was designed for horse-drawn wagons and was therefore unsuitable both in terms of its substructure and road width for the burden posed by rapidly increasing modern motorized traffic, as demonstrated by the need for frequent repairs. Furthermore, allowing long distance traffic to pass through towns caused damage to buildings. Separating through-traffic from local traffic was vital for ensuring brisk automobile traffic on the roads.<sup>109</sup> Here he adopted those arguments for autobahn construction that had been repeatedly put forward since 1926 by the autobahn advocates belonging to the HAFRABA association, published in the association's bulletin and also cited by other critics of the existing road system, for instance in Todt's memorandum of December 1932.<sup>110</sup>

Hitler was able to overcome the Reichsbahn's opposition to the autobahn project when on 10<sup>th</sup> of April 1933 he offered to let the head of the railroad, Dormmüller, take over construction of the autobahn, thus involving the Reichsbahn in the autobahn project as a planner, financier and organizer.<sup>111</sup> By taking this approach, Hitler invalidated any objections that might have been raised by the Transport Ministry, which basically pursued railway policy and thus reduced his cabinet's resistance to the autobahn project. At a meeting with Hitler on 1<sup>st</sup> of June 1933, Dormmüller agreed to assume responsibility for autobahn construction, requested the creation of the legal basis and offered 50 million Reichsmark in initial funding.<sup>112</sup> The legal basis was then created on 27<sup>th</sup> of June 1933 with the law concerning the "*Errichtung eines Unternehmens Reichsautobahnen*," (Establishment of a Reichsautobahn company), §5 of which stipulated that the Reichsbahn would manage and represent the company. However with Todt, a road construction engineer, Hitler assigned a strong promoter of autobahn construction to the Reichsbahn as "General Inspector for German Roads".<sup>113</sup> According to his biographer Seidler, he has to be considered a road haulage lobbyist<sup>114</sup> and as such represented a counterweight to Dormmüller. §8 and §11 of the law gave the him the right to decide the routing of the autobahns.<sup>115</sup> After the successful initiation of autobahn construction, rights of control over the *Unternehmen Reichsautobahnen* were once more withdrawn from the Reichsbahn and

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<sup>109</sup> *K.-H. Minuth*: Introduction to the files of the Reichskanzlei, Regierung Hitler 1933-1938, op. cit., p. XLIII as well as a discussion between the Chancellor and transport experts on the question of autobahn construction on 18<sup>th</sup> of May 1933, op. cit., p. 463f., see also *E. Schütz und E. Gruber*, op. cit., p. 19-22

<sup>110</sup> *Straßenbau und Straßenverwaltung*, BA, R 4601, volume 3001/A

<sup>111</sup> Hitler's discussion with the head of the railroad, Dormmüller, on 10<sup>th</sup> of April 1933, in: *Akten der Reichskanzlei, Regierung Hitler 1933-1938*, op. cit., p. 331. Parallel to the autobahn project, the Reichsbahn was able to realise new constructions and acquisitions worth 560 million RM as a work creation programme of its own in the years 1933 and 1934.

<sup>112</sup> *Akten der Reichskanzlei, Regierung Hitler 1933-1938*, op. cit., p. 543f. See also: *A. Gottwald*: *Julius Dormmüller, die Reichsbahn und die Autobahn*, Berlin 1995, p. 41

<sup>113</sup> From now on referred to as Gl.

<sup>114</sup> *Seidler*, see appendix 1, p.146.

<sup>115</sup> The press called him the dictator for road construction, see *Völkischer Beobachter* on 6<sup>th</sup> of July 1933, p. 1

transferred to Todt by a decree issued on 23<sup>th</sup> of January 1935. This was justified on the grounds that the Reichsbahn had not given autobahn construction the necessary priority nor proceeded with the necessary financial boldness.<sup>116</sup>

To conceal the lack of specific transport policy objectives, the autobahn project was not only portrayed as a measure to create employment and promote motorized transport. Instead, propagandists shifted the discussion to a whole series of other aspects:

- The project would create a giant work for the future of transport.
- It would build a monument to National Socialism that would stand for centuries.
- "Adolf Hitler's roads" would be built.
- Principles of landscape aesthetics would be realized. Autobahns would be adapted to the landscape. At the same time, the landscape was to be cared for.<sup>117</sup>
- A pseudo-ideology was adopted in order to reconcile technology and nature.
- The aspect of recreation was combined with the autobahn. The peculiar idea of "*Autowandern*," (road touring) was introduced, that was supposed to combine enjoyment of the landscape with driving through the landscape on the autobahn.<sup>118</sup>

The particles of ideology listed here were spread among the population in countless inaugural speeches, films, exhibitions, publications and, above all, in newspaper reports in the *gleichgeschaltete* press.<sup>119</sup> Monumental autobahn constructions –especially bridges<sup>120</sup> - were embedded in the concept of landscape aesthetics and were supposed to stand as symbols of eternity, thus increasing the prestige of the Third Reich.<sup>121</sup> In this connection, it is hard to avoid the impression that monumentality was imposed with no regard for construction costs.

Landscape aesthetics and monumentality were prime goals that took priority over economic

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<sup>116</sup> *Hartmannsgruber*, op. cit., p. LX, as well as the RG, Teil II, 1935, p. 37.

<sup>117</sup> *Shand* 1984, op. cit., interprets landscape aesthetics as a means of reconciling the modernity of the autobahn with the Nazi's *völkisch* ideology.

<sup>118</sup> On "Autowandern" see *Die Strasse*, issues 3, 11, 14, 1936

<sup>119</sup> On the travelling exhibition "Die Strasse" see *Die Autobahn*, 1934, issue 8, and issue 10, p. 442 and issue 15, p. 685-690. The travelling exhibition was shown in Munich, Berlin, Essen and Braunschweig. At the opening of one section near Dresden on 26<sup>th</sup> of June 1937 Hitler emphasised the future of transport: "In a few decades there will be massive traffic on these roads, in which the entire population will participate. Millions of our Volkswagens....will roll over these roads." See *Kasseler Post*, 27<sup>th</sup> of June 1937, archive of the city Kassel.

