



A 1937 poster by Robert Zinner depicting the Saale Bridge near Hirschberg; the 'monumental work' was intended to be admired from the viewing platform below the Eagle Stele, from: Schütz / Gruber (note 2).

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The Infrastructural Construction of the "Volksgemeinschaft" Aspects of Motorway Construction in National Socialist Germany

1.

The essential facts are easily stated, and they are sufficient to dispel the myths to which collective memory has stubbornly continued to cling despite decades of research in cultural, social, and technological history—although the question of the conditions under which these myths acquired their self-evidence need not concern us here: The *Reichsautobahn* was not originally a National Socialist project. Its construction was not intended as a job creation programme, nor was its extensive network designed for military purposes. Rather, the project originated in the middle years of the Weimar Republic and, at first glance, even displayed distinctly democratic features. Conceived as a four-lane, grade-separated motorway linking Hamburg, Frankfurt am Main, and Basel, with a later extension to Genoa, the HAFRABA project—together with the MÜLEIBERL route connecting Munich, Leipzig, and Berlin—constituted the first fully developed plan for a national long-distance road network. Unlike the railway or the motor coach, it based the prospect of potentially mass spatial mobility upon the principle of individual use.¹ Yet although the project had been completed in its essentials by 1927 and elaborated in detail by 1932, it was realised only under the Third Reich. In doing so, it immediately became a National Socialist project in precisely that eminent sense in which an infrastructural architectural project is perhaps even more consequential than monuments of representation or domination for the reality-generating practice of a totalitarian politics.²

Construction of the *Reichsautobahn* began in September 1933, following the plans developed during the 1920s, with the central HAFRABA section

¹ The actual significance of the omnibus lay precisely in regional overland transport: in 1932, the network of omnibus routes was two and a half times as extensive as the railway network. See Thomas Kühne, "Massenmotorisierung und Verkehrspolitik im 20. Jahrhundert: Technikgeschichte als politische Sozial- und Kulturgeschichte," in *Neue Politische Literatur* 41 (1996), pp. 196–229, here p. 207; on the significance of the HAFRABA project for economic policy, see *ibid.*, p. 209.

² When Fritz Todt, appointed "General Inspector for German Road Construction" (*Generalinspektor für das deutsche Straßenwesen*) in 1933, assumed overall supervision of the autobahn construction, the project had already been elaborated by the private HAFRABA association — structured into twenty-kilometer sections and documented in seventy volumes containing plans, descriptions, and calculations. See Erhard Schütz and Eckhard Gruber, *Mythos Reichsautobahn: Bau und Inszenierung der „Straßen des Führers“ 1933–1941* (Berlin, 1996), p. 35.

between Frankfurt and Darmstadt.³ The motorway was inaugurated there in May 1935. In the autumn of 1936, the completion of its first thousand kilometres was celebrated, and by the cessation of all construction work at the end of 1941, a total of 3,819.7 kilometres had been completed. At that point, however, plans had already expanded far beyond the original project to encompass approximately 20,000 kilometres. Construction proceeded—under catastrophic working conditions—on twenty-two building sites distributed throughout the Reich. This dispersal was motivated partly by organisational and logistical considerations, but above all by propaganda. The anticipated employment effect, which had already been associated with the HAFRABA project in 1929, nevertheless remained comparatively modest, primarily because of the increasing mechanisation of road construction. Although the objective had been to create 600,000 jobs, the highest level of employment, reached in 1936, amounted to only 124,483 workers directly engaged in construction and roughly 250,000 employed indirectly in planning offices, supplier industries, and, not least, the extensive propaganda apparatus. Only a comparatively small proportion of these workers had previously been unemployed. The military significance of the motorway, finally, was virtually negligible. The *Reichsbahn* remained considerably more efficient for transporting both matériel and personnel. Troop movements on the motorways were regarded as hazardous because the light-coloured concrete carriageways served as navigational aids for enemy aircraft. Moreover, the relatively thin road surfaces and many of the bridges were incapable of carrying heavy tracked vehicles.⁴ It should also be remembered that the rapid redeployment of military units within the territory of the Reich itself was of limited importance to a regime whose strategic ambitions were directed towards expansion beyond its borders.

All three of the myths that have become inseparably associated with the *Reichsautobahn* are therefore false. The "Roads of the Führer" (*Straßen des Führers*) were not Adolf Hitler's invention. Their significance for labour-market policy was slight. Their military significance was practically non-existent.⁵ Even their transport value was highly contested. In 1932, there were

³ The decision to construct the autobahns was apparently taken by Hitler only situationally in 1932/33. See Joachim Radkau, *Technik in Deutschland. Vom 18. Jahrhundert bis zur Gegenwart* (Frankfurt am Main, 1989), p. 309.

⁴ The fact that autobahn construction created the technological and organizational basis for the later defensive installations on Germany's western borders belongs — particularly as a secondary benefit — rather to the accidental aspects of its military significance. Significant, by contrast, is the fact that in 1937 the military authorities enforced the black coloring of road surfaces in the vicinity of urban agglomerations. See Schütz and Gruber (see note 2), pp. 82–83 and 88.

⁵ See Schütz and Gruber (see note 2), pp. 10–12, who also emphasize Todt's authorship of this designation (p. 18), as well as Werner Durth, "Architektur und Stadtplanung im Dritten Reich," in Michael Prinz and Rainer Zitelmann (eds.), *Nationalsozialismus und Modernisierung*, 2nd ed. (Darmstadt, 1994), pp. 139–171, here pp. 143–146. A concise

fewer than 490,000 motor vehicles registered throughout the Reich, rising to only around 1.6 million by 1938, and these were concentrated overwhelmingly in the larger cities.⁶ Moreover, despite the repeatedly renewed demand for a *Volkswagen*—a "people's car"—which had become a leitmotif of automotive journalism during the 1920s but was realised only under the Third Reich through the heavily subsidised *KdF-Wagen* and against the resistance of the established automobile industry, the private motor car still retained, even in the late 1930s, the character of a luxury and leisure commodity. It is therefore hardly surprising that contemporary critics dismissed the motorways as little more than "roads for the cheerful enjoyment of life by wealthy people".⁷ Nevertheless, the *Reichsautobahn* became not merely the central infrastructural project of National Socialism but its single most important architectural undertaking. And it became a myth.

