European Coasts of Bohemia

Negotiating the Danube-Oder-Elbe Canal in a Troubled Twentieth Century

Jiří Janáč

Amsterdam University Press

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Acknowledgements

Let me start with an anecdote. Two engineers meet at a Comecon expert group conference somewhere in Eastern Europe. One has a weekend house close by the conference venue, and after the meeting, invites his foreign colleague back for dinner. When they arrive, the guest is overwhelmed by the luxury of the place and asks his host whether engineers are so well paid in this country. The response is clear: "No, they are not, but the one-way bridge we came over has 4 lanes on paper!" In a way, the same applies to this book. There is no canal connecting the Danube and the Oder, yet we now have a dissertation. This does not mean I embezzled any funds. To achieve my own goals, however, I have made use of the work done by generations of engineers, some of whom even agreed to meet and provide me with their deep insights into the problems. Here I would like to sincerely thank Jaroslav Kubec, Václav Plecháč and Evžen Polenka.

Coming back to the bridge metaphor, I must say that the route from research project to book was by no means straightforward in my case. Therefore, I would like to express my gratitude to those who kept me on the right track and did not let me settle for a one-way footbridge. In particular I have in mind my supervisors, Luďa Klusáková and Johan Schot. Their trust and encouragement, as well as words of advice on various matters related to writing and (not only) academic life, kept me going whenever I started to lose faith in this project.

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intricacies of turning the manuscript into a book. In this respect, my thanks also go to Val Kidd for speedy editing. James Morrison and Paul Cooper helped me with the language in the earlier stages of writing. Also, I am grateful to the people at the Foundation for the History of Technology, especially to Jan Korsten and Sonja Beekers.

The anecdote continues by returning to a session with the same Comecon expert group some years later, this time the two engineers have swapped roles. The dinner is taking place in an even bigger dacha. How have you managed to afford this? asks the visitor. Did you notice the bridge we crossed? There was no bridge… Similar to the joke, writing this book has been stretched between two places - Prague and Eindhoven. For the welcome and support offered during my stay in Eindhoven, I would like to thank everyone at Eindhoven University of Technology, especially Alec Badenoch, Vincent Lagendijk and others involved in the History of Technology course. In Prague I owe a great deal to my colleagues in the department, most notably Karel Kubiš.

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Prague. August 15, 2012

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Chapter 1 Introduction

"This (the Danube Oder Elbe canal) is a European affair. It makes no sense as a national project. We cannot afford it; such a project is tens or hundreds of billions of crowns. If the European Union recognizes the project is reasonable and is ready to finance it, then it might be realized". Thus argued Pavel Drobil, Czech Environment Minister on August 16, 2010. Drobil agitated for a bold decision: Three months earlier, on May 26, 2010, the caretaker government of the Czech Republic, led by Prime Minister Jan Fischer, decided to extend the building ban in the corridor of the proposed route of the Danube-Oder-Elbe Canal.[1] The administration took the last possible opportunity to close the debate that had re-opened several years earlier when the Czech Republic entered the European Union (EU). Despite long-running controversy over the idea of building a canal, national authorities, sensing a great funding opportunity from the EU Cohesion Fund, revived the century-old vision of building a canal to link the Elbe, Oder, and Danube rivers.[2] The proponents saw the opportunity to correct a well-known mistake made by William Shakespeare, who in *The Winter's Tale* famously (and inaccurately) refers to Bohemia as having a coastline. Proponents of the canal wanted to fulfill an old dream to situate Bohemia on European coasts.[3]

Responding to protests from ecological organizations and in an effort to firm up the idea, the proponents established an inter-sector governmental committee to evaluate the project.[4] Environmentalists countered that the canal's construction would endanger water quality in all three river basins as well as their local water cycles. Sketching an image of a gigantic concrete trough slicing deep trenches

1 Czech newspapers such as the leading economic daily *Hospodářské noviny,* reported on the decision on 24 or 25 May. "Vláda schválila další ochranu pro území kanálu Dunaj-Odra-Labe," *Hospodářské noviny*, 24 May 2010.

2 "We count on an 85% contribution from the Cohesion Fund," said Viktor Meca of the Transport Ministry back in 2005. "Plánovaná stavba kanálu ohrozí přírodu," *Hospodářské noviny*, 13 May 2005.

3 Not surprisingly, this error is extremely popular among historians – one of the best works on Czech history available in English, written by Derek Sayer, quotes it directly in the title. So does an article on the Czechoslovak naval fleet in the interwar period. In this book, such an allusion seems even more appropriate – indeed, the only coastlines of the Czech lands are the coasts of Europe. Derek Sayer, *The Coasts of Bohemia: A Czech History* (Princeton, NJ: Princeton University Press, 1998); Stefan Albrecht, "Böhmen Liegt am Meer," *Österreichische Osthefte* 46, no. 4 (2004): 515-534.

4 Czech Republic Government Resolution no. 561/2006 on the territorial development policy of the Czech Republic.

Figure 1.1 – This map illustrates the location of the Danube-Oder-Elbe canal (DOE) in Europe's natural river system. The red-dotted line indicates the European watershed, dividing the continent into a northern and a southern part. The DOE canal was designed to overcome this watershed. Source: Drawn by the author [Jiří Janáč].

through the landscape, opponents of the project argued that, once constructed, the canal would deprive the lower Morava-Danube junction of its natural cleansing and flood-control capacity. The projected canal would cause the Morava floodplain and the Oder meanders to vanish from the map altogether. Furthermore, the environmentalists felt that river transport would fail to be competitive with other modern modes of freight transportation, thus removing the very economic justification for the potential natural hazards.[5] Paradoxically, the canal promoters' main argument for constructing the canal had been environmental. They saw the proposed waterway as a tool of complex water management using natural forces while simultaneously stabilizing the water balances; it would secure optimal conditions for the area's sustainable development. The canal, they said, would furthermore dramatically diminish air pollution by reducing road traffic in the area.[6]

5 Milan Janák, *Kanál Dunaj-Odra-Labe: příležitost, nebo hrozba? Stanovisko Koalice pro život řek Dunaje, Odry a Labe* (Brno: Hnutí Duha, 2004).
6 See the document prepared by Ekotrans Moravia in 1990: "Vodní cesta Dunaj-Odra-Labe, příspěvek k

Both groups sought to mobilize the European authorities i.e. the EU. Environmentalists referred to Brussels, proposing the unification of national legislation and standards in accession countries. With regard to water bodies, such aims were articulated in the Water Framework Directive of 2000.[7] On the other hand, the canal promoters pointed to the European Commission White Paper on transport, a document outlining key priorities for transport policy from 2001 to 2010. This document stated that a key aim was to foster waterway transport as a dynamic alternative in a sustainable transport chain, and considered the canal project worthy of additional study.[8] As a prospective crucial element of the envisioned European waterway network, the Danube-Oder-Elbe canal was included in the Czech Republic's EU accession treaty.[9]

Not only the people involved viewed the canal project as a truly European affair. On second glance, Minister Drobil's perspective was indeed correct. The canal, designed to overcome the main European watershed between three European seas, had never been an exclusively national affair. For most of the twentieth century, the entire canal route was situated within a single state (the Austrian Empire, Czechoslovakia, and, for a few years, the Third Reich), but because of the international nature of water bodies, the canal's planning had never been never a matter of national policy. By connecting the two rivers, the canal would establish a network stretching across large parts of the continent. Indeed, the twentieth-century history of the Danube-Oder-Elbe Canal project, first enacted by a special law in 1901, records the history of an emerging waterway network in Europe, often imagined but never realized. These plans tell a story of alignment between various perceived regional and national interests and other transnational (border-crossing) geopolitical frames. The canal was never just a canal. It featured in the successive dreams of *Mitteleuropa* (Central Europe), *Grossraumwirtschaft*, Sovietisation, and Europeanization, all of which embodied the wishes of various powers to control the region.

The canal, never built but debated for over a century, provides an excellent opportunity to study the intermeshing of historical ideas of a region, nation, and Europe not as abstract ideals but as a concrete project. This book focuses on how

evropské integritě" (MZA, H42, b. 338).

7 Maria Kaika, "The Water Framework Directive: A New Directive for a Changing Social, Political and Economic European Framework," *European Planning Studies* 11, no. 3 (2003): 299-316.

8 European Commission, White Paper: European Transport Policy for 2010: Time to Decide (Luxembourg: Office for Official Publications of the European Communities, 2001), http://ec.europa.eu/transport/strategies/doc/2001_white_paper/lb_com_2001_0370_en.pdf. 13-14. Accessed 26 May 2008.

9 Treaty Concerning the Accession of the Czech Republic, the Republic of Estonia, the Republic of Cyprus, the Republic of Latvia, the Republic of Lithuania, the Republic of Hungary, the Republic of Malta, the Republic of Poland, the Republic of Slovenia, and the Slovak Republic to the European Union, (European Parliament, 2003), http://www.europarl.europa.eu/enlargement_new/treaty/default_en.htm. Accessed 25 May 2007.

and why a single waterway situated within the Czech borders was linked to creating these ideals and frameworks, deeply embedded in the geopolitical agendas behind them. Czech hydraulic engineers who promoted the idea and worked on the canal design claimed and mobilized these political frameworks to get the canal built. They offer an excellent entry into the case, articulating relations between various frameworks. Therefore, besides looking at the history of waterway networks, the thesis will also explore the role of experts.

Infrastructure Historiography

The literature on the Danube-Oder-Elbe canal project is rich and has touched on several aspects. Nevertheless, the scholarship shows some major gaps. From the institutional history perspective, the canal was studied as case study of two NGOs involved in its preparation.[10] Regional historians have also devoted attention to the various canal plans in the local context.[11] Other studies have viewed the canal as an example of political bargaining between Czechoslovakia and its neighbors, including the Third Reich with its Nazi racial policy against the Czech nation.[12] In a laudable effort to see the inter-war canal debate as the creation of Central Europe, another study depicts the issue as a conflict of contradictory national interests.[13] Still another attempt, though modest in its achievements, has sought to apply an environmental history perspective and inquire into the relations between the canal project and the natural environment. Unfortunately, the author Josef Bartoš has refrained from applying any theoretical concepts, simply condemning the project as a threat to nature.[14] Most commonly, the canal's histories have been written by

10 Both articles follow the narrative contained in the archives. Kateřina Smutná, "Podíl Společnosti dunajsko-oderského průplavu na na přípravě průplavního propojení Labe, Odry a Dunaje," *Dějiny věd a techniky* 1989, no. 4 (1989): 223-235; Zdeněk Bičík, "Spolek pro stavbu labsko-oderského průplavu v Pardubicích," in *Plavba a obchod po Labi: sborník příspěvků z 1. mezin. symposia o dějinách labské plavby v Děčíně 1969*, ed. Helena Smíšková and Miloslav Košťál, *Rozpravy Nár. techn. muzea v Praze* (Prague: Národní technické muzeum, 1971), 47-53.

11 Mostly regarding consequent spatial planning issues. Josef Bartoš, "Projekty průplavu Odra-Labe-Dunaj na střední Moravě v letech 1938-1945," *Střední Morava* 6, no. 11 (2000): 37-46; Josef Bartoš, "Město Olomouc a projekty kanálu Odra-Labe-Dunaj," *Střední Morava* 7, no. 12 (2001): 17-26.

12 Andělín Grobelný, "Projekty odersko-dunajského průplavu a československo-německá jednání v meziválečném období," *Ostrava: Sborník příspěvků k dějinám a výstavbě města*, no. 10 (1979): 312-334; Andělín Grobelný, "Místo odersko-dunajského průplavu v nacistických projektech přestavby vnitrozemské vodní sítě v letech 1939-1941," *Časopis Slezského muzea* 29, no. 1B (1980): 231-241.

13 Ivan Jakubec, "Idea dunajsko-oderského průplavu v 19. a 20. století a její proměny," in *Integration und Desintegration in Mitteleuropa. Pläne und Realität*, ed. Marcella Rossová (Prague; München, 2009), 235-256.

14 Josef Bartoš, "Historické varianty spojení řek Odry, Labe a Dunaje," in *Vodní cesta D-O-L. Historie, ekologie, krajina: historická a současná studie a výběr příspěvků ze semináře Vodní cesta D-O-L: Ekonomie, ekologie, krajina v rámci EDO Olomouc 2003*, ed. Michal Bartoš (Olomouc: Univerzita Palackého v Olomouci, 2004), 7-37.

engineers, who focus on technicalities and boast the project's positive effects. They claim that time and time again the canal fell victim to ignorance, narrow-mindedness, and politicians' incompetence.[15] These papers are full of technical details and follow the logic of linear and unidirectional technological progress, which acts in these writings as a major force behind changes in canal design. Altogether, a lot of paper has been filed in this case, building historical arguments for or against the canal project. However, some crucial questions remained unanswered or, more precisely, have not been asked.

Existing accounts of the canal's past suffer from two biases which have been ingrained in waterway histories in general. Although the particular research field has been out of fashion since World War I due to waterways' "unattractive and old-fashioned image," there is a growing body of works dealing with or closely related to inland navigation.[16] Given the truly international character of rivers that flow without respect for borders, the national bias of the majority of these historical writings is quite remarkable. Thus far neither the border-crossing nature of rivers nor the border-crossing aspects of inland navigation have been given their rightful place in the narratives.[17] This paradox can be partly explained by examining the structure of waterway networks. Unlike other forms of transport, navigable rivers and canals never became a completely integrated network; therefore, the economic impact of canals was mostly regional.[18] However, "methodological

15 They provided a standardized "promoting progress against the odds" narrative. Most were published in periodicals; the most notable exceptions being the following monographs, all written by hydraulic engineers actually working on the DOE canal projects: Jaroslav Kubec, Josef Podzimek, and František Nepil, *Křižovatka tří moří: vodní koridor Dunaj-Odra-Labe* (Prague: Your ARTillery, 2007); Josef Bartovský, *Vodní cesty a vodohospodářské plánování v Čechách a na Moravě. Přehled a bilance práce dvou generací, další úkoly dvouletka a pětiletka* (Prague: Společnost Dunajsko-oderského průplavu, 1946); Jaroslav Čábelka, "Velký průplav v srdci Evropy – vodohospodářsko dopravní soustava Dunaj-Odra-Labe," in *Plavba a obchod po Labi: sborník příspěvků z 1. mezin. symposia o dějinách labské plavby v Děčíně 1969*, ed. Helena Smíšková and Miloslav Košťál, *Rozpravy Nár. techn. muzea v Praze* (Prague: Národní technické muzeum, 1971), 11-40; Antonín Smrček, *Nástin historie vodní cesty Dunaj – Odra – Labe v souvislosti s úpravou řeky Moravy* (Prague: privately printed, 1940).

16 Gerald Crompton, "'The Tortoise and the Economy': Inland Waterway Navigation in International Economic History," *Journal of Transport History* 25, no. 2 (2004): 1-22, here 15.

17 This is the case with general transport history. Gijs Mom, "What Kind of Transport History Did We Get?" *Journal of Transport History* 24, no. 2 (2003): 121-138; Simon P. Ville, *Transport and the Development of the European Economy, 1750-1918* (New York: St. Martin's Press, 1990). An example of the persistence of such attitudes can be found in: Gerald Crompton, ed., *Canals and Inland Navigation*, Studies in transport history (Aldershot: Scolar Press, 1996).

18 Gerard Turnbull, "Canals, Coal and Regional Growth during the Industrial Revolution," *The Economic History Review* 40, no. 4 (1987): 537-560. For the highly challenged process of integration of the Danube and Rhine river basins into a single waterway system, see Guido Thiemeyer, "Die Integration der Donau-Schifffahrt als Problem der europäischen Zeitgeschichte," *Archiv für Sozialgeschichte* 49, no. 2 (2009): 303-318; Guido Thiemeyer and Isabel Tölle, "Supranationalität im 19. Jahrhundert? Die Beispiele der Zentralkomission für die Rheinschiffahrt und des Octroivertrages 1804-1851," *Journal of European Integration History* 17, no. 2 (2011): 177-196.

nationalism" also played its part; consider for instance Eckoldt's compendium of German rivers.[19] Eckoldt included the Elbe and other streams flowing across various national boundaries throughout the last millennia, yet he treated German hydraulic engineering as a relatively autonomous and from the rest of the world isolated phenomenon.

Only recently have water histories taken a transnational perspective and started to follow their research objects across political boundaries. These recent studies include the examination of transnational organizations like Thiemeyer's study of the Danube governance, which analyzes the transformation of river systems into a transnational infrastructural network.[20] Such a transnational approach to history allows historians to reflect on and go beyond the confines of the nation. While the notion of "transnational" often acquires various and sometimes conflicting meanings, the approach's scholarly contribution remains undisputed.[21] Nations are not a natural form of the modern world nor are they an inevitable analytical frame of historical process. With respect to literature, the notion of transnational in this book is important but is employed rather implicitly to describe processes cutting across national borders.

The second bias in the current conceptualization of canals and navigable rivers as an economic activity of inland water transport (or inland waterborne traffic – IWT) has only reinforced the first bias. Best examples would be works from the 1990s, an edited volume on the economic performance of the IWT sector in times of industrialization by Armstrong and Kunz and an analysis of tariff policy on the Elbe during in the inter-war period by Jakubec. In the first case, the nation state forms the unit of analysis, while in the second, nation states are main actors. Both authors focus on the economic aspects of operating inland navigation, while leaving aside other facets of waterways.[22]

However, as the review of such canal histories shows, waterways cannot be reduced to simple carriers of goods. Even if understood as transport infrastructures, the analysis of their performance would have to include issues such as technological equipment, interferences with other water uses or competition with other forms of transport. In order to decipher the complexity of actors and interests

19 Martin Eckoldt and Hans-Georg Braun, *Flüsse und Kanäle. Die Geschichte der deutschen Wasserstrassen* (Hamburg: DSV-Verlag, 1998).
20 Thiemeyer, "Die Integration der Donau-Schifffahrt als Problem der europäischen Zeitgeschichte."
21 Erik van der Vleuten, "Technological History and the Transnational Challenge: Meanings, Promises, Pitfalls," *Technology and Culture*, no. 4 (2008).
22 Andreas Kunz and John Armstrong, eds., *Inland Navigation and Economic Development in Nineteenth-Century Europe* (Mainz: Verlag Philipp von Zabern, 1995); Ivan Jakubec, *Železnice a labská plavba ve střední Evropě, 1918-1938: dopravněpolitické vztahy Československa, Německa a Rakouska v meziválečném období* (Prague: Karolinum, 1997).

involved in waterway construction and operation, and to identify major actors in the process, science and technology studies provide a useful instrument. The Large Technical System (LTS) concept is based on the idea that technological systems are complex entities consisting of technical artifacts, institutional and legislative frameworks, and other components. This concept was originally coined by Thomas Hughes and later adapted to encompass the key collective actors engaging with the system in its sociotechnical complexity. Thus it does not distinguish between traditional analytical categories of a priori technical, social and political aspects of the system. There are several examples available to conceptualize nationally framed water-management systems in terms of LTS. Van der Vleuten and Disco proved that such an approach is not only feasible, but could be extremely valuable.[23] In water management as well as in inland navigation, key actors in the system development process, so called system builders, had to combine myriads of components to make entire water management systems or shipping on a waterway feasible and profitable.

One more category should be added to the sociotechnical: Nature. From the mid-twentieth century onwards, waterways received some attention in the context of environmentalism as elements of the natural environment.[24] Environmentally informed writings on rivers as waterways have generally addressed regulations in the nineteenth and twentieth centuries and the subsequent excessive harnessing of the power of rivers in the mid-1900s.[25] These works tend to tell the story of progress, the technological taming of former wild streams. However, as Sarah Pritchard demonstrated in her masterpiece on the post 1945 history of the river Rhone, nature was not simply tamed – it afforded material constraints to technological development and use.[26] Furthermore, she shows how changes in political discourse on rivers and water influenced the continuous material transformation of the Rhone. Pritchard developed a synthesis of LTS tradition with environmental history, situating nature as an independent phenomenon on a par with sociotechnical systems. Building on similar arguments, some scholars positioned the study of waterways within an emerging historical sub-discipline of water history – which, in their approach, roughly stands

23 Erik van der Vleuten and Cornelis Disco, "Water Wizards: Reshaping Wet Nature and Society," *History & Technology* 20, no. 3 (2004): 291-309; Cornelis Disco and Erik van der Vleuten, "The Politics of Wet System Building: Balancing Interests in Dutch Water Management from the Middle Ages to the Present," *Knowledge, Technology & Policy* 14, no. 4 (2002): 21-40.
24 Disco and van der Vleuten, "The Politics of Wet System Building," 39.
25 The most notable examples related to Europe are: David Blackbourn, *The Conquest of Nature: Water, Landscape, and the Making of Modern Germany* (New York: Norton, 2006); Christof Mauch and Thomas Zeller, *Rivers in History: Perspectives on Waterways in Europe and North America* (Pittsburgh, Pa.: University of Pittsburgh Press, 2008).
26 Sara B. Pritchard, *Confluence. The Nature of Technology and the Remaking of the Rhône* (Cambridge: Harvard University Press, 2011).

for nature.[27] It is in this stream of scholarship that this book is situated.

Indeed, the two biases, lack of cultural perspective and methodological nationalism, can be overcome if we apply the concept of co-construction. The move towards sociotechnical analysis required the development of new analytical tools. In order to understand the interaction between cultural processes and technological artifacts, scholars in science and technology studies adopted a linguistic approach. They see discursive practices of historical actors as crucial variables in providing meaning to the material world. By deriving their meaning from culture, technological artifacts actually become an active part of it. Existing literature focuses predominantly on "co-construction" of national identities and symbolic technological projects, not offering any solid methodology.[28] The search to apply this approach to waterways leads us back to Pritchard. While she focused on co-construction of the Rhone and post-war France, this book focuses on the Donau Oder Elbe canal (DOE) and Europe. The designers of the DOE, as well as those transforming the Rhone, had to align changing discourses with technological changes and the natural environment of respective streams.

The history of waterways forms part of a broader history of European infrastructures. In 2005, Thomas J. Misa and Johan Schot articulated a powerful historiographical argument in favor of studying technological change, including infrastructures such as waterways, as a means of understanding the formation of Europe. In order "to situate technology in a broader social and cultural analysis of Europe," they proposed the concept of "hidden (technological) integration/disintegration" and expressed it in contrast to the general image of European integration as a nation-states-led process of political and economic convergence starting in the immediate post-war period. From the position of transnational history, Misa and Schot challenged both the spatio-temporal framework of the process and the position of nation states and their political representations as the basic units of inquiry and virtually the only relevant actors in the study of integration. At the same time, they challenged the widespread assumption that connected the integration of the continent with the emergence of the EU and its predecessors.[29]

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27 Terje Tvedt et al., *A History of Water*, 3 vols. (London: I.B. Tauris, 2006).

28 Schueler discusses at length the theoretical debates behind the issue of co-construction as well as existing historical literature on the topic; Judith Schueler, *Materializng Identity: The Co-Construction of the Gotthard Railway and Swiss National Identity* (Amsterdam: Aksant, 2008), 28.

29 Thomas Misa and Johan Schot, "Inventing Europe: Technology and the Hidden Integration of Europe," *History & Technology* 21, no. 1 (2005): 1-19, here 3. See also Johan Schot, "Transnational Infrastructures and the Origins of European Integration," in *Materializing Europe: Transnational Infrastructures and the Project of Europe*, ed. Alexander Badenoch and Andreas Fickers (New York: Palgrave Macmillan, 2011), 82-112.

Figures 1.2 – The conflicting image of waterways as industrial highways and clean technology. The first image, used on the cover of the leaflet published by Ostrava mining company in 1966 to promote the construction of the canal emphasizes the industrial background landscape. The second photograph shows the Elbe meandering through Northern Bohemia around 1946. Source: Ostrava hledá přístup k moři (Ostrava Seeks Access to Sea, 1966, NAČR, FMZO, odd. 20, b. 65); NAČR, CPU, b. 96.

Misa and Schot's starting point was that the processes of integration (as well as fragmentation) on the continent began much earlier than the standard narrative on European integration suggests. Indeed, for instance, the integration of infrastructures (including waterways) on the continent is a long-term process dating back to at least the mid-1800s. Furthermore, integration processes were driven and performed with different visions of integration in mind, which means it is not possible to work with any "pre-defined" spatial or territorial concept of Europe. Finally, transnational collaboration, which carried forward the integration processes, was frequently pursued by non-state actors; in the field of technology, these were mostly expert networks whose activities were not fully under the control of national authorities. Therefore, while the role of nation states must not be underplayed, its assumed primacy does need to be questioned.

Misa and Schot tried to direct the history of technology towards a study of the "emergence of Europe" in the twentieth century as an outcome of contested processes of linking and delinking infrastructures, and the circulation and appropriation of knowledge and artifacts. Emphasizing the non-theological character of the integration process, they proposed looking at the various technology developments as Europe-building practices, which enacted different and often conflicting visions of Europe. Interpreting the linking and delinking in this way enables

the researcher to see the process of co-constructing European polity and identity. From this perspective, political post-war integration represented just one episode in the long-term process of the construction of Europe and one particular vision of Europe.

This new vision on how to write European history drew on new developments in infrastructure studies. Following the "transnational turn" that has taken place in historiography since the 1990s, historians of infrastructures have shifted their research focus to the formation of transnational networks and systems. Until the late 1990s, almost all the existing literature on infrastructures in Europe was confined to the national perspective and mostly offered accounts of negotiations among the perspectives and interests of great powers – namely, Germany, Britain, and France – thus excluding large parts of Europe.[30]

Over the past seven years or so, a distinctive body of literature on "transnational infrastructures and the shaping of contemporary Europe" emerged, to which this research aims to contribute. Historians connected with the *Tensions of Europe* research network have made significant contributions to this subfield of the history of infrastructures and the history of Europe. Erik van der Vleuten and Arne Kaijser edited a seminal collection concentrating on the infrastructural networking processes in Europe since the 1850s. They studied infrastructures such as the large technical system,[31] based on the idea that infrastructures are complex entities consisting of technical artifacts, institutional and legislative frameworks, and other components.[32] Although their study claimed to have a European focus, it nevertheless mainly included case studies from the western (in the Cold War sense) part of the continent.[33] The book helped develop a new field and identified promising research sites – most prominently international organizations.

A group of researchers based at Eindhoven University in the Netherlands launched a successor project (the TIE project) focusing directly on the role of transnational organizations in the development of European transport systems.[34]

30 This shift to a transnational perspective was inspired by globalization studies and the concept of a networked society. Armand Mattelart, *Networking the World, 1794-2000* (Minneapolis, Mn.: University of Minnesota Press, 2000); Paul Edwards, "Infrastructure and Modernity: Force, Time, and Social Organization in the History of Sociotechnical Systems," in *Modernity and technology*, ed. Thomas J. Misa, Philip Brey, and Andrew Feenberg (Cambridge, Mass.: MIT Press, 2003), 185-226.

31 Erik van der Vleuten, "Understanding Networked Societies: Two Decades of Large Technical Systems Studies," in *Networking Europe: transnational infrastructures and the shaping of Europe, 1850-2000*, ed. Erik van der Vleuten and Arne Kaijser, *History & Technology* (Sagamore Beach, MA: Science History Publications, 2006), 279-314.

32 Thomas Parke Hughes, *Networks of Power: Electrification in Western Society, 1880-1930* (Baltimore: Johns Hopkins University Press, 1983).

33 Erik van der Vleuten and Arne Kaijser, eds., *Networking Europe: Transnational Infrastructures and the Shaping of Europe 1850-2000* (Sagamore Beach, MA: Science and History Publications, 2006).

34 The "Transnational Infrastructures and the Rise of Contemporary Europe" research project has a well

This project studied organizations such as the *European Conference of Transport Ministers* (ECMT) or the Bureau International des Autoroutes as arenas in which international collaboration and transnational, "European" standards were articulated and negotiated. These international organizations, which were dedicated to infrastructural integration, aimed to facilitate the construction of trans-border interconnections and acted at continental or regional level as "system builders;" that is, crucial actors who aligned diverse interests and technical constraints towards realization of the integrated system. At these organizations, different interests – internationalist, nationalist and sectoral – were aligned and negotiated, together with diverging perceptions and visions of Europe. Recently published results offer an alternative history of European infrastructures not based on the idea of dominating nation states and their foreign policies or on tracing the prehistory of post-war EEC/EU common transport policy. They tell the story of the contested shaping of European systems and their governance.[35]

The study of European system builders revealed crucial aspects of the construction of transnational infrastructural systems in Europe. The most critical factor in establishing the system involved setting common parameters. However, this was never simply a technical issue, as various social, cultural, and political factors usually come into play. The parameters comprised a set of measures aimed at facilitating the trans-border operation of a given infrastructural system. This not only required the simple material inter-linking of existing national or local/regional systems and their technical compatibility, but also the establishment of transnational regulatory regimes.