<sup>120</sup> See issues 8 and 23 of the journal "Die Strasse", 1935, that focussed on autobahn bridges, as well as numbers from later years, and *Ernst Vollbehr: Arbeitsschlacht – Fünf Jahre Malfahrten auf den Bauplätzen der „Strassen Adolf Hitlers“*, 2. edition, Berlin 1938. Vollbehr was a comrade of Todt during World War I, and in 1933 Vollbehr was hired by Todt to follow the construction of the autobahn as a painter, whereby he understood autobahn construction as battle in a war, as Vollbehr wrote in the introduction. Of the forty 4-colour paintings reproduced in his book, 31 deal with bridges. In a strong contrast to the theme "Arbeitsschlacht" (labor battle) his pictures are peculiarly empty of people. Workers are hardly visible, if at all. In terms of its print run, the book enjoyed a wide circulation, as up to 50,000 copies were printed in the second edition in 1938.

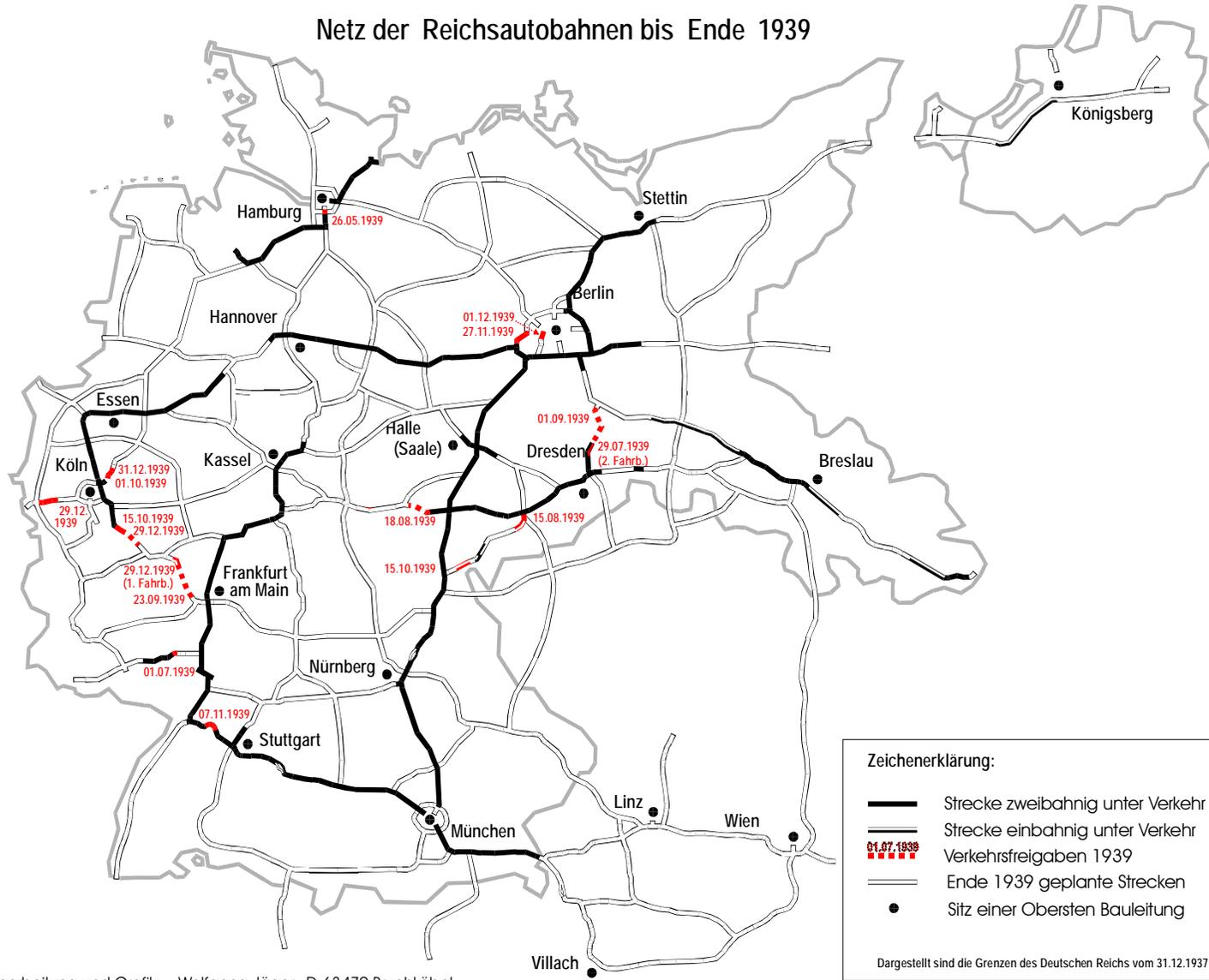
<sup>121</sup> The monument aspect was emphasised several times. In 1934 the GEZUVOR section head *Becker* provided some unintentional comedy when he compared the construction of the autobahns with that of the pyramids in Egypt, see Landesoberbaurat *Dr. Becker: "Von der HAFRABA zur Reichsautobahn"* in: *Kasseler Post* on 18<sup>th</sup> of March 1934, p. 3 (Library university of Kassel, Hessischer Lesesaal). At the inaugural ceremony of a section near Dresden on 26<sup>th</sup> of June 1937, Hitler said that the autobahn would still be standing in a thousand years, see *Kasseler Post*, 27<sup>th</sup> of June 1937, archive of the city Kassel.

efficiency. A map of the network, as it has been established till 1939, shows the following picture.<sup>122</sup>

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<sup>122</sup> *Schwell und Jäger. Jäger. Verkehrsfreigaben von Autobahnen in den Jahren 1933 bis 1945*, in: *Strasse und Autobahn*, 2000, issue 8, p. 468

# Netz der Reichsautobahnen bis Ende 1939



Bearbeitung und Grafik: Wolfgang Jäger, D-63479 Bruchköbel

Picture 3.6.1

## 5 The Lack of Planning Guidelines for GEZUVOR

As the HAFRABA the GEZUVOR was not part of a branch of the transport administration but its formal character was that of a private association. The work of GEZUVOR was financed by the Municipalities and chambers of industry and commerce as institutional members of the GEZUVOR. The number of members grew up from 300 in 1933 to 3000 in 1934, as many towns became member (forced by the Prussian president Göring) and many companies of the road construction industry<sup>123</sup>.