2.

The particular significance of motorway construction for the Third Reich becomes apparent, first of all, in the unprecedented media campaign that accompanied the project from its very inception and exploited the entire repertoire of modern advertising and communication techniques. The infrastructural project thus immediately became an equally unprecedented project of communication—in the broadest possible sense of the term, encompassing "the exchange not only of persons and goods but also of data and information".⁸ The myth of the *Reichsautobahn* was, in this sense, deliberately pro-

summary of the facts is provided by James D. Shand, "The Reichsautobahn: Symbol for the Third Reich," *Journal of Contemporary History* 19 (1984), pp. 189–201.

⁶ See Schütz and Gruber (see note 2), pp. 34 and 12. The low density of automobiles in Germany at the time becomes apparent not from absolute numbers, but from comparative figures: in 1938, there were still 148 inhabitants per passenger car in Germany, compared with 24 in Great Britain, 23 in France, and 5 in the United States. See Kühne (see note 1), p. 199; on the urban concentration of individual motorization in Central Europe, see *ibid.*, p. 201.

⁷ This was stated by Georg Halter, professor of highway construction and railway engineering at the University of Munich, an NSDAP member since 1931 and by no means a critic of the regime. Quoted in Erhard Schütz, „Die saugende Bahn. Zur Faszinationsgeschichte der Reichsautobahn,“ in Ferdinand Seibt et al. (eds.), *Transit Brügge–Novgorod. Eine Straße durch die europäische Geschichte* (Bottrop, 1997), pp. 608–615, here p. 610. See in detail Schütz and Gruber (see note 2), pp. 20–22. On the "people's car" (*Volksauto*) and the structural resistance of the highly diversified automobile industry to large-scale series production as the basis of mass motorization, see Radkau (see note 3), pp. 303–305, and Kühne (see note 1), pp. 208–209 and 200: "Cars produced on assembly lines were the exception in Germany before the Second World War."

⁸ Schütz and Gruber (see note 2), p. 13. See also Erhard Schütz, „Faszination der blaß-grauen Bänder. Zur ‚organischen‘ Technik der Reichsautobahn,“ in Wolfgang Emmerich and Carl Wege (eds.), *Der Technikdiskurs in der Hitler-Stalin-Ära* (Stuttgart,

duced. The spectacular media staging of the project—which drew not only upon the then novel techniques of mass communication but also upon the established media of the traditional arts, extending even to the countless oil paintings of construction sites and completed motorways in stylised landscapes commissioned expressly for this purpose—formed an integral component of the project's realisation and contributed substantially to the remarkable history of its fascination.⁹

Certainly, this involved what is commonly called propaganda. The motorways symbolised, in several respects, the large-scale realisation of a dynamic ideology and thus became a central element in the Third Reich's self-representation. They constituted, as it were, the materially expansive manifestation of the National Socialist Movement; they realised an entirely unprecedented architectural form and thereby appropriated, intensified, and extended across virtually the whole territory of Germany the already symbolic significance of the construction site (*Baustelle*) as the quintessential expression of technological mastery over nature in the twentieth century. Finally, the completed motorways demonstrated with almost tangible immediacy the compelling unity of idea, planning, and execution on a national scale.¹⁰ Yet this project of communication was concerned with something more than spectacular staging and theatrical symbolism.

The media campaign that transformed motorway construction into a public spectacle from the outset fulfilled a strategic function quite different from that of mere publicity or advertisement.¹¹ More than almost any other architectural undertaking of the Third Reich, the *Reichsautobahn* aimed at the thoroughgoing transformation of both nature and society in the literal sense of the expression. Consequently, its communicative dimension acquired from the very

1995), pp. 123–145, here pp. 132–133, and in detail Schütz and Gruber (see note 2), pp. 104–121.

⁹ Schütz and Gruber (see note 2), p. 13: Since the construction of the autobahn was an “interweaving of staging and projected expectations, a mixture of planning and the free play of forces, of wishes and fears, obsessions and calculation,” “what ultimately constituted the autobahn as a whole” represented “a very special case in the history of fascination.” On “art along the Reichsautobahn,” see Claudia Windisch-Hojnacki, *Die Reichsautobahn. Konzeption und Bau der RAB, ihre ästhetischen Aspekte, sowie ihre Illustration in Malerei, Literatur, Fotografie und Plastik*, doctoral dissertation (Bonn, 1989), pp. 192–258.

¹⁰ See Durth (see note 5), pp. 143ff. On the symbolic significance and communicative elevation of the construction site (*Baustelle*) in the twentieth century, see Hans Präfefer, “Flirting with Disaster. Zur Symbolgegenwart der ‚Baustelle‘,” in Hans Präfefer (ed.), *Zeitzeichen Baustelle* (Frankfurt am Main, 1998), pp. 8–47; on the Reichsautobahn, see *ibid.*, pp. 27–29.

¹¹ On advertising, see Schütz and Gruber (see note 2), p. 105: Advertising for the autobahn was carried out in many different ways, while advertising along the autobahn was prohibited. As an “elevated” structure, the autobahn “was kept free of advertising” (*ibid.*). This has remained the case in Germany to the present day, although now for the more mundane reason of traffic safety.

beginning not merely an empirical political significance but also a specifically political-transcendental one¹². In this respect, motorway construction constituted the material—and incomparably more elaborate—counterpart to the Third Reich's other technologically mediated project of communication: radio broadcasting. Radio was intended to form "a nationwide network that centrally integrated the *Volksgemeinschaft* while simultaneously accommodating regional identities through its decentralised transmitters". Yet this was by no means a matter of projecting fictitious realities, as the formulation misleadingly suggests. Rather, it involved the communicatively effective accentuation of already existing regional characteristics.¹³ One might therefore formulate the point more precisely by saying that the nationwide reach of broadcasting was intended to transform "the fictional reality of a technologically constituted, virtually unified Germany into a territorially effective imagination in the minds of its listeners".¹⁴

The network of the *Reichsautobahn* was to accomplish the same task in material rather than immaterial form and, in strategic terms, as the complementary counterpart of broadcasting. It was intended, not merely to make possible but literally to realise, "the paradox of intensifying the integration of the German people through mobility while simultaneously giving renewed contour to their regional identities".¹⁵ This explains the fundamental significance of the *Reichsautobahn* as both an infrastructural and a communicative project within the political and social project of National Socialism. In its dual function, it constituted the functional matrix for the literal construction—that is, the entirely artificial realisation—of the regime's specific political and social form. It became, in effect, the constitutive medium of the National Socialist „*Volks-gemeinschaft*“: a historically unprecedented form of mobility-based, densely integrated social organisation on the scale of an entire society.