Furthermore, the negotiations at these various organizations also involved the scope of the integration; that is, the spatial extent of the network. To some degree, this was a consequence of negotiations with various conflicting interests and technological demands. Many European international organizations embodied and promoted a certain wider geopolitical agenda; typical examples are the ECMT or

maintained and regularly updated website: http://www.tie-project.nl/. Accessed 2 May 2012.

35 The Eindhoven group produced a series of articles, edited volumes, and books (PhD theses). See, among others, Erik van Der Vleuten et al., "Europe's System Builders: The Contested Shaping of Transnational Road, Electricity and Rail Networks," *Contemporary European History* 16, no. 3 (2007): 321-347. A special issue of *Journal of Transport History* entitled "European Infrastructures," edited by Johan Schot, 28, no. 2 (2007); an edited volume by Alexander Badenoch and Andreas Fickers, *Materializing Europe: Transnational Infrastructures and the Project of Europe* (New York: Palgrave Macmillan, 2011). And five monographs: Vincent Lagendijk, *Electrifying Europe: The Power of Europe in the Construction of Electricity Networks*, (Amsterdam: Aksant, 2008); Frank Schipper, *Driving Europe: Building Europe on Roads in the Twentieth Century* (Amsterdam: Aksant, 2008). Irene Anastasiadou, *Constructing Iron Europe: Transnationalism and railways in the Interbellum* (Amsterdam: Amsterdam University Press, 2012); Suzanne Lommers, *Europe – On Air: Interwar Projects for Radio Broadcasting* (Amsterdam: Amsterdam University Press, 2012); Schueler, *Materializng Identity: The Co-Construction of the Gotthard Railway and Swiss National Identity* (Amsterdam: Aksant, 2008).

Council for Mutual Economic Assistance (Comecon), which operated on opposite sides of the Iron Curtain during the Cold War.

However, the politically induced territorial delimitation of the developed system did not necessarily have the desired effect. Besides the official goals declared by the given international body, experts participating at these organizations pushed their own specific agenda, for which Schot and Lagendijk coined the term "technocratic internationalism." Having to cope with two limitations – one concerning their actual capability to influence the general mission of these organizations and the other related to the minimal decision-making power of these organizations – experts had developed strategies to pursue their own interests. In particular, they attempted to present their agenda as purely technical in order to keep politicians and diplomats disinterested. These experts preferred to advance their own vision of the network, based on the presumption that inherent factors of each network-technology should delimit the final shape of the network and not politics.[36] This leads us to the question of how the present book contributes to this new historiography on the co-construction of infrastructures and Europe.

Canal as a Laboratory of Europe

As indicated, the entire twentieth century has been marked by initiatives attempting to interconnect the Danube basin and Black Sea ports via a waterway network to both the Baltic and North Sea markets using a canal connection between the Morava, Oder, and Elbe. The DOE project promised to connect the three seas through the Moravian Gate, the lowest point of the watershed. In itself, this geographical position was a justifiable argument for constructing the canal. The Moravian Gate provided the most economical option for extending and interconnecting the three rivers and their inland navigation networks. From the perspective of European transnational system-builders, DOE was an obvious solution to the natural limitations of the region's inland waterway network.

However, DOE was developed at the junction of transnational system building and national network development. As the Moravian Gate is situated on Czech national territory, developers of the canal also had to take into account the national perspectives on the project. Nil Disco, in his analysis of transnational aspects of the West European waterway network construction identified the crucial problem they faced relating to a particular feature of waterways and especially

36 Johan Schot and Vincent Lagendijk, "Technocratic Internationalism in the Interwar Years: Building Europe on Motorway and Electricity Networks," *Journal of Modern European History* 6, no. 2 (2008): 196-217.

trans-watershed canals: they incited conflict between those who controlled access to the sea and those who had the authority to extend the navigability of a certain river or a waterway system further inland. The former would profit greatly from the construction, while the latter would have to bear the costs.[37] Finding themselves in the latter position, Czech experts had to develop strategies for advertising and "selling" the canal as both a transnational and national project that would remain firmly embedded in Czechoslovak nation-building efforts. Therefore, this book does not concentrate on international organizations *per se*, but rather on the interaction between them and the national authorities in charge of construction and preparatory works. Several scholars have shown that the tension and negotiations visible in the negotiations at the (transnational) system builders' level could also be fruitfully examined from the national perspective.[38]

In the case of the DOE canal, transnational system builders used four different integration frameworks to legitimize the need for transnational integration at the time, each of which was linked to a specific vision of Europe: Mittel-Europeanization, Nazification, Sovietization, and Europeanization. The frameworks represented not only distinctive spatial delimitations of the proposed waterway network, but also specific sets of values and ideas. They were not simply the products of transnational infrastructure network planners, but reflected existing political concepts of organizing territories served by the projected canal. Broader political agendas blended with the creation of infrastructural networks. Hence, transnational system building processes embodied both the deliberate and the unintentional materialization of specific political goals and their underlying cultural and social context.[39]

Coming back to the notion of co-construction, experts changed the canal design in response to discursive shifts in meanings – as a transport route binding territory, as flood protection control, as an axis of national economic development or a tool of Sovietization. The experts reacted to specific cultural values attached to water and waterways by the ideological underpinning of different frameworks. At

37 Cornelis Disco, "From Sea to Shining Sea: Making Ends Meet on the Rhine and the Rhone," in *Materializing Europe: Transnational Infrastructures and the Project of Europe*, ed. Alexander Badenoch and Andreas Fickers (New York: Palgrave Macmillan, 2011), 353-397.
38 Léonard Laborie, "A Missing Link? Telecommunications Networks and European Integration 1945-1970," in *Networking Europe: Transnational Infrastructures and the Shaping of Europe, 1850-2000*, ed. Erik van der Vleuten and Arne Kaijser, *History & Technology* (Sagamore Beach, MA: Science History Publications, 2006), 187-215; Gijs Mom, "Roads without Rails: European Highway-Network Building and the Desire for Long-Range Motorized Mobility," *Technology & Culture* 46, no. 4 (2005): 745-772.
39 As far as deliberate use of such power is concerned, van Laak claimed that infrastructures acquire a certain flavor of the imperial. Besides connecting, they "also exclude and segregate and establish a new hierarchy." Dirk van Laak, "Technological Infrastructure: Concepts and Consequences," *ICON. Journal of the International Committee for the History of Technology* 2004, no. 10 (2004): 53-64, here 55. For a general discussion on the issue of materialization, see Tony Bennett and Patrick Joyce, *Material Powers: Cultural Studies, History and the Material Turn* (London: Routledge, 2010).

the same time, the canal project operated not only as a mirror, but also as a carrier of these frameworks, as various activities undertaken by promoters of the project implicitly performed and re-produced values, ideas and visions inherent in the given framework.

The application of these frameworks also provides a form of periodization, each period starting with the emergence of a new framework. These periods resonate with general political history, although one must recognize that these frameworks often co-existed for some time. The first chapter deals with the framework labeled Mittel-Europeanization. In spatial terms, the notion is hard to define, though most contemporary authors agreed that it comprises the territories between the Danube, the Rhine and the Vistula. On the one hand, the idea of *Mitteleuropa* represented the most ambitious version of German national territory, on the other hand regional articulation of the idea of Europe. In order to describe the integration process advanced in the name of *Mitteleuropa* and to cover both these meanings of the concept, Mittel-Europeanization is given preference over its English translation – Central-Europeanization. Since the 1870s, associations promoting the integration and standardization of transport networks in the area competed first with the imperial plans of Austria and Germany and later with Pan-European and national sentiments.

A different, racial form of Pan-Germanism dominated the Nazi period, and the territorial shape of the envisioned network switched to the ever-expanding German larger economic area, *Grossraum*. Chapter two deals with the process of Nazification; it is full of internal controversies, as signified by the discrepancy between Nazi ideology and its imperial ambitions. Unlike its predecessor, Nazification was enforced, though not strongly resisted. It aimed to create a *Grossraum* waterway network, centralized and built according to prescribed standards, reaching from the Atlantic to the Black Sea.

The third chapter focuses on the post-war socialist integration promoted by the new transnational system builder, Comecon. As the canal found itself on the Eastern side of the Iron Curtain, this period marked an introduction of Soviet methods and practices. Therefore, it is fair to speak of the Sovietization of the canal project. The notion of Sovietization is rather ambiguous; here it is used to describe many different processes relating to the expansion of soviet style communism. This consisted of general re-orientation towards the East, regarding both the spatial delimitation of the envisioned network and the image of water and waterways. This process did not go unchallenged and could hardly be compared to Nazification concerning its content and form of realization.

Concurrently with plans for a separate East European waterway network, the

United Nations Economic Commission for Europe (established in 1947) envisioned a pan-European network, which was later adopted by the EU. The Europeanization of the canal thus started almost simultaneously with its Sovietization. Chapter four looks at the cooperation and joint planning performed across the seemingly Iron Curtain. While ideas on European integration had already appeared before World War II, only after 1947 did they lead to the formulation of a program for waterway integration.

Each of the four frameworks represented a specific setting for interplay between national and transnational perspectives. Under every single framework, a new design was developed in an attempt to align the specific requirements of national representation with the specific vision of a transnational waterway network. Each chapter opens with more detailed historiographical surveys discussing every one of these frameworks and their ideological background. One reason for moving the thorough analysis of these concepts from the introduction to the chapters is the fundamentally different setting of these debates.

This book aims to help re-incorporate the former communist part of Europe into the European history of infrastructures. The existing literature offers fairly thorough accounts of the processes of hidden integration in Western Europe. These analyses marginalize the developments in the Eastern bloc after World War II, almost as if they were non-European.[40] This is somewhat paradoxical, given that the hidden integration concept explicitly attempts to overcome the preoccupation of European infrastructure studies with post-war Western political integration. This concept also calls for re-incorporating the East into the picture by challenging the firmness and impermeability of the Iron Curtain. The DOE project is a perfect case study for doing just that, situated as it is on the historical border between East and West.[41] DOE constitutes a socio-technical laboratory on a small spatial scale, and at a junction uniting various visions of Europe. Despite a history full of interruptions, it has never disappeared from the agenda of both national and transnational planners, which means it provides a relatively stable point from which to promote the hidden integration of a new Europe.

40 For the case of infrastructures, see: Van der Vleuten et al., "Europe's System Builders"; Johan Schot, "Building Europe on Transnational Infrastructures," *Journal of Transport History* 28, no. 2 (2007): 167-171. Not explicitly applying the concept, but working in the same direction, Vleuten and Kaijser, *Networking Europe*.

41 Larry Wolff, *Inventing Eastern Europe: The Map of Civilization on the Mind of the Enlightenment* (Stanford, Calif.: Stanford University Press, 1994).

Sources

The simple fact that the canal has not yet been built, offers a unique opportunity to study how its design process reflected and interacted with the wider process of integration and fragmentation of Europe. Once enacted by law as part of the envisioned Austrian imperial waterway network, the canal retained its momentum throughout the twentieth century. *Mitteleuropean*/*Grossraumwirtschaft*/ Comecon/European network planners always picked up the idea and built on earlier attempts to construct the canal. As scholar Alec Badenoch put it, the outcome of past projects, visions, and fantasies smoothed the path for future construction, and the international cooperation in preceding periods leaves a lasting mark on future European planning.[42] Viewing the twentieth-century history of the "discourse on Europe" through the lens of archival records of this single infrastructural project brings to the foreground all the fragmentation, disintegration, exclusion, and conflicts in the process of long-term hidden integration in Europe. On the one hand, the DOE project suffered from the tension between national and transnational system building. On the other hand, it also benefited from the existence of these two perspectives, since it provided continuity of the canal idea at times when either national or transnational organizations lost interest.

There is a line in the British television series "Yes, Minister" in which the state secretary proposes to use "the marvelous winter" of 1967 as a convenient excuse for missing documentation on governmental expenditure. In that year, he says, "we lost no end of embarrassing files" in the floods.[43] The analogously marvelous summer of 2002 could be blamed for a massive loss of sources on the history of the DOE. The Archives of the Czech National Technical Museum are only slowly recovering from the floods, as well as part of the library at the Prague Water Research Institute and the Czech Statistical Office, which I have visited in relation to this research.

Furthermore, archival work with relatively recent material in the Czech archives, while offering plenty of academic stimulation, is very time-consuming. In the mid-1980s, Milada Efmertová noted that she could not study the complete records of the State Planning Office (SPÚ 1949-1959) because materials were not yet

42 See Badenoch's account of the pre-war London-Istanbul road and its later realization as route E-5. Alexander Badenoch, "Touring Between War and Peace: Imagining the 'Transcontinental Motorway', 1930-1950," *Journal of Transport History* 28, no. 2 (2007): 192-401. In his article, Badenoch opposed the available historiography by exploring the road's symbolic dimensions, interpreting it as a relative success because the discourses set to work on behalf of that project affected the later, completed visions and plans for European infrastructural building.

43 The quotation is from the episode "Yes Minister: The Skeleton in the Cupboard (#3.3)" (1982).

accessible.[44] Twenty years later, the situation has only changed to a limited extent. Since 1989, archival material and documents relating to communist repression have been made easily accessible, while other documentation from the communist period waits in deposits.[45] Prague might be the only post-communist European capital where Comecon files are not available or put in order.[46] It was only towards the last few months of this project that some crucial files became available, when Ministry of Transport papers (period after 1960) were transferred to the archives. On this subject, I would like to thank to the archivists of the National Archive in Prague, Miroslav Kunt and his colleague Bohuslav Brom, for their help in searching through the archival groups not yet equipped with an inventory (some having just been moved from their original institutes).

The crucial archival group devoted entirely to the DOE, was established by a government resolution of 1952 to gather and store in one place documents related to the canal for possible future use. Since then, the group currently stored at the Moravian Land Archive has been continually updated. At the Prague National Archive, I viewed the files of various ministries (such as the inter-war Czechoslovak Ministry of Trade and the socialist Ministry of Foreign Trade) and those of the Directorate for Waterway Construction (1903-1949) and the Communist Party, as vital (and available) sources of post-war history.

Besides natural disasters and national history policies, also institutional changes complicated the search for material. National tension between Czechs and Slovaks led to the Navigation Department of the Transport Research Institute (VÚD) being transferred from Prague to Žilina (in Slovakia), then to Bratislava, and finally partially back to Prague; all of this had disastrous effects on the material. While Bratislava VÚD stores some files from when it employed Jaroslav Kubec in the 1980s,[47] the Czech *Dopravní knihovna* (Transport Library, former part of the Ministry of Transport, which stores most VÚD research reports) offers only fragments. The files belonging to the socialist water structure

44 Marcela Efmertová, "K institucionálnímu vývoji výzkumně-vývojové základny slaboproudé elektrotechniky v Československu v letech 1945-1965," *Studie z dějin techniky*, no. 1 (1988): 291-446, here 296.
45 Such preoccupation has produced several undesired results. First, inaccessibility of materials on social and economic history complicates a full understanding of the communist period; secondly, in the light of the records of repressive apparatus the communist régime appears to be strong and well organized – which is at least disputable. See the Introduction in: Jiří Kabele and Martin Hájek, *Jak vládli? Průvodce hierarchiemi reálného socialismu*, Knihy dokumenty (Brno: Doplněk, 2008), 11-13. For a more general critique of the prevailing totalitarian interpretation of the communist regime, see Michal Pullmann, "Sociální dějiny a totalitněhistorické vyprávění," *Soudobé dějiny* 15, no. 3-4 (2008): 703-717.
46 Based on my own research and archival visits and also on reliable information obtained from colleagues, I am assured that in Sofia, Berlin, Warsaw, and Budapest, such documents are open to study and relatively easily available.
47 According to information from Mr. Žitňanský, this is mostly print documentation.

designing agency Hydroprojekt, are stored partly at NAČR in Prague, partly at MZA Brno (documents of Hydroprojekt branch in Blansko). Some files remained in the company archive of its successor, Pyöry Brno, and the surviving but now private Hydroprojekt in Prague. While Hydroprojekt engaged in canal planning throughout the 1960s and 1970s, none of these firms could find anything on the subject in their archives (except "lists" of shredded materials).[48] Similarly, nothing survived at the archived materials of the Ministry of Agriculture, Forestry, and Water Management, which was assigned the task of coordinating the governmental committee on the evaluation of the canal between 1968 and 1972.[49] The lack of materials required an additional search for sources. My visit to the Archive of the Czech Academy of Sciences proved particularly fruitful.

The only institute offering materials for virtually the entire period investigated is the Archive of the Ministry of Foreign Affairs. Its materials covers the activities of Czechoslovak delegates in international organizations such as The League of Nations, Danube Commission, or the United Nations Economic Commission for Europe (UNECE). I studied UNECE materials at the UNOG Archive in the Palace of Nations in Geneva. In order to obtain detailed information on technological developments in inland navigation, I examined the Permanent International Association of Navigation Congresses (PIANC) collection stored in Delft University of Technology's library.

As an auxiliary source, a set of interviews was conducted with engineers involved in the DOE design process. Because the government halted the projects in 1972 before detailed on-site works began, the group of direct participants remaining since the 1940s is rather small. Among those interviewed were Messrs. Jaroslav Kubec, Evžen Polenka, and Václav Plecháč. Apart from state archives, many documents were from other sources, particularly after 1970, for which materials are rare and the general thirty-year rules apply.

48 There are over 600 boxes of materials without any inventory at NAČR. None of Hydroprojekt's successive organizations kept any list of files handed in to the archive. Filip Paulus of NAČR has been extremely helpful in locating files; nonetheless, all efforts were ultimately fruitless.
49 Information from archivist František Frňka (Department 4 of NAČR).

Chapter 2
Mittel-Europeanization on Waterways

While a Central European railway network has been fully developed, everybody has completely forgotten about the inland waterways. There the problem of the Central European Waterways arises.[1]

Looking at a standard map of what is now Europe, you would hardly notice any signs of a waterway network in the middle. A mountainous belt reaching from the Swiss Alps through Bavaria and Czechoslovakia to the Carpathians forms a watershed that divides Europe without leaving much space for anything aspiring to be called "the Middle."[2] The watershed actually *is* the center; all other parts inevitably belong to either the river basin or the waterway systems. Hence, the call to improve the unified Central European Waterway network was not so much a complaint about the state of affairs at the time, but an articulation of a vision of Central European integration in terms of waterways.

Other visionaries articulated the need to overcome the main continental watershed in a continental rather than regional context. Count Coudenhove-Kalergi, the famous inter-war prophet of a united Europe, analyzed its spatial divisions. He identified two detached river basins as core regions dividing the continent into a western and an eastern part, the center of which was their intersection, which included the states whose territories drained both the Rhine and the Danube. However, Coudenhove-Kalergi argued that Europe became smaller after World War I, when the USSR left the European scene, and the notion of Central Europe became redundant. Germany and Switzerland joined the industrial West *(Industrie-Europa)* and Austria moved to the agrarian Danubian East *(Korn-Europa)*. Applying the watershed metaphor, Coudenhove-Kalergi spoke of a *Rhein-Europa* and a *Donau-Europa*.[3]

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1 It reads better in German: *Daraus entsteht das mitteleuropäische Wasserstrassenproblem*. Elemér Hantos, "Einleitung: Mitteleuropäische Wasserstrassenpolitik," in *Mitteleuropäische Wasserstrassenpolitik: Referate und Beschlüsse der Mitteleuropäischen Wasserstrassenkonferenz, Budapest, 11.-13. Mai 1929*, ed. Elemér Hantos (Vienna: Braumüller, 1929), 1-10, here 2.

2 Even fifty years later, engineer Hoblík stated that regarding navigation regulations, "the Danube and the Elbe are two different worlds;" Report on the Czechoslovak waterway program for UNECE August 15, 1955. (AMZV, MO-OMO, box 65).

3 Richard von Coudenhove-Kalergi, "Rhein und Donau," *Paneuropa* 7, no. 10 (1931): 285-290, here 287.

The most striking feature of the concept of the Central European waterway network was indeed its material non-existence. Professor Elemér Hantos of the University of Budapest made this point clear at the opening of the *Mitteleuropäische Binnenschiffahrtkonferenz* in Budapest in 1929. Hantos defined Central Europe as the area consisting of the river-basins of the Vistula, Oder, Elbe, Weser, Rhine, and the (disconnected) Danube.[4] The Danube waterway, disconnected from all other river basins in the region, remained underdeveloped compared to the Rhine. However, Hantos' conclusion differed from Coudenhove-Kalergi. In his speech, the Hungarian economist identified an engineering challenge that, if taken up, would help create a Central Europe. He called for the construction of artificial navigation canals, because "the dominant position of the Danube in the Central European transport system is contingent on the establishment of a waterway network interconnecting the Central European river basins."

The Hungarian economist wed the construction of the infrastructure to a political program for an integrated Central Europe. He urged the quick realization of the plans for the Danube-Oder-Elbe (DOE) and Rhine-Main-Danube (RMD) canals, considering both links crucial for a Central European waterway network. Once realized, these would enhance the riparian states' economies, thereby buttressing the region's overall prosperity. Both men believed that modern transport infrastructures induce "time-space convergence of neighboring countries," which must be followed by political rapprochement to avoid conflicts.[5] Transport issues were typically emphasized features of the proposed transnational cooperation schemes because everybody perceived them as apolitical and mutually profitable. While formulated in contrast to Coudenhove-Kalergi's Pan-Europe, Hantos' program for regional integration represented a particular application and form of the integrative processes in Europe; we should not dismiss it as negative or a blind alley. This chapter will illustrate the use of the canal designing process as a platform for negotiating the varying Central-European integration framework.

On Mittel-Europeanization

The idea of Central Europe is an extremely slippery concept. The difficulty lies in the discursive qualities of the seemingly descriptive geographic notion. It is heavily laden with hidden connotations and political agendas. Accordingly, historians have argued that Central Europe should be understood exclusively as a

4 Hantos, "Einleitung: Mitteleuropäische Wasserstrassenpolitik," 1.
5 Richard von Coudenhove-Kalergi, *Pan-Evropa* (Prague: Panevropa, 1993), 18.

normative category, expressing a specific ambition.[6] Some even suggest that nothing like Central Europe actually exists.[7] The ambivalence is clearly articulated in the contemporary linguistic opposition of the two notions of Central Europe. While Central Europe (or *Střední Evropa*) translates into German as *Mitteleuropa*, scholars have discouraged using the terms interchangeably, at least since 1945. The literature associates the image of *Mitteleuropa* with German imperialism. In contrast, Střední Evropa in Czech discourse generally has a positive connotation.[8] Robin Okeye sought to overcome its ideological use by defining the term as a spatially dynamic historical region; as a framework of interaction:

> [A] transitional zone of mountains, basins and counter-flowing river systems, shaping a pattern of ethnic splintering implausible in the vast plains of the continental east or extensive peninsulas of the Atlantic west … Over against this ethnic kaleidoscope, the German people was able to consolidate itself, before moving south-east and east ...[9]

In so doing, Okeye demarcated tidal Central Europe (or *Mitteleuropa*) as the lands and peoples whose fortunes have been "crucially bound up with Germany's."[10] While such a definition removes some problems for historians and provides a methodologically acceptable definition of Central Europe as an analytical category, it also abstracts from the normative visions and projects the idea of Central Europe far back into history, before the idea even emerged. Understandably perhaps, the shift of meaning, out of its historical original context, is not acceptable to most historians.

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6 This term often serves as a carrier of undeclared political agendas. Proclaiming a given area or country as a "center" either means freeing it from the (backward) East or incorporating it into the German "sphere." For analyses of such instrumental usage of the term by intellectuals and historians trying to promote the idea of the Great Germany or de-orientalize former communist countries, see (among others): Peter Bugge, "The Use of the Middle: Mitteleuropa vs. Stredni Evropa," *European Review of History* 6, no. 1 (1999): 15-35; Steffen Höhne, "Mitteleuropa. Zur konzeptuellen Karriere eines kulturpolitischen Begriffs," *Bohemia* 41, no. 2 (2000): 279-294; Jacques Le Rider, *Mitteleuropa: Auf den Spuren eines Begriffes: Essay* (Vienna: Deuticke, 1994).

7 Such an attitude often mocks the paradoxical division of the continent into two halves: the West and the Center. The most famous expression of such a vision was found in the works of Hungarian historian Peter Hanak. While most of his colleagues agreed that if Central Europe as a region did exist, it only did so in terms of cultural proximity, Hanak argued that such proximity is not generally perceived and the idea of the "center" works only to distance itself from the East. Peter Hanak, "Gab es eine Mitteleuropäisch Identität in der Geschichte?" *Europäische Rundschau* 14, no. 1 (1986): 115-123.

8 Bugge, "The Use of the Middle."

9 Robin Okey, "Central Europe/Eastern Europe: Behind the Definitions," *Past and Present* 137 (1992): 102-133, here 105.

10 When the notion of Central Europe appears in this text as an analytical description (therefore not explicitly linked with authors and bearers of a particular perspective on the subject), I refer to Okeye's definition. Ibid., 106.

Most historical studies present *Mitteleuropa* as a German nationalist articulation of the idea of Europe, and are predominantly concerned with its intricate relationship with German nationalism. Scholars have generally considered *Mitteleuropa* as a form of the *Grossdeutsch* conception of German national territory. From this point of view, the German project of Central European integration is often described as antithetical to the peaceful process of international European integration after 1945.[11] Only recently has attention been paid to the existence of Central European integration before World War II that has not been partial to German hegemonic enterprise. Other studies have taken a different approach, exploring the existence or reproduction of transnational structures and ties. However, these studies use nation states as the unit of analysis instead of following the chosen structure.[12] This can be partly attributed to the "floating borders" of the region and its modern division into East Central Europe and its largely forgotten western counterpart, and partly to the domination of national shaping of history.[13]

In order to overcome the conceptual and linguistic ambiguities of the concept, this book adopts the approach advanced by historians Johan Schot and Thomas Misa when studying the process of Europeanization. They propose to focus on social actors' definitions.[14] From this point of view, the *Mitteleuropa/Stredni Evropa* dichotomy is a struggle between various actors and shaping the future spatial and political organization of the area. Attempts to construct Central Europe/ *Mitteleuropa* as part of the broader integration processes can be labeled Mittel-Europeanization. This term is part of the formation of Europe and its specific realization on a smaller spatial scale. There are three key reasons to prefer "Mittel-Europeanization" over "Central-Europeanization": First, the term represents the crucial role of German culture in the process; second, and more specifically, it combines the two facets of the process: simultaneous building of a transnational

11 Delanty interpreted *Mitteleuropa* as "anti-Europe," in terms of an identity project opposing the ideas of the European Union. Similarily, Elvert saw the hegemonic *Mitteleuropa* project as antithetical to the liberal Europe of post-war European federalists. Gerard Delanty, *Inventing Europe: Idea, Identity, Reality* (New York: St. Martin's Press, 1995), 131; Jürgen Elvert, *Mitteleuropa!: Deutsche Pläne zur europäischen Neuordnung (1918-1945)*, Historische Mitteilungen, 35 (Stuttgart: F. Steiner, 1999), 392-393.

12 A typical example is the analysis of trade patterns in Danubian states after the breakup of the Habsburg Empire. The authors simply reconstruct the Danubian monarchy on the territorial grid of the successor states without actually examining the *Donauraum* or *Mitteleuropa* as historical regions. They concluded that historically developed trade patterns proved highly resistant to changes in political borders and alliances, and the region remained closely integrated in economic terms throughout the interwar years, despite fierce political conflicts. Stefan Karner, Ingrid Kubin, and Michael Steiner, "Wie real war 'Mitteleuropa'? Zur wirtschaftlichen Verflochtenheit des Donauraumes nach dem ersten Weltkrieg," *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 74, no. 2 (1987): 153-185.

13 The division of Central Europe was elaborated by Polish emigré historian Oskar Halecki in the 1950s. Oskar Halecki, *The Limits and Divisions of European History* (London; New York: Sheed & Ward, 1950).

14 Thomas Misa and Johan Schot, "Inventing Europe: Technology and the Hidden Integration of Europe," *History & Technology* 21, no. 1 (2005): 1-19.

region and German nation state; and third, it emphasizes that this regional integration frame was not just an evolutionary stage of European integration, but also its alternative.