Although Willy Hof and not Fritz Todt was the formal head of the GEZUVOR, Todt could entrust them with the task of planning various routes. To carry out the planning, eleven regional sections were created and run with a strict hand by Todt. Some of the sections handed in their reports at 14-day intervals.<sup>124</sup> In 1933 the GEZUVOR was made up of over 300 experts who, showing tremendous commitment, worked late into the night drawing up the plans. What makes the GEZUVOR's activities so remarkable is that most of these experts worked in a voluntary capacity. Todt's dictatorial powers allowed him to exploit the GEZUVOR with cold calculation. Within a short period and at no cost he obtained plans for what he called the basic network. This road system was just under 7,000km long and was documented in 387 volumes with sections of around 30 km.<sup>125</sup> None of these volumes can be found in the archive of the Federal republic of Germany today.

By the end of 1933 the GEZUVOR had submitted a total of five reports about preliminary project work to the Chancellor through the GI. In 1934 a further 20 reports were submitted.<sup>126</sup> The fact that the GEZUVOR addressed its reports to the Chancellor shows that Hitler had followed planning progress. The

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<sup>123</sup> The member's list as on 28<sup>th</sup> of October 1933 in: BA volume R4601, volume 1263, sheet 86-90. For the new members see Die Autobahn, Vol. 1934, passim.

<sup>124</sup> BA volume R4601, volume 1263

<sup>125</sup> Gesellschaft zur Vorbereitung der Reichsautobahnen (publisher): op. cit., p. 133. In the introduction, Minister Kerrl cynically referred to the work carried out by the GEZUVOR free of charge as "the members' willingness to make sacrifices." See also the minutes of the last meeting of the GEZUVOR on 19<sup>th</sup> of December 1935, op. cit., p.134-137.

<sup>126</sup> BA volume R4602, volume 600 and volume 1

GEZUVOR fell into a planning euphoria and wanted to expand the basic network from 7,000km to 11,000km, prompting Todt to admonish that expansions to the basic network should be postponed and work concentrated on urgently needed sections instead.<sup>127</sup> Interestingly, the GEZUVOR initially planned without uniform guidelines leading Schönleben, head of department at the GI, to make an anxious enquiry on 12<sup>th</sup> of October 1933 asking the GEZUVOR which planning guidelines it used.<sup>128</sup> The "Guidelines for Autobahn Planning"<sup>129</sup> were only laid down in a decree for the GEZUVOR and the Reichsautobahn Company by Todt on 12<sup>th</sup> of December 1933.

According to the GEZUVOR files that have been found at the BA<sup>130</sup>, a large number of different routes were planned, especially in the center of Germany, that were handled by the Hanover-Kassel section. The Hanover-Kassel section was run by *Landesbaurat* Becker, who until then had been a member of the HAFRABA board and who was known as the author of numerous articles about the planting of vegetation on roadsides. After responsibility for autobahn planning was withdrawn from the GEZUVOR at the end of 1935 once planning of the basic network had been completed,<sup>131</sup> Becker ceased to play any role in autobahn development. Todt made so many requests for routes that the section threatened to go under in work. According to the Hanover-Kassel section's report on 14<sup>th</sup> of April 1934, the following routes were planned:<sup>132</sup>

- Göttingen-Kassel-Fulda-Würzburg
- Eisenach-Bad Hersfeld-Gießen
- Kassel-Eisenach-Bamberg
- Emden-Münster-Kassel

<sup>127</sup> Todt to the GEZUVOR on 4<sup>th</sup> of June 1934, BA volume R4601, volume 1263, sheet 19, 51, 52. At a ceremony marking the presentation of 2000km of autobahn on 17<sup>th</sup> of December 1937 with 2000 construction workers, Hitler talked about an expansion to 12000km, see *Die Strasse*, issue, 1, 1938, p. 2

<sup>128</sup> in: BA R 4601, volume 1263, sheet 105

<sup>129</sup> in: BA R 4601, volume 1263, Sheet 65-70

<sup>130</sup> BA volume R4602, volume 600 and volume 1, and R4601, volume 1476 and volume 1263. In the archives of the German states there may exist additional files on the GEZUVOR, e.g. Thüringisches Hauptstaatsarchiv Weimar, C233, C234, C235

<sup>131</sup> This competence was withdrawn at an extraordinary meeting of members on 27<sup>th</sup> of July 1935, see *Die Strasse*, issue 15, 1935, p. 558f

<sup>132</sup> BA R4602, volume 600

According to the Hanover-Kassel section's report on 30<sup>th</sup> of May 1934, the following additional routes were also planned.<sup>133</sup>

- Kassel-Gotha
- Kassel-Cologne

The 5<sup>th</sup> report about the GEZUVOR's preliminary project work dated on 20<sup>th</sup> of December 1933 also mentions the Eisenach-Fulda-Frankfurt<sup>134</sup> route.