3.

The construction of the *Reichsautobahn* formed part of an ambitious—or at least emphatically intended—programme of mass motorisation that had been conceived as an instrument of social policy. It was a vast infrastructural undertaking for whose realisation virtually inexhaustible resources were mobilised and around which an extensive para-state apparatus of organisations and institutions emerged. One of its principal political functions was to enforce the National Socialist regime's systematic preference for individual motorised

¹² Werner Durth, *Deutsche Architekten. Biographische Verflechtungen 1900–1970*, 2nd ed. (Munich, 1992), p. 201.

¹³ Schütz / Gruber (Anm. 2), 106

¹⁴ Thus Dominik Schrage, *Psychotechnik und Radiophonie. Subjektkonstruktionen in artifiziellen Wirklichkeiten 1918–1932* (Munich, 2001), p. 328.

¹⁵ Schütz and Gruber (see note 2), p. 134.

transport over public transport and, in particular, over the *Reichsbahn*.¹⁶ Yet the political implementation of the motorway project was itself only the precondition for its actual objective: the social establishment of an entirely new transport infrastructure—at once rapid, densely interconnected, and flexibly usable—whose technical and social foundation was to be long-distance individual mobility by motor vehicle.

This amounted to considerably more than a transport policy. Notwithstanding all the National Socialist rhetoric of *Blut und Boden* ("Blood and Soil"), the *Reichsautobahn* constituted the centrepiece of a gigantic project aimed at the "nationalisation of the masses" through the technologically mediated mobilisation of individuals and their communicative integration, both territorially and, in a more fundamental sense, transcendently.¹⁷ The creation of an infrastructure for mass individual mobility thus became the necessary precondition for what might almost pleonastically be called the artificial construction of the „*Volks-gemeinschaft*“. Accordingly, the motorway was explicitly conceived as a factor in the intensification of communication in the broadest sense of that expression.¹⁸ In this respect, the project possessed an unmistakable developmental dimension, since it was expected to "open up new regions through modern transport" and to integrate previously peripheral areas into the national space.¹⁹ Its decisive functional principle, however, lay elsewhere. The very feature that contemporary critics regarded as demonstrating the motorway's doubtful utility—namely its orientation towards individual leisure mobility—was in fact the central mechanism through which its intended social effects were to be achieved.

The construction of the *Reichsautobahn* coincided with the emergence of modern tourism as the mass-cultural transformation of bourgeois travel. In the longer historical perspective, this resulted in the socialisation of individual mobility and thereby in a socially inclusive, materially and sensuously grounded expansion of individual experience of the world. During the interwar years, however, and within the framework of the leisure policies that accompanied its first institutional forms, mass tourism functioned above all as a new

¹⁶ Radkau (see note 3), pp. 308–309. The opposition between the autobahn and the railway was further radicalized by the fact that the automobile was genealogically associated less with the railway than with the airplane, and thus, alongside it, became the embodiment of the specific technologies of the twentieth century, namely those based on internal combustion engines.

¹⁷ Thus Hitler stated programmatically in 1925. At the opening of a section of the network in 1937 he declared: "The new German Reichsautobahn network [...] will more than anything else help to connect the German Gaue and lands with one another and force them into unity." Quoted in Durth (see note 5), p. 146. Albert Speer formulated this equally explicitly: The autobahn was a work that more than any other "immediately demonstrates the new will toward the unification of the German nation and the German Lebensraum." Quoted in Durth (see note 12), p. 199. – All contemporary documents are quoted here deliberately from secondary sources.

¹⁸ Thus Kühne (see note 1), p. 209. See also Schütz (see note 8), p. 135.

¹⁹ Durth (see note 5), p. 147.

instrument for the comprehensive transformation of the social itself.²⁰ Italy had already pioneered this development after 1925. Under the name *Opera Nazionale Dopolavoro*, a para-state monopoly organisation for non-commercial leisure programmes emerged that transformed sport, entertainment, and above all travel into instruments of accelerated modernisation by pursuing what was explicitly understood as the rationalisation of the body in response to the rationalisation of industrial labour.²¹ Within these programmes, organised tourism was intended not merely to regenerate the labour force—including the newly expanding salaried middle classes—but, more fundamentally, to promote the "nationalisation of the masses" by dissolving inherited socio-spatial identities and systematically producing the experience of a new national belonging. Holidays and travel thereby became media through which the nation acquired an immediately tangible territorial materiality.

It was upon this model that the National Socialist leisure organisation *Kraft durch Freude* ("Strength through Joy", KdF) drew after 1934. The organisation's very name defined the „*Volksgemeinschaft*“ from the outset as a *Leistungsgemeinschaft*—a community constituted through productive achievement.²² Although officially dedicated to political education and physical training, KdF became the most popular organisation of the regime above all because it developed into the service organisation of an emerging system of mass tourism, functioning for many participants as a state-organised and state-monopolised "supermarket of culture and recreation".²³ KdF thus provided both the institutional framework for the collective mobilisation of the population and the social-policy instrument through which its intended individual motorisation was to be realised. The KdF car was conceived not simply as another prestigious symbol alongside the twelve cruise ships of the KdF fleet. It was intended to become the technical vehicle for producing the „*Volksgemeinschaft*“ through individual mobility, while the *Reichsautobahn* supplied the infrastructural medium through which that mobility could be realised.²⁴

The mobility-based transformation of the social therefore aimed at a functional condensation of society through individualised movement. It sought to

²⁰ See Kaspar Maase, *Grenzenloses Vergnügen. Der Aufstieg der Massenkultur 1850–1970* (Frankfurt am Main, 1997), pp. 179–225.

²¹ *Ibid.*, p. 179.

²² *Ibid.*, p. 208. See also Hasso Spode, „Der deutsche Arbeiter reist.“ Massentourismus im Dritten Reich,“ in Gerhard Huck (ed.), *Sozialgeschichte der Freizeit: Untersuchungen zum Wandel der Alltagskultur in Deutschland*, 2nd ed. (Wuppertal, 1982), pp. 281–306.