Before moving to the history of the canal, it is useful to delve deeper into the various historical interpretations which this chapter explores. The idea of Central Europe emerged as an integrative concept in the early nineteenth century. German geographer August Zeune coined the term "Mitteleuropa" (Central Europe) in 1808 simply to describe the area between the Mediterranean and the North Sea. After the Napoleonic Wars, however, intellectuals started to divide the continent into the civilized Atlantic West and the semi-barbarian backward East. By this time, the idea of the center lost its value-neutrality.[15] In 1810, an influential member of the emerging German national movement, Friedrich Ludwig Jahn, referencing the recently (1804) abolished Holy Roman Empire, called for the establishment of a new German Empire in the geographical area between France and Russia. Jahn felt that the center, freed of the two superpowers on the East and West, represented the natural territory of the German nation state.[16] When in 1866 Otto von Bismarck established the *kleindeutsch* alternative to the German national territory, it temporarily closed discussions about the *grossdeutsch* (Central European) option. By the end of the nineteenth century, however, the idea gained new momentum in the form of German imperialism.

Three decades after Jahn, economist Friedrich List famously formulated a vision of German economic hegemony over the Eastern part of the continent based on a central-periphery pattern of Europe.[17] He identified the European East as an open "frontier" of the German settlement, analogous to the British colonies or the American West. While addressing the possibility of German expansion to the east of Europe, he proposed that the regions east of the Hungarian border, including the entire Black Sea, be chained to the *Mutterland* and to each other by the network of railways and waterways.[18] List felt that such infrastructural unification

15 On the origins of such orientalisation of Eastern Europe (the discursive construction of Eastern Europe as inferior to the West), see Larry Wolff, *Inventing Eastern Europe: The Map of Civilization on the Mind of the Enlightenment* (Stanford, Calif.: Stanford University Press, 1994).

16 There is no general consensus regarding the first use of the term. Geographers argue it was first used by their colleague A. Zeune (1808), while Jahn is generally acknowledged as having knotted together all three constitutive layers of the concept: German Nationalism; the idea of the centre as being superior to the margins (east or west); and European geography. Hans-Dietrich Schultz and Wolfgang Natter, "Imagining Mitteleuropa: Conceptualisations of 'Its' Space In and Outside German Geography," *European Review of History* 10, no. 2 (2003): 273-292, here 275; Le Rider, *Mitteleuropa*, 49.

17 List considered German leadership to be a natural result of the cultural and economic superiority of Germans over Slavs; he did not operate with notions of racial or ethnic predispositions. Bo Stråth, "Mitteleuropa: From List to Naumann," *European Journal of Social Theory* 11, no. 2 (2008): 171-183, here 176.

18 Elvert, *Mitteleuropa!,* 23. In his opus magnum, published in 1841, List addressed the role of infrastructures, such as "improved river navigation, improved highways, steam navigation and railways," which he

would lead to the establishment of a *deutsch-ungarischer Wirtschaftsraum* (economic area) between the North, Baltic, and Black Seas; that is, the seas that the DOE canal also sought to connect.[19]

The rise in publications dealing with central-European themes reached its peak at the outbreak of the World War I when Friedrich Naumann published his *Mitteleuropa* (Central Europe). According to Naumann and officials of the two Central European Empires, the war coalition helped amalgamate the region.[20] However, the outcome of the war and the Paris Peace Conference rendered their visions of union between Germany and Austria-Hungary irrelevant.

From the very beginning, however, the German *Mitteleuropa* project not only mobilized integrative forces and produced processes that led to closer cooperation and the creation of integrated space. It simultaneously spurred resistance and nationalist isolationism on the part of the non-German people inhabiting the area. In the 1840s, Czech historian and politician František Palacký responded to List and Jahn's visions by designing a concept of regional cooperation based on the transformation of the Austro-Hungarian Empire into a federalized system to ensure small nations' rights of self-determination and protect them from enforced Germanization.[21] Revival of the concept of *Mitteleuropa* within German public discourse in the early years of World War I gave birth to the so-called "Fear of *Mitteleuropa*." That fear, representative of the region's small nations was relayed to the Allies.[22]

By the end of World War I, three basic Central European integration concepts competed for the future organization of the area. The "long" nineteenth century gave birth to a wide range of German *Mitteleuropa* projects, ranging from the liberal federative visions of List and Naumann to the explicitly imperial conception

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believed to "constitute the fundamental elements of improved systems of agriculture and of civilization;" Friedrich List, *The National System of Political Economy* (London; New York: Longmans, Green, and Co., 1909), paragraph I.X.8.

19 Henry Cord Meyer, *Mitteleuropa in German Thought and Action 1815-1945* (The Hague: Martinus Nijhoff, 1955), 12.

20 Friedrich Naumann, *Central Europe* (New York: A.A. Knopf, 1917), 1-5. Even the military plans of the two Empires reflected growing *Mitteleuropean* sentiments. Petr Prokš, "Projekt 'německé' Mitteleuropy ve válečných plánech Německa a Rakouska-Uherska (1914-1916)," *Slovanský Přehled* 88, no. 4 (2002): 473-498.

21 In his influential treatise published in 1865 as a set of journal articles, Palacký envisioned the future political role of the Habsburg monarchy in securing the existence of small nations and their natural equal rights. František Palacký, *Idea státu rakouského* (Olomouc: Univerzita Palackého, 2002).

22 Meyer coined the notion of the "Fear of *Mitteleuropa*" when he accused representatives of small nations at the Paris Peace Conference, primarily the Czechoslovak delegates Masaryk and Beneš, of exaggerating the significance of the more-or-less innocent dreams of a few Germans and turning them into a collective nightmare. Meyer noted that "mistaken conceptions and fears of an era, or a people, can be as influential in determining the course of history as political or economic facts." Meyer, *Mitteleuropa in German Thought*, 344.

related to Jahn's visions, which survived within right wing intellectual circles until the Nazis incorporated it in their foreign policy.[23] In 1917, Czech politician and philosopher Tomáš Garrigue Masaryk responded to German ambitions from a "Slavonic Standpoint," proposing a union of nations between the major powers of Russia and Germany. After World War I and the Paris Peace Conference, the centuries-old economic ties throughout the former Habsburg Empire transformed into the idea of *Donauraum*. This concept became especially popular in the former imperial centers of Vienna and Budapest. Voices suggested that regional cooperation in the area between France, Turkey, and Russia should be integrated within the broader pan-continental or universal framework of Coudenhove-Kalergi's Pan-Europe or the League of Nations.

Most historical writings on Central European integration visions of the interwar era present a single narrative of failure.[24] Echoing the metaphor used by Czech historian Jan Křen, historical literature often depicts Central Europe as a "region of vain federalization."[25] Inter-war *Mitteleuropeanists* have been marginalized as historically insignificant due to lack of success in their endeavors. To some extent, historiography uncritically overtakes the perspective and views held by contemporary actors – mainly representatives of nation states. Typical in this sense is Hantos' evaluation and his activities in a report for the Czechoslovak Minister of Foreign Affairs from the late 1920s and in current historiography.[26] From a national viewpoint, these mitteleuropeanists were indeed an insignificant group of eccentrics. They lacked any actual influence and achieved nothing of their program.

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23 Mommsen actually built his narrative on the history of the idea of *Mitteleuropa* in pre-World War I Germany around such duality. Wolfgang J. Mommsen, "Die Mitteleuropaidee und die Mitteleuropaplanungen im Deutschen Reich vor und während des Ersten Weltkrieges," in *Mitteleuropa-Konzeptionen in der ersten Hälfte des 20. Jahrhunderts*, ed. Richard G. Plaschka, Horst Haselsteiner, and Arnold Suppan (Vienna: Verlag der Österreichischen Akademie der Wissenschaften, 1995), 3-24.

24 Many reviewers of volumes on the interwar visions of Europe and Central European federation plans questioned the actual significance of such ideas and initiatives, given their minimal achievements and results. Several works addressing the issue from national/international perspectives have appeared recently. Heinz Duchhardt and Malgorzata Morawiec, eds., *Vision Europa: Deutsche und Polnische Föderationspläne des 19. und 20. Jahrhunderts* (Mainz: Philipp von Zabern, 2003); Heinz Duchhardt and István Németh, eds., *Der Europa-Gedanke in Ungarn und Deutschland in der Zwischenkriegszeit* (Mainz: P. von Zabern, 2005); Marta Goňcová, ed., *Střední Evropa a evropská integrace* (Brno: Masarykova univerzita, 2006).

25 Jan Křen, *Dvě století střední Evropy* (Prague: Argo, 2005), 23.

26 In his report to Prague, Hugo Vavrečka, the Czechoslovak Ambassador to Vienna (1925-1932), characterized Hantos as an extremely ambitious person who supported Central European integration in order to "get some official position" and whose activities "are of no special significance." From a transport history perspective, Czech economic historian Ivan Jakubec appreciated Hantos' plans to solve the critical situation at a multilateral level, but noted that they were "unacceptable" for most successor states. Letter from Vavrečka (AMZV, odb.IV, b. 1095, September 11, 1929); Ivan Jakubec, *Železnice a Labská plavba ve střední Evropě, 1918-1938. Dopravněpolitické vztahy Československa, Německa a Rakouska v meziválečném období* (Prague: Karolinum, 1997), 56.

Through the lens of the DOE canal, however, we can study the integration promoters' activities from a transnational rather than a national perspective. In his pleas for trans-border cooperation among Central European peoples, Friedrich Naumann proposed a list of transnational common policies, such as joint boards for railways and the control of rivers. However, he noted that instead of all the common policies, such a list should contain those few areas that remain under national control.[27] In the light of the history of European integration, the importance of *Mitteleuropa* resides in the relationship between various forms of Central-Europeanism and other integration frameworks and efforts.

Here, we again encounter the basic dichotomy of the history of *Mitteleuropa*: either a specific variety of the German nation-building process or a stage in the history of European integration. In 1955, Henry Cord Meyer challenged the assumption of a direct link between the Nazi idea of *Grossraumwirtschaft* and the German idea of *Mitteleuropa.* Meyer saw the 1871 establishment of the German Empire as a time of birth; the year 1918 and the Paris Treaty as the death of the idea, before it was revived in 1933 in a mutated racist version.[28]

Recent contributions to the debate have concluded that there were intellectual and personal links between *Mitteleuropa* and Nazi ideology. Jürgen Elvert emphasizes the point by correlating it to the rather dated Meyer volume. Elvert drew a clear line of continuity for the idea throughout the 1920s, presenting a picture of the century-long development of the two-fold German *Mitteleuropa* conception from the early nineteenth century until the end of the Third Reich. From the point of view of integration history, Elvert devoted a large part of his book to evidence that the inter-war *Mitteleuropa* thinkers (both federalists and racists) deserve no credit for the federalization process that took place after World War II; the federal structure they proposed was an implicitly non-democratic totalitarian folk-alliance.[29] Similarly, Bo Strath recently suggested the link between Naumann's otherwise liberal *Mitteleuropa* and the national socialist ideology by singling out the attempted bringing together of nation (in the meaning of state – *Kaiserreich*) and society (*Volk* – the actual nation) in a form that appealed to the Nazis.[30]

From an infrastructural perspective, Mittel-Europeanization seems to be a hidden, projected integration of the area between the Rhine, the Vistula, and the

27 Naumann, *Central Europe*, 31.
28 Meyer, *Mitteleuropa in German Thought*, 291-325.
29 Elvert, *Mitteleuropa!*, 392-393. Mazower, on the other hand, saw continuities between the two, or more precisely between the German Neurodnung visions of Europe and post-war Europeanism. Most notable is the *Europakreis* club, where architects of post-war Europe such as Ludwig Erhard met with leading Nazi economists. Indeed, one's position depends on his or her general perspective – *Mitteleuropean* or European. Mark Mazower, *Hitler's Empire: How the Nazis ruled Europe* (New York: Penguin Press, 2008), 571.
30 Stråth, "Mitteleuropa," 182-183.

Danube. That process started in the late nineteenth century. While the *Mitteleuropa* concept had not been adopted by the *Kaiserreich* as a political doctrine, it had become increasingly associated with elements of imperialist thinking. In 1904, the *Mitteleuropäischer Wirtschaftsverein* (Central European Economic Association) was founded as a pressure group aiming to impose an informal German Empire over South-Eastern Europe and the Balkans, followed by the Near East and eventually even the Far East; these areas were to be dominated gradually, first in economic terms and later in political and military terms.[31] Nonetheless, the single result was the construction of the famous Baghdad Railway.[32] A growing number of competing integration concepts characterized the inter-war period. After the initial era saw stabilization of the new successor states, the need for broader economic cooperation led to various visions and cooperation projects in the region. However, the rise of National Socialism in Germany caused liberal *Mitteleuropa* plans to give way to a non-democratic and racist perspective on the organization of Central Europe.

Building *Mitteleuropa* on Waterways before Versailles

At the conclusion of World War I, Rudolf Kjellén presented a solution to the pressing question of Europe.[33] The Swedish social scientist and author of probably "the most circulated geopolitical work through history," opened his 1917 essay entitled *Problem of the Three Rivers* by showing how the unhappy fate of the continent has been inseparably intertwined with the course of three streams: the Vistula, the Rhine, and the Danube. Kjellén identified these rivers as crucial friction lines (*Reibungsfläche*) that divided Europe into three distinctive cultural areas. To the west of the Rhine lies the territory of the Romans; to the south of the Danube is the Balkans, with its strong oriental influence; and to the east of the Vistula lie the vast plains of Russia.[34] However, the ongoing war brought a solution to these permanent tensions. A fourth independent region finally emerged in the formerly

31 Agreements on customs and direct foreign investments were seen as the carriers of economic ties, which would eventually lead to political and military dependence on Germany. Mommsen, "Die Mitteleuropaidee."
32 Sean McMeekin, *The Berlin-Baghdad Express: The Ottoman Empire and Germany's Bid for World Power* (Cambridge, Mass.: Belknap Press, 2010).
33 Between 1914 and 1935, Kjellén's *Grossmaechte der Gegenwart* was published twenty-five times in Germany. Ola Tunander, "Swedish-German Geopolitics for a New Century: Rudolf Kjellén's 'The State as a Living Organism,'" *Review of International Studies* 27, no. 3 (2001): 451-463, here 451.
34 Rudolf Kjellén, "Das Problem der drei Flusse. Geopolitische Konturen," in *Deutschland, aber wo liegt es?: Deutschland und Mitteleuropa: Analysen und historische Dokumente*, ed. Hans Ester, Hans Hecker, and Erika Poettgens (Amsterdam; Atlanta, GA: Rodopi, 1993), 117-146, here 121-123.

unstable no-man's land in the middle. In Kjellén's view, the war-induced coalescence between Austria-Hungary and the German Empire produced the situation that solved the problem of Europe – "and this situation is *Mitteleuropa*."[35]

Kjellén felt that such a connection was not just an abstract sum of invisible ties. He saw *Mitteleuropa* materializing in the form of the trans-watershed canal, linking the river basins of the three rivers into a single network. Kjellén believed that the DOE canal, launched by the 1901 Austrian Water Act, had the capacity not only to establish a coherent Central European Waterway network by interconnecting the distantly separated and isolated river basins, but also to co-produce a stable and sustainable core region in the heart of the continent. Kjellén believed the scheme had already been solved technically and theoretically and was close to final realization, given the intimate political relations between Germany and Austria at that time. In the canal project, Kjellén saw "technology, economy and politics" coming into close interplay in a final step in the process of regionalization in Europe.[36]

From Kjellén's determinist "organic state" position, the German-led unification of the continent through waterways seemed inevitable. A harmonious march of technology, economy, and politics would, in the foreseeable future, inevitably lead to the coalescence of the space between France, Russia, and Turkey. As determined by its geography, ethnography and economy, this space would be, if not governed, then certainly dominated by Germans.

Kjellén had the facts right. In 1917, Central Europe was divided into the separate river basins of the Danube, the Rhine, and the Vistula, with the Oder and Elbe lying between the Rhine and the Vistula. There were also activities in motion that aimed to interconnect these rivers in a coherent network. The so-called "Renaissance of Canals," fueled by the re-discovered competitiveness of inland waterborne transport, and simultaneously by the symbolic power of water routes (as expressed by Kjellén), had been brought about in the last decades of the nineteenth century and led to demands for unification and cooperation on a larger scale.[37] In 1873, *Zentralverein für Hebung der deutschen Fluß- und Kanalschifffahrt*

35 Kjellén's analysis is actually more detailed and complex and, especially in the case of the Danube, he acknowledges it is not a simple interracial/cultural border. Ibid., 129.
36 Ibid., 127. Kjellén was not alone in ascribing considerable powers to rivers. Other scholars such as Eugeniusz Romer, the founder of Polish geography (and geopolitics), have acknowledged the role of rivers in the formation of national territory at that time. It had much to do with the concept of natural (and cultural) borders developed by the source of Kjellén's inspiration, Friedrich Ratzel, and further developed by his disciple Karl Haushofer. Eugeniusz Romer, *Rola rzek w historyi i geografii narodów* (Lwów: privately printed, 1901).
37 Gerald Crompton, "'The Tortoise and the Economy': Inland Waterway Navigation in International Economic History," *Journal of Transport History* 25, no. 2 (2004): 1-22, here 15.

Figure 2.1 – In 1881, Galician industrialist Romuald Coppieters mapped all the existing and planned waterways in Europe, demonstrating the clear contrast between East and West: a dense versus a less developed waterway network. As the title of his map suggests, Coppieters projected the German notion of Mitteleuropa on the waterway network, with the West representing everything west of Germany, and the rest as the Center with open eastern borders. Source: Romuald Coppieters de Tergonde, Neu projectirte Canalbauten, Schiffahrtsverbindungen durch Ausbau eines Donau-Oder, San-Dniester, und Moldau-Elbe-Donau-Canals und deren volkswirthschaftliche Bedeutung für Oesterreich-Ungarn (Vienna: published privately, 1881).

(later *Zentral Verein für Deutschen Binnenschiffahrt,* ZVfB) organized a congress of hydraulic engineers that witnessed the first attempts to unify standards of canal construction and administration of waterways in the recently established German national territory.[38] Consequently, the length of waterways in Germany doubled between 1875 and 1914.[39]

38 Leo Sympher, "Abmessungen neuer Hauptwasserstraßen," *Zentralblatt der Bauverwaltung* 38, no. 7-8 (1918): 30-35.

39 In the late nineteenth century, waterways in central Europe experienced a "renaissance" that peaked in Germany between 1895-1905 when waterborne transport grew faster than either the production of coal or railways. Prussia, like Austria, was a latecomer to this trend due to the strong position of its agricultural producers. Andreas Kunz, "The Performance of Inland Navigation in Germany, 1835-1935," in *Inland navigation and Economic Development in Nineteenth-Century Europe*, ed. Andreas Kunz and John Armstrong (Mainz: Philipp von Zabern, 1995), 47-78, here 54.

A decade later, the first meeting of the Permanent International Navigation Congresses (PIANC) took place in Brussels in 1885. The sessions focused in part on standardizing the basic parameters of the envisioned trans-continental network. However, what first appeared as a technical task – namely, the design of a uniform vessel for future trans-watershed canals – proved to be a highly political issue. A local boat type had evolved in each river basin and delegates tended to pursue their particular local interests. The PIANC resolutions first recommended the French 370t type and then, soon thereafter, the German 400t vessels (1886 Vienna). The hosts simply dominated the debate: what seemed optimal in 1885 at a congress in Brussels found little support a year later in Vienna.[40]

German influence not only dominated PIANC, but naturally also at a regional level. The "Renaissance of Canals" spilled over to neighboring states. Waterways re-appeared on the Austrian government's agenda in 1893, when the Ministry of Trade in Vienna established a Department for Research and Construction of Canals. The German influence was clear when the terms and conditions of the competition were established for the Danube-Vltava canal project issued the same year. The parameters required vessels with a cargo carrying capacity of around 600t, the same as those the German authorities had chosen earlier for the Dortmund-Ems Canal and *Mittellandkanal*.[41]

The activity of the new office culminated in 1901 when the Austrian Parliament issued its Waterways Act. The document outlined an imperial waterway system that promised to make the Danube the realm's main transport artery. The proposed network aspired to reach as far as the Dniester, thus linking even the most distant regions of the Austrian part of the dual monarchy (*Cisleithania*) to the coherent network. Not surprisingly, the standards chosen by the Danubian monarchy were those that complied with the Danubian 675t vessels.

The DOE formed a core for the entire scheme. Paradoxically the plan remained disconnected from the Oder. Following the constraints of imperial geography, after overcoming the watershed between the Baltic and Black seas through the Moravian Gate, the canal route turned eastwards along the isohypse towards the Vistula river basin and the city of Cracow in Austrian Galicia, instead of descending to the German Oder. While the law governing the project listed the connection between the Danube and the Oder, what Austrian authorities pursued in practice should actually be called the Danube-Vistula canal.[42]

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40 Permanent International Association of Navigation Congresses, *Programmes of the Proceedings, Names of the Reporters, Suggestions and Conclusions of XII International Navigation Congresses 1885-1912* (Brussel: Office of the Secretary General, 1913), 7, 19.

41 Jan Kaftan, "Geschichtliches, gegenwärtige Lage, technische und wirthschaftliche Bedeutung des Projekts," in *Das Donau-Moldau-Elbe-Kanalprojekt* (Berlin: Siemenroth und Troschel, 1897), vol. 1, 11.

42 Moravian engineer Smrček rearticulated his vision of the DOE in order to align it with official policy

Figure 2.2 – The 1901 Austrian Waterways Act proposed constructing an imperial network in Cisleithania. The red line indicates the planned canals. The DOE, here the Danube-Vistula canal, starts at Vienna, then heads north before splitting into the Elbe and Vistula branches. The system was designed to connect the major cities in the Austrian part of the dual monarchy: Bohemian Prague via the Danube-Vltava canal, Galician Lemberg, Cracow, Linz, and Vienna. Source: ATMB, Smrček, b. 136.

Likewise, the lavishly designed inland navigation development program sanctioned by the Prussian Waterways Act of 1905 failed to link the Austrian Danube-Vistula canal. The Act actually set the parameters for canalizing the upper Oder in a way that effectively compromised the possible future realization of the DOE interconnection.[43] While Austrian coal miners did not want to open the Viennese market to Prussian and Silesian competitors, the Prussians analogously protected Berlin. In fact, the Act even incorporated the canalization of the Oder up to the port of Kozle (Cosel in German). It sought to balance more substantial investments in the western part of the country, especially the construction of the link between the Rhine and Berlin (and the Elbe), the *Mittelandkanal*.[44]

and referred to the Elbe branch of the DOE as the Pardubice-Cracow canal. Antonín Smrček, *Der Pardubitz-Prerau-Krakauer-Kanal und seine Zusammenhang mit dem Donau-Oder-Kanal von Anton Smrček* (Berlin: Troschel, 1904).

43 While the Act authorized the construction of the *Mittellandkanal* connecting Berlin to Rhine for 1000t vessels, and generally applied the Dortmund-Ems 600t standard (Berlin-Sttetin connection), the dimensions for the upper Oder were limited to 450t. Hans-Joachim Uhlemann, "Kurfürst – Könige – Kaiser: Eine kurz gefasste Geschichte des Wasserstraßenbaus der Hohenzollern," *Navalis* 2, no. 2 (2005): 4-15, here 13-14; Martin Eckoldt, *Flüsse und Kanäle: Die Geschichte der deutschen Wasserstrassen* (Hamburg: DSV-Verlag, 1998), 285-287.

44 Georg Gothein, a member of the Prussian Diet and a representative of Silesian industry in various waterway initiatives, repeatedly criticized the marginalization of Eastern parts of Germany (East Prussia and Upper Silesia) in the state investment and transport policy. Alastair P. Thompson, *Left Liberals, the State, and Popular Politics in Wilhelmine Germany* (Oxford; New York: Oxford University Press, 2000), 320.

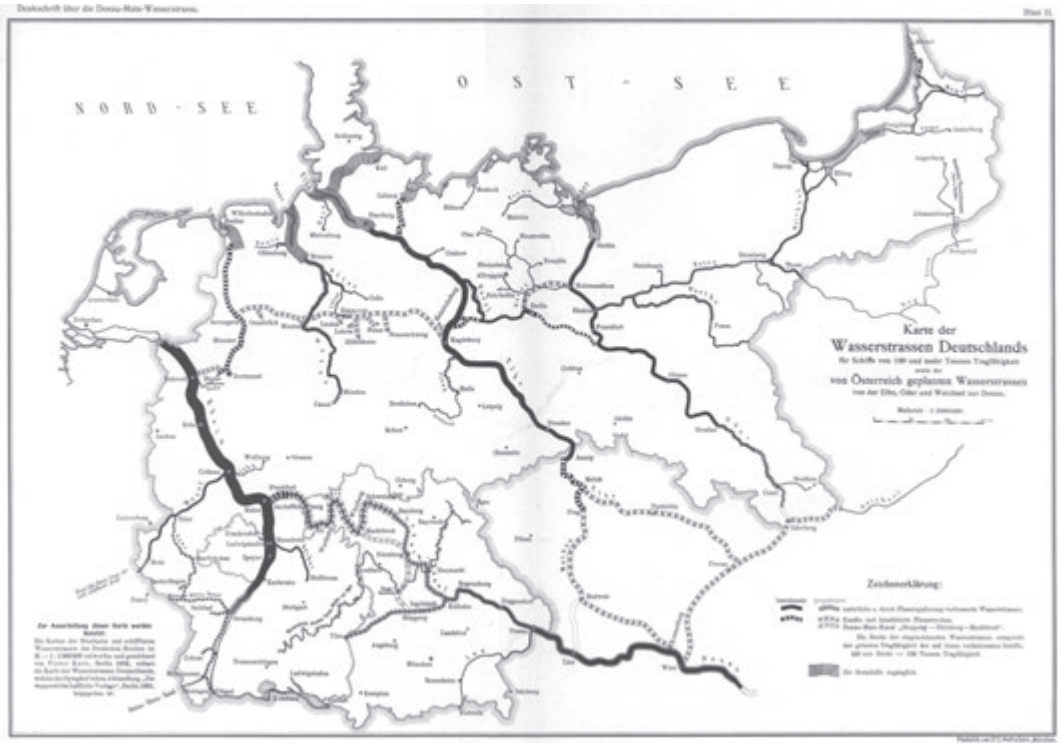

Figure 2.3 – "While the German and Austrian imperial plans for a waterway network recognized the international character of the Danube and Elbe, they never intended to grant the Oder the same status. The map shows the disconnection of both systems on the upper Oder. Remarkably, the DOE, although granted Austrian nationality, is presented as a part of the German network unlike other sections of the proposed Austrian network or, for instance, the mouth of the Rhine. Source: Faber, Eduard. Denkschrift zu dem technischen Entwurf einer neuen Donau-Main-Wasserstrasse von Kelheim nach Aschaffenburg (Nürnberg: Verein für Hebung der Fluss- und Kanalschiffahrt in Bayern, 1903).

Such incompatibility of waterway development projects occurred despite initiatives to unify regional networks. In 1896, ZVfB became "Mittel-Europeanized." It began to gather local and national organizations that supported either individual canal projects or other navigational improvements in the German and Austrian Empires in order to develop a program for a transnational network in the region. The initiative resulted in the establishment of the independent *Deutsch-Oesterreichisch-Ungarischer Verband für Binnenschiffahrt* (DOUV), which constituted a communication platform for experts and interest groups and a regional counterpart to the universal (albeit rather European) PIANC.[45] Leading Prussian

45 Of the 37 governments subscribing to PIANC in the pre-war era, 21 were European and some were colonies (particularly French). The even stronger domination of Europeans among the list of participants

waterways engineer, Leo Sympher, presided over DOUV for several years and was General Secretary of the PIANC congress in Düsseldorf in 1902. Czech engineers Antonín Smrček and Antonín Klír, who officially represented Austrian institutions, both participated in DOUV and in PIANC sessions before becoming leaders of the Danube-Oder project in Czechoslovakia.[46]

Apart from developing and promoting individual canal projects, DOUV explicitly called for standardization of the navigational parameters for future canal constructions and river improvements in the region.[47] The chosen vessel type reflected the situation in Germany and was based on boats and construction types that prevailed on the Rhine, the Oder, the Elbe, and the upper Danube, and has accordingly been dubbed "central European" on occasion.[48] The two imperial networks, however, implemented no such recommendation.

The transnational institution was unsuccessful in persuading the empires to develop a common waterways policy. It did, however, play an important role in adjusting the routing and technical layout of the DOE/Danube-Vistula canal through the Moravian Gate. In 1906, Smrček challenged the version pursued by the Vienna Directorate and proposed a series of locks instead of a boat lift system. As spokesman for locally-interested parties who preferred a multi-functional project over the quick transit route, Smrček managed through his actions at the 1905 PIANC meeting in Milan and the 1906 DUOV conference to establish ties that eventually had a decisive effect on the conflict.[49] To solve the problem the Directorate set up

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and reporters on the discussed issues is apparent in the proceedings. In contrast, DOUV clearly articulated its regional focus. At the founding conference of the new organization in September 1896 in Dresden, participants identified interconnection of the German rivers (Rhine, Oder, Elbe) to the Danube as their main goal and a necessary pre-condition for overall development of involved states. "Erster Verbandstag des Deutsch-Österreichisch-Ungarischen Verbandes für Binnenschiffahrt," *Centralblatt der Bauverwaltung* 16, no. 40 (1896): 440-441.