What is so interesting about these plans is that in the Hanover-Kassel-Frankfurt region, they deviate from the original HAFRABA Göttingen-Kassel-Marburg-Giessen-Frankfurt route<sup>135</sup> (compare Figure 1). In a letter dated 18<sup>th</sup> of September 1933, Todt instructed that the north-south section Göttingen-Kassel-Fulda be planned instead of the HAFRABA route.<sup>136</sup>

Although a catalogue of planning criteria was presented by the former GEZUVOR planners in 1937,<sup>137</sup> this must be viewed as a subsequent rationalization, because in the early stages of GEZUVOR planning there were no rational transport policy criteria according to which routes between towns were to be drawn up.<sup>138</sup> The lack of planning criteria also posed a difficulty for the head of the Hanover-Kassel section, Becker, insofar as Todt insisted that the explanations for the route sections include a chapter on the economic aspects of the routes. However, Becker had no expertise in this area.<sup>139</sup>

Even today, we do not know which criteria and priorities formed the basis of Todt's decision when he finally gave the order for the construction of individual sections from among the large number of planning options. What emerges from articles in the journal "Die Strasse" is that while individual activities such as the construction of a junction for the Hamm-Kassel route<sup>140</sup> or preliminary work for

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<sup>133</sup> Op. cit.

<sup>134</sup> Op. cit.

<sup>135</sup> R. Otzen: Die Autostrasse Hansestädte – Frankfurt – Basel. Erläuterungsbericht zum Entwurf der Autostrasse, Hannover 1927, Schrift Nr. 4, p. 10f

<sup>136</sup> Progress report of the Hannover Kassel Section on 30<sup>th</sup> of December 1933, op. cit.

<sup>137</sup> Gesellschaft zur Vorbereitung der Reichautobahnen (publisher), op. cit., p.127f

<sup>138</sup> Lärmer, op. cit., p. 94

<sup>139</sup> Progress report of the Hannover Kassel Section from 13<sup>th</sup> of November 1933, op. cit..

<sup>140</sup> See short reports, in: Die Strasse, issue 24, 1937, p.744

the Cologne-Kassel route<sup>141</sup> were started, the public debate conducted in the *gleichgeschaltete* press provided no explanation in terms of an overall concept. Todt regarded the GEZUVOR's plans as mere preliminary work that he could change at will.<sup>142</sup> One can come to the thesis, that the lack of a public debate on the need of certain lines and their cost benefit relation as a democratic counterpart to the dynamics of a nation wide project had resulted in a situation where Todt a the dictator of road construction could make irrational decisions and could serve special interests.

I would now like to discuss three planning criteria which could have been used and their relation to the layout of the autobahn network. It was not explicitly stated that **traffic density** in the different cities should be a criteria for the planning of routes. With 1 motor vehicle (including motorcycles) per 24 inhabitants, Munich had the highest vehicle density in Germany (compared to Berlin with 38 inhabitants).<sup>143</sup> But in fact, in Munich plans for the autobahn to Chiemsee were primarily based on the expected Sunday day trip traffic and Hitler personally laid down details of the route. According to Kaftan, too many visitors from Munich were placing an excessive burden on the destination Starnberger See, and alternatives were sought in consultation with the construction industry.<sup>144</sup> In 1937 traffic counts carried out on the autobahn to Chiemsee clearly show the peaks caused by excursion traffic on Sundays.<sup>145</sup> A second criteria on which autobahn routing could have been based was the **intensity of freight traffic**. According to statistics from the GEDEKRA *Reichsverband der Kraftverkehre*, the heaviest truck traffic in July 1933 was from Berlin to Cologne.<sup>146</sup>

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<sup>141</sup> Op. cit.

<sup>142</sup> F. Todt. Die Planung des Reichsautobahnnetzes, in: Die Strasse, issue 7, 1937, p. 176.

<sup>143</sup> Statistisches Jahrbuch für das deutsche Reich, 1933, p. 159

<sup>144</sup> Kaftan, op. cit., p. 153, and Anton Woerner: Die Reichautobahn München – Salzburg, in: Die Autobahn, issue 9, 1933, p. 10-12

<sup>145</sup> For the data see Forschungsgesellschaft für das Strassenwesen (publisher): Strassenbau-Jahrbuch 1937-1938, Berlin, Verlag Volk und Reich, 1938, p. 29-42, here p. 32 f.

<sup>146</sup>

Konrad Mellerovicz: Autobahnen und Kraftverkehrswirtschaft, in: Die Autobahn, issue 9, 1934, p. 370.

Another criteria for autobahn routing could have been the **accessibility** of the capital Berlin. However, if one looks at the connection Frankfurt a.M.-Berlin it becomes apparent that planning and construction in Hesse deviated from this. The Frankfurt-Fulda-Eisenach link mentioned in the GEZUVOR's fifth report about the preliminary work dated 20<sup>th</sup> of December 1933 can be considered the direct line from Frankfurt a.M. to Berlin in Hesse. However, this was avolumeoned in subsequent GEZUVOR plans and replaced by the Frankfurt-Gießen-Bad Hersfeld-Eisenach route that still exists today. This route cannot be called a direct link between Frankfurt a.M. and Berlin. Apart from providing practical support for local traffic in those areas with a recognisably high traffic volume in the years before 1933, (which however, is not mentioned in the files as a planning objective) the routing conforms to no recognisable transport criteria. All that can be detected are formal aspects, that three lines should run from east to west and two lines from north to south.<sup>147</sup> Only later, when the autobahn system had already achieved a significant dimension were systematic traffic counts carried out.<sup>148</sup>

## 6 Two Concepts for Routing in Hesse

When construction work on the autobahn Frankfurt-Mannheim started in 1933, the detailed plans that had already been drawn up by the HAFRABA could be implemented straight away, but it was not possible to incorporate the concepts of landscape aesthetics and monumentality. The autobahn section Frankfurt-Karlsruhe was crossed by functional bridges and runs in long straight sections across flat terrain with only a few curves that have large radii, thus promising safe and comfortable motoring.<sup>149</sup> Furthermore, towns that are directly accessible from the autobahn are laid out along the route like pearls on a necklace so that motorised local traffic between these towns could be handled over the autobahn: Frankfurt-Darmstadt-Mannheim-Heidelberg-Karlsruhe. The

<sup>147</sup> E. Schönleben: Das Netz der Reichsautobahnen, in: Die Strasse, issue 19, 1936, p. 614 describes some 7000 km of the basic network.