²³ Maase (see note 20), p. 210. For the sake of completeness, it should be noted that mass tourism was not only a “right-wing” but also a “left-wing” project, which after the Popular Front victory of 1936 was pursued in France and Italy as well through highly subsidized railway travel. Unlike the fascist states, however, these programs did not aim at intensified national integration, but at the participation of the lower classes in the pleasures of the upper classes. Hence the slogan: “La neige pour tous.” See *ibid.*, pp. 192–195.

²⁴ Schütz and Gruber (see note 2), p. 143.

produce a new homogeneous social totality by suspending inherited regional, local, and familial attachments as far as possible and replacing them with new socio-spatial relations constituted through an infrastructural network of communication.

4.

The large-scale architectural project of motorway construction and the equally large-scale socio-political project of mass motorisation rested, above all, upon National Socialism's distinctive relationship to modern technology and, more specifically, to the technological achievements of the twentieth century. What has often been interpreted as an almost Futurist enthusiasm for technology was in fact embedded within a broader political and cultural programme whose objective was the synthesis of technology and *Kultur*—a synthesis that found one of its most comprehensive expressions in the *Reichsautobahn* project.²⁵ Taken as a whole, this programme radicalised what has been described as the "reactionary modernism" of conservative intellectuals and large sections of the technical intelligentsia during the Weimar Republic, who had sought to integrate modern technology into the cultural framework of German nationalism.²⁶ Against the background of the familiar German opposition between *Kultur* and civilisation, the aim was to replace "the amorphous chaos of bourgeois society with the clear forms of a technologically advanced authoritarian order".²⁷ More than this, however, technology itself was to be removed from the sphere of civilisation and incorporated into the sphere of *Kultur* as a specifically modern realm of beauty and productive optimisation. Particularly in the field of technological innovation—and, more specifically, in what contemporaries described as "large technical systems", that is, the systematic interdependence of different technologies and the social structures organised around them, as exemplified by motorised transport and aviation—reactionary modernism developed a new concept of beauty grounded in technological efficiency, standardisation, and productive order.²⁸

²⁵ Thus Jeffrey Herf, *Reactionary Modernism: Technology, Culture, and Politics in Weimar and the Third Reich* (Cambridge, MA, 1984).

²⁶ Jeffrey Herf, „Der nationalsozialistische Technikdiskurs: Die deutschen Eigenheiten des reaktionären Modernismus,“ in Wolfgang Emmerich and Carl Wege (eds.), *Der Technikdiskurs in der Hitler-Stalin-Ära* (see note 8), pp. 72–93, here pp. 76–77.

²⁷ On the concept of "large technical systems," see Joachim Radkau, „Zum ewigen Wachstum verdammt? Jugend und Alter großer technischer Systeme,“ in Ingo Braun and Bernward Joerges (eds.), *Technik ohne Grenzen* (Frankfurt am Main, 1994), pp. 50–106.

²⁸ Thus Detlev J. K. Peukert, *Max Webers Diagnose der Moderne* (Göttingen, 1989), pp. 82–83. On intellectual enthusiasm for aviation, see Detlef Siegfried, *Der Fliegerblick. Intellektuelle, Radikalismus und Flugzeugproduktion bei Junkers 1914 bis 1934* (Bonn, 2001). On the compatibility of New Building (*Neues Bauen*) and "reactionary moder-

It is one of the historical paradoxes of this programme that reactionary modernism simultaneously represented a genuine possibility inherent in modernity itself. As a continuation of the classical-modern enthusiasm for rationalisation, it corresponded to the comprehensive design ambitions of a radical engineering aesthetics—a conception that, significantly, was being explored at precisely the same time by the architects of the *Neues Bauen*, albeit in an entirely different political context.²⁹ The infrastructural project of the *Reichsautobahn* therefore represented both the material realisation and the symbolic articulation of a fundamentally new order of reality. Within it, the accelerated expansion of technological possibilities converged with an equally new experience of spaces that were increasingly—and ultimately almost completely—subjected to conscious design. As an architectural undertaking, the motorway constituted nothing less than the comprehensive transformation of nature and society through the functional synthesis of technical construction and aesthetic design. It was precisely this aesthetic dimension—extending beyond the engineering structure itself to encompass the deliberate reshaping of the surrounding landscape—that acquired decisive significance for the infrastructural construction of the „*Volksgemeinschaft*“.

The spatial reorganisation brought about by motorway construction therefore manifested itself not only in the road itself but equally in the meticulous—and, in this respect, virtually total—design of the landscape as the sensuously perceptible form of this new spatial order. For this reason, landscape (*Landschaft*) became one of the central concepts of National Socialist spatial policy. It referred no longer merely to the natural environment in the literal sense but equally, in a transferred sense, to the urban landscape (*Stadtlandschaft*) and thereby defined the specifically National Socialist conception of urbanism. It

nism” using the example of the Bauhaus, see Sabine Weißler, „Bauhaus-Gestaltung in NS-Propaganda-Ausstellungen,“ in Winfried Nerdinger (ed.), *Bauhaus-Moderne im Nationalsozialismus. Zwischen Anbiederung und Verfolgung* (Munich, 1993), pp. 48–63; Winfried Nerdinger, „Bauhaus-Architekten im ‚Dritten Reich‘,“ *ibid.*, pp. 153–178; Wolfgang Voigt, „Triumph der Gleichform und des Zusammenpassens“. Ernst Neufert und die Normung in der Architektur,“ *ibid.*, pp. 179–193; and Franz Dröge and Michael Müller, *Die Macht der Schönheit. Avantgarde und Faschismus oder Die Geburt der Massenkultur* (Hamburg, 1995), pp. 267–288.