46 Antonín Klír graduated as hydraulic engineer from Prague Technical University in 1885, and was a professor there from 1909. Tomáš. Zach, "Prof. Ing. Dr. Antonín Klír – český technik – profesor vodního stavitelství ČVUT," *Sborník Muzea Dr. Bohuslava Horáka*, no. 16 (2004): 45-63.

47 Initially, the most promoted projects were those connecting the Elbe and the Oder to the Danube (Danube-Vltava and Danube-Oder canals), and the Rhine-Main-Danube canal. Among the first 24 leaflets published in the DUOV series, which essentially covered the first two congresses in 1896 and 1897, no other project received as much attention as these three.

48 Carl V. Suppán, *Normal-Binnenschiffstyp für die Verbandsländer*, Deutsch-Oesterreichisch-Ungarischer Verband für Binnenschiffahrt. Verband-Schriften Nr. XXXIX: "Mitteilungen über die derzeitige und angestrebte Schiffbarkeit der Hauptströme und ihrer Nebenflüsse" (Berlin: Siemenroth und Troschel, 1898). Smrček used the label "Mitteleuropean" in his call for the revision of the Austrian waterway scheme and its adjustment in favor of the "einheitliche mitteleuropäische Schiffs-Type," Antonín Smrček, *Der Pardubitz-Prerau-Krakauer-Kanal und seine Zusammenhang mit dem Donau-Oder-Kanal Von Anton Smrček* (Berlin: Troschel, 1904), 4.

49 Smrček described the dispute in: Antonín Smrček, *Der Stand der wichtigeren Kanalprojekte Donau-Elbe, Donau-Oder und Donau Weichsel: Bericht, erstattet auf dem VII. Verbandstage zu Stettin am 26. Juni 1906* (Gross Lichterfelde: Troschel, 1909), 15-37.

an international committee consisting of Austrian, Czech, Polish (Austrian), and German experts. In 1908, after a week-long on-site investigation, this body opted for Smrček's project.[50]

At the end of World War I, railways and ground transport suffered considerably from the lack of manpower, fuel, and machinery. As Kjellén noted, the waterways profited from the difficulties facing their competitors. In the eyes of German and Austrian journalists, the Danube and its tributaries offered promising and relatively cheap access to the agrarian products of the Balkans, and the planned links of the German waterways network to the Danube Basin gained considerable attention.[51] Leo Sympher, the recently appointed head of the Waterway Construction Department at the German Ministry of Public Works pursued the issue. After his promotion to the office in 1915, Sympher began to endorse the vision of the future German network designed for 1000t vessels.[52] However, the spatial framework of such a network was rather Mittelleuropean in nature. The Danube-Oder connection was an integral part of Sympher's synthetic treatise on the future of German waterborne transport.[53]

The construction of waterways, especially the trans-watershed canals connecting Northern Germany to the Danube, became one of the central themes of the *Mitteleuropäischen Wirtschafts-Konferenz* organized in Budapest in 1916.[54] The war led to coalescence between the Central European Empires, as envisioned in 1915 by Naumann and observed in 1917 by Kjellén, and strengthened the position of *Mitteleuropean* initiatives such as *Mitteleuropäischen Wirtschaftsverein* (MEW), the organizer of the conference. MEW, which was established in 1904 in Berlin by Brno-born professor of economics Julius Wolf, aimed to promote the eastward expansion of German industry and commerce.

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50 Antonín Smrček, *Nástin historie vodní cesty Dunaj – Odra – Labe v souvislosti s úpravou řeky Moravy* (Prague: privately printed, 1940), 10.

51 This argument appears repeatedly in favor of the Rhein-Main-Danube canal. Henry Cord Meyer, "Mitteleuropa in German Political Geography," *Annals of the Association of American Geographers* 36, no. 3 (1946): 178-194, here 186-187.

52 Sympher, "Abmessungen".

53 Two major works on German water management can be quoted as examples from this period, both of which included the Danube-Oder connection as an integral part of the German network. The volume co-edited by Soldan even includes an article on the connection through Moravia written by Smrček. Leo Sympher, *Die zukünftige Entwicklung der Deutschen Wasserwirtschaft* (Berlin: C. Heymann, 1918); Leo Sympher and Wilhelm Soldan, *Die Wasserwirtschaft Deutschlands und ihre neuen Aufgaben* (Berlin: R. Hobbing, 1921).

54 *Mitteleuropäische Wirtschaftsvereine in Deutschland, Österreich und Ungarn: Verhandlungen der Mitteleuropäischen Wirtschafts-Konferenz in Budapest 1916*, vol. 18, Veröffentlichungen des Mitteleuropäischen Wirtschaftsvereins in Deutschland (Leipzig: Deichert, 1917).

In the wake of the general upheaval of *Mitteleuropeanism,* the Austrian waterway scheme received considerable public attention.[55] Although the Austrian Directorate for the Construction of Waterways did not participate in the MEW conference, it did start to reconsider its imperial waterway scheme with regard to its possible connection to the German network and consequent technical adjustments. In the spring of 1917, the private and public parties interested in the waterway development met in Ústí nad Labem, a city in Bohemia on the River Elbe close to the German border. Delegates from within the state and regional land administration, as well as from technical schools and business associations located along the planned waterways, formed an *Oesterreichischen Arbeitsausschusses für die herstellung eines Grossschiffahrtsweges Elbe-Oder-Donau*, inspired by the German *Elbe-Oder-Donau-Verein* established a few kilometers down the Elbe in Dresden a few months earlier.[56] The core of the membership overlapped with the Austrian part of DOUV, although the latter had not convened since 1913.[57]

A general shortage of finance and manpower prevented the plans from being put into practice. Yet, meetings between the Austrian *Ausschuss* and its German counterparts (in the Elbe and Oder basins) were responsible for the introduction of Sympher's 1000t vessel standard in Austria. In Prague in 1917, and a year later in Dresden, they met to set the standards for the future construction of what they called the Central European Waterway Network.[58] The negotiations led to

55 Among the many new publications on the topic was a contribution by a member of the Habsburg family, army general Archduke Heinrich Ferdinand. In his brief treatise on the transport question in Central Europe, Gottfried Zoepfl (a DOUV leader), promoted canal constructions as a natural step forward in the inevitable process of *Grossdeutsch* unification of both empires. Heinrich Ferdinand Erzherzog von Oesterreich, *Die Wasserstrasse mitteleuropas* (Vienna: Deuticke, 1917); Georg Thilo, *Die zukünftige Stellung der Binnenschiffahrt in der Weltwirtschaft, ihre Bedeutung für den mitteleuropäischen Wirtschaftsbund* (Berlin: Gea-Verl., 1916); Gottfried Heinrich Lorenz Zoepfl, *Mitteleuropäische Verkehrspolitik: Vortrag gehalten bei der 25. Jubiläumsversammlung des Bayerischen Kanalvereins in Nürnberg am 2. September 1917* (Berlin: C. Heymann, 1918).

56 August Karst, *Was will der Elbe-Oder-Donau-Verein? Eine Werbeschrift*, vol. 2, Veröffentlichungen des Elbe-Oder-Donau-Vereins in Dresden (Dresden: Heinrich, 1918).

57 A simple comparison of the lists of participants makes this continuity clear – the main difference was a higher proportion of Bohemian participants. Deutsch-Oesterriechisch-Ungarischer Verband für Binnenschiffahrt, *Bericht über den Verlauf des VIII. Verbandstages in Linz, 23. bis 26. Juni 1909* (Groß-Lichterfelde: Troschel, 1911), 180-193; Osterreichischen Arbeitsausschusses für die Herstellung eines Grossschiffahrtsweges Elbe-Oder-Donau, *Die Gründung des osterreichischen Arbeitsausschusses für die Herstellung eines Grossschiffahrtsweges Elbe-Oder-Donau* (Reichenberg: privately printed, 1917), 4-9.

58 After 1918, Czech hydraulic engineers complained that there was no official documentation on the meetings in Prague and Dresden in the Directorate for Construction of Waterways' archives at its Vienna headquarters. Czechoslovak authorities were only informed about these two sessions by way of a treatise published by Friedrich Gebers, chairman of the Dresden meeting and director of the *Schiffbautechnische Versuchanstalt* in Vienna. It seems that these two meetings were a German initiative and that neither the Czech engineers at the Prague branch of the Directorate nor delegates of national Czech interest groups were involved. The last paragraph of their "complaint" says: "That's how *Mitteleuropa* was being constructed. The Republic, however, will go its own way." (NAČR, MVP, b. 156, June 20, 1920).

Figure 2.4 – " In World War I, German and Austrian authorities developed plans for a common waterway network, while explicitly embracing the idea of Mitteleuropa. At the Elbe-Oder-Donau Conference in Wroclaw on March 22, 1917, Schneller von Mohrtahl of the Ministry of Trade presented his vision of the waterway network that sought to compete with maritime shipping on the route between the Orient and the North Sea coast. Roman numerals on the map indicate the number of locks, Arabic numerals the number of kilometers on any given stretch of the waterway network. Source: Otto Schneller von Mohrthal, Der Anteil der österreichischen Schiffahrtskanäle am Mitteleuropäischen Wasserstrassennetz (Vienna: printed privately, 1917), annex.

agreement on the recommended type of vessel for the envisioned *Mitteleuropean* network. Such a vessel was to be 67 meters long (without rudder) and 9 meters wide (without flank protection); its draft was to be not greater than 1.8 meters and the highest construction on board not higher than 3.8 meters above water level. Furthermore, in order to enable exceptional passage of longer boats or boats with deeper loaded drafts, the dimensions of the canals, especially navigational structures such as locks and weirs, should allow for the passage of boats 80 meters long and 2 meters deep.[59] Such measurements conform with the German boats

59 Report on the need to revise dimensions of vessels by J.F. Meierle, then the Czechoslovak representative in Vienna responsible for dividing the Austrian Directorate's materials and property among the successor

employed on the Elbe, while an exception was made to ensure the canal would also be navigable for the lower Danubian ships, providing the critical stretch of the Danube on the Hungarian-Czechoslovak border was improved or the water level was high enough. This occasion, which actually preceded the political fragmentation of Central Europe, marked the turning point in actualizing the Mittel-Europeanization of waterways, although the Austrian authorities failed to come up with any authoritative decision on the matter.[60] By the end of World War I, all national waterway development programs in the region operated with a unified standard.

De-Austrianization: Shaping the Czechoslovak State[61]

With the creation of independent Czechoslovakia, the complexity of a landlocked nation grew stronger in Czech society.[62] As the industrial heart of the former empire, Czechoslovakia was now an export-oriented economy that had been suddenly cut off from sea ports, and therefore world markets. Because production capacities far exceeded the potential for domestic consumption, securing access to the sea became the top priority for Czechoslovak representatives at the Paris Peace Conference.[63] Karel Kramář, the first Czechoslovak prime minister and leader of the Czechoslovak delegation in Paris, referred to the issue in the Czechoslovak Parliament on September 30, 1919, saying:

> We are in the center of Europe and all that is needed for the wealth of the nation and what is a vital condition for the export capability of the nation – free access to a sea – we utterly lack. One of the most important tasks of our activity at the Paris Peace Conference was to secure for the Czech

states after World War I (NAČR, MVP, b. 156, December 21, 1919).

60 With the exception of the "ad hoc" Ministerial Decree 943/I, dated May 26, 1917, by which the Prague branch was instructed to employ 1000t vessels as a standard for any structures constructed on the Elbe in the future (NAČR, MVP, b. 156).

61 Re-orientation of transport policies to serve the new national territory was occasionally dubbed "de-austrianization" (*odrakouštení*). National daily newspaper *Lidové Noviny* referred to Kráčmer's call for revising the Austro-Hungarian waterways scheme in these terms. "Průplav Plzeň-Praha-Brno-Bratislava," *Lidové Noviny*, 18 October 1923.

62 This was part of national mythology even before that. See the well-known short story entitled *Water Spirit,* written by distinguished nineteenth-century Czech writer Jan Neruda, in which the main character frequently repeats the line "No sea. Why have we no sea?" Promoters of the canal were quick to take advantage of such sentiments, including Smrček, who called his 1919 article propagating waterways "Brno and Olomouc – Future sea ports." Jan Neruda, *Prague Tales* (Budapest: Central European University Press, 1996), 174; Antonín Smrček, "Brno a Olomouc – mořskými přístavy," *Zemědělská politika* 18, no. 1 (1919): 34-35.

63 Jakubec, *Železnice a Labská plavba*, 19-21.

> State such a position which would in the future replace this lack of access to the sea.[64]

Such geopolitical considerations had already played a major role during the territorial delimitation of the new Czechoslovak State, although they did not exclusively follow the official imperatives of ethnic or historical borders. In addition to the politicians, specialists from various professions also took part in the discussions at Versailles, including Viktor Dvorský, geographer and founder of Czech Geopolitics, and Antonín Smrček, a prominent DOE supporter. While Dvorský and Smrček both fully supported the idea of making the Danube the southern border of the new state, as well as the need for free access to the sea through the internationalization of central European rivers, their opinions on the adoption of the Austrian waterways scheme conflicted. In the interconnection of the Danube, the Oder and the Elbe, Dvorský saw the exact same qualities that Kjellén had ascribed to the project; namely, the establishment of conditions that would automatically lead to a German-ruled Central Europe. Smrček, on the other hand, believed the project would be the first step towards Moravia and Czechoslovakia becoming the heart of a prosperous and cooperating (Central) Europe.[65]

From Smrček's perspective, promoting Czechoslovakia as a crossroads of European waterways did not contradict the geopolitical wellbeing of the nation. On the contrary, his 1919 treatise on the new Czechoslovak Republic's economic situation already expressed what had to be done. He emphasized the vital importance of internationalized transport routes for landlocked Czechoslovakia, whose foreign trade was absolutely dependent on transit through foreign territories. Smrček proposed the internationalization of all Central European rivers of international importance: the Rhine, the Elbe, the Danube, the Oder, the Vistula, and even the Dniester.[66] He also suggested establishing exterritorial Czechoslovak maritime ports in the estuaries of all these rivers except the Dniester and the Rhine, and also in Trieste.[67] Furthermore, in order to secure the successful construction and operation of the DOE and the profit it would bring to the nation, Smrček proposed delineating the Czechoslovak borders in a way befitting the canal project (see Figures 2.5 and 2.7).

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64 "Těsnopisecká zpráva o 77. schůzi národního shromáždění Republiky Československé v Praze v úterý dne 30. září 1919," *Společná česko-slovenská digitální parlamentní knihovna*, http://www.psp.cz/eknih/1918ns/ps/stenprot/077schuz/s077005.htm. Accessed 11 October 2010.
65 In 1926, Dvorský finally articulated his opinion openly on the subject. Viktor Dvorský, "K otázce vodních drah uvnitř Československé republiky," *Sborník československé společnosti zeměpisné* 32 (1926): 116-120.
66 Antonín Smrček, *Hospodářské úkoly československé republiky* (Č. Budějovice: J. Svátek, 1919), 52-53.
67 Ibid., 44-48.

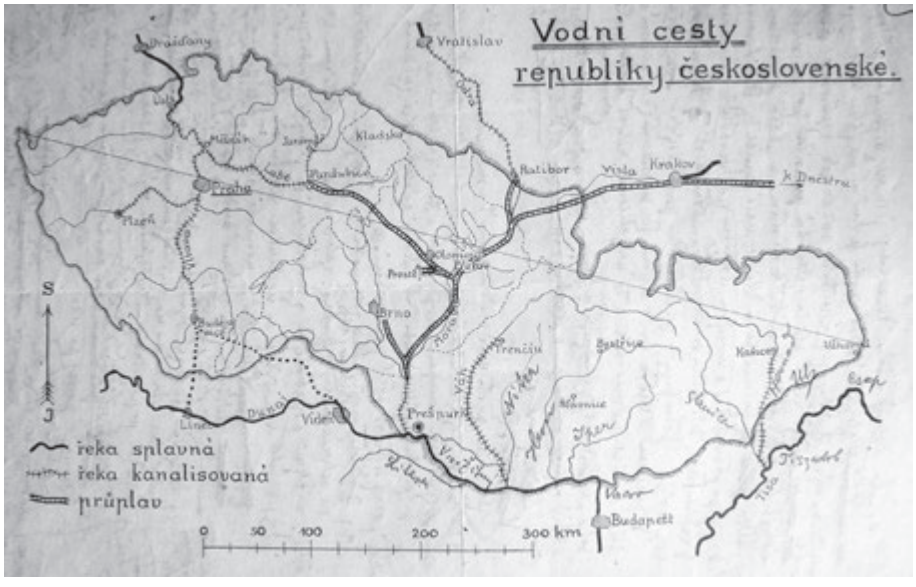

Figure 2.5 – Delineating the state to fit the canal? In 1919 Smrček proposed drawing the Czechoslovak borders in a way that would put control over the entire route of the future DOE in Czechoslovak hands. Both banks of the lower Morava lay on Czechoslovak territory and the northern border extended to Ratbor, allowing the young state access to navigate the Oder and the Vistula. The diplomats in Versailles decided otherwise. The hand written notes on the map are those of Smrček. Source: ATMB, Smrček, b. 132.

Ultimately, the Versailles Treaty secured access to the vital infrastructural waterway links for all interested parties (not only riparian states), by introducing an international regime on the main central European rivers – the Rhine, the Danube, the Oder, and the Elbe. All three of the main flows that the DOE should interconnect appeared on the list. Czechoslovakia was also entitled to lease its own national sections in the ports of Hamburg (Elbe) and Sczecin (Oder) and, by way of war reparations, received a part of the former German fleet on both rivers. Paradoxically, the navigable part of the Oder was situated exclusively in German territory. Seeking a guarantee for the extension of the navigable route, Czechoslovakia considered putting the canalization of the then non-navigable stretch between the German port of Kozle (Cosel) and the Czechoslovak city of Ostrava on the agenda of the recently-established International Commission of the River Oder (CIO) in the form of a "travail d'intérêt priomordial."[68] Such efforts were unsuccessful, not only because the internationalization of the given stretch

68 Letter from the Ministry of Trade to the Ministry of Public Works concerning the extension of a navigable Oder (NAČR, MPOŽ, b. 1767, February 3, 1923).

Figure 2.6 – 1930 League of Nations map showing the upper Oder and the troublesome internationalization of the river. The Oder was internationalized downstream from the confluence with the Opavice (Oppa), although the navigable part of the river only reached the German port of Kozle (Cosel). This decision made Czechoslovakia a riparian state, entitled to claim a share of the German Oder fleet as a part of World War I reparations, even though the entire navigable stretch of the Oder was located on German territory. Source: Commission Internationale de l'Oder, Protocoles du voyage d'études, Mai-Juin 1930 (Strasbourg: League of Nations, 1930), 35.

did not impose an obligation for its canalization, but also as the river did not allow for canalization due to it being a *Gebirgsfluss* (mountain river).[69] Because the realization of the extension, either in the form of canalization or a lateral canal, would affect the water regime on the river, the CIO kept an eye on the project from the time of its tenth meeting at which Bohuslav Müller presented the idea.[70]

69 Argumentation repeated in 1930 by Georg Gothein at the conference *Mitteleuropäische Wirtschaftstag* in Wroclaw. Quoted in the report on the conference for the Ministry of Trade; *Středoevropská hospodářská konference* (MPOŽ, b. 2486, no. 39606/30), 15.

70 Müller, since the early 1920s Czechoslovak delegate for International River Commission, was born in Prague and graduated as a hydraulic engineer. He served at the Austrian Ministry of Public Works in Vienna from 1911 and after 1918 was transferred to a similar position in Prague.

However, the commission did not actively pursue the idea and merely supervised its development.[71]

The River Commissions, established in 1919, introduced international administration to the nationalized territory of the former Austro-Hungarian states and in Germany. This naturally provoked protests from Germany.[72] The country felt heavily under-represented in the commissions. Its concerns were justified, given that the share of riparian states in the international River Commissions was rather low: twenty-five percent in CED, seventy-three percent in CID, forty-five percent in OIC, sixty percent in EIC, and seventy percent in CCNR (by 1929).[73] Such arrangements should have secured the position of a small country like Czechoslovakia, as well as a general environment for cooperation in this international project of improvement on the rivers, and should also strengthen the position of western European countries in the region.[74]

Delegates in the commissions constituted a more-or-less stable group. The same individuals usually represented their countries in all commissions and together formed a group of river diplomats who traveled from one river basin meeting to another. Originally, the Czechoslovak Government (*rada ministrů*) appointed Antonín Smrček as the Czechoslovak delegate to the Allied Danube Commission (October 22, 1919), which on July 19, 1920 became the *Commission Internationale de Danube* (CID). Two other commissions with Czechoslovak participation, those for the Oder and the Elbe, were appointed with Antonín Klír and Jan Vladimír Hráský, both professors of hydraulic engineering.[75] Shortly thereafter, however, a special office was created for the Czechoslovak delegate in the River Commissions, with the status of minister plenipotentiary, led by Bohuslav Müller, a hydraulic engineer returning from public service in Vienna.[76]

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71 The information on the project was again reported to the CIO in 1930. Commision Internationale de l'Oder, *Protocoles du voyage d'études (Mai-Juin 1930)* (Strasbourg,1930), 9-10.

72 Jakubec, *Železnice a Labská plavba*, 25-26.

73 Fritz Krieg, "Das Weltbinnenschiffahrtsrecht und die Ströme Mitteleuropas," in *Mitteleuropäische Wasserstrassenpolitik: Referate und Beschlüsse der Mitteleuropäischen Wasserstrassenkonferenz, Budapest, 11.-13. Mai 1929*, ed. Elemér Hantos (Vienna: Braumüller, 1929), 81-101, here 89.

74 Only France and Great Britain participated in all five International Commissions: CIO, CID, CIE, CCNR (Rhine) and CED (Commission European de Danube – a body controlling the mouth of the river). Zastoupení československé repoubliky v mezinárodních komisích říčních (AMZV, IV., b. 130, May 9, 1927).

75 Letter from the Czechoslovak delegation informing the ministry that Klír had become a member of the Commission on the Elbe. Studijní transitní komise v Paříži, vyslání zástupce (NAČR, MVP, b. 159, March 20, 1920).

76 In 1920, Hugo Vavrečka, Czechoslovak consul in Hamburg and former representative of the republic at the economic section of the Paris Peace Conference, urged Minister of Foreign Affairs Eduard Beneš to create a single central authority for the Czechoslovak participation in River Commissions. In reaction to this letter and to similar developments in other participating countries, the government agreed to create such a body on October 20, 1920. Former secretary to the Ministry of Public Works engineer Bohuslav Müller was appointed head of the body and granted the status of minister plenipotentiary. Zastoupení

Diplomats and political delegates depended heavily on technical experts. Following the examples of countries such as Romania, Yugoslavia, and France, the young nation appointed Hráský, Klír, and Smrček as *delégues-adjoints,* specialists in the given waterway.[77] In a dispute with the Ministry of Industry and Trade over the appointment of a substitute for the Czechoslovak delegate at the Danube Commission, Dostálek (minister of public works) said, "The mandatory tasks of the Commission are almost exclusively construction and navigational questions and … Czechoslovakia would thus be unable to influence the negotiations without appointing a technical delegate."[78]

While the Paris Peace Conference was discussing internationalization, Czechoslovakia took over the Austrian waterways program. On June 11, 1919, the Parliament passed Law no. 33, by which the administration of the planned constructions situated in Czechoslovak territory fell under the authority of the Water Management Department of the Czechoslovak Ministry of Public Works (*Ministerstvo veřejných prací*, MVP). The former Prague branch of the Austrian Directorate for the Construction of Waterways was elevated to the role of central national agency and retained its original name in the Czech version: *Ředitelství vodních cest* (ŘVC). While Czechoslovakia inherited almost the entire agenda of the late imperial waterway office, it only employed half as many people.[79] Accordingly, the originally lavish scheme was informally cut down to a point where the Danube-Oder-Elbe canal was the only viable project.[80]

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v mezinárodních říčních komisích (AMZV, IV, b. 130, July 6, 1920).

77 This concept was developed by France and widely copied. The main representatives were Colonel John Grey Baldwin (Great Britain), Arthur Seeliger (Germany), Bohuslav Müller (Czechoslovakia), Carlo Rossetti (Italy), Constantin Contzescu (Romania), and Jules Brunet (Belgium). Hungary and Yugoslavia changed their representatives, while France divided the responsibilities between Lacroix (CID, CED) and Gout (CIO, CIE). Later, a sixth Commission was established to control water use in former Transleithania: the international Commission on the Régime of the Danube (CRED). Zastoupení československé repoubliky v mezinárodních komisích říčních (AMZV. IV., b. 130, May 9, 1927).

78 Jmenování náhradních delegátů v mezinárodní komisi dunajské. Předsednictvu ministerské rady (AMZV, IV., b. 130, December 3, 1937).

79 Virtually every waterway included in the Austrian Waterway Act of 1901 was located in Czechoslovak territory. Such a state of affairs was not a coincidence, but a result of political bargaining whereby the Austrian government traded the 1901 Act for the support of Czech and Moravian MPs to construct Alpine railways. Zdeněk V. Tobolka, "Jak vznikl vodocestný zákon z roku 1901," *Plavební cesty Dunaj-Odra-Labe* 1 (1940): 9-12; Ivan Jakubec, "Říšský vodocestný zákon č. 66/1901 jako fenomén hospodářských dějin a DVT?," *Rozpravy NTM* 189 (2004): 53-58; Ivan Jakubec, "Vodocestný zákon a jeho realizace," in *Vodní dílo v krajině. Konference na lodi*, ed. Lukáš Beran and Ladislava Valchářová (Prague: Výzkumné centrum průmyslového dědictví ČVUT, 2006), 54-65.

80 The original scheme was reduced to the DOE. The 1901 Austrian Waterways Act considered two alternative solutions for overcoming the Black Sea/North Sea watershed in Czechoslovak territory. The first was to transect the Šumava Mountains and connect the Vltava to the Danube along the old Schwarzenberg timber floating canal, which had been constructed back in the late eighteenth century. The second option was to link the cities of Pardubice (on the Elbe) and Přerov (on the Morava river and the Danube-Oder canal. The Vltava-Danube canal was no longer considered a viable alternative and did not appear in the

The adoption of the Austrian scheme went virtually unchallenged. The first head of the ministry, František Staněk, was a long-time acquaintance of Antonín Smrček from the Parliament of Cisleithania in Vienna, where both served several terms before the war. A network of contacts at the highest level enabled Smrček to push forward the canal agenda in the new Czechoslovak Government.[81] Furthermore, the unique position of hydraulic engineers contributed to the smooth acceptance of the project they pursued. In times of growing pressure on soil and water resources, the hydraulic engineers promised to dry out waterlogged areas, protect fields and settlements from flooding and, following the rise of electricity, their expertise in damming offered a cheap source of energy. Hydraulic engineers seemed to be best suited to improving the well-being of the nation by controlling nature.[82] A telling sign of their special social status was the fact that Professor Smrček from Brno Technical University, and also his counterpart from Prague, Professor Jan Vladimír Hráský, were elected to the Austrian *Reichsrat* more than once.[83] Despite withdrawing from the political scene after 1918, both remained sought after as counselors and authorities.[84]

There was a significant dispute over the institutional framework and delegation of competencies, however. A resolution of the Czech technical experts meeting (*Všetechnická veřejná schůze*), held immediately after the *coup d'état* in the autumn of 1918, requested the establishment of a special Ministry for Water Management and Electrification (*Ministerstvo vodohospodářské a elektrisační*). Under the heading *Vodohospodářská akce*, the group, led by Hráský, outlined the water management program for the new state. Building on their experiences with the Austrian system, organically developed and therefore rather complicated and ineffective,

discussion (NAČR, MVP, b. 156, March 20, 1920).

81 With the help of Minister Staněk, Smrček co-organized a meeting of hydraulic engineers and DOE canal supporters with the government in Bratislava in February 1919. Confirming telegramm (TMB, Smrček, b. 132, January 30, 1919).

82 There is a lack of hydraulic engineering studies in Bohemia. However, historians have devoted considerable attention to their German counterparts, especially in environmental history. Rita Gudermann, "Conviction and Constraint. Hydraulic Engineers and Agricultural Amelioration Projects in Nineteenth-Century Prussia," in *Germany's Nature: Cultural Landscapes and Environmental History*, ed. Thomas M. Lekan and Thomas Zeller (New Brunswick, NJ: Rutgers University Press, 2005), 33-55; David Blackbourn, "'Time is a Violent Torrent': Constructing and Reconstructing Rivers in Modern German History," in *Rivers in History: Perspectives on Waterways in Europe and North America*, ed. Christof Mauch and Thomas Zeller (Pittsburgh, Pa.: University of Pittsburgh Press, 2008), 11-25.