<sup>148</sup> See: Der Kraftverkehr auf Reichsautobahnen, Reichs- und Landstrassen im Dritten Reich, published by the Generalinspekteur für das deutsche Strassenwesen, Berlin 1939

<sup>149</sup> The routing is described in: *R. Auberlen: Die Verbindung des Landstrassennetzes mit der Reichsautobahn Karlsruhe-Frankfurt-Hersfeld*, in: Die Strasse, issue 11, 1937, p.302-307, as well as in issue 9 and 10 (for the inauguration of the section Frankfurt-Darmstadt), 1935.

autobahn passes these towns close to the town boundaries. Following the early HAFRABA blueprints for that line had meant that the modern autobahn followed the old layout of the railway dated from 1850<sup>150</sup>: a direct link between the cities Heidelberg and Mannheim and in the middle of this link a junction with the line to Darmstadt, which has been directed in the middle of the land strip of the right side of the Rhine valley. This implied that the dense populated villages at the foot of the hills could not be served by this line.

After 1934, new plans were drawn up for routing the rest of the Hessian network. These were based on the principles of landscape aesthetics and departed completely from the concept of the Frankfurt-Karlsruhe autobahn. For the implementation of the GEZUVOR plans, the chief directions of works that were then set up were entrusted with the detailed planning of the route and construction. This detailed planning was then carried out in consultation with the *Landräten*, mayors, farmer's organisation, *Landesbauräten* and cultural monument offices,<sup>151</sup> and then submitted for final approval by Todt. In many cases, he made final corrections to details, as demonstrated by the files of the chief direction of works in Kassel.<sup>152</sup>

The principle of landscape aesthetics realized in the Hessian Network demanded that autobahns, unlike railway lines which cut through hills or cross valleys on raised dams and which therefore stand out from the landscape as technical constructions, should be adapted to the landscape. This kind of routing in accordance with the intention of landscape aesthetics did indeed provide panoramic views of the landscape and of towns – e.g. the approaches to Kassel - from slopes and mountain peaks<sup>153</sup> - that had been unknown on railway lines and country roads as these run through valleys whenever possible. In his lecture "From the HAFRABA to the Reichsautobahn," the section head of the GEZUVOR, Becker pointed out that the North Hessian section was

<sup>150</sup> Reichsverkehrsministerium (Ed.): Hundert Jahre deutsche Eisenbahnen, second edition, 1938, p. 32

<sup>151</sup> See "Ehe die erste Lore rollt", archive city of Kassel, Kurhessische Landeszeitung on 19<sup>th</sup> of March 1937, archive city of Kassel.

<sup>152</sup> in: BA R 4601, volume 4043, 4046, 4045

<sup>153</sup> See the reports on the inauguration of the section Göttingen-Kassel: "Zur neuen Schönheit führt ein neuer Weg" in the Kurhessischen Landeszeitung, the newspaper of the Gau Kurhessen, on 19<sup>th</sup> of June 1937, archive city of Kassel.

deliberately routed over the peaks of the plateau, while valleys were usually crossed vertically. No other routing was possible considering the level of settlement in recent years, he argued.<sup>154</sup> However, this argument is not very convincing if we take into account the lower population density before 1945 compared to the new housing projects that have been put up since the 1960s. The routing of sections that pass important tourist attractions such as Neuenstein Castle,<sup>155</sup> the exit Bad Hersfeld-West and Montabauer Castle on the A3<sup>156</sup> illustrates how roads were fitted into the basic idea of landscape aesthetics.

Moreover, one can recognise a remarkable realisation of the principles of landscape aesthetics and monumentality in the way that the autobahn intersection south cross Kassel was laid out on a mountain peak that requires an ascent of 80m on both the north and south sides. This can be considered a triumph of Nazi construction of the A7 autobahn, which went far beyond all conventional road planning visions. The Third Reich's overwhelming desire to assert itself also manifested itself in the gigantic bridges, such as the Werra Valley Bridge near Hannoversch Münden with a steep gradient of 7.8%<sup>157</sup> (see Figure 4), the Fulda Bridge (only constructed in 1962, see below) with a span of 120m between the piers near Bergshausen on the south cross Kassel and the numerous, and extremely expensive large constructions, that support the slope location of the A4 from Bad Hersfeld to Eisenach high over the Werra Valley.<sup>158</sup>

<sup>154</sup> in: Kasseler Post on 18<sup>th</sup> of March 1934 (library university Kassel, Hessischer Lesesaal)

<sup>155</sup> Neuenstein Castle was mentioned several times in local press reports about the completed Kassel-Bad Hersfeld route, see archive city of Kassel, Kurhessische Landeszeitung, Whit holiday 1938 and on 14<sup>th</sup> of January 1939. The Munich-Salzburg autobahn runs over the bridge over the Mangfall and provides a view of the church at Weyarn with the world famous Annunciation group by Ignaz Günther.

<sup>156</sup> I have used the present numbering for the roads. For references to earlier numbering see *K. Schefold und A. Neher*, op. cit. , Anlage 21.

<sup>157</sup> This downhill section is not, however, bought at the price of a view far into the landscape. For more about the bridge at Hannoversch Münden see the Bundesminister für Verkehr (publisher.): *Werratalbrücke Hedemünden*, Hannover 1993. On the bridges in North Hesse see also the article: "Landschaft gestaltet Brücken" in the Kurhessischen Landeszeitung on 10<sup>th</sup> of September 1935, archive city of Kassel.