²⁹ This, too, was in principle nothing new, but rather the radicalization of a tendency of the 1920s. Especially in the context of emerging commercial aviation, and particularly in its architectural infrastructure, the airport at the edge of the city was contrasted with the confusing multiplicity of technical forms of inner-city railway stations as a clear and transparent technical shaping of the landscape. Airports, developed as an independent building type around 1930, were intended to manifest “the desirable relationship between architecture, technology, and landscape” and at the same time — as modern buildings in the sense of New Building — to be the “expression of a technical civilization” “oriented toward ‘relationship and interpenetration’ rather than separation.” Thus Christoph Asendorf, *Super Constellation – Flugzeug und Raumrevolution. Die Wirkung der Luftfahrt auf Kunst und Kultur der Moderne* (Vienna/New York, 1997), pp. 12 and 15.

was no coincidence that this conception found its paradigmatic expression in the plans for the "City of the KdF Car"—later Wolfsburg—which was envisaged as an "organic urban landscape" and after 1945 developed almost seamlessly into one of the paradigmatic examples of the modern automobile city.³⁰ Within this context, the *Reichsautobahn* marked what contemporaries celebrated as the engineer's "discovery of the landscape". The corresponding notion of the engineer as the protector of the landscape was intended simultaneously to achieve its enhancement and thereby to complete the synthesis of technology and *Kultur*. Consequently, from the outset, landscape preservation remained subordinate to landscape creation.³¹ Even where individual planners were motivated by genuine conservationist concerns, the project as a whole did not aim primarily at protecting nature. Its objective was rather the comprehensive technical mastery of nature through its aesthetic optimisation.³² The intended "gain in wholeness" thus became the very purpose of the project itself. Motorway construction was conceived as the reconciliation of technology, *Kultur*, and nature—as a national *Gesamtkunstwerk* intended not merely to symbolise but materially to realise the total planning and comprehensive aesthetic shaping of the German landscape.³³

5.

This architectural construction of the landscape corresponded to a new and distinctively scenic conception of travel, deeply influenced by the aesthetics of the cinema. The landscape itself was to become part of the journey, carefully composed so as to sustain the driver's attention and transform mo-

³⁰ On the concept of the "urban landscape" (*Stadtlandschaft*), see Durth (see note 5), pp. 158–166, and Klaus von Beyme et al., „Leitbilder des Wiederaufbaus in Deutschland,“ in Klaus von Beyme et al. (eds.), *Neue Städte aus Ruinen. Deutscher Städtebau der Nachkriegszeit* (Munich, 1992), pp. 9–30, here pp. 20–24. On Wolfsburg — named as such only under British occupation in 1945 — see Werner Durth, „Städtebau und Weltanschauung,“ in Rosemarie Beier (ed.), *Aufbau west – Aufbau ost. Die Planstädte Wolfsburg und Eisenhüttenstadt in der Nachkriegszeit* (Ostfildern-Ruit, 1997), pp. 35–49.

³¹ Durth (see note 12), p. 200. "No one can fail to recognize," it was stated in the 1937 commemorative volume *Vier Jahre Arbeit an den Straßen Adolf Hitlers*, "that the new roads allow us to experience our landscape in an entirely new way: more untouched, calmer, freer; despite the high speed, the sequence of images is not hurried. We consciously create large spaces in the landscape. The Führer's Roads (*Straßen des Führers*) thereby not only emphasize the essence of the landscape in the happiest manner, but must even enhance it." Quoted in *ibid.*, pp. 199–200.

³² Schütz and Gruber (see note 2), p. 128.

³³ Schütz and Gruber (see note 2), p. 124; Durth (see note 12), p. 204; and Schütz (see note 7), p. 611, who interprets "the overall network" of the autobahns as a "monumental total work of art" (*Gesamtkunstwerk*).

vement into an aesthetic experience.³⁴ The curvature of the road, the positioning of bridges in relation to panoramic viewpoints, the winding course through forests that momentarily enclosed the traveller, and finally the meticulous landscaping of embankments and verges—all these elements were intended to produce an "overall impression of living reality". From the standpoint of engineering, this represented a conscious departure from the principles that had governed railway construction. Instead of pursuing the shortest possible route or the systematic levelling of gradients, the *Reichsautobahn* sought to create a continuous aesthetic experience of movement through a deliberately designed landscape.³⁵ As the epitome of specifically German engineering, the motorway was to establish "not the shortest but the noblest connection between two points".³⁶ Yet the technically organised and aesthetically completed production of landscape accomplished through motorway construction cannot be reduced to the tourist objectives of organised mobility. The *Volkswagen* project, in all its characteristic ambivalence, makes this particularly clear. For the *Volkswagen* formed part not only of a programme of mass motorisation intended to promote social integration—and, certainly, a measure of social pacification—but equally of a programme designed to accustom individuals systematically to accelerated mobility itself.³⁷

Mass motorisation was thus a process of discipline. It was intended not merely to transform a new technology gradually into an unquestioned feature of everyday life. It was equally a process through which traditional forms of

³⁴ Durth (see note 12), p. 200. On the cinematic and immersive perception of driving on the autobahn — as a quasi-realistic naturalistic color film in contrast to the unmistakably artificial black-and-white cinema film — see Schütz and Gruber (see note 2), p. 131. The view through the windshield was indeed fundamentally different from the view through a train window: the landscape did not pass by at a certain distance; rather, one entered into it at relatively high speed. Yet the "dromoscopic" perspective of driving on the autobahn also differed from driving on a country road, because attention — especially given the low density of traffic — was no longer directed primarily toward traffic or the road, but toward the entire space and movement within it. Thus the landscape, unlike what Paul Virilio would later claim, was not "fragmented," but rather opened up as an overall impression. Paul Virilio, „Die Dromoskopie,“ in *Der negative Horizont. Bewegung, Geschwindigkeit, Beschleunigung* (Munich/Vienna, 1989), pp. 133–154, here p. 139.

³⁵ Thus in 1942 Fritz Tamms, "Die Reichsautobahn als architektonische Gesamterscheinung," quoted in Durth (see note 12), p. 201.

³⁶ Thus Emil Maier-Dorn, the "Reichsschulungswalter" of the "National Socialist Association of German Engineers," quoted in Schütz and Gruber (see note 2), p. 125.