83 Both Smrček (1859-1951) and Hráský (1857-1939) served as MPs in Vienna between 1907 and 1918, having been members of the Bohemian and Moravian Diets, respectively.

84 Sixty-year-old Professor Smrček decided to focus on his professional career and duties in the Hydraulic Laboratory at Brno University of Technology, which he established in 1917. He considered his political mission to have been accomplished with the establishment of the independent State. An entry in Smrček's notebook dated May 17, 1919 (TMB, Smrček, b. 119) says, "Responding to questions by influential politicians as to whether I would stand as MP, I said no."

the group called for central planning and organization of water management at state level. As of 1912, when the undirected organic development of the water governance system in Bohemia peaked, no fewer than seven mutually independent institutions claimed authority over water flows and resources.[85] In his proposal, Hráský defined five justifiable but often conflicting claims for water control (flood protection of fields, settlements; use of water for amelioration; water supply; inland navigation; and power production enterprises) that needed to be aligned by the overriding state authority.[86]

However, the attempt to achieve a special water management ministry failed. The state administration was organized not on the principle of water, but on the standard division of economic sectors; accordingly, a water-related agenda remained split between the MVP and the Ministry of Agriculture. As complex water structures, waterways interact with other forms of water use and agricultural circles claimed control over the lower part of the Morava River as a primary source of water for irrigation.[87] Besides that, the Ministry of Trade and the Ministry of Railways claimed some authority over the operation, construction, and planning of waterways as transport infrastructures. Thus, the Directory for the Waterways' position as central state agency for waterways development was contested as was its canal department as special unit for further preparing the DOE project.

Despite the failure to constitute a ministry of their own, hydraulic engineers formed a strong and respected lobby within the state structures. Former Czech officials of the Vienna Directory achieved leading positions, as did their colleagues from former Bohemian and Moravian institutions. Emil Zimmler, former technical director of ŘVC's Prague branch, was appointed the first head of MVP's Water

85 Following the water downstream, the uppermost parts of the watershed were governed by *C.K. lesnicko-technické oddělení pro hrazení bystřin* under the Austrian Ministry of Agriculture (*Ministerstvo orby*); smaller rivers came under the *Kulturně-technická kancelář* of the Agricultural Council of the Bohemian Kingdom (established in 1884 on the basis of the Austrian Amelioration Act). The non-navigable rivers suitable for rafting were managed by *Odbor pro vodní stavby* of the Land Committee of the Bohemian Diet (since 1884). The lower and navigable stretches of rivers fell under the Imperial Governors' Office – the Department for Water Constructions (delegated to the Austrian Ministry of Public Works). To this list, the two Waterways Acts added three more governing bodies. On the basis of the Act on canalizing the Vltava and Elbe from České Budějovice/Budweiss to the German border, the Commission for the Canalization of the Rivers Vltava and Elbe in Bohemia (1) was established, presided over by the governor and divided between the Imperial and Bohemian authorities (1896). The 1901 Waterways Act led to the establishment of the Prague branch of the Directorate for the Construction of Waterways (2) and of the Land Commission for Regulation of Rivers in the Bohemian Kingdom (3). Pamětní spis spolku architektů a inženýrů v království českém ve příčině jednotné organisace vodohopodářské činnosti v království českém (ATMB, Smrček, b. 132, March 1, 1912).

86 Jan Vladimír Hráský, "Aktualita podniků vodocestných a zákonné jich zajištění," *Věstník vodního hospodářství* 1, no. 1 (1919): 6-7.

87 See the discussion on multi-functionality of water systems in the Introduction.

Management Department.[88] Meanwhile, the Waterways section was headed by an engineer, Eduard Bazika, from the central Viennese Directorate. More importantly, from the very beginning, hydraulic engineers led the introduction of the technocracy movement's ideas and its institutionalization in Czechoslovakia. The Masaryk Academy of Labor (MAP), a state-funded national center for the technical branches of science, named after the first and then serving state president, was initially led by Antonín Klír, professor of hydraulic engineering at Prague Technical University (1920-1923).[89] From his position at the ministry, Zimmler promoted the waterways agenda; at a meeting held on March 20, 1920 to discuss the dimensions for canalizing the Middle Elbe, he successfully persuaded delegates from other institutions to support his views on the national network. The basic technical dimensions conformed to Sympher's 1000t standard vessel.[90]

The canal question gained momentum in the early years of the republic. By April 1919, the ŘVC had already asked its former Vienna-based headquarters for DOE documentation developed after November 1, 1918, and finally bought it for 150,000 Austrian crowns in 1920. Czechoslovakia simply inherited older files. As Zimmler argued, the Morava-Elbe connection, which had been marginalized until 1918, then "got international" and the Vienna-based ŘVC started to work on it properly.[91] In 1921, inspired by the German debate on the Rhine-Main-Danube canal, MVP established the Canal Department (*průplavní oddělení*) within ŘVC, consisting of eleven engineers and four draftsmen focusing directly on the DOE project.[92] In the same year, Prague became a true capital city, also for inland navigation, as the canalization of the Vltava River between Prague and the Elbe was finally accomplished. It had been more than twenty years since the work began. The current minister of public works celebrated the event as representing the connection of Prague to "worldwide shipping routes."[93]

The canal-supporting NGOs relentlessly continued to promote the idea. They recruited members from the areas along the proposed route of the canal,

88 The implementation of a relatively high centralization of water management was a clear success for the hydraulic engineers. Before that, the water management agenda was divided among the industrial and trade departments of the Austrian Ministry of Public Works and the Ministry of Agriculture.
89 Masarykova Akademie Práce was established in January 1920 to promote scientific management at national level. Emilie Těšínská, "Vznik Masarykovy akademie práce: technokratické tendence a účast přírodovědců," in *Technokracie v českých zemích (1900-1950)*, ed. Jan Janko and Emilie Těšínská (Prague: Archiv Akademie věd České republiky: Institut základů vzdělanosti Univerzity Karlovy, 1999), 103-135. Another hydraulic engineer, Emil Zimmler, presided over the Academy from 1926 to 1932.
90 NAČR, MVP, b. 156, March 20, 1920.
91 The Czechoslovak Ministry of Finance delayed the process. Funds required on August 9, 1919 were granted only on January 19, 1920. Průplav Pardubicko -přerovský, opatření plánů (NAČR, MVP, b. 156).
92 ŘVC's 1922 Annual Report (NAČR, GŘVC, b. 429).
93 Český Svět k slavnostnímu zahájení plavby Prahou (Prague: Šolc a Šimáček, 1921).

advancing from the German borders upstream along the Elbe to the Czechoslovak hinterland. The main organizations were *Elbe-Verein* from Ústí nad Labem, *Středolabský komitét* from Kolín, and *Spolek pro stavbu průplavu Pardubice-Přerov* from Pardubice. On the Oder, it was *Vodohospodářský svaz pro povodí Odry v Opavě*, based in Moravská Ostrava and supported by the local steelworks; the main organization on the Morava was *Moravský říční a průplavní spolek,* led by Smrček; and in the Danubian valley, the Slovak *Vodohospodárský sväz pre povodí Dunaja* from Bratislava dominated. In these organizations, the local chambers of commerce and municipalities aligned with leading hydraulic engineers such as Smrček and Hráský. In order to keep the idea of the canal alive, they held annual Water Management Conventions (*Vodohospodářské/Vodocestné sjezdy*). Naturally, these took place in cities along the canal route: first in Plzeň in 1919, then Ústí nad Labem (1921), Olomouc (1922), Brno (1923), Kolín (1924), Ostrava (1925), and so on. From 1922 onwards, the association of NGOs interested in the canal published its own journal, *Věstník pro vodní hospodářství* – the only specialist magazine on water management published in the Czech language.[94]

Nonetheless, the initial interest in the canal faded quickly. Instead of integrating the Central European waterway system, integration of the still-fragmented Czechoslovak railway network became the issue of the day.[95] Although the Waterways Conventions managed to keep the public informed and interested, they were decreasingly efficient in terms of gathering political support. With each passing year, the number of important political figures such as ministers and MPs attending the event diminished. The canal project was also losing its appeal due to the generally low costs of alternative transport during the economic boom of the 1920s, which reduced the image of inland waterborne transport as being the cheapest. In 1923, as a reaction to this declining political support, the MVP ordered ŘVC and other institutions to gather and develop materials in support of constructing waterways in Czechoslovakia, especially those emphasizing its economic viability.[96]

However, a crucial hindrance to the development of the canal project came in the form of a challenge to its ability to serve the nation. During the early years of the republic, when its transport policy and the future shape of infrastructural networks were being debated and drafted, Moravian hydraulic engineer Josef Kráčmer

94 *Věstník pro vodní hospodářství* was a professional technical journal on water management, published between 1922 and 1939. In World War II, it was replaced by *Plavební cesty Dunaj – Odra – Labe (1941-1951),* published by the Society for the Danube-Oder-Elbe Canal.
95 Ivan Jakubec, "Úvahy o dopravně-politických otázkách česko-slovenských vztahů 1918-1938," *Sborník vojenské akademie v Brně. Řada C – společenskovědní* (1994): 243-249.
96 In his capacity as head of the ministerial department, engineer Emil Zimmler issued order 6-280/5 dated November 1, 1923 (NAČR, ČPÚ, b. 19).

presented a brand new "de-Austrianized" national waterways network scheme formulated in opposition to the traditional concept of the Danube-Oder-Elbe canal.[97] Kráčmer's plan was a response to the popular geopolitical associations with the "fear of *Mitteleuropa*" and works of scholars such as Kjellén or Dvorský, who argued that from a geopolitical point of view, the DOE canal would serve German rather than Czechoslovak interests. Once constructed, the DOE would link the German Oder to the Danube and Balkan markets via an international waterway better suited to the type of commodities traded along this route than railways, which had to pay for transit through Austria and Hungary. This critique largely echoed the German proponents of the DOE project's arguments, but adopted a more negative tone.[98]

Furthermore, the national considerations also had implications for Czechoslovakia's internal policy. Ethnically, Germans dominated in the borderlands of the republic and the DOE linked these regions through the ethnically Czech hinterland. Therefore, Kráčmer maintained, the whole idea conflicted with the official state policy and, to a certain extent, symbolized the Germanization of Central Europe in contrast to the existence of an autarkic and sovereign nation. Kráčmer's proposal was aimed directly at the long-term development of the ethnic Czechoslovak nation: "How many German factories would be connected by the canal on the stretch between Děčín and Ostrava? And how many Czech ones? – not more than a third ..."[99] Indeed, Kráčmer's plan was driven predominantly by political objectives and he paid much less attention to financial and technical considerations.[100]

The attempt to revise the Austrian scheme received considerable attention. Among Kráčmer's supporters were several political figures of national importance, primarily the mayor of Prague, and representatives of major industrial cities such as Brno and Plzeň, which the new routing promised to put directly on the canal route. Kráčmer envisioned a waterway running in an east-west direction across the country, parallel to the Danube.[101] The suggested solution would not only place the Canal or the Republic at the crossroads of Europe, as supporters of the original

97 Josef Kráčmer (1883-1951) was a hydraulic engineer and long-time employee of Moravský zemský úřad Brno (Moravian Provincial Office).
98 Max Conntag, "Welche wirtschaftliche Bedeutung hat für Deutschland eine Wasserstrassenverbindung zwischen der Donau und dem Oder-Elbe-gebiet gegenüber einer solchen zwischen der Donau und dem Rhein?" *Zeitschrift für Binnenschiffahrt* offprint (1920).
99 The forging of the Czechoslovak nation is usually described as either a natural result of cultural unity or an improvised reaction to the outcomes of World War I. Milan Zemko and Valerián Bystrický, *Slovensko v Československu: 1918-1938* (Bratislava: Veda, 2004).
100 As such, his efforts sit alongside other initiatives aiming to forge the Czechoslovak nation, many of which were rather unrealistic.
101 Josef Kračmer, *Studie průplavního spojení Plzeň-Praha-Brno-Ostrava-Bratislava jakožto základu českého řešení vodocestné sítě* (Prague: privately printed, 1923).

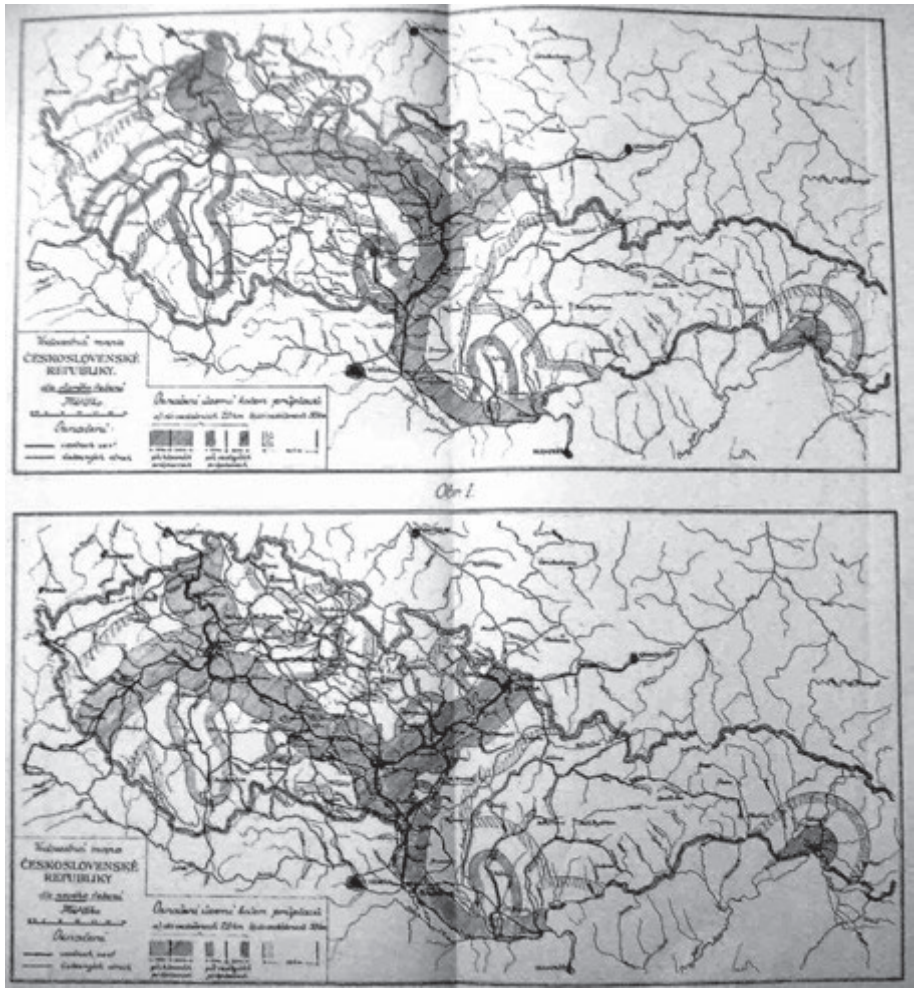

Figure 2.7 – Waterways were not only a matter of foreign but also domestic policy, as Josef Kračmer argued. He called for de-Austrianization – and thus de-Germanization – of the project. Instead of border regions with a German majority (upper picture), the DOE was to bring prosperity to the country's central regions where Czechs lived. Source: Kračmer, Josef. "Jak se bojuje proti revisi vodních cest a novým jejich návrhům." Technický obzor 32, no. 17 (1924): 291-295, here 302.

Austrian routing promised, but also the largest Czechoslovak cities: "Prague and Brno will become the biggest ports in Central Europe." According to the plan, Prague would be connected by water to the international market in five directions: "through Berounka and a new canal to Regensburg and the upper Danube; to the middle Danube by the Vltava and a canal across the Šumava mountains, to the Elbe via the Vltava, and to the Oder and the lower Danube via the new

canal through Brno."[102] Indeed, the municipalities, led by Prague, even established an association supporting Kráčmer's project, calling it "canal Plzeň-Prague-Brno-Ostrava and Brno-Bratislava."[103]

The main dispute took place at the Waterways Convention (*Vodocestný sjezd*) in Kolín in January 1924.[104] Smrček fiercely opposed Kráčmer's plan, describing it as a completely misguided conception, and critically challenged Kráčmer's professional capabilities, arguing that Kráčmer had spent his entire career working in the field of water supplies.[105] However, Smrček, while he believed that "even if elaborated with utmost perfection," the proposal "stood no chance to get executed in competition with the Pardubice-Přerov connection," he did admit it had some charm: "It is vital to say openly to those seduced on the wrong way that they are ready to fight for irrelevant, though attractive phantom.[106]

The key argument against Kráčmer's vision emphasized the "naturalness" of the traditional solution, the core of which lay in Smrček's belief that the primary motives of a waterway scheme should follow environmental constraints not political aims. At the convention, Smrček successfully mobilized social capital gathered in support of the DOE since imperial times. Some traditional canal supporters took the attempted revision as an attack on their position; for instance, old NGOs operating in favor of the DOE and their supporters and host municipalities.[107] However, others simply did not understand the nature of the argument for change, given that the canal idea was far from the list of government priorities and that, without the state, there was no chance of actually achieving such a huge investment.

Mittel-Europeanization beyond the State?

After 1919, the Transport Committee of the Paris Peace Conference became the Advisory and Technical Committee on Communications and Transit (CCT), a

102 Josef Kračmer, "Jak se bojuje proti revisi vodních cest a novým jejich návrhům," *Technický obzor* 32, no. 17 (1924): 291-295.
103 The first meeting of the association took place at Prague Town Hall on November 23, 1923. Among the participants was Kliment Velkoborský, a young engineer of the Czech Navigation Office and later the leading advocate of the canal in the 1950s (NAČR, ČPU, b. 19).
104 Generally speaking, all the presenters supported Smrček's standpoint (ATMB, Smrček, b. 25).
105 After the debate in the journal *Technický obzor* in 1924, Kráčmer left the scene and his ideas were never revived, although his "national" critique of the DOE resonates in the literature.
106 Kračmer, "Jak se bojuje proti revisi," 292.
107 The regional weekly of Eastern Bohemia and the city of Pardubice (located on the Elbe and the original DOE route) described Antonín Smrček's speech on the superiority of the "natural" routing as "the total fiasco of Kráčmer's plan." "Velký vodocestný sjezd v Kolíně," *Východ*, 26 January 1924.

permanent body of the League of Nations. It summoned the first conference on transport and transit to Barcelona in 1921.[108] The event fell within the general shift in international politics from a principle of the balance of power between empires towards a transnational regime foreshadowed by the Treaty of Versailles. The League provided a new mechanism for international cooperation and stimulated cooperation on various technical and economic issues. The architects of the League felt that politics and economics formed an inseparable unity.[109] The latter ultimately became the cornerstone of the League's activities.[110] The Barcelona First General Conference on Communications and Transit was one of the first major meetings that the League organized.

This conference articulated in general terms the principle of free navigation on all rivers that provided more than one country with sea access.[111] The *Convention and Statute on the Regime of Navigable Waterways of International Concern* represented a major outcome and success of the conference not only in inland navigation. However, putting the convention's 24 articles into practice required a great deal of elaboration. To this end, a special Committee for Inland Navigation was created within CCT, focusing on the technical and legal practicalities of interconnected national waterway systems, including the operation and mandate of the international River Commissions.[112] Besides regular work, part of CCT's advisory agenda was forming a special committee to inspect the state of the waterways in Poland in 1926. As a low-lying country, Poland had great potential for a network of inland navigable waterways over long distances, connecting the large hinterland to the seaports. However, the improvement of rivers was hampered by the

108 One of the many technical expert committees the League organized that operated as intermediaries between governments and the secretariat and offered technocratic, apolitical solutions to various problems. Charles Howard Ellis, *The Origin, Structure & Working of the League of Nations* (London: G. Allen & Unwin, 1928), 476-480.

109 The opinion put forward by, among others, Robert Cecil and Jan Smuts. Ibid., 467.

110 Frank Schipper, *Driving Europe: Building Europe on Roads in the Twentieth Century* (Amsterdam: Aksant, 2008), 76.

111 Thus, the convention extended the principle of free navigation beyond the few rivers nominated in the Treaty of Versailles. It now included international canals but also national waterways that completed international ones. Police and navigational prescriptions apply to all vessels navigating on the same waterways, regardless of the flag they fly. *Convention and Statute on the Regime of Navigable Waterways of International Concern,* League of Nations document C.479. M.327. 1921. VIII.

112 Many experts also took part in the one or more River Commissions. These included Baldwin, Rossetti, Seeliger, and Krbec, although the latter only attended as an official of the Minister Plenipotentiary Bohuslav Müller, not as a regular member; material on CCT at the Ministry of Foreign Affairs (AMZV, II, b. 618+619; AMZV, IV., b. 1107). In 1924, at the CCT's 6th session, the original Committee for Transport by Water split into the special Inland Navigation Committee and the Committee for Ports and Maritime Navigation. Frank Schipper, Vincent Lagendijk, and Irene Anastasiadou, "New Connections for an Old Continent: Rail, Road and Electricity in the League of Nations Organisation for Communications and Transit," in *Materializing Europe: Transnational Infrastructures and the Project of Europe*, ed. Alexander Badenoch and Andreas Fickers (New York, NY: Palgrave Macmillan, 2010), 113-143, here 120.

need to unite all the systems of the former empires (Russia, Austria-Hungary, and Germany).[113] In the same year, an American named Walker D. Hines, a former arbitrator on river shipping in Europe under the peace treaties, was chosen as a neutral delegate to inspect the state of shipping on European rivers.[114] Both special committees prepared exhaustive reports, but did not incite the broader debate on Central European waterways within the League.

The explicit plan for the European waterway regime appeared on the CCT Committee for Inland Waterways' agenda in 1932, in the wake of the Great Depression and political integration plans such as Briand's Initiative.[115] A Belgian delegate named Alexandre Delmer, motivated by the problems arising from navigation on the physically interconnected but otherwise separate waterways of the Netherlands, Belgium, and France, proposed unification of the policy regulations. However, European states did not seem interested in opening their national waterways to international regulation and competition. By the early 1930s, only four out of twenty-nine states granted equal rights to foreign vessels on their national waters and only a few others expressed willingness to do so in the future.[116] Although the committee wanted to pursue the idea, it decided to restrict the unification to technicalities such as signaling or organizing traffic, while ignoring more politically sensitive issues.[117] Hence, attempts to adopt European navigation regulations did not meet with success. Even the Barcelona Convention, despite being accepted by twenty-nine votes to one, was not at that time ratified by the riparian states of the Rhine and Danube.[118]

Czechoslovak delegates had their say in CCT negotiations. While Czechoslovak participation remained very limited throughout the 1920s, at the seventeenth session held in 1932, Vojtěch Krbec joined the Committee on Inland Waterways and Václav Roubík joined the Roads Committee.[119] Even then, discussions held at CCT

113 LoN publication C.25.M.15. 1927, VIII.

114 Hines travelled down the Rhine and Danube by boat, meeting with local representatives, port officials, businessman and politicians. His reports on the Danube identified the break-up of Austria-Hungary and the subsequent installation of customs barriers as the principal reason behind the fifty percent decline in volume of traffic compared to the pre-war situation; LoN publication C 444/a/M 164/a/1925, VIII, dtd 20.8.1925 (AMZV, IV, b. 1105).

115 An issue partly addressed but not solved at the unsuccessful International Conference for the Unification of fluvial law at Geneva in 1930. SPIN-TN Network, The Integration of European Waterways (2004), http://www.ccr-zkr.org/files/histoireCCNR/17_the-integration-of-european-waterways.pdf. 31. Accessed 14 January 2009.

116 Report by Krbec (AMZV, II, 617, December 27, 1933).

117 Ibid.

118 Only when planning to deepen unification did the committee realize that national governments were widely ignoring the Barcelona Convention. 1301/II-4/34 (AMZV, II, 617, December 27, 1933).

119 The exception was Dr. Lankáš, who was on the Railway Committee between 1921 and 1932. Besides subcommittees, there were also temporary commissions. Regarding waterways, the most important were the Committee on River Law (Sitenský) and the Committee on Combined Transport (Lankáš), (AMZV, II,

and its subsidiary bodies remained concealed to some extent from Czechoslovak hydraulic engineers and the interested public. Although trained as an engineer, Krbec was more of a career diplomat and did not enter the debates on the waterway program in Czechoslovakia. In fact, the MVP complained that it did not receive information on CCT activities.[120] Czechoslovakia was rather reserved regarding Delmer's proposal because, "till the construction of the planned canals," the issue did not interfere with national interests.[121] Despite that, the MVP expressed mixed feelings regarding the initiative, as it would have definitely limited national sovereignty once the canals were constructed.[122] Krbec considered attempts to unify regulations to be useless because of the protectionism the majority of European states practiced on their national waterways. He was also confused about the scope of the suggested unification: the committee intentionally did not specify whether the regime should cover the entire continent or only interconnected systems.[123]

Dominant protectionist policies presented considerable obstructions to CCT's attempts to construct a European waterway network. These issues were further amplified by indirect communication with local initiatives supporting waterways projects. While the negative stance towards Delmer's plan did not mark an end to CCT's efforts at European unification, the demise of Arthur Seeliger and his German countrymen from CCT in the autumn of 1933 did deal a final blow to any serious work on the issue.[124]

The League launched its pan-European cooperation activities immediately after the war. The idea of Mitteleuropean integration, however, was only revived in the mid-1920s. In 1925, a group of Viennese businessmen centered around Julius Meinl established the *Mitteleuropäischer Wirtschaftstagung* (MWT – since 1928 *Mitteleuropäischer Wirtschaftstag*), a transnational body aiming to promote economic integration in Central Europe, which was suffering economically from

b. 617, July 11, 1932). In 1938, Krbec briefly chaired the entire CCT. In 1920 Krbec was transferred to the Ministry of Foreign Affairs on the advice of Colonel Fierlinger from the MVP and appointed permanent secretary to the Czechoslovak delegate on the River Commissions, nominated by the Ministry of Foreign Affairs. He was later appointed Czechoslovak consul in Trieste (1930-1935) and Hamburg (1935-1939). In World War II, Krbec chaired a department at ŘVC, then joined the renewed Ministry of Foreign Affairs and retired in 1949. Information extracted from his personal file at the Archive of the Czech Ministry of Foreign Affairs.

120 Letter from Krbec to the Ministry of Foreign Affairs (AMZV, II, 617, December 13, 1933).

121 Information on the eighth session of the Inland Navigation Committee for MZV, prepared by Roubík (AMZV, II, 617, November 22, 1933).

122 Roubík refered to the commercial treaty with Hungary, which included a special paragraph on the issue. (AMZV, II, 617, November 22, 1933).

123 When Krbec raised the question at the CCT committee meeting, the response was to "wait and see" how governments would react. Report by Krbec (AMZV, II, 617, December 30, 1933).

124 Letter from Krbec to the Ministry of Foreign Affairs (AMZV, II, 617, February 14, 1934).

political fragmentation.[125] Intellectually, the mission and structure of the organization were developed by the *Arbeitskomitee* chaired by Elemér Hantos, economist and former Hungarian Minister of Trade. Naturally, MWT promoted reconstruction of the economic ties within the *Donauraum*, but simultaneously advanced a much broader integration concept that stretched from the Baltic Sea to the Black Sea.[126] In order to gain support from governments in the region, the MWT remained rather unspecific in terms of its definition of Central Europe. Such an arrangement should have made the MWT acceptable for successor states as well as for both former empires.[127] This decision, together with the organizational structure following the national principle, allowed delegates to project their own national perspective onto MWT's general mission. The particularly influential *Deutsche Gruppe* pursued the economic unification of Central European states and its potential extension to all European states, while the official Czechoslovak version of Central Europe excluded its western neighbor.[128] Although the MWT informed Central European governments about its meetings and invited them to participate, it remained a non-governmental institution, partly due to its unclear concept of Central Europe. The deliberate choice to leave the notion open should have enabled the cooperation of all states in the region. However, diplomats found such a standpoint rather suspicious.[129]

The MWT shifted towards Friedrich Naumann's Pan-German *Mitteleuropa* after the accession of Berhard von Bühlow to the German Foreign Ministry in

125 The literature often dismisses the organization as a tool of German imperialism, which paved the way to the *Grossraumwirtschaft* policy and military expansion of the Third Reich in the Balkans and Eastern Europe. However, in the first period of its existence (1925-1930), the organization remained focused on the cooperation and development of international trade in broadly defined Central Europe, which encompassed the former Austro-Hungarian Empire, Germany, the rest of the *Donauraum*, Poland and Switzerland. Elemér Hantos, "Wirtschaftliche Tagung," *Paneuropa* 3, no. 13/14 (1926): 41-43.