<sup>158</sup> The bridge at Wommen was only completed with four lanes in the course of the transport projects after reunification in 1989, see Amt für Straßen- und Verkehrswesen Frankfurt (publisher): *Bundesautobahn A4 Bad Hersfeld – Erfurt*, Frankfurt 1994



9. Bauabschnitt Hannover—Bassel. Die fertige Werratalbrücke bei Seßemünden (Hannoversch-Münden), Mai 1938

Figure 4, *Ernst Vollbehr*: Arbeitsschlacht – Fünf Jahre Malfahrten auf den Bauplätzen der „Strassen Adolf Hitlers“, Berlin 1938.

The idea of landscape aesthetics was so highly developed that autobahn sections not only hugged valleys and mountains with many narrow curves, they were also laid over countless summits resulting in great panoramic views. The way over summits had gradients of up to 8%.<sup>159</sup> This gradient of 8% is all the more surprising as Todt's decree of 12<sup>th</sup> of December 1933 to the GEZUVOR and the Reichsautobahn Company, "Guidelines for Autobahn Planning"<sup>160</sup> stated that gradients of 5% or more should be avoided as far as possible. Some months later Todt changed his mind and admitted gradients of more than 5% in routs leading through hills on the grounds that the passengers in the cars could get a lively impression of the beauty of the landscape.<sup>161</sup>

There are many publications on the subject of landscaping the autobahn (cf. appendix 1). In these publications one often had underlined the conflict of the different professional groups: civil engineers who had the goals of an economic construction and road safety and on the other hand the architects for landscaping Todt had brought into play. But in the files of the chief direction of works in Kassel to be found in the *Bundesarchiv* one can not find any influence of the architects for landscaping as a professional group. The publications on the subject of landscaping could be enriched in so far as they do not relate landscaping to the goal of road safety which the civil engineers had to achieve and do not discuss the trade-off between these two goals: Steep gradients significantly reduced the effortless and risk-free practicability of the autobahn for automobiles.

I will show the reduction of road safety here at two examples.

(1) The autobahn term "Kassel Mountains" was born – mountains that are still feared by motorists today, especially in winter. Truck drivers on the section Göttingen-Bad Hersfeld who wish to avoid the Kasseler Mountains still use the B27 along the rivers Werra and Fulda – which raises justified doubts about the sense of the routing in terms of traffic engineering.

<sup>159</sup> Daten zu den Nordhessischen Autobahnen sind enthalten in Straßenneubauamt Hessen-Nord (Hersg.): *Autobahnbau in Nordhessen*, ca. 1974.

<sup>160</sup> in: BA R 4601, volume 1263, sheet 65-70

<sup>161</sup> Letter of Todt to Gesellschaft Reichsautobahn on 20<sup>th</sup> February 1934, in: Thüringisches Hauptstaatsarchiv Weimar, C234, p. 24

(2) The Rimberg<sup>162</sup> service station on the A5 was located at the top of a mountain, providing a wonderful panoramic view – but at the price of a steep ascent that represents a grave threat to road safety. The service station is located 500m above NN at the highest point of the road in Hesse and the ascent is especially hazardous in winter. On the other hand, it would have been easy to bypass the Rimberg by laying this section of the road 500m further to the east, which shows the special orientation of planning to observation points.

However, the frequently cited discourse about landscape aesthetics does not suffice to explain the routing of the autobahn in Hesse. Instead the question of routing has to be raised that researchers have neglected so far. This article has now looked at this issue. What is so remarkable about routing in Hesse is how the routing between Frankfurt and Kassel deviates in two respects (compare Figure 5) from the Kassel-Marburg-Giessen-Frankfurt route originally drawn up by the HAFRABA. Not only was the mountain route for the A7/A5 chosen, instead of one that would have run through largely flat terrain. It is also conspicuous that the section that was realised is designed as a **trunk road connection** Kassel - Frankfurt and at the same time rules out local traffic between the medium sized towns. The connection between the two Hessian towns Marburg and Giessen with Kassel provided for in the HAFRABA route was dispensed with completely, while the two Hessian spa resorts Bad Hersfeld and Bad Nauheim, that were of only minor importance in this period, were connected. Once again, this emphasises the weight attached to the tourist aspects of road routing. This routing also makes it clear that autobahn construction did not completely and in every respect serve to meet specific transport needs.

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<sup>162</sup> The service station was planned, but only built in 1949, see Bundesminister für Verkehr (Hersg.): HAFRABA – Bundesautobahnen Hansestädte – Frankfurt – Basel, Bau Verlag, Wiesbaden and Berlin 1962, p. 123