³⁷ Kühne (see note 1), p. 209. A necessary prerequisite for this was the introduction of rationalized large-scale series production in automobile manufacturing in Germany as well. Accordingly, the Volkswagenwerk was a "social-utopian project for implementing mass motorization in Germany," representing "a specific translation of Fordism and Americanism into National Socialist conditions" — despite the fact that American special-purpose machines were to be imported and used. See Manfred Grieger, "River Rouge am Mittellandkanal. Das Volkswagenwerk während des Nationalsozialismus," in *Zukunft aus Amerika. Fordismus in der Zwischenkriegszeit*, published by Stiftung Bauhaus Dessau/RWTH Aachen (Dessau, 1995), pp. 163–173, here pp. 171–172.

perception and behaviour, "acquired over centuries," were to be abandoned and replaced by entirely new dispositions.³⁸ Traffic education consequently meant far more than instruction in the safe operation of a potentially dangerous technology. It was training in the practical mastery of a new reality—one that was at once more dynamic, more complex, and more hazardous than any previously experienced. Urban traffic in particular demanded not only heightened vigilance but an entirely new structure of attention. As a disciplinary process in which repressive and productive forms of conditioning converged in the constitution of a new subjectivity, traffic education aimed no less at preparing individuals for accelerated and offensive mobility. What National Socialist terminology described as *Autowandern*—the proper use of the motorway, intended eventually to become accessible to everyone—was conceived, in precisely this double sense, as an educational trial for the mobility-based „*Volksgemeinschaft*“.³⁹ The calculated conditioning of individuals operated simultaneously on several levels. It habituated them, on the one hand, to speed and continuous movement; on the other, to the experience of extensive yet carefully structured spaces. Together, these two dimensions were intended to merge into a disposition towards collective de-limitation and, ultimately, into an orientation towards unhindered, efficient, and autonomous advancement.⁴⁰ This corresponds, initially, to the symbolic significance of the motorway itself. The *Reichsautobahn* embodied the expansive momentum of the National Socialist "Movement" and expressed, in its relentless extension across space, what has aptly been described as the futurist "claim of the fast to rule over the slow".⁴¹ More importantly, however, it corresponds to the immediate physical experience of motorway travel itself and therefore points well beyond the project's general symbolism of dynamism. The conditioning force of the motorway's seemingly endless pale-grey dual carriageways lay above all in the irresistible pull of accelerated movement as an almost tactile experience in which body and landscape entered into an immediate relation.⁴²

³⁸ Kühne (see note 1), p. 204.

³⁹ See Schütz (see note 7), p. 611.

⁴⁰ See Fritz Todt, 1933: "Our National Socialist nature corresponds to the new road of Adolf Hitler, the autobahn. We want to see our goal far ahead of us; we want to move straight and decisively toward the goal. We overcome crossings; unnecessary constraints are alien to us. We do not want to evade; we create sufficient space for moving forward, and we need a path that allows us to maintain a pace appropriate to us. Thus we build the roads in the Third Reich; thus we educate people; thus we erect the entire National Socialist Reich." Quoted in Durth (see note 5), p. 147.

⁴¹ Kühne (see note 1), pp. 202–203.

⁴² Thus in 1938 Walter Dirks, "Das Dreieck auf der Autobahn. Impressionen von einer Fahrt Frankfurt–Berlin–München–Frankfurt," in *Gesammelte Schriften*, vol. 3 (Zurich, 1990), pp. 136–152, here pp. 138–139: The autobahn "is not a road on which one moves in active engagement, passing this tree and that house, going around this obstacle, stopping before that one, braking, accelerating, shifting gears, clutching, honking. On the road, it is we ourselves who drive [...]. But on the railway we no longer seem to be very active ourselves [...]. It is the railway that is active; it moves quickly and smoothly, [...]"

Perhaps this did indeed express "the passive pleasure of fatalistic surrender, the fascination of being drawn irresistibly onward," an experience analogous to the intoxication of flight. Yet even if the fascination of the motorway ultimately rested upon a "desire to be relieved of subjectivity"—to which the National Socialist Movement appeared to offer an answer, and for which movement along the roadway itself supplied the corresponding aesthetic sensation—this merely realised the specifically mythical dimension that had belonged to the motorway project from the outset.⁴³ For myth is not simply—and only in a very limited sense—the reality of a desire.⁴⁴ Myth is the ontologisation of history. It incessantly transforms historically produced realities into essential forms; it converts history into nature. It seeks to render the world immutable and thereby to deprive it of its historicity through the very act of naturalisation.⁴⁵ Myth overlays historically constituted realities with transhistorical meanings that suspend, without actually answering, the question of their legitimacy. For precisely this reason, myths constitute exceptionally powerful instruments of political self-legitimation. As long as "nature" appears—even where it is itself historically produced—to stand for what is unalterable, political and social reality can present itself as lying beyond justification precisely because it appears to require none.

The myth of the *Reichsautobahn* therefore operated on three interconnected levels. It naturalised the communicatively produced „*Volksgemeinschaft*“; it naturalised the synthesis of technology and *Kultur*; and, finally, through the aesthetic completion of landscape, it naturalised a culture of unlimited optimisation grounded in communicatively organised mobility. This, however, was the genuinely novel aspect of the project. Self-ontologisation through infrastructurally organised individual mobility marked a decisive break with the substantial political ontologies of the past. Although these still survived in the territorial concretisation of the „*Volksgemeinschaft*“, they were increasingly displaced by a specifically modal form of self-ontologisation. Like the automobile city that after 1945 became the dominant paradigm of urban planning throughout much of the Western world, the *Reichsautobahn* was therefore far more than an infrastructure of transport. It constituted the central mythological figure of a thoroughly artificial reality whose only possible foundation lay in a modal ontology and within which even nature itself became an element of technologically mediated and aesthetically completed world-making.

toward us and irresistibly draws the car into itself. It pulls us through the terrain, and sometimes even through the landscape. For there are places [...] where the curving railway [...] merges with an essential element of the landscape.”

⁴³ See Schütz (see note 7), p. 614.

⁴⁴ Thus Helmut Lethen, *Verhaltenslehren der Kälte. Lebensversuche zwischen den Kriegen* (Frankfurt am Main, 1994), p. 30. English translation: *Cool Conduct: The Culture of Disengagement*, trans. by Don Reneau (Minneapolis/London, 2002).

⁴⁵ Roland Barthes, *Mythologies*, trans. Annette Lavers (New York, 1972), pp. 146–147.

6.