126 Drahomír Jančík, "Československo a Mitteleuropäischer Wirtschaftstag ve Vídni," *Sborník Vojenské akademie v Brně. Řada C* (1994): 119-128, here 119.

127 Hantos attempted to use economic ties to bridge the political divide between the two conceptions of regional integration (German *Mitteleuropa* and "anti-German" Central Europe). In order to keep both sides interested, Hantos' own vision or delimitation of the region remained necessarily blurred. Nils Müller, "Die Wirtschaft als 'Brücke der Politik': Elemér Hantos' wirtschaftspolitisches Program in den 1920er und 1930er Jahren," in *'Mitteleuropa' und 'Südosteuropa' als Planungsraum*, ed. Carola Sachse (Göttingen: Wallstein, 2010), 87-114.

128 Carola Sachse, "'Ehe von Schornstein und Pflug': Utopische Elemente in den Raumvorstellung des Mitteleuropäischen Wirtschaftstags in der Zwischenkriegszeit," in '*Mitteleuropa' und 'Südosteuropa' als Planungsraum*, ed. Carola Sachse (Göttingen: Wallstein, 2010), 49-86, 54.

129 Governments were usually represented by ministry observers who were interested in the discussed themes, and by members of the local embassies. The 1926 meeting was attended by official representatives/observers (mostly embassy officials) of Czechoslovakia, Germany, Austria, Bulgaria, Poland, Romania, and Yugoslavia (by then still the kingdom of Serbs, Croats, and Slovenes); that is, all Danubian countries plus Poland; Zpráva o středoevropském dopravním zasedání ve dnech 2.-5. října 1926 ve Vídni (NAČR, MPOŽ, b. 1800).

1928. The *Deutsche Gruppe* gradually took over the leadership of the organization and put aside Hantos' idea of a customs union of succession states, which Germany regarded as dangerous.[130] Disappointed by this development, Hantos established a brand new organization – the *Mitteleuropa-Institut zur Förderung der wirtschaftlichen und kulturellen Annäherung* – in Brno, Vienna, and Budapest.[131] German business circles reacted by establishing their own *Mittel-Europa Institutes* in Dresden and Berlin. There was another change in MWT leadership in 1931, when industrialist Tilo von Wilmowsky replaced veterans like Georg Gothein and Gottfried Zoepfl, which marked the final reorientation towards the *Anschluss Grossdeutsch* policy. However, the MWT never became a totally monolithic organization and various lines of thought and concepts of *Mitteleuropa* co-existed within its structure.[132]

Given the overall orientation towards economic integration, inquiries into transport issues naturally gained a prominent position on the MWT agenda. The second annual conference was devoted to transport issues (*Verkehrstagung*, 1926), the next one to the closely related problems of tourism (3rd congress, 1927), the fourth to the "*Donauproblem*" (4th congress, 1928), and finally, in 1929 in Budapest, the main theme was the problem of inland waterborne transport in the region. According to Josef Fuxa, unofficial delegate of the Czechoslovak Ministry of Trade, the organizing committee of the *Mitteleuropäische Verkehrstagung* (Vienna, October 1926), chose transport as the central theme because of its perceived apolitical character and obvious need for transnational standardization and cooperation.[133] However, the issue was highly politicized and discussions were far from smooth. For example, the Czechoslovak representative felt that the resolution criticizing the current state of navigation on the Danube was thoroughly political and directed against the successor states.[134]

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130 Elvert, *Mitteleuropa!*, 107; Vlastislav Lacina, "Hospodářská dezintegrace střední Evropy po první svìtové válce a snahy o opětné sblížení v letech 1924-1930," *Acta Oeconomica Pragensia* 15, no. 7 (2007): 272-281, here 278.

131 Müller, "Die Wirtschaft als 'Brücke der Politik'." Czechoslovak diplomat Vavrečka sarcastically noted that the name chosen for the organization reflected Hantos's ambitions as a scientist. Letter from Vavrečka (AMZV, odb.IV, b. 1095, September 11, 1929).

132 Dagmar Moravcová, *Československo, Německo a evropská hnutí 1929-1932* (Prague: Institut pro středoevropskou kulturu a politiku, 2001), 281.

133 The discussions dealt with different modes of transport separately. Typically, delegates critically evaluated the current situation then suggested improvements. The themes largely resembled those discussed at the LoN, whose representative Heinrich Rheinhardt also attended the congress. Debate on inland navigation dealt exclusively with the Danube. Zpráva o středoevropském dopravním zasedání ve dnech 2.-5. října 1926 ve Vídni (NAČR, MPOŽ, b. 1800), note on the choice of transport on page 3.

134 Report by Ministry of Trade official Antonín Hanáček: Středoevropský dopravní sjezd ve Vídni. Dunajská otázka (NAČR, MPOŽ, b. 1800).

Waterways remained overshadowed by railways and received significant attention for the first time in 1928 during the MWT conference on the *Donauraum*. Georg Gothein, former MP for Wrocław and representative of the *Hansa-bundes*, an organization promoting liberal trade, presented his view on the economic viability and usefulness of the Danube-Oder-Elbe canal.[135] He expressed his strong belief in the positive economic role the connection might play in creating a unified Central European market.[136] Similarly, Czechoslovak delegate Hans Singule devoted part of his report to the canal plans.[137]

More detailed discussions took place a year later at the Budapest Conference on Inland Water Transport. On that occasion the conflict regarding the MWT's mission culminated and the event, although prepared under the auspices of the MWT, was a private initiative of Hantos. Nevertheless, the meeting was well attended by German and Austrian engineers, who clearly demonstrated their dissatisfaction with Germany's position on the Danube and, playing the unity card, criticized the fact that *Mitteleuropa* was giving away its property to foreign nations for nothing.[138] A proposal was made to establish a special Central European Association of Navigation Societies as a sub-section of the German *Zentral Verein für Deutsche Binnenschiffahrt*. The idea was eventually rejected due to the problems caused by using the term *Mitteleuropean* and a solution was postponed.[139] Two of the resolution's ten points emphasized how the development of waterways (respectively, construction of the canals) could contribute to the harmonious coexistence and mutual apprehension among central European nations.[140] Czechoslovakia's representative at the meeting, Antonín Smrček, called for the construction of trans-watershed connections according to unified (but not specified) standards. Hantos respected Smrček enormously, addressing him as the "Altmeister der mitteleuropäische Wasserstrassen," and offered him a leading position in the Brno

135 By then a German city on the middle Oder known as Breslau.

136 In his speech, Gothein mentioned the need for standardization and argued in favor of Sympher's 1000t vessels (NAČR, MPOŽ, b. 2486). Gothein's apology for the canal was later published in *Zeitschrift für Binnenschiffahrt* (1930).

137 Moravcová noted the negative attitude of the German Trade Ministry towards the Canal, based on the presumption that after completion, it would "strengthen the position of the Czechoslovak fleet on the Oder; "Moravcová, *Československo, Německo a evropská hnutí*, 163; Jančík, "Československo a MWT," 124. According to Hanáček's report, Hans Singule was neither an engineer nor a state official, but a journalist.

138 In the words of the ministerial counselor from Regensburg, Fritz Krieg, "How long must the law of parity and equality of all subjects of international law be infringed? How much longer must Mitteleuropa alone keep its currents, the heart of its territories, open to foreign ships?" Krieg, "Das Weltbinnenschiffahrtsrecht," 94.

139 Together with other German delegates, Zoepfl proposed the revival of the DUOV, while Hantos and Hungarian and Romanian delegates defended the *Donauraum* concept of Central Europe. Hantos, "Bericht über den Verlauf," 184-186.

140 Elemér Hantos, *Mitteleuropäische Wasserstrassenpolitik: Referate und Beschlüsse der Mitteleuropäischen Wasserstrassenkonferenz, Budapest, 11. bis 13. Mai 1929* (Vienna; Leipzig: W. Braumüller, 1929), 188-189.

branch of the *Mitteleuropäische Institut*.[141] Smrček accepted and became its vice-president.[142]

Half a year later Smrček presented a more elaborate proposal for the standardization of waterways. In a lecture on the state of Central European waterways, delivered at the *Mitteleuropäischer Wirtschaftstagung* in Wroclaw in 1930, he contended:

> the interconnected Central European Canal network should, at least on its main transversal lines, be constructed in such a way that allows the economically most expedient ships, the 1000t type already introduced on the new German canals, to go anywhere.[143]

He was clearly stating that the proposed Central European Waterway network should follow the standards set by the German authorities for the newly-built canals. The organizers of the event could not have been more pleased by this. The *Deutsche Gruppe* moved the fifth MWT congress from Vienna to Wroclaw in order to detach from Hantos and his adherents, and intentionally devoted part of the program to the subjects covered by his Budapest conference.[144]

Simultaneously, a transnational organization devoted exclusively to the question of inland navigation in Central Europe emerged at the turn of the decade. At its annual meeting in December 1929, the Moravian River and Canal Society (*Moravský říční a průplavní spolek,* MŘPS) discussed aligning with the *Mitteleuropäischer Binnenschiffahrtsverband* (MVB – Central-European Inland

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141"Einleitung: Mitteleuropäische Wasserstrassenpolitik," in *Mitteleuropäische Wasserstrassenpolitik Referate und Beschlüsse der Mitteleuropäischen Wasserstrassenkonferenz, Budapest, 11-13. Mai 1929*, ed. Elemér Hantos (Wien; Braumüller, 1929), 1-10, here 2. Hantos and Smrček met for the first time at the first General Meeting of the newly established institute in Brünn on September 10, 1929. Rainer, president of the Brno Institute, knew Hantos from MWT meetings and invited Smrček to his office to meet Hantos before the session. Letter from Rainer to Smrček (TMB, Smrček, b. 133, September 6, 1929).

142 Miroslav Jeřábek, *Za silnou střední Evropu: Středoevropské hnutí mezi Budapeští, Vídní a Brnem v letech 1925-1939* (Prague: Dokořán, 2008), 66.

143 In his speech, Smrček mentioned the late *Ministerialrat* Sympher and defined the two *Hauptkanale* of the proposed regional network – the old Austrian Donau-Oder-Elbe-Vistula and the Rhine-Main-Danube. Antonín Smrček, "Vorschläge in Bezug auf eine raschere Durchführung der Mitteleuropäischen Kanalprojekte (Oder-Donau-Elbe, Rhein-Main-Donau, Donau-Weichsel)," in *Bericht über die Verhandlungen der fünften Mitteleuropäischen Wirtschaftstagung in Breslau 1930* (Berlin; Gruenewald: W. Rothschild, 1930), 129-139.

144 Moravcová, *Československo, Německo a evropská hnutí*, 165, 203. Among the four topics discussed, the two dealing with transport issues were no. 3 railways and no. 4 waterways (*Erleichterungen und Vereinfachungen in der mitteleuropäischen Binnenschiffahrt*), for which Smrček was chosen as main speaker. Other speakers were German *Ministerialrat* Fritz Krieg, Živko Jovanovič from Yugoslavia, and Adolf Stern, director of the Bratislava Chamber of Commerce. Hungary was represented by *Oberbergrat* Ernö Haidegger, and Austria by *Strombaudirektor* Ludwig Salcher from Vienna and Fuhrman, *Ministerialrat* from Vienna and director of the Directorate for the Construction of Waterways. *Liste der Angemeldeten redner für die V. Mitteleuropäische Wirtschaftstagung in Breslau* (TMB, Smrček, b. 125).

Water Transport Association). This body deliberately built on the work of its pre-war predecessors, the *Deutsch-Oesterreichisch-Ungarisch-Schweizerischen Verband für Binnenschiffahrt* (DOUV),[145] and invited its former members to work together. Under the presidency of Smrček, the Moravians followed the major Czechoslovak canal promoting groups by unanimously accepting the invitation. While some voices contested the adherence to the new organization on the basis of its German domination, the vote was only a formality, as Smrček had already been appointed MVB vice-chairman.[146]

At the MVB founding conference held in Stuttgart in May 1930, the first speaker, Gottfried Zoepfl, emphasized continuity with the pre-war DUOV. Zoepfl himself was living proof of this link. A professor of economics from Vienna, Zoepfl was not only a member of the DUOV, but had also been the editor of its publications back in 1897.[147] He had also proposed the establishment of the new organization in Budapest a year before. In Stuttgart he met with his colleagues from the imperial era, former employees of the Imperial Directorate for Construction of Waterways like Smrček or Czerkawski, who were now representatives of Czechoslovakia and Poland, respectively.

Discussions regarding the aims and operation of the new organization opened with a debate on its position towards the MWT, the main organization promoting regional economic integration in Central Europe. The German delegates, especially Georg Gothein, ex-*reichsminister* and prominent MWT member, pressed for closer cooperation and a future merger with the MWT, highlighting the similar membership and analogous organizational structure of both organizations.[148] Smrček, on the other hand, emphasized the apolitical status of the MVB, which he thought should provide independent expert solutions and keep its distance from politics. Smrček felt that the MWT, at least since its split with Hantos, represented

145 The revived DUOV met at the International Exhibition of Inland Navigation and Utilization of Hydro-Power in Basel in 1926. The fact that Czechoslovak representatives were not invited clearly demonstrates the ethnically German character of the event, at which delegates from Switzerland, Germany, Austria, and Hungary participated. After the meeting Czechoslovak Germans, who led the North-Bohemian Chamber of Commerce located in Liberec/Reichenberg, took up the task of inviting Czechoslovak canal associations. At "political level" German ZVfB, located in Berlin, was assigned with full revival of the DUOV under a new, *Mitteleuropean* identity. Emil Zulkowsky, "Středoevropský svaz pro vnitrozemní plavbu," *Věstník pro vodní hospodářství* 9, no. 10 (1927): 165-166, here 165.

146 The entire process of "joining" the MBV started in 1927 at the informal meeting organized by the North Bohemian Chamber of Commerce. Ibid. There, the invitation was accepted and the 1929 vote taken in all participating associations, was little more than a formality. "Zpráva o konání valné hromady průplavního spolku v Přerově," *Věstník pro vodní hospodářství* 12, no. 1 (1930): 14.

147 Zoepfl also edited the minutes of the Stuttgart meeting.

148 Gothein, a founding member of the pre-war DOUV, attended the conference as representative of the Silesian *Schlesischer Oder-Verein* from Wroclaw/Breslau. *I. Verbandstag des Mitteleuropäischer Binneschiffahrtsverbandes 15.-17. Mai 1930 Stuttgart. Verzeichnis der Teilnehmer* (TMB, Smrček, b. 25, 1930), 38.

a controversial side to Central European integration. The MBV Board ultimately accepted Smrček's proposal to postpone the issue of adherence to the MWT, take it off the agenda, and concentrate first on stabilizing the organization.[149]

The membership of the MVB territorially roughly corresponded to its prewar predecessor. The participating organizations were mainly German, with Austria, Switzerland, and Hungary represented by a single institutional member and Czechoslovakia by three organizations closely linked with the DOE project: *MŘPS*, *Spolek pro výstavbu kanálu Pardubicko-přerovského,* and *Vodohospodářský svaz pro povodí Odry* v Opavě. Czechoslovakia was the second-most represented country at the meeting.[150] Among more than five hundred delegates attending the conference, thirty-eight represented Czechoslovakia (compared to eighteen Swiss, fourteen Austrians, and nine Hungarians). Besides the leading NGOs closely tied to individual navigation projects, the delegates included state officials and representatives of other organizations involved in inland navigation in Central Europe.[151] The International River Commissions of the Rhine and the Elbe deputized their general secretaries, Von Wesendock and Jan Hostie, respectively, while Smrček acted as delegate of the Danube Commission. Interestingly, Elemér Hantos attended the event; not as an official representative of the *Mitteleuropa-Institut*, but as emeritus state secretary.[152]

At the plenary session, Smrček remained faithful to his belief in the organization's apolitical mission and restricted himself to purely technological subject matter – an analysis of technical problems of waterways and their development – and he clearly stated that all administrative issues and organization of inland navigation were not his concern. He outlined three crucial areas requiring attention: construction of waterways, improvement of trans-shipment and other freight manipulation, and construction of vessels. Smrček again argued in favor of Sympher's 1000t vessels as a standard for future waterway navigation structures in Central Europe.[153]

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149 *Niederschrift über die Vorstand- und Ausschuss-Sitzung des Mitteleuropäischen Binnenschiffahrtsverbandes am 15.Mai 1930 zu Stuttgart* (TMB, Smrček, b. 25, June 14, 1930), 5.

150 According to the agreements made on the first day of the meeting, Czechoslovakia was to supply the second highest share of the organization's planned budget (fifteen hundred out of six thousand RM). Delegates from France and the Netherlands, countries that were not granted membership, also attended. *I. Verbandstag des Mitteleuropäischer Binneschiffahrtsverbandes 15.-17. Mai 1930 Stuttgart. Verzeichnis der Teilnehmer*.

151 Václav Roubík and Eduard Bazika from MVP; Antonín Hanáček represented the Ministry of Trade. Ibid.

152 Ibid., 39.

153 Smrček's Stuttgart speech manuscript: *Technické problémy vodních cest a vnitrozemské plavby, předneseno na prvním sjezdu středoevropského svazu pro plavbu vnitrozemní ve Štutgartě 16.května 1930* (TMB, Smrček, b. 25).

The Stuttgart Conference marked both the beginning and the end of the *Mitteleuropean* transnational initiative to construct a regional waterway network in Central Europe. Political developments in the region negatively affected the further operation of the *Verband* and the first conference remained the only one. The second meeting of the executive committee, held in Mannheim in 1932 during the German *Zentral Verein* Convention, proved to be a fiasco. Effectively, the fact that only German and Czechoslovak delegates appeared ushered in an epoch of bilateral Czechoslovak-German cooperation on the DOE project. In 1931, the MWT started its metamorphosis into a tool of the German economic *Grossraumwirtschaft* policy in Central and Southeastern Europe.[154] Simultaneously, without governmental support, the activity of the MI in Brno slowly declined after 1932.[155]

Experiencing the frantic activities of the transnational community, Smrček became highly critical of the Czechoslovak authorities' aloof attitude towards the waterways program. By comparing Czechoslovakia with the states that regularly invested in improving their waterways network such the USA, France, and especially Germany, Smrček showed how ignorant behavior could slow the progress and hamper the prosperity of the country.[156] As his fellow professor Emil Zimmler put it, "the sluggish attitude of Czechoslovak authorities toward waterways" might "result in an unpleasant surprise when Germany once again starts calling for the connection to the Danube and the Orient."[157] Although such a statement invokes the image of marching armies, Zimmler highlighted the possibility that Czechoslovakia could be by-passed either by the German-Polish-Romanian waterway project connecting Prussia and Silesia to the Black Sea through Poland and Romania (the Oder-Vistula-Dniester-Prut canal), or by the so-called Trans-European Canal connecting the Vistula and the Dnieper via the Bug and the Pripyat.[158]

154 Carl Freytag, "'Die Tür zwischen Deutschland und Donauraum ist geöffnet': Südosteuropa-Konzepte und Positionierung Mitteleuropäischen Wirtschaftstags nach dem 'Anschluss' Österreichs 1938," in *'Mitteleuropa' und 'Südosteuropa' als Planungsraum*, ed. Carola Sachse (Göttingen: Wallstein, 2010), 141-166, here 143-144.

155 Jeřábek, *Za silnou střední Evropu*, 240.

156 Antonín Smrček, *Provádění vodních staveb na Moravě – uvázlo : jinde zato – zejména v cizině – pokračují se zvýšenou energií* (Brno: privately printed, 1926).

157 Quoted in: Otto Cvrk and Eustach Mölzer, *Obtíže vodních cest* (Prague: Práce, 1946), 20. See also Smrček's speech at the second meeting of the Brno based *Mitteleuropean* Institute: *Protokol o druhé schůzi představenstva Středoevropského ústavu ku podpoře hospodářského a kulturního sblížení v Brně, konané dne 30. dubna 1930* (Brno: privately printed, 1930).

158 For the Polish project see Maksymilian Matakiewicz, "Droga wodna Baltyk-Morze Czarne, przez Wisle-San Dniestr-Prut i Dunaj, z polaczeniem do Lwowa," *Przeglad Techniczny* offprint (1927). The Trans-European canal was an extension of the transversal Mittellandkanal to the East. Via the upgraded old Korolevskiy Canal built in 1848, it promised to connect the Baltic to the Black Sea by way of Vistula, Bug, Pripyat, and Dnieper. See the report by Henryk Herbich (1896-1968), a Polish hydraulic engineer employed in the interwar period at the Polish Ministry of Public Works. East Central Europe: 1. Utilization

In 1931, the Czechoslovak Parliament finally responded and passed the new law. It included a special paragraph on the construction of the national Czechoslovak Waterway Network, based on reconsideration and nationalization of the old Austrian project.[159] The *Act on the State Fund for Making the Rivers Navigable, Construction of Ports, Reservoir Dams, and Utilization of Hydro-power* contained a small paragraph concerning the construction of the Danube-Oder-Elbe canal.[160] The Act established a separate Fund for Water Management (*Vodohospodářský fond*) committed to financing the canalization of rivers and preparatory works for trans-watershed canals. However, the eventual construction of the DOE was not included. Regarding the technical part of the proposed network, the basic measures conformed with Sympher's 1000t standard vessel. Smrček had successfully opposed proposals for much smaller dimensions, which would have limited international transit and therefore had supporters among those who feared a German-led Mittel-Europeanization.[161]

However, hydraulic engineers and the canal lobby did not see the Act as an assurance of positive development. The vast majority of canal-interested players saw the state's lack of direct involvement as a sign of persistent ambivalence, and considered the Act nothing more than a formal gesture towards Silesian industry and other interested parties, including the German state. At the Czechoslovak Waterway Convention in Pardubice in the summer of 1931, Smrček again called for broader international cooperation and agreement on the standard type of vessels.[162]

Apart from the standard pool of supporters, a new private player stepped into the spotlight during the negotiations on the Czechoslovak Water Act: industrialist Tomáš Baťa. He saw the Great Depression as an opportunity for expansion. His family firm was based in Zlín, a city not far from the Morava River, which meant it could have benefited from the canal. Baťa's support for the new Water Act critically

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and development of water resources, 2. Planning of inland waterways and hydroelectric schemes, study dated March 13, 1943 (UNOG, GIX 15-1 35-1).

159 Smrček's crucial role in preparing the new law was also highlighted by the MP for southern Moravia Jáša at the Czechoslovak Parliament's first debate on the law on 8 May 1929: "In this sense, Professor Smrček's great idea remains topical: for years he has kept on drawing attention to the fact that our country and its industry needs above all access to the world markets, to the sea. Our improved and regulated rivers should provide a major tool to achieve such a goal." "Těsnopisecká zpráva o 46. schůzi poslanecké sněmovny národního shromáždění Republiky Česko-Slovenské v Praze ve čtvrtek dne 8. května 1930," *Společná česko-slovenská digitální parlamentní knihovna*, http://www.psp.cz/eknih/1929ns/ps/stenprot/046schuz/s046006.htm. Accessed 12 October 2010.

160 Zákon ze dne 27. března 1931, č. 50 Sb. z. a n., o státním fondu pro splavnění řek, vybudování přístavů, výstavbu údolních přehrad a pro využitkování vodních sil.

161 Smrček, *Nástin historie vodní cesty*.

162 Antonín Smrček, "Proč je třeba plavebního spojení Labe s Dunajem a Vislou? – Směrnice pro jeho provedení," *Věstník pro vodní hospodářství* 13, no. 5-7 (1931): 102-106, here 104.

Figure 2.8 – Detail from the undated waterway map of Central Europe from the ŘVC archives, covering the full Czechoslovak waterway program: the DOE, canalization of the Vltava upstream from the Elbe and the river Váh in Slovakia. The projected national grid on the map shows how the Paris Treaty complicated infrastructural development in the region – compare with figures 2.3 and 2.4. The pencil line indicates the actual border between Poland and Germany and, together with the printed border line, delineates the Upper Silesia region that voted for loyalty to Germany in 1921. The map also shows the short-lived state border between Russia and Ukraine. Note that the author designed the map to include Paris (Paříž, in the left margin); perhaps in order to emphasize the westness of the network and its non-German character. The dotted line just below the city of Plzeň (Pilsen) in Bohemia delimits "territory controlled by the canal." Source: Vodní cesty ve Střední Evropě (NAČR, GŘVC, b. 412, undated).

affected its final form.[163] Not particularly interested in transit, Baťa emphasized the role of the canal in providing a cheap transport route that connected his town (Zlín is not indicated on most canal maps, but is located on the tributary entering the Morava just above Napajedla, close to Otrokovice) to the Danube, making the markets downstream and the Black Sea ports more accessible, while simultaneously securing cheap upstream transportation of various raw materials. Baťa also emphasized the local developmental functions of the canal, especially flood protection and irrigation. In order to speed up transport and limit the extra costs associated with transshipment, Baťa proposed a "light" version of river regulation.[164]

163 Baťa's influence over the state administration was undoubtedly strong. Hugo Vavrečka, an architect of the Czechoslovak state, and ambassador to Vienna in the second half of the 1920s, left public service in 1931 to became director of one of Baťa's companies. For more on Baťa in Interwar Czechoslovakia, see: Marek Tomaštík, *Tomáš Baťa – doba a společnost* (Brno: Viribus Unitis, 2007).
164 A description of Baťa's development plans for the region can be found in: Ondřej Ševeček, *Zrození Baťovy průmyslové metropole. Továrna, městský prostor a společnost ve Zlíně 1900-1938* (České Budějovice Veduta, 2009).

Baťa was also concerned whether the project would be feasible; in the case of the fully fledged transit canal, this was a valid question, for both political and economic reasons. The utilization of the existing river bed, however, would make the project both cheaper and more feasible, above all in political terms, as canalization of the Morava could be seen as the first step in the construction of the DOE; at the same time, however, it would not allow for any transit transport (and the feared German Mittel-Europeanization) due to the lack of a connection to the Oder. In 1930, during discussions on the Water Act, Baťa took up the treatise on the canalization of the Morava from the Danube upstream to the city of Olomouc developed in the early 1920s and published it as an appendix to his own position paper on the Morava River problems.[165] The publication initiated discussion of the possibility of canalizing the river, which had previously been considered unsuitable for navigation. Engineer Stanislav Suk, architect of the canalization project, proposed reducing the length of the river from 247km to 160km by channelizing the winding course and canalizing the shortened river with a series of relatively low barrages (2.3m) with navigation locks. The Waterway Act reflected the debate over canalization and commissioned the Directorate for Construction of Waterways (ŘVC) to study the canalization of the Morava from Olomouc down to the Danube, assessed in comparison to the canal solution.[166]

A new branch of the ŘVC led by engineer Jaroslav Hudlický was established in Olomouc to conduct this task. On July 1, 1935, a year later than the schedule authorized under the Act of 1931, Hudlický presented his final report.[167] A solution was designed for vessels of 1000t as determined by the Water Act. However, apart from the transportation function emphasized by the chosen parameters, other interests were taken into account especially concerning agriculture, hydropower, and the requirements for the planned industrialization of rural regions along the river. In order to minimize costs, Hudlický strove to employ those parts of the river that were already regulated (both projected and already executed regulations) to

165 Baťa selected Suk's study written in 1919, as an "expert" opinion supporting his own visions. In order to pursue his goals, Baťa hired prominent Czechoslovak engineer and geologist Quido Záruba-Pffefermann to prepare the detailed revision of Suk's project. When Zaruba did so, Baťa disregarded his work as not respecting the task. The real problem was that the desired harmonization of functional uses of the canal, which Baťa had dreamed of, was actually impossible. In the flatland, the canal would simply either drain the fields (when countersunk) or drench them (when elevated). Even if these two challenges were overcome using a series of very small locks, the canal would be virtually unusable for transportation. Záruba prepared two variants, with twelve and nine grades respectively (Suk operated twenty-two). None of the variants met Baťa's demands in all respects. Antonín Smrček, "Splavnění řeky Moravy od Olomouce k ústí do Dunaje se souběžným řešením průplavu," *Věstník pro vodní hospodářství* offprint (1933).
166 Hudlický, 1937 lecture for the Association of Engineers in Olomouc. Jaroslav Hudlický: Přednáška pro SIA v Olomouci, 1937 (NAČR, MVP, b. 292).
167 ŘVC's technical report on canalization of the Morava, 1936. Splavnění Moravy: Technická zpráva (NAČR, MVP, b. 292).

the highest possible extent.[168] The report found that the middle Morava was best suited for canalization. The upper stretch of the river was considered too steep and the lower stretch too flat. Canalization of the upper section of the Morava would require extreme elevation of water level above the ground, which would have a negative effect on the river flow of tributaries, especially the Bečva. Canalization of this part of the river would equally cause problems with infrastructural crossings, because at least "one ferrous railway bridge, eight ferrous road bridges and four concrete road bridges would have to be lifted up." [169] The report deemed the lowest part of the river unsuitable for canalization for a wider range of reasons. It was clear to Hudlický that both agricultural and navigational uses "cannot be satisfied at once."[170] Navigation required localization of the first weir to be as close to the Danube as possible which would create an 18km long, elevated reservoir, thus rendering large areas of land unsuitable for agricultural use. Moving the weir further away from the Danube, however, would allow the Danube waters to flow up the Morava riverbed, causing a deposit of sediments when the water level dropped and the subsequent creation of a delta between the first weir and the Danube.[171] Furthermore, while the flat terrain along the river prevented the use of high weirs due to agricultural concerns, too many short locks would slow down navigation to an unreasonable extent. Another argument against canalization of the lowest stretch of the Morava was that the Czechoslovak left bank of the river would be situated below water level, which would not allow industrial establishments, while the other, Austrian bank, would be ideal for industrial development.