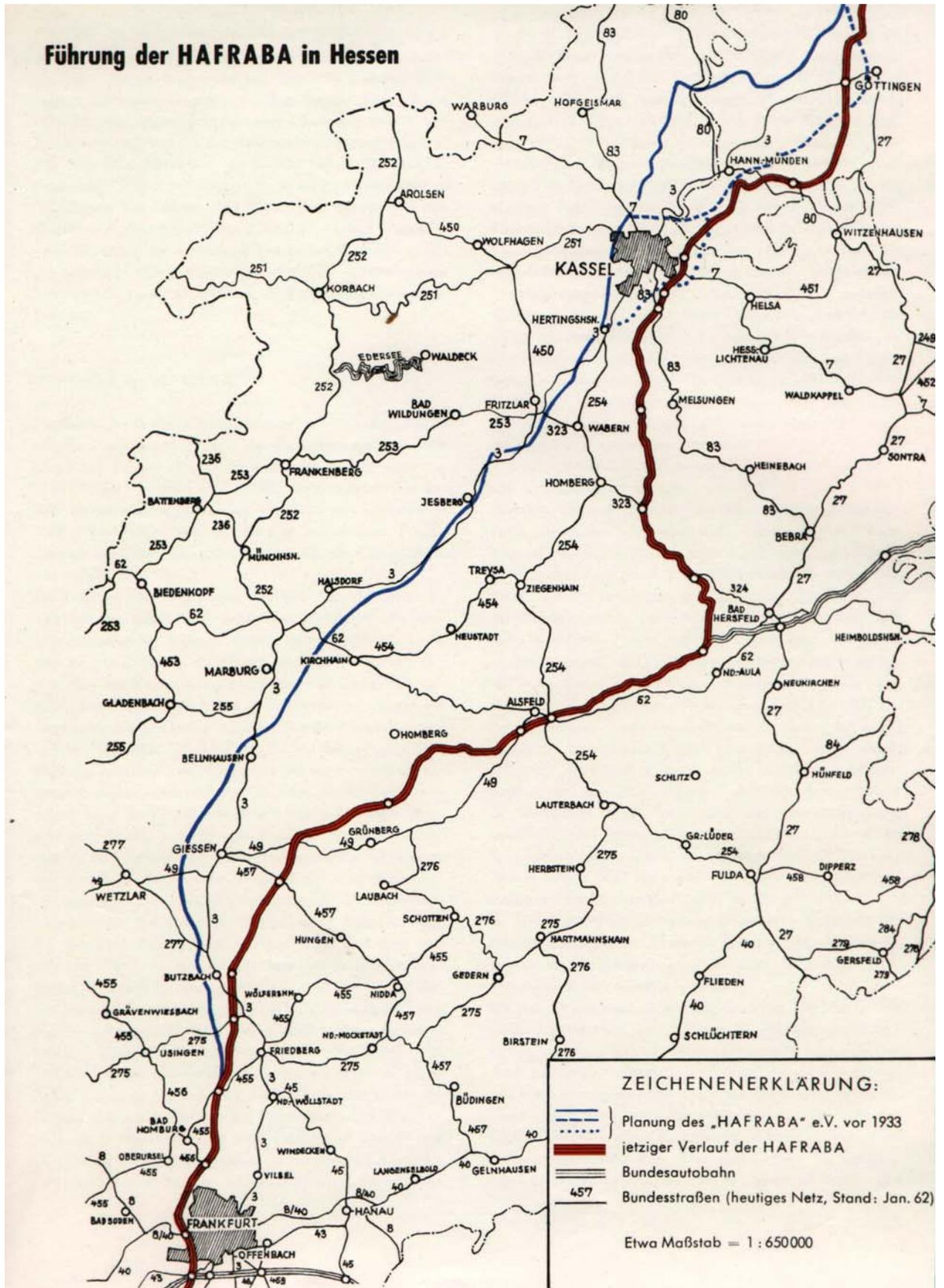


Figure 5, Hafraba route in Hesse taken from: Bundesminister für Verkehr (Hersg.): HAFRABA – Bundesautobahnen Hansestädte – Frankfurt – Basel, Bau Verlag, Wiesbaden and Berlin 1962, p. 99

If one interprets the routing of the A5/A7 and the A3 from the Reichsbahn's perspective, it fits seamlessly into the Reichsbahn's interests of not sharing business in either local passenger or freight traffic with rivals from the road transport sector, whereby it has to be remembered that in passenger transport the volume of local traffic far exceeds that of long distance traffic and thus also accounts for the greatest share of turnover.<sup>163</sup> The route network of the A5/A7 and A3 autobahns not only shows how little the autobahn network was integrated into local transport structures. Its routing also includes some extreme gradients and to this extent the road appears to have been built as an obstacle to truck traffic in the sense that trucks in those days had only a low engine output of some 50 HP. An undated report about the section of the autobahn between Dresden and Nuremberg by a Dresden-based road haulage company concedes that using the autobahn cut the time required for the journey by 40% and fuel consumption by 20% compared to the route over the country road. However, the long inclinations of up to 5 km were a disadvantage and made high demands on drivers, the vehicle, the engine and transmission. The report states: "The uphill section regularly has to be travelled in first gear, whereby on occasion an articulated lorry needs up to half an hour to overcome a single inclination."<sup>164</sup>

One can therefore safely assume that fully loaded trucks made only very slow progress on roads with gradients of 7% to 8%. To this extent, this kind of routing hindered trucks as competitors to the Reichsbahn in long distance transport. Finally, the logical linking of the two forms of transport, truck and rail, that could have been achieved by routing the A4 close to what was then the important rail junction Bebra was not carried out. However, records in the *Bundesarchiv* provide no evidence that the Reichsbahn exercised any direct influence on routing. The chief directions of works made up of Reichsbahn officials only carried out the detailed planning of the routes previously laid down by the GEZUVOR or Todt.

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<sup>163</sup> In 1929 transport in 2nd and 3rd class accounted for 98% of turnover in passenger traffic with an average distance per person of less than 30 km, see Statistisches Jahrbuch für das Deutsche Reich 1933, p.163.

<sup>164</sup> in: BA R 4601, volume 3093



## 7 Conclusion

With regard to autobahn construction, transport policy was highly contradictory. On the one hand, a network of 3,000 km of high-speed roads was created in the years before 1939. On the other, truck transport by private road haulage companies was drastically curtailed<sup>165</sup>. And also the strategies in the transport policy does not fit to the goal of armament. Neither there have been incentives for the diffusion of trucks at private enterprises so the army could requisition trucks nor served the autobahn the deployment of troops.

This article shows the irrational transport policy criteria that sufficed for autobahn construction in Germany and Hesse, as well as its many arbitrary features. The aspects of landscape aesthetics took priority over transport engineering. The planning process also reveals the dictatorial role played by Todt, in particular his unscrupulous exploitation of the goodwill of the HAFRABA experts. Here too, in the field of road construction, we can see how the Nazis ruthlessly adopted ideas from the Weimar Republic.