The particular significance of the *Reichsautobahn* for National Socialism can thus be explained in at least three respects. First, it was the manifestation of a strategic synthesis of technology and *Kultur* in deliberate opposition to the historical binding of technology to civilisation. The motorway was thereby the spectacular manifestation of a distinct German path of technological development, which was intended to place the scientific-technical mastery of nature within the framework of a national territorialisation of its possibilities. In this sense, secondly, the motorway was a structuring technical and aesthetic artefact for the production of a functional and, at the same time, visible spatial order, whose functional matrix was as much condensed as it was nationwide communication, and whose political-social effect was to be the technology- and mobility-supported—indeed, the infrastructurally and communicatively mediated—construction of the „*Volksgemeinschaft*“. As the realisation, symbolisation, and mythologisation of communication, the motorway became the medium of a new reality of structurally enforced, networked connections—which is why the bridges carried such high symbolic significance that they were called the "pyramids of the Third Reich," and why the metaphor of the "network" with its derivative, the "connection," was nothing less than the emblem of the „*Volksgemeinschaft*“.⁴⁶ Not least, however, the *Reichsautobahn* was the functional structure for the aesthetic shaping and perfection of space; therein, it was the constituting medium of the „*Volksgemeinschaft*“—and, at the same time, it was the medium for the technical realisation of the aesthetically finalised *Gesamtkunstwerk* "Germany," whose political-social form was the „*Volksgemeinschaft*“ and whose spatial-territorial form was the "landscape".

Against this background, a number of broader considerations suggest themselves. Motorway construction initially aimed at the architectural enhancement of the landscape as a political aestheticisation of nature. The aspect of landscape protection and landscape enhancement through technology stood in deliberate contrast to the abstract neutralisation of space in the scientific-technical relation to nature, as it had emerged with modern technological development and become historically dominant in the course of industrialised nature-mastery. At the same time, the concept of landscape enhancement merged with the scenic design of heightened mobility on the one hand, and the sensuously perceptible reorganisation of space as a concretisation, if not

⁴⁶ Schütz and Gruber (see note 2), pp. 94–103. However, the idea of an overall network did not — as was later claimed — originate with Hitler either; it had already been developed within the HAFRABA association around 1929. See *ibid.*, pp. 28–31. On the particular functional and aesthetic significance of bridges as materializations of a communicative structure, see also Windisch-Hojnacki (see note 9), pp. 122–191, and Hans-Joachim Petsch, *Baukunst und Stadtplanung im Dritten Reich* (Munich/Vienna, 1976), pp. 146–148.

indeed the very synthesis of the „*Volksgemeinschaft*“ through the technical connection of its members, on the other. The motorway was thus a structuring technical and aesthetic artefact for the production of a communicative spatial order that was as functional as it was visible. Yet, as an optimisation of nature, motorway construction simultaneously realised a fundamentally new relation to the landscape. Since the eighteenth century, landscape had been brought into a compensatory opposition to scientific-technical nature-mastery as an aestheticised nature, representing, as it were, the territorialisation of the lifeworld against the neutralisation of space. Landscape stood for the bourgeois aestheticisation of nature against its scientific-technical degradation into construction material.⁴⁷ The National Socialist "discovery of the landscape by the engineer," by contrast, signals the totalitarian radicalisation of the objectification of nature in the technologically driven and aesthetically finalised enhancement of nature into an artificially generated "landscape"—which, nonetheless, was grasped not as a constructed artefact, but rather, mythologisingly and thus ontologisingly, as a virtually constructively unfolded and realised potentiality of nature. In truth, however, this constituted a totalitarian aestheticisation because it negated the constitutive contingency of the aesthetic act by transforming it into an element of an ontologisation.⁴⁸ The function of this totalitarian aestheticisation was thus a dual one: on the one hand, it was the sensuously impressive, overwhelming, and therein compelling territorialisation of the „*Volksgemeinschaft*“, and on the other, as a technologically driven aestheticisation, it was not a counter-tendency to objectifying rationalisation, but its absolute outréing. As the epitome of the Absolute, the aesthetic thereby became the finalisation of the technical towards perfection. The technical optimisation of nature—including human nature through conditioning education towards dynamics—and the aesthetic finalisation of this optimisation according to the measure of beauty, which is to say, to speak pleonastically once more, according to the measure of absolute perfection: this was ultimately the strategic horizon within which the motorway project stood and in which it possessed its preeminent significance. One could well see in this a spatial-material dimension of avant-garde counter-traditionalism, and say, in alignment with the constructivist procedures of the avant-garde, that the general political-functional principle of this transformation of the social was the consciously brought-about detachment of individuals from traditional local and regional ties and lifeworld contexts, and their placement within a new, abstractly generated blueprint of the social

⁴⁷ See Joachim Ritter, „Landschaft. Zur Funktion des Ästhetischen in der modernen Gesellschaft,“ in Joachim Ritter, *Subjektivität. Sechs Aufsätze* (Frankfurt am Main, 1974), pp. 141–163.

⁴⁸ Also in this sense it is true that “landscape [...] cannot be conceived outside the ‘technical space’” (*technischer Raum*). Thus Stefan Kaufmann, “Einleitung,” in Stefan Kaufmann (ed.), *Ordnungen der Landschaft. Natur und Raum technisch und symbolisch entwerfen* (Würzburg, 2002), pp. 7–29, here p. 14.

whole.⁴⁹ This would be the realisation of the avant-garde dispositif of deconstruction and construction within the political, pointing to the fact that the avant-garde dispositif formed the functional deep structure of the totalitarian politics of the twentieth century. In this sense, the mobilisation of individuals was indeed the prerequisite for their "nationalisation".⁵⁰ Within the broader context of this dispositif, however, lies ultimately the most fatal significance of National Socialist motorway construction: namely, the conditioning for space-grabbing dynamics. After all, the motorway was not only symbolically but realistically the space-grabbing and structuring element in the programme of the "thorough planning of the German space" and of a "total planning" that was intended to be "a powerful expression of a higher order under which everything is integrated that is viable and entitled to life".⁵¹ And in this sense, the motorway was a large-scale infrastructure project intended not least to ground and structure the "development of the German cultural landscape in the East"—whereby the expulsion or annihilation of the previous inhabitants was not merely accepted by the planners, but simply presupposed as a matter of course and therefore not even mentioned, because the colonisation of Eastern Europe was regarded as a "chance for rational planning" and the boundless optimisation of the "living space" (*Lebensraum*) of the German „*Volks-gemeinschaft*“, and thus had all plausibility on its side.⁵²

⁴⁹ In principle — this may merely be noted here — this concerns the process of consciously producing uprooted masses as “material” for an almost constructivist form of total socialization, as Hannah Arendt described it with regard to National Socialism and Stalinism. See Hannah Arendt, *The Origins of Totalitarianism* (New York, 1951), pp. 455–479.