The report recommended canalization as the optimal solution for the middle part of the river. The advantages were clear. The lateral canal with a constant downhill grade would require a large reservoir to be constructed somewhere upstream. Furthermore, the inevitable elevation of the canal route above ground level would enlarge the inundation area, while dredging the canal into the ground would result in draining the adjacent fields. Lateral canals would connect the canalized middle Morava at both ends to the rest of the DOE, just below the confluence with the Bečva to the north and above the confluence with Dyje in the south. Hudlický recommended a series of weirs and locks with a fall of three to ten meters.

168 This is in sharp contrast to Suk's canalization plan, proposed by Baťa, which on many accounts did not adhere to existing regulations. Stanislav Suk, "Technická zpráva ku povšechné studii pro úpravu vodních poměrů řeky Moravy v trati od Kroměříže k ústí do Dunaje u Děvína," in *Základ pro úpravu vodního hospodářství na Moravě*, ed. Tomáš Baťa (Zlín: T. & A. Baťa, 1930), 8-20.
169 ŘVC's technical report on canalization of the Morava, 1936. Splavnění Moravy: Technická zpráva (NAČR, MVP, b. 292).
170 Ibid.
171 As in the Suk project (10km). Suk, "Technická zpráva," 17-18.

However, the governmental-level debate made the report redundant, due to the Ministry of Agriculture's strong opposition to canalization.[172] While the Ministry of Public Works remained open to alternatives, the Ministry of Trade strongly supported the idea of canalizing the Morava in the same way as the Elbe (riverbed only). The ministry's aim was to extend the Danube waterway into the Czechoslovak hinterland via the Morava (and, concurrently, by canalizing the Váh in Slovakia). Czechoslovak connection to the three seas was secured by its position on the Danube, Elbe, and Oder rivers, and from the perspective of the national economy, there was no need to actually interconnect the rivers. Thus, the Ministry of Trade did not see a future link to the Oder that would allow for the transit function of the DOE canal as a priority.[173] On the other hand, the Ministry of Agriculture completely rejected the canalization of the Morava. Czechoslovak agro-engineers argued that canalizing any stretch of the river would cause problems with runoff of waste water, hamper the water regime, and generally worsen environmental quality by turning the river flow into dead water. Put simply, the Ministry of Agriculture felt it was impossible for agriculture and transport to share the same infrastructure due to contradictory demands.[174]

While canalization of the Morava could be debated nationally, extending the navigable Oder into Czechoslovakia required cross-border cooperation. The first bilateral talks between Germany and Czechoslovakia on the DOE canal occurred in the second half of the 1920s. The activities of Waterways Conventions and leading hydraulic engineers within the state ranks such as Zimmler, resulted in the signing of the protocol on extending the navigable Oder to Ostrava in 1926.[175] The North Moravian branch of the ŘVC in Moravská Ostrava prepared drafts for canalizing the Czechoslovak stretch of the International Oder and its connection to the DOE, inspired by Smrček's 1923 proposal. Although the German authorities did not adhere to the agreement nor prepare the waterway project on German territory within the agreed time, in 1929 they eventually provided sufficient documentation on the planned connection between the Czechoslovak border and the navigable Oder.[176]

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172 One significant outcome of the 1935 debate was the Journal of Masaryk Academy of Labor's special issue devoted to the canal. This was just another platform for the usual suspects: Smrček, Hanáček, Bartovský, Zimmler and Lorenz, *Sborník MAP*, no. 52 (1935).

173 The Ministry of Trade's response to the Chamber of Commerce memorandum on the DOE canal (NAČR, MVP, b. 292, September 29, 1936).

174 The Ministry of Agriculture's response (NAČR, MPOŽ, b. 2543, June 16, 1936).

175 The Protocol agreed on October 19, 1926 regarding consideration of proposals for constructing the canal linking the Danube and the Oder on the German-Czechoslovak border (AMZV, IV, b. 169; October 19, 1926).

176 The official exchange of documentation was rather slow and MVP only received the German project in 1929, when ŘVC entered direct negotiations with its German counterpart, *Oderstrombauverwaltung- Was-*

The project to canalize the Czechoslovak Oder was finally completed in 1930. This was just in time for the inspection by the International Oder Commission, which traveled the river from source to mouth. The Czechoslovak authorities preferred to canalize the river rather than construct a lateral canal. In the undermined terrain of the North Moravian coal basin, it would have been difficult to find safe routing for the canal. Furthermore, the existing infrastructure, not only roads and railways but infrastructure related to industrial water use, would make such construction even more complicated. The navigability of the Czechoslovak Oder from its confluence with the Opavice to the city of Bohumín on the Czechoslovak-German border was to be secured by constructing a single weir in Koblov.[177] Construction works began in 1931, financed through the Water Management Fund, which had been established within the framework of the Czechoslovak Water Act.

Figure 2.9 – In 1937, Czechoslovakia opened a new weir on the river Oder by Koblov. The hydraulic structure was hailed as a first step towards realization of the DOE. The ceremony was a national event with all the important figures in the Czechoslovak water engineering community attending, including Smrček and Bartovský. Source: ATMB, Smrček, b. 134.

serbauamt Ratbor.

177 Letter from the Czechoslovak representative in CIO, Bohuslav Müller, requesting background materials (NAČR, MVP, b. 156, May 15, 1930).

During the debate on extending the navigable Oder into Czechoslovakia, bilateral negotiations gradually developed into a wider trans-border cooperation between both state and non-state players. In 1929, representatives of Czechoslovak institutions were invited to the German cities of Wroclaw and Opole to lecture on the Czechoslovak waterways program.[178] In 1931, private and public interested parties from Czechoslovakia and Germany came together to form the Danube-Oder-Elbe Committee (*Dunajsko-odersko-labský komitét,* DOEK), a non-governmental organization estsablished to construct the canal. This organization was largely comprised of former representatives at the MWT, PIANC or MVB.[179] The usual protagonists, such as Georg Gothein and Antonín Smrček, stood at its cradle.[180] In addition to experts, the membership consisted mainly of large industry from Silesia and chambers of commerce from cities lying on the Oder and Morava from Stettin to Olomouc. In addition to international conferences, the national branches of the new organization held separate meetings in both countries. Despite the participation of state institutions, the DOEK activities remained fruitless, except for keeping the canal idea alive and mobilizing the social capital. However, when faced with the rise of Nazism in Germany and its far-reaching geopolitical visions, the Czechoslovak players slowly started to realize, as Smrček put it, that the Czechoslovak State's ignorant position was hazardous and that the canal would be built "either by us, or over us."[181]

Indeed, German authorities changed their attitude and, after years of rather uncommitted "cooperation," openly stated their support for the canal project. Such a change of opinion was at least partly inspired by DOEK activities. In 1936, the German ambassador in Prague came to the Ministry of Foreign Affairs with a formal *Aide-Mémoire* referring to the 1935 DOEK meeting in Wroclaw. In this document, the ambassador proposed launching official international negotiations

178 Director of the ŘVC branch in Moravská Ostrava, and ministry official Johan F. Meierle lectured regularly in Silesia and was invited to lecture on the Czechoslovak waterway program by *Verkehrsverien für Ratibor Stadt und Land*; Consent for Meirele's lecture by MVP (NAČR, MVP, b. 193, November 15, 1929).
179 Letter from the Wroclaw Chamber of Commerce dated October 27, 1932, addressed to Antonín Hanáček, with annexes (NAČR, MPOŽ, b. 2479).
180 At the DOEK meeting in 1932 in Głuchołazy (Bad Ziegenhals), Gothein presented his vision of the DOE as a waterway governed like an "international river" accommodating 1000t vessels. Georg Gothein, "Zur Frage der Abmessungen eines Donau-Oder-Elbe-Kanals", "Zur Frage des Betriebs auf einem Donau-Oder-Elbe-Kanals," (NAČR, MPOŽ, b. 2479).
181 In this sense, Smrček compared the DOE to the Gotthard Railway and presented Moravian Vales and Moravian Gate as being naturally predestined for the construction of the waterway link (reviving the old argument of "naturalness," he had used against the revisionists in the early 1920s; page12 of the report). At the meeting, Smrček also noted how the possible waterway connection and transit were seen as "threatening" the state, while existing railway transit and planned road transit did not arouse such sentiments (page 8). Report on the meeting of Danube-Oder-Elbe Committee in Prague on October 20, 1936 (NAČR, MVP, 292).

on the technical features of the project.[182] Nonetheless, German support remained conditional. Germany would cooperate on the canalization of the upper Oder between Cosel (Kozle) and Moravská Ostrava, provided Czechoslovakia made decisive moves towards completing the link down to the Danube.[183]

The situation became more complicated in November 1936, when Germany withdrew from all River Commissions.[184] The revival of the traditional bilateral cooperation, transferring the river administration back from international to national authorities, also meant the restitution of German domination on the Elbe and the Oder, because Germany, as a downstream country, controlled access to the sea. Following the German withdrawal, International Commissions on both rivers were abolished because the participating Western governments either openly supported Germany or applied the appeasement policy.[185] Czechoslovak business circles reacted by calling for the immediate construction of the DOE canal. Had it been completed, the canal would have secured reciprocal relations on waterways between Czechoslovakia and Germany. Without the canal, Czechoslovakia had nothing to offer in exchange for free shipping on German waterways when it came to inland navigation.[186]

Shortly after its withdrawal from the commissions, Germany invited Czechoslovakia to a bilateral meeting of experts on inland navigation. The delegation, led by engineer Josef Bartovský, visited the construction site of the Rothensee boatlift, which connected the Elbe to the *Mittellandkanal*. While the formal agenda covered German plans to re-construct the Elbe, informal negotiations suggested Germany would reject any attempt to establish a formal agreement guaranteeing freedom of shipping for Czechoslovak vessels. [187] In return, the Czechoslovak delegation showed the same reluctance regarding the DOE project, which, as Minister

182 Aide-mémoire October 22, 1936 (NAČR, MVP, b. 292).
183 Former German minister of transport, Julius Krohne, openly stated this position at the Danube-Oder-Elbe Committee meeting in Prague on November 19, 1935, when he called for a clear statement from the Czechoslovak authorities, without which Germany could not proceed with the canalization of the Oder upstream to the Czechoslovak border. Report on the meeting (NAČR, MPOŽ, b. 2543), 4. For a detailed discussion of German archival material on this subject, see: Andělín Grobelný, "Projekty odersko-dunajského průplavu a československo-německá jednání v meziválečném období," *Ostrava: Sborník příspěvků k dějinám a výstavbě města*, vol. 10 (1979): 312-334.
184 The decision to withdraw from the commissions was announced in a note on November 14. Smlouva o mezinárodnosti řek na německém území – výpověď (AMZV, IV, b. 130, November 14, 1936).
185 The British delegation felt that when Germany withdrew and Italy would not attend the next meeting, a satisfactory settlement depended on direct negotiations between the governments involved. However, there were only two riparian states: Czechoslovakia and Germany (AMZV, IV, b. 130, December 29, 1936).
186 Memorandum Národohospodářského svazu Moravskoslezského v Moravské Ostravě (NAČR, MVP, b. 292, February 25, 1937), 5.
187 Germany presented its extensive plan to upgrade the river from the coast to the Czechoslovak border for 1200t vessels before 1942. Technické otázky labské. Styk s Německem. Prohlídka technických prací na německém Labi (AMZV, IV, b. 130, October 5, 1937).

Dostálek concluded in his report on the meeting to the Ministry of Foreign Affairs, "is now more topical than ever ... when Silesian coal is about to lose the Berlin market to the *Ruhrgebiet,* after the *Mittelandkanal* is open, they (Germans) need to get access to the Danubian markets."[188]

The move towards the actual preparation of the canal project announced by the DOEK, started to take shape in the summer of 1937. At this time the former minister of foreign affairs and current president of state, Edvard Beneš, visited Moravská Ostrava, the biggest industrial center on the Czechoslovak Oder. Here, representatives of various local industries and interest groups confronted him with the canal plans. Beneš responded by openly declaring support for the project.[189]

Only a few days later, Josef Bartovský presented a "state of affairs" report on the DOE canal. On September 10, 1937, the Head of the MVP's Inland Navigation Department stressed that, after the conclusion of the canal/riverbed dilemma, the remaining issue was the crossing of the canal with the Morava. Nationalization of the Austrian project resulted in relocation of the lowest section of the canal to the left, Czechoslovak, bank of the river.[190] This information was accompanied by a letter urging the government to make a quick decision on state participation in the funding of the canal construction.[191] The Ministry of Railways tried to slow down the process by requiring that the canal be discussed by the recently established National Transport Planning Committee (*Komise pro sdělání dopravního plánu*), where the railway specialists would easily overpower the supporters of the waterway. While canal promoters successfully deflected such an attack, the debate among government departments became tedious. The leading representative from the Ministry of Trade noted: "nobody achieves anything unless the sectoral interests are harmonized."[192]

The canal debate was gaining momentum. Two months later, on November 11, journalists (and hydraulic engineers) celebrated the completion of the weir Koblov-on-Oder as the cornerstone of the DOE canal.[193] Organizations supporting the

188 Technické otázky labské. Styk s Německem. Prohlídka technických prací na německém Labi (AMZV, IV, b. 130, October 5, 1937). Jan Dostálek (1883-1955), a construction engineer, represented the Czechoslovak Popular Party in coalition governments throughout the 1930s as minister of Public Works (December 7, 1929-September 22, 1938) with a short break when he led the Ministry of Industry and Trade (February 2, 1934-May 28, 1935).

189 "Prezident ve Vítkovicích", *Národní listy*, 24 August 1937.

190 Stav přípravných prací kanálu Odersko-dunajského (NAČR, MVP, b. 292, September 10, 1937).

191 In return, the government asked other ministries for their opinions. However, the required information was not gathered before the end of the year (NAČR, MPV, b. 292, December 29, 1937).

192 He presented this report at the Czechoslovak session of the Danube-Oder Committee meeting organized by the Central Czechoslovak Chambers of Commerce in Prague in April 1937 (NAČR, MPOŽ, 2543).

193 The canalization of the Czechoslovak Oder started in 1931, with Koblov the only weir on the Czechoslovak stretch of the river. This was the very first step in making the Oder navigable on Czechoslovak territory. "První krok k uskutečnění Dunajsko-oderského průplavu," *Lidové Noviny*, 19 December 1937.

canal held a celebratory convention for the opening of the weir. All the usual participants of Waterways Conventions attended. Also notable was the strong position of Slovakia, which became very active and interested in the waterways program in 1937.[194] Last but not least, one of the speeches at the meeting signified the final transition from the transnational to the German-led bilateral form of organization of Central Europe. Josef Volenec, a hydraulic engineer from Ostrava and longtime supporter of the canal, revived the almost forgotten idea of regional cooperation within the MBV. Despite admitting that the formerly inter/trans-national organization had been incorporated in the recently established German imperial waterway administration, he advocated the organization as the only one capable of satisfying "our [Czechoslovak] demands," unlike other geographical frameworks of cooperation, such as the Danubian *Donauraum* or the *Little Entente*.[195]

During the Czechoslovak president's visit to Ostrava, representatives of the local mining and metallurgical industries (*Vítkovické horní a hutní těžířstvo*) – crucial members of the DOEK – declared their support for the construction of the DOE canal in the form of a one million-crown donation. The gesture was readily accepted and, within a few months, the brand new organization was established: the Danube-Oder-Elbe Society (*Společnost Dunajsko-Oderského průplavu*, DOECS).[196] Its founders faced a two-fold challenge. First, they needed to formulate an achievable and sufficiently specific strategy for the realization of the canal. At the same time, they had to devise a mechanism for close cooperation with state authorities responsible for the project, in order to avoid possible duplicity of efforts. Furthermore, private industries, as investors, wanted to maintain control over the project.

The founding meeting of the DOECS held in Prague on February 5, 1937, established several specialist committees. The DOECS organizing committee developed a plan to combine state institutions, private participants, and large industry in a working conglomerate. In the summer of 1938, the MVP agreed on terms

194 Slovakia was officially one of four autonomous lands of the Czechoslovak state, along with Bohemia, Moravia-Silesia, and Ruthenia. In the summer of 1937, the capital of Slovakia, Bratislava, hosted a large exhibition devoted to the waterways and the Danube. In November, the local Chamber of Commerce organized a debate on the canal issue and the Slovak parliament subsequently granted two hundred thousand CZK for preparatory works on the DOE in Slovak territory. The project was backed by influential Slovaks: Josef Kállay, former Czechoslovak Minister of Slovak Affairs (1921-1927) and influential banker; and Kornel Stodola, member of the Czechoslovak parliament (1920-1925), senator (1925-1938) and president of the Bratislava Chamber of Commerce. See Kállay's article in Slovenský deník, December 10, 1937.
195 Report from the working meeting of the Moravian-Silesian-Slovak water associations, held on December 18, 1937 at Moravská Ostrava town hall. Zápis z pracovní schůze předsednictev vodohospodářských spolků moravsko-slezsko-slovenských, konané dne 18. prosince 1937 v zasedací síni městské radnice v Mor. Ostravě (TMB, Smrček, b. 133): 9.
196 Společnost Dunajsko-oderského průplavu: Stanovy, (NAČR, MVP, 292, November 23, 1937).

of cooperation and DOECS committed itself not only to financially support the institution and the canal-supporting campaign in the media, but also to take responsibility for technical surveys and background materials. As a result, the new Canal Group (*Průplavní skupina*) was created at the ŘVC, housed and paid for by DOECS.[197]

The DOECS technical committee, presided over by ministerial official Bartovský, met for the first time in early April, 1937. They discussed Professor Smrček's paper, which provided a summary of the current state of the project accompanied by a schedule for the canal construction. His paper summed up what was later referred to as the "Czechoslovak lock variant" of the Danube-Oder connection. More precisely, based on the results of twenty years of MVP, ŘVC and Water Management Fund operations, Smrček compiled an "inverted draft" of the general design. In order to identify the individual steps that would lead to the realization of the project and their sequence, Smrček identified gaps in the existing documentation. He proposed a four-step strategy. Firstly, the largest vessel type and the routing on the lower Morava between Děvín and Otrokovice required immediate attention. Secondly, the general technical standards of the canal had to be precisely specified (locks, etc.) and the water supply for the entire route needed to be solved. This would enable execution of the third step: the launch of the preparatory phase of construction works on the lower Morava from Děvín (Danube) to Hodonín (geological examination, detailed surveying, land expropriation, etc.). The fourth and final step was simultaneous construction of the remaining parts of the canal. However, Smrček concluded that it was vital, even for the execution of the first step, to secure unconditional support from the Czechoslovak Government.[198]

Indeed, many issues concerning the technical layout of the canal remained unresolved. Smrček, moreover, was not sufficiently acquainted with all the facets of the negotiations and conflicts caused by the project at various levels of state

197 The department consisted of former employees of the ŘVC branch in Olomouc, established there on the basis of the 1931 Water Act to enquire into the possibility of canalization of the Morava (two engineers and one assistant), six engineers and three auxiliary workers hired by DOECS, and officials transferred there either from the former Czechoslovak institutions in Slovakia and Ruthenia or from institutions disbanded after the establishment of the Protectorate (Ministry of Defense, Ministry of Foreign Affairs). The department started operations in March 1939, only a few days before German troops marched into Prague. For example, Vojtěch Krbec, Chairman of the Advisory and Technical Committee for Communications and Transit of the League of Nations, spent the war years as head of the fifth section of the Navigation department – construction. Výroční zpráva k II. řádné valné hromadě SDOP konané dne 22. listopadu 1939 (TMB, Smrček, b. 133), 6-8.

198 The report reads like a questionnaire for the public authorities. Smrček enumerated many as-yet-unresolved questions requiring immediate attention to ensure the project could proceed. For example, which variant of routing in the Silesian coal basin (if any) has been chosen? What were the official results of the canalization/canal debate? Návrh časového postupu a pořadí přípravných prací pro brzkou realisaci stavby průplavu dunajsko-oderského (TMB, Smrček, b. 128, March 30, 1938).

administration, and private industries. In his ambiguous role as leading state official and DOECS representative, Bartovský organized a meeting of the ŘVC and MVP at Olomouc in the summer of 1938, to discuss and evaluate Smrček's report and prepare a more detailed and informed analysis of the current state of the project, focusing on major conflicts and the most problematic parts of the existing canal design.[199] The final document divided the entire route between the Danube (village of Děvín) and the Oder (the town of Bohumín) into twelve sections.[200] This paper represented the first official draft of a national version of the Danube-Oder canal.

Figure 2.10 – The national waterway networks as envisioned by industrialist Jan Antonín Baťa. He saw the waterways, especially the DOE, as national projects to unite Czechoslovak territory. To achieve that, Baťa added the south Slovak canal (the line along the southern border of Slovakia) to the original waterway scheme as proposed by the Czechoslovak Act of 1931. Source: Jan Antonín Baťa, Budujme stát (pro 40,000,000 lidí) (Zlín: Tisk, 1937), 49.

199 Protokol sepsaný 9.6.1938 v Olomouci (MZA, H42, b. 275, June 9, 1938). One identified weak points was water provision for the canal. In July 1938, ŘVC together with MVP and DOECS organized a field trip to see the actual sites of the projected water reservoirs in Northern Moravia. Protokol sepsaný ve dnech 20-22 července 1938 v Moravské Ostravě (MZA, H42, b. 275, July 22, 1938).

200 From the Danube by Děvín, the canal continues on the left (Czechoslovak) bank of the Morava and crosses it by aqueduct between Kostice and Brodské. It then continues on the right bank past the city of Hodonín (moved out of the center – Austrian project) to Baťov-Otrokovice, a city created recently around Baťa factories, where the canal again crosses the river and a port is situated. From Baťov, the new routing followed the old Austrian one around the city of Přerov (planned port and starting point for the future Elbe branch) to Hranice. Here, instead of using the already infrastructurally overused Bečva valley, ŘVC proposed an alternative routing on a hillside to Německý Jeseník. From there to Mariánské Hory, the route again followed the old Austrian project. The final descent to the Oder and the city of Moravská Ostrava was approved earlier by national authorities; only the precise position and dimensions of the Vítkovice port were not yet clear. Ibid.

Germany's growing political offensive did not revive fears of Mittel-Europeanization. In a tense pre-war atmosphere, the symbolic power of the canal as a large-scale national technology project simply overshadowed the threat of its possible Germanizing impact. On the contrary, the national press depicted the recently completed Koblov weir and the Kružberk reservoir as parts of the canalization of the Oder being decisive steps towards a bright future for the nation, a nation that would soon be located on the European waterway crossroads. Jan Antonín Baťa, successor to the now-deceased Tomáš Baťa as head of the family firm, published a treatise emphasizing the need to build a national infrastructural network for the future "40 million Czechoslovaks," including a chapter on the DOE and other planned waterways.[201] Various municipalities, regional associations and interested private parties published memoranda appealing for the construction of the canal.[202] On April 26, 1938, the Czechoslovak Parliament passed a resolution supporting the canal project.[203] Milan Hodža, Czechoslovak prime minister and tireless advocate for Central Europe economic integration,[204] in an interview with the leading daily *Národní listy*, even reversed the negative stigma of the DOE, expressing the belief that the "canal as the common economic enterprise would converge our fatherland with the German Reich in a march towards common civilization aims."[205] However, the international situation was escalating quickly; the Munich Agreement and subsequent occupation of Czechoslovakia proved Hodža wrong: the convergence actually preceded the construction of the canal.

Conclusion

In the circumstances of post-war Central Europe, the slow progress of the canal project was by no means surprising. On the contrary, given the tense relations in the region and dominant perspective on waterways as tools of geopolitics, it is surprising

201 The population of Czechoslovakia at that time was approximately fifteen million. Stanislav Holubec recently analyzed Baťa's plan in his study of the ideology of Tomáš and Jan Antonín Baťa. Holubec suggests that strong utopian and technocratic tendencies, especially visible in the work of Jan Antonín, were influenced by the modernization and rise of both the USA and USSR and also by Italian fascism. Stanislav Holubec, "Silní milují život. Utopie, ideologie a biopolitika baťovského Zlína," *Kuděj* 11, no. 2 (2009): 30-55.
202 Memorandum severomoravsko-slezského svazu průmyslníků (NAČR, MVP, b. 292, September 8, 1937), Memorandum národohospodářského sboru moravskoslezského v Ostravě (NAČR, MVP, b. 292, February 25, 1937); Národohospodářský sbor pro Valašsko a přihlehlé kraje (NAČR, MVP, b. 292, October 14, 1937), Labsko-vltavský sbor národohospodářský v Praze (NAČR, MVP, b. 292, December 2, 1937).
203 Resoluce 147 schůze sněmovny NS RČS April 26, 1938 pro DOL (AMZV, IV, 170).
204 Marta Goňcová, "Dr. Milan Hodža a pokusy o integráciu strednej Európy 1918-38," in *Češi a Slováci a východní Evropa ve 20. století*, ed. Stanislav Vodička and Vladimír Goněc (Brno: Vojenská akademie, 1994), 161-165.
205 Milan Hodža quoted in newspapers: "Průplav Odra-Dunaj," *Národní listy*, 5 February 1938.

that the project not only survived on the agenda of state institutions, but actually moved towards realization, albeit slowly. In addition to the engineers relentlessly driving the project, the general economic situation also affected the process. During the Great Depression, leading Czechoslovak industrialists sought cheap transportation, and investment in waterway infrastructure seemed an appropriate option. Equally, the significant drop in international trade revived calls for economic cooperation in the region. Thus, the early 1930s represented a heyday for the canal, with initiatives coming from outside (MWT, MVB, *Mitteleuropa-Institut,* International Labor Organization) and from within (Baťa).[206] Close contacts established at international negotiations on the canalization of the Czechoslovak Oder, and also during meetings at transnational, mostly Mitteleuropean, level (such as the MWT or MBV), stirred the trans-border cooperation of locally-interested parties, which ultimately played an important role in the revival of the project in 1937. At the same time, a comprehensible vision of the DOE as a national symbolic project appeared. Facing the threat of war, industries, engineers, and the state seemed to finally align their former conflicting interests: the DOE project, with strong support from Germany, drew closer to realization in the inter-war period.

The image of the canal as a tool of Mittel-Europeanization of the defined territory largely affected Czechoslovak decision-making on the issue. The most striking feature of the period, as seen from the perspective of the canal, was the almost complete lack of international diplomatic debate. Between the wars, the Czechoslovak state followed the example of its imperial predecessor and left the practical negotiations to the interested parties and experts. Virtually all trans-border communication and cooperation regarding the construction and operation of the canal remained restricted to non-governmental parties. The protocol of 1926, together with exchanges of diplomatic notes in the 1930s, represented rather modest exceptions to the rule. Between 1925 and 1932, the state proved to be more concerned with its own consolidation than with any form of transnational and international cooperation, especially compared to the lively transnational cooperation of non-state parties.

206 In the wake of the Great Depression, the International Labor Organization (Abb. ILO) launched a project on Pan-European infrastructural development. Its architects tried to direct the development and employment-supportive policy of individual states towards transnational European networks, following the 1930 Briand plan for European union. In the first and rather hastily produced reaction to the call for submission of eligible projects, the Czechoslovak Ministry of Social Welfare offered three infrastructural projects of international importance. The DOE canal appeared on the list alongside the construction of long-distance roads and the damming of the Berounka River. However, it disappeared from the debate before the next round of negotiations; letter to Albert Thomas dated June 24, 1932, signed by Minister Dr. Ludwig Czech (AMZV, II, b. 627).

The leaders of the Czechoslovak state, most prominently Edvard Beneš, always felt that the canal project was a step towards realizing a German *Mitteleuropa*. While Smrček was able to protect the original canal route from technically unjustified "nationalization," he did not succeed in his fight against the ideas that triggered the push for such change in the first place. The Great Depression brought a new and strong impetus for integration in the region, but the "fear of *Mitteleuropa*" effectively prevented such plans coming to fruition.[207] In the end, the wide range of Central European integration models debated in the period was reduced to a simple question: with or without Germany? The answer from the Czechoslovak side remained strictly negative towards any cooperation with its western neighbor until the late 1930s.