### Appendix 1

#### Studies on the German autobahn project

- K. Kaftan*: Der Kampf um die Autobahn, Berlin 1955  
*Paul Hafen*: Das Schrifttum über die deutschen Autobahnen, Bonn 1956.  
*Karl-Heinz Ludwig*: Technik und Ingenieure in Dritten Reich, Königstein 1974  
*Karl Lärmer*: Autobahnbau in Deutschland 1933 bis 1945, Berlin 1975  
*H. Henning*: Kraftfahrzeugindustrie und Autobahnbau in der Wirtschaftspolitik der Nationalsozialisten 1933 bis 1936, in: Vierteljahresschrift für Sozial- und Wirtschaftsgeschichte, Bd. 65, 1978, p. 217-242,  
*R. Stommer* (Hersg.): Reichsautobahnen – Pyramiden des Dritten Reiches, Marburg 1982  
*Wolfgang Sachs*: Die Liebe zum Automobil, Berlin 1984.  
*J. D. Shand*: The Reichsautobahn: Symbol for the Third Reich, in: Journal of Contemporary History, 1984, Vol. 19, p. 189-195  
*Anette Nietfeld*: Reichsautobahn und Landschaftspflege, Werkstattberichte des Instituts für Management und Umweltplanung, herausgegeben von *Arnim Bechmann*, Nr. 14, 1985, TU Berlin.  
*Claudia Windisch-Hojnacki*: Die Reichsautobahn – Konzeption und Bau der RAB, ihre ästhetischen Aspekte, sowie ihre Illustration in Malerei, Literatur, Photographie und Plastik, Diss. Universität Bonn, 1989  
*M. Kornrumpf*: HAFRABA e.V. – Deutsche Autobahn-Planung 1926-1934, Bonn 1990. A study without clearing the sources and with admiration of the NS-movement.

<sup>165</sup> See also *Oswald Lutz*: 3000 Kilometer Reichsautobahn für den gewerblichen Kraftverkehr, in: Die Strasse, 1938, issue 24, p. 772

- Christopher Kopper*: Modernität oder Scheinmodernität nationalsozialistischer Herrschaft – Das Beispiel der Verkehrspolitik, in: *Christian Jansen, Lutz Niethammer und Bernd Weisbrod* (Hrsg.): Von der Aufgabe der Freiheit, Festschrift für Hans Mommsen, Berlin 1995, p. 399-411
- E. Schütz und E. Gruber*: Mythos Reichsautobahn, Berlin 1996, 2. Auflage Berlin 2000
- Franz Seidler*: Fritz Todt, Bublies Verlag, Belthelm-Schnellbach 2000.
- Dietrich Schwell und Wolfgang Jäger*: Verkehrsfreigaben von Autobahnen in den Jahren 1939 bis 1945, in: *Strasse und Autobahn*, issue 8, 2000, p. 478-488.
- Thomas Zeller*, Straße, Bahn, Panorama – Verkehrswege und Landschaftsveränderung in Deutschland 1930 bis 1990. Diss. Munich, Campus Verlag, Frankfurt 2002

## Appendix 2

### Publications of the HAFRABA association in 1927

(Source: Library of University of Brunswick)

- Otzen, Robert: Die Autostraße Hansestädte-Frankfurt-Basel ; Schrift Nr. 1 ; Zweck und Ziele des Vereins "Hafraba" – Verlag der Göhmanschen Buchdruckerei, Hannover 1927
- Tagungsbericht der 1. Verwaltungsrat-Sitzung am Donnerstag, 10. Febr. 1927, in den Räumen der Frankfurter Gesellschaft für Handel, Industrie und Wissenschaft in Frankfurt a/M, Schrift Nr. 2 , Hellerdruck Frankfurt 1927
- Vorträge gehalten anlässlich der 1. Verwaltungsrat-Sitzung am 10. Februar 1927 in den Räumen der Frankfurter Gesellschaft für Handel, Industrie und Wissenschaft in Frankfurt a/M/, von Piero Puricelli und Robert Otzen, Schrift Nr. 3 – Hellerdruck Frankfurt 1927
- Otzen, Robert: Die Autostraße Hansestädte-Frankfurt-Basel, Erläuterungsbericht zum Entwurf der Autostraße, Schrift Nr. 4 - Hellerdruck Frankfurt 1927
1. Sitzung des Technischen Ausschusses am Dienstag, den 5. April 1927 in Frankfurt am Main, Schrift Nr. 5 - Hellerdruck Frankfurt 1927
  1. Sitzung des Verkehrswirtschaftlichen Ausschusses am Montag, den 16. Mai 1927, in den Räumen der "Hafraba" Frankfurt am Main Savignystr. 25, Schrift Nr. 7 - Hellerdruck Frankfurt 1927
  2. Sitzung des Technischen Ausschusses am Dienstag, den 24. Mai 1927, im Hotel Disch in Köln a.Rh., Schrift Nr. 7 - Hellerdruck Frankfurt 1927
  2. Sitzung des Verwaltungsrates am Mittwoch, den 25. Mai 1927, im Sitzungssaal des Hotel Disch in Köln am Rhein, Schrift Nr. 8 - Hellerdruck Frankfurt 1927
  2. Sitzung des Verkehrswirtschaftlichen Ausschusses am Samstag, den 29. Oktober 1927, im Turmsaale des Rathauses zu Mannheim, Schrift Nr. 9 - Hellerdruck Frankfurt 1927
  1. Sitzung des Finanzierungs-Ausschusses am Donnerstag, den 1. Dezember 1927, im Hotel Ernst-August zu Hannover, Schrift Nr. 10 - Hellerdruck Frankfurt 1927
  3. Sitzung des Verwaltungsrats am Donnerstag, den 1. Dezember 1927, im Hodlersaal des Neuen Rathauses zu Hannover, Schrift Nr. 11 - Hellerdruck Frankfurt 1927

### Abbreviations:

- ADAC: Allgemeiner Automobilclub Deutschland – General Auto Club Germany
- BA: BA, Berlin – Archive of Federal Republic of Germany
- HAFRABA: Verein zur Vorbereitung der Autostrasse Hansestädte-Frankfurt-Basel  
The Society for the Promotion of the Autobahn Hansestädte -Frankfurt-Basel
- Mio. : million
- RG: Reichsgesetzblatt - official gazette of the Reich