⁵⁰ This also explains — and once again contradicts the thesis that autobahn construction pursued military objectives — why the emphasis on north–south connections in the original plans of the 1920s was retained in the Third Reich despite the planned colonization of Eastern Europe: it was not least a matter of overcoming denominational boundaries between northern and southern Germany. See Kühne (see note 1), p. 209. On the avant-garde dispositif, see Dröge and Müller (see note 28), pp. 196–211, and Peter Bürger, *Theorie der Avantgarde* (Frankfurt am Main, 1974), pp. 92–116. Bürger, however, following Walter Benjamin’s concept of allegory, overemphasizes the non-organic character of the avant-garde artwork and thereby obscures the constructivist tendencies within the totalitarian aestheticizations of the interwar period.

⁵¹ Thus in the first planning booklet *Siedlungsgestaltung aus Volk, Raum und Landschaft*, undated, quoted in Durth (see note 12), p. 204, and in Tamms 1942, quoted *ibid.*, p. 201.

⁵² First planning booklet, quoted in *ibid.*, p. 204. This combination of rationalization and spatial planning under the aspect of “German living space” (*deutscher Lebensraum*) was, incidentally, not a peculiarity of the Third Reich, but had already been formulated with great clarity in 1929, although without a colonial impulse. See Heinz Wilhelm Hoffacker, “Raumplanung als Gesamtrationalisierung. Ein Versuch zur theoretischen Begründung der Notwendigkeit von Raumplanung aus dem Jahre 1929,” in *Zukunft aus Amerika* (see note 37), pp. 277–287.

7.

We thus stand at the very centre of the problem: the National Socialist motorway project points not only exemplarily but paradigmatically to the strategic finalisation of technocratic socialisation within the murderous horizon of a totalitarian optimisation. Its necessary prerequisite is racism as a fundamental biopolitical technology of exclusion and elimination of what is inherently inimical to optimisation.⁵³ Behind this stands an existentially grounded concept of the political, which realises itself within the horizon of the specifically political distinction between friend and enemy and declares war on everything that "constitutes a negation of one's own mode of existence".⁵⁴ Yet racist optimisation through the exclusion of what is inherently inimical to optimisation is as such not a specificum of National Socialism, but the general matrix of racist biopolitics, as it was executed in many ways during the twentieth century as the political realisation of the naturalism and the not-only-biological materialism of the nineteenth century. The particular character of National Socialist racism—which remains utterly incomprehensible from the standpoint of mere political-existential rationality—enters instead through something else: namely, the aestheticisation, or better, the aesthetic finalisation of this existential concept of politics. For if the aesthetic constitutes the sphere of the—secularised—Absolute, and beauty is its criterion, then its totalisation aims at the perfection of the actual: everything ugly, which is to say, everything imperfect, is destined to disappear—that would indeed be the accomplished completion! And this was in fact the goal of the *Gesamtkunstwerk* "Germany".

At this point, we are no longer dealing with politics in any sense of the term, however broadly conceived, but with something very different: namely, the definitive cultivation of human and non-human nature through its technologically driven and aesthetically finalised—and therefore totalitarian—optimisation. From this, the substantive significance of the aesthetic for National Socialism ultimately reveals itself. Although repeatedly emphasised alongside that of the technical, it was more and something other than the oft-invoked "beautiful illusion" (*schöner Schein*) of the Third Reich, which was supposed to conceal or at least compensate for its violent "being" (*Sein*). As the immanent sphere of the Absolute, the aesthetic, in the context of boundless optimisation, became the matrix of a coercive perfection of reality that

⁵³ See Michel Foucault, *The History of Sexuality, Volume 1: An Introduction*, trans. Robert Hurley (New York, 1978), pp. 135–159; see also Michel Foucault, "*Society Must Be Defended*": *Lectures at the Collège de France, 1975–1976*, trans. David Macey (New York, 2003), pp. 239–265.

⁵⁴ Thus Carl Schmitt, *The Concept of the Political*, trans. George Schwab (Chicago, 1996), p. 27. For the sake of precision, it should be noted that this is not a concept of the political generated by Schmitt, but rather the existential concept of the political that he articulated and rendered explicit, whose self-evidence Foucault problematizes in his thesis on racism.

must eliminate everything imperfect and, above all, everything opposed to perfection, because, as something directed towards perfection, it cannot in principle coexist with it. This is, to be sure, precisely the dimension of the National Socialist project that is missed by any exclusively political problematisation of the Third Reich—and which thoroughly refutes the as widespread as it is ignorant belief in the insignificance of the aesthetic compared to the so-called "hard factors" of politics, and namely the economic. Economics, after all, played at most an instrumental role in the construction of the *Reichsautobahn* as well as in the planned mass motorisation.⁵⁵ Substantively, however, the National Socialist "aestheticisation of politics" was pursued in a very strict sense: not only as spectacular staging, and not only as symbolic over-shaping, but above all as the social establishment of an absolute criterion of totalitarian and therein constitutively racist optimisation.⁵⁶

People have spoken of monstrosity—but what does that really tell us. In truth, we lack the concepts to measure the dimension of this literally final strategy. Nonetheless, one need not be religious to call things by their proper names and to give expression to what remains utterly inaccessible to an all too secular reason because it was directed towards the Absolute: the National Socialist project of technologically forced and aesthetically finalised optimisation aimed at the this-worldly correction of Creation—that is the monstrosity of National Socialism! Technologically forced and aesthetically finalised totalitarian optimisation was the declaration of war against the imperfection of Creation; its *ultima ratio* is mass murder.

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⁵⁵ See Schütz and Gruber (see note 2), pp. 10–11 on financing and pp. 136–141 on utilization.

⁵⁶ Walter Benjamin, "The Work of Art in the Age of Its Technological Reproducibility," in *Selected Writings*, vol. 3, 1935–1938 (Cambridge, MA, 2002), pp. 101–133, here p. 132.