Nonetheless, foreign policy requirements had a limited effect on private players' actions. Czechoslovak hydraulic engineers gradually developed a specific strategy to counter the fear of *Germanization by canal* and created an image of the DOE as a tool to influence the inevitable Mittel-Europeanization (German controlled network construction) of the region and benefit from it. The former highly national position held for instance by Smrček in 1919, eroded over time. When the state proved to be a hindrance to the DOE, Smrček considered the canal a far more promising means of ensuring security and prosperity than the independent state – and, unlike the state, one that would endure.

While the historical literature on the process tends to construct a set of conflicting visions of Central Europe, engineers working on the DOE seemed to ignore such political antagonism. Of course, politics regularly and inevitably interfered with the "scientific" network planning, on both the national and international stage. When the MBV considered its affiliation to the MWT, Czechoslovak engineers objected, using an argument similar to the one they raised against the "nationalized" routing of the canal; namely, that politics should not meddle with purely technical matters. Considering their profession to be apolitical, the engineers bridged the conflict between the German and non-German perceptions of *Mitteleuropa*.

Notwithstanding the political tensions between the Czechoslovak and German visions of Central Europe, which considered the construction of the canal virtually impossible during the inter-war period, Czechoslovak engineers managed to harmonize the Czechoslovak canal project with the German plan for the

207 Beneš simply saw Germany and the *Mitteleuropa* plans as a major threat to Czechoslovak sovereignty and blocked any attempts on cooperation in the region, which included Germany. In a 1931 telegram to Vienna, Beneš clearly specified his position, stating: "we can take part in a united Europe with France, Belgium and Poland, but not in *Mitteleuropa* without them." Quoted in: Drahomír Jančík, "Celní unie v úvahách o středoevropské hospodářské integraci (1918-38)," in *Československo a střední Evropa v meziválečném období*, ed. Jaroslav Pátek (Prague: Karolinum, 1993), 61-91, here 62.

Mitteleuropean network. People like Smrček and Zimmler, who operated across the political and spatial hierarchies, played a crucial part in such a transnational standardization from below. Somewhat paradoxically, the ŘVC eventually promoted the material Mittel-Europeanization of Czechoslovak territory so feared by the political national representation.

Chapter 3
Canal as Artery for Nazi Expansion

Some members of the [Czechoslovak] parliament had the opportunity to see the advancement of waterway constructions in Germany. Huge investments are directed into waterways there. Germany does not fear, as we do, that by constructing waterways, the future of the railways might be endangered. Germany is fully aware of the national economic importance of waterways and does not regret any costs. Canals are being built there, connecting one river to the other …

Mr. Josef Chalupník, Prague, December 15, 1937[1]

In December 1937, during a Czechoslovak parliamentary hearing on the state budget, a Silesian MP named Josef Chalupnik tried to persuade the National Government of the need for transport infrastructure investments in general and the vital importance of constructing the Danube-Oder-Elbe canal in particular. Reading between the lines, the strong and rather explicit message was: follow the courageous and progressive example of Germany, let's do it the German way!

The German annexation of so-called Sudetenland (border regions of former Czechoslovakia with an ethnically German majority) changed the territorial shape of the country. The annexation also transformed the atmosphere in society. The Munich Agreement, signed by the leading European powers in the early hours of September 30, 1938, turned the independent Czechoslovak State into a defenseless island surrounded by Nazi Germany. The truncated republic lingered on under the shadow of Nazism and the previously feared Germany suddenly became the official exemplar of successful organization of state affairs.[2]

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1 Josef Chalupník was a social-democratic MP and later senator, union leader, and mayor of Vítkovice (1918-1924); after its incorporation into the city of Moravska Ostrava, also mayor there (1935-1939). Blažena Przybylová and Josef Šerka, *Muži s mocí. Portréty představitelů města Ostravy 1918-1989* (Šenov u Ostravy: Tilia, 1999), 26-28. Quoted from "Těsnopisecká zpráva o 95. schůzi Senátu Národního shromáždění Republiky Československé v Praze ve středu dne 15. prosince 1937," *Společná česko-slovenská digitální parlamentní knihovna*, http://www.psp.cz/eknih/1935ns/se/stenprot/095schuz/s095004.htm. Accessed 11 October 2010.
2 Fascination with German success was common in a country abandoned by democratic leaders. Jan Gebhart and Jan Kuklík, *Druhá republika 1938-1939. Svár demokracie a totality v politickém, společenském a kulturním životě* (Prague; Litomyšl: Paseka, 2004).

This development had a direct and instant effect on the Danube-Oder-Elbe (DOE) canal negotiations. Borders now interrupted the canal route, previously located exclusively on Czechoslovak territory. Together with the antecedent Nazi *Anschluss* of Austria (March 1938), the annexation of Czechoslovak Sudetenland put both ends of the proposed artificial waterway into German hands (the upper Oder in Czechoslovak Silesia, as well as the mouth of the Morava into the Danube by Děvín, lay within the lands ceded to Germany).[3] The same was true for the summit reservoir, although its connection to the upper Oder remained on Czechoslovak soil. The redrawing of the map also caused other indirect complications. By occupying part of the Upper Oder river basin, Germany separated the planned water reservoirs of Spálov and Kružberk from the part of the canal these structures should supply with additional water. Similarly, the relegation of parts of Southern Moravia to Germany affected the proposed branch canal to the city of Brno, which now passed through German territory.[4] Furthermore, following the German example, Poland occupied the Czechoslovak right bank of the Oder between Moravská Ostrava and Bohumín.[5] According to a report for the Danube-Oder-Elbe Canal Society (DOECS), only 149km of the originally planned total of 260km of the route from Bohumín (Czechoslovak-German border) to Děvín (Czechoslovak-Austrian border and to the mouth of the Danube) remained on Czechoslovak territory.

Practical application of the Munich Agreement required detailed negotiations of various issues affected by the annexation. Among other things, re-shaping national territory affected the national transport networks, as parts of the existing and planned main lines lay on the territories relegated to Germany. The agreement originally envisioned forming an international committee to prepare a detailed plan for the annexation of Czechoslovak borderlands and oversee the process. According to the third supplement to the Agreement, the committee should also act as arbitrator in the event of a disagreement between the parties.[6] By the end

3 In November 1938, the official name of the country changed to Czecho-Slovakia. The hyphen illustrates the upheaval of nationalist tendencies in the public space and the relatively quick collapse of the idea of Czechoslovakism. The autonomy of Slovakia as well as Ruthenia was declared by the special Act on November 22, 1938. Ibid., 88. Here we use the old form (Czechoslovakia) throughout the text for the sake of clarity.

4 Report on the effects of the land taking the water supply for the DOE canal and on the shortening of the canal route in Czechoslovakia. The DOECS's central committee met to discuss the report prepared by Hudlický (officially an employee of the ŘVC as head of the Olomouc branch) at a special meeting on November 10, 1938. Zpráva o vlivu zabrání území na zásobování průplavu vodou a o zkrácení průplavní trasy v ČSR (MZA, H42, b. 4).

5 Poland invaded the northern parts of Moravia and Slovakia with an alleged majority of ethnically Polish people. Gebhart and Kuklík, *Druhá republika*, 24-26. For the Polish perspective see: Jerzy Tomaszewski, "The Aims of Polish Foreign Policy before Munich," in *Mythos München = Le mythe de Munich = The myth of Munich*, ed. Fritz Taubert (München: R. Oldenbourg, 2002), 123-127.

6 The full text of the Munich Agreement is available elsewhere; e.g., Bořivoj Čelovský and Pavel Stránský,

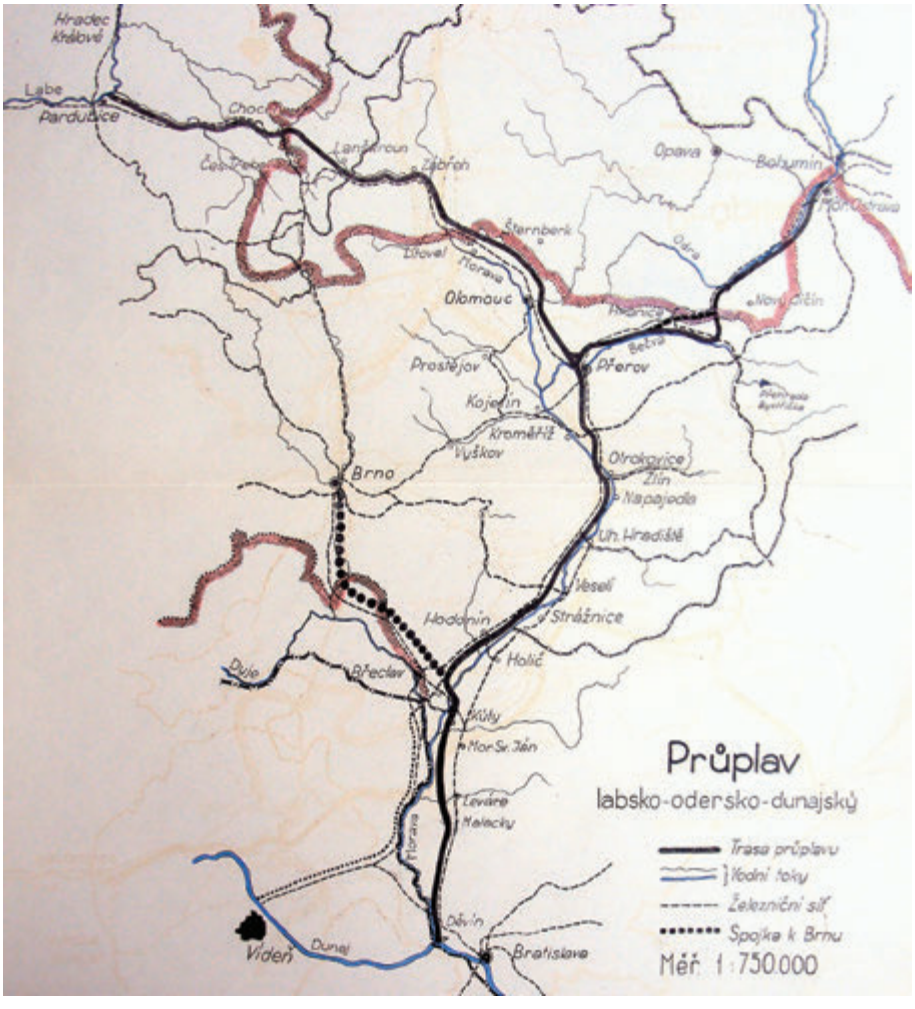

Figure 3.1 – After the 1938 Treaty of Munich, the planned DOE route became interrupted by national borders. The map prepared as an evaluation tool to measure the impact of the Treaty on the DOE project shows how both planned and existing national infrastructural grids (the dashed line indicates railways) were fragmented beyond practical use. The red line indicates Czechoslovakia's new borders. The dotted line shows the alternative German canal route, linking it to the Danube in Vienna. All the DOE branches, including the side-canal to Brno, intersect on German territory. Source: MZA, H42, b. 93.

of October 1938, however, the committee had been confined to the role of a mere diplomatic stand-in and Germany took the lead.[7]

The agenda items for the German-Czechoslovak talks on inland navigation

Mnichovská dohoda 1938 (Šenov u Ostravy: Tilia, 1999), 387-389.
7 Gebhart and Kuklík, *Druhá republika*, 22.

in Berlin in the autumn of 1938, clearly documented the form of the negotiations. The first point required Czechoslovak resignation from the International Commissions of the Elbe and Oder. Under point five, the Czechoslovak inland fleet committed to adapting to German navigational standards and administrative rules and to the development of Czechoslovak transport with German seaports. Furthermore, Germany re-repatriated the part of the Czechoslovak fleets on the Oder, Elbe and the Danube that was created after World War I. The cooperation on the development of the Elbe, Oder and Danube (points 2 and 3) and construction of the Danube-Oder Canal (point 4) were the only items without apparent negative consequences for Czechoslovakia. Czechoslovak delegates faced constant pressure from the German authorities, who presented their proposals in the form of claims and orders. Furthermore, while experts in both parties were able to find acceptable solutions, the German claims tended to increase. As one Czechoslovak representative noted, "negotiations in [technical] subcommittees would continue smoothly, but the results achieved were always turned down by the [German] powers that be."[8]

The German authorities considered that their priority was the construction of the DOE canal. Point four of the above-mentioned list makes this clear. The proposal they put forward in Berlin on November 16 consisted of five points, stating "mutual, sincere interest" in the development of the project and setting the framework for future discussions on routing and technical issues. The first point of the so-called *Protocole* affirmed the common decision of both parties to build the canal and to finance construction on their respective territories. The second point envisioned the establishment of a bilateral commission of experts that would administer the project development and later on its potential execution. The fourth and fifth points presented an illusion of mutual respect and cooperation, acknowledging reciprocal relations in future navigation on the canal, as well as initial German acceptance of the future construction of the branch connecting the Danube-Oder canal to the Elbe. However, the third point openly established the superiority of German administration in all decision-making as regards planning, construction, and operation of the future canal.[9]

8 Report on the Czechoslovak navigation experts meeting held on November 22 in Berlin. Zápis o poradě čs.plavebních expertů, konané dne 22/XI.38 v budově Čs. vyslanectví v Berlíně (MZA, SDOP, b. 122, November 25, 1938), 5-6.

9 The protocol was accompanied by a list of so-called "Explanations" (*Erläuterungen zum Deutsch-Tschechoslowakischen Protokoll über den Bau eines Oder-Donau – Kanals*), which reacted to three issues raised during the talks: (1) the first point of the protocol does not eliminate the possibility of establishing a Czechoslovak-German company to build and operate the canal as suggested by Czechoslovak delegates; (2) the head of the planned central Czechoslovak-German canal-building authority would be appointed by the German government and the deputy by Czechoslovakia; (3) the German side had no objection

Czechoslovak canal experts could only fully enter negotiations after signing the Protocol. Neither the representatives of the Ministry of Public Works' Navigation Department nor of the ŘVC participated in these talks in Berlin.[10] However, they did dominate the Czechoslovak section of the Expert Commission for the Construction and Operation of the Oder-Danube Canal, established as a result of the talks.[11] Josef Bartovský, in his capacity as head of the Navigation Department, organized a preparatory meeting before the first session scheduled for December 20 in Berlin. Naturally, Bartovský wanted to discuss the Czechoslovak position with other individuals and institutions interested in the canal issue and focused on the DOECS. The main causes for concern were rumors of an alleged German alternative route. Bartovský opened by presenting a summary of anticipated demands. Firstly, the German authorities had allegedly decided to make a detour around the city of Moravská Ostrava, thereby depriving the city of cheap transport and an additional water supply. Secondly, at the southern end of the canal, Germany preferred the old Austrian trajectory along the left bank of the Morava at the confluence with the Danube in Vienna, which omitted Bratislava. Bartovský was not so naïve as to believe that the routing would be negotiable. Nonetheless, together with specialists from other ministries and DOECS delegates at the meeting, he prepared a list of points that would prevent the most negative effects of the putative German alternative; in particular, ensure that the city of Moravská Ostrava remained directly connected to the canal.[12]

In Berlin, Bartovský soon realized that the rumors were correct. The meeting was chaired by Johannes Gährs, undersecretary at the Reich Transport Ministry who had been responsible for hydraulic architecture since 1921. The German delegation included Georg Franzius, a leading official from the Wroclaw based Oder Authority, Fuhrmann, director of the Vienna Directorate for the Construction

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to the possible construction of the canal branch to Brno. The document was signed by Division General Karel Husárek, Czechoslovak Minister of Public Works, and Johannes Gährs of the German Ministry of Transport; Die deutsche-tschechoslowakisches Protokol über den Bau eines Donau-Oder Kanals (MZA, H42, b. 275).

10 With the exception of Rudolf Zástěra. The talks addressed the practicalities of inland navigation relating to the Czechoslovak fleet's operations, not investment plans. Several navigation specialists attended these meetings including Rudolf Zástěra (Ministry of Public Works); František Sitenský (Ministry of Trade); Jozef Karlický from the Bratislava branch of the Navigation Office; Antonín Hanáček, former navigation specialist at the Ministry of Trade and then-director of the Czechoslovak Elbe Shipping Company; Vojtěch Krbec, former head of the League of Nations Inland Transport Committee; and Jindřich Choleva, head of the Czechoslovak delegate office at the International River Commission. For discussions on the division of the Oder fleet and technical issues, Czechoslovakia was represented by Karlický, Sitenský, and Zástěra.

11 German version: *Sachverständigen – Komission für den Bau und Betrieb des Oder-Donau-Kanal;* Czech version: *Komise znalců pro stavbu a provoz odersko-dunajského průplavu.*

12 Minutes of an inter-ministerial meeting. Záznam o meziministerské poradě (MZA, H42, b. 275, December 16, 1938).

of Waterways, with ministerial councilors Fritz Krieg and Hans Hoebel. The Czechoslovak side was represented by delegates of the ministries involved: Bartovský and Rudolf Zástěra of the Ministry of Public Works, Václav Topol of the Ministry of Agriculture, and engineer Jozef Karlický of the Navigation Authority in Bratislava.

The initial results were positive: both sides agreed on the "Mitteleuropean" 1000t vessel-type (lock width 12m and depth 3m), despite the fact that the locks on the German Oder between Cosel and Wroclaw, built according to the Prussian 1905 Waterways Act, would have to be enlarged. The Czechoslovak delegation presented the design to their German colleagues who scrutinized the Czechoslovak project and suggested adjustments aimed at aligning the canal with the German standards of the day. The Germans also pursued changes motivated by the Nazi *Grossraumwirtschaft* policy.

Regarding the routing, members of the commission shared the opinion that a study *in situ* must precede any further decisions. Nevertheless, the German delegates indeed preferred Vienna over Bratislava (for economic reasons) and promoted the feared detour around Ostrava, although they agreed to build a port in Moravská Ostrava connected to the canal by a special branch. A proposed transposition of the canal route in the Oder valley from the right bank of the river to the left was a reaction to the Polish annexation of the right bank.[13] The German delegates also raised the question of the riverine variant, but eventually accepted the Moravian agricultural circles' argument for the lateral canal along the Morava.

The main dispute was the canal's general dimensions especially concerning the type and number of locks. The Germans demanded the locks be eliminated by installing ship lifts at both ends of the summit reservoir, in order to speed up transit traffic. Emphasizing the role of the canal as crucial transport infrastructure of the *Grossraumwirtschaft,* the Germans also required a limited number of twin barge train locks, each with a fall of at least nine meters; that is to say, significantly higher than the Czechoslovak proposal of three to ten meters.[14] Furthermore, the cross-section of the waterway should follow the example of the recently-completed north German *Mittellandkanal*; in other words, significantly larger than that proposed in the Czechoslovak project.[15] Nonetheless, when Karlický asked about the possible

13 Although not voiced in this way at the meeting, subsequent developments favored such presumptions; that is, a return to the original Czechoslovak right-bank variant after the occupation of Poland.
14 Germans based their estimate on the *Institut für Konjunkturforschung* report (Institute for Business Fluctuation Research) which showed annual transit on the canal to be between 10 and 15 million tons.
15 In dredged parts, the width was 37m and the middle depth 3.5m. In parts elevated above the ground, the corresponding dimensions were 41m x 4.0m (former Czechoslovak projects operated at 34m). Jan Rosík, "O příčném profile průplavu," *Plavební cesty Dunaj-Odra-Labe* 1, no. 5-6 (1940): 103-109, here 107. Experience in the German waterway program also influenced the suggested use of clay for sealing banks.

agricultural application of the project, the German response was not entirely disapproving – on the condition that neither agricultural facilities nor their water consumption would clash with or slow down transportation.[16] On the other hand, the Germans rejected plans to install electric plants on weirs along the canal route, claiming these could potentially conflict with inland water transport.

Enlarged transit capacity would require additional water sources. The German delegation suggested holding further talks on the issue in Wroclaw between the Czechoslovak authorities and the German Directorate for the Oder River Basin. For the time being, the delegates generally accepted the Czechoslovak solution of water supply, including the projected dams on the now-German left bank of the Oder. Bartovský returned from Berlin extremely optimistic and looked forward to "bestowing tasks to the officials immediately after New Year's Eve". The commission meeting set the agenda for the future – a list of open issues included the type of locks, routing (especially in the Ostrava mining region) and financing, especially of the "enlargement" of the planned constructions on Czechoslovak territory, etc.[17] In his report for DOECS, Bartovský expressed the belief that construction work could start within two years. At the same time, he asked the society to continue covering the operation of the enlarged Canal Department of the ŘVC; otherwise, he would have to deal with the Ministry of Finance, which could slow down the course of action considerably.[18]

Despite the form of the agreement and the atmosphere in which it was signed, the Czechoslovak hydraulic engineers welcomed the Protocol and Expert Commission. They believed it to be the decisive step towards the long-desired realization of the project. Antonín Smrček, in an interview for *Lidové Noviny*, welcomed the agreement and called for maximum exploitation "of the opportunity to influence the routing on our territory" and of the economic potential of the canal.[19] While such an attitude might appear to exhibit a strange lack of loyalty to the state he once fervently helped build, it is important to realize that Smrček was first

16 Report of the commission of experts' first meeting on the construction and operation of the Danube-Oder canal, held in Berlin on December 20 and 21, 1938; Zpráva o I. zasedání komise znalců pro stavbu a provoz odersko-dunajskho průplavu konaném v Berlíně ve dnech 20 a 21 prosince 1938 (MZA, H42, b. 275).

17 Czechoslovak delegates attempted to explain that because it was Germany that would profit from the enlarged carrying capacity of the canal, it should cover the extra costs for the enlargement on Czechoslovak territory (estimated Czechoslovak transport would not exceed 1-1.5 million tons annually, which was ten times less than the German plan).

18 German delegates were even more optimistic and urged the development of the general design to enable construction works to start in 1939. Bartovský also mentioned his meeting with the retired minister Krohne, who assured him that the German claim for eighty-five percent of the Czechoslovak river fleet was negotiable. Poznámka pro spis (MZA, H42, b. 275, December 22, 1938).

19 He was eventually proved wrong on both points: the routing was determined by the German authorities and the canal was not executed. "Dunajsko-oderský průplav v popředí," *Lidové Noviny*, 17 Nov 1938.

and foremost an engineer, who saw his *opus magnum* close to realization. Only a few months previously, he had clearly revealed the hierarchy of his affiliations: "if there is a European interest … our state must not be the barrier for the navigation connection."[20] Having said that, who and what was the Europe he had in mind?

On Nazification

The events of mid-March 1939 opened the door for the far-reaching adoption of Nazi values and methods in preparing the DOE canal. The Expert Commission meeting, originally scheduled in Prague at the beginning of March, had to be postponed because Prague was hosting a visit from a different department of the German Government at the time.[21] On March 16, 1939, Adolf Hitler with his host arrived in Prague, where he declared Bohemia and Moravia a German protectorate. A day earlier, the Fascist government declared the independent Slovak state. The end of the Second Republic also meant the beginning of direct Nazification of the country.

The concept of Nazification was developed by contemporaries during and immediately after World War II as a tool to describe the gradual social process of adoption, voluntary or enforced, of the Nazi ideology and related practices and symbols. It served the needs of de-nazification, and thus focused predominantly on German territories. In this chapter, its original meaning is expanded to cover also the processes beyond the core territory of the Reich. In the history of the 1930s, Germany Nazification meant the formation of social consensus behind Hitler. In the Protectorate Bohemia and Moravia, on the territory occupied by Nazi Germany, Nazification was an exogenous phenomenon, a process aimed at transforming the newly acquired territories as part and parcel of Hitler's Empire.

The Nazi invasion of Czechoslovakia, or Europe for that matter, did not come with a well-defined concept of how to organize the newly acquired territories. Klaus Hildebrand, prominent historian of the Third Reich, divided Nazi foreign policy into three mutually antagonistic currents, two of which he saw as having successfully gained considerable acclaim among the political elite. While the first of these currents represented traditional imperialistic ambitions, articulated in the form of a conventional *Machtpolitik*, the second was based on racial-Darwinism,

20 Protocol of the second meeting of the DOECS' technical committee, held on June 15, 1938. Protokol o druhé schůzi technického odboru konané dne 15. června 1938 (TMB, Smrček, b. 133).
21 Report on the commission of experts' first meeting to discuss the construction and operation of the Danube-Oder canal, held in Berlin on December 20 and 21, 1938; Zpráva o I. zasedání komise znalců pro stavbu a provoz odersko-dunajskho průplavu konaném v Berlíně ve dnech 20 a 21 prosince 1938 (MZA, H42, b. 275), 10.

its ultimate goal being domination by the Aryan race over the various geographically defined *Lebensraum* (living space).[22] These two rival concepts competed over the shape and orientation of Nazi-ruled Europe and also over the future of the Protectorate.

While it is possible to foresee the ultimate goals of the Nazi vision for the future organization of the continent being defined by ideological racial imperatives, the actual politics was created on a day-to-day basis and subject to change depending on the current situation on the war fronts and the atmosphere within Germany. Instead of the uncompromising imposition of the Nazi regime with its racial values and principles, societies under Nazi rule experienced diverse and locally specific forms of Nazification. At any given time and place, Nazification reflected constant tension between the demands of racial ideology and the imperatives of imperial policy, thus the process acquired different forms.[23]

While these notions show some continuity and connection with Naumann's concept of German *Mitteleuropa*, none of them can be identified as its direct and linear descendant.[24] The Nazi vision of Europe stood in sharp contrast to certain ideas of inter-war liberal (*Mittel*) European federalists such as Hantos or Coudenhove-Kalergi. Since the early 1930s, *Mitteleuropa* disappeared from public discourse as the integrative (normative) concept and remained in use almost exclusively as a vague analytical geographical term.[25] The proponents of a German-dominated federation, based on the variously defined superiority of German culture, gradually freed up space for the Nazi concept of a racially-based Germanic Reich. The change in MWT's (*Mitteleuropäischer Wirtschaftstag*) form and policy after the take-over by pro-Nazi industrialists in the 1930s, which might be labeled Nazification, clearly illustrates such a shift. Similarly, the spatial imagination of contributors to the journal *Volk und Reich* reflects the process.[26]

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22 Hildebrand thought the socialists represented by the Stresser brothers were the weakest. Over and above the three currents, Hildebrand, as intentionalist in the debate over the *Sonderweg*, saw the dominant figure of Hitler as a relatively autonomous and ultimately decisive agent. Klaus Hildebrand, *The Foreign Policy of the Third Reich* (London: Batsford, 1973), 14-18.

23 This was actually true for the situation in Nazi Germany. Steven P. Remy, *The Heidelberg Myth: The Nazification and Denazification of a German University* (Cambridge, Mass.: Harvard University Press, 2002), 245.

24 See Chapter 1 for a discussion on the continuity of *Mitteleuropa* concepts in the inter-war period.

25 Elvert, while trying to prove a clear continuity, actually implicitly opposed such an assertion. While the first half of his treatise is based on newspapers, etc., for the second half (from the mid-1930s), he had to delve deep in the archives to find remarks about *Mitteleuropa*. Jürgen Elvert, *Mitteleuropa!: Deutsche Pläne zur europäischen Neuordnung (1918-1945)*, Historische Mitteilungen, 35 (Stuttgart: F. Steiner, 1999).

26 Ulrich Prehn, "Die 'Entgrenzung' des Deutches Reiches: Europäische Raumordnungsentwürfe in der Zeitschrift Volk und Reich (1925-1944)," in *'Mitteleuropa' und 'Südosteuropa' als Planungsraum*, ed. Carola Sachse (Göttingen: Wallstein, 2010), 169-196, here 175.

The foremost challenge to older conceptions was the ideological position formulated by Alfred Rosenberg, leading Nazi propagandist and author of the infamous articulation of Nazi ideology. Rosenberg saw Europe as an arena for the final battle between declining Roman Catholicism, represented by France, and the righteous ascent of the Nordic race, represented by Germany, which also had to defend the eastern border of Nordic civilization against the Soviet danger (Slavic Marxist-Jewish conspiracy). Rosenberg felt that Germany, especially its racial and ideological purity, was predestined to save Europe.[27]

However, there was a second reason for the fall of *Mitteleuropa* in German thinking. Its objectives simply became too narrow for the offensive Nazi politics. Elvert spoke in this context about the expansion from *volkische Mitteleuropa* towards *germanische Europa*.[28] Other authors refer to the transition to *Kontinentaleuropa*.[29] The final limits of Nazi territorial ambitions were neither clear nor consistent over time.[30] Nazi leaders generally preferred to remain unclear in terms of their visions and, to a certain extent, programmatically concealed their ultimate goals.[31]

From the 1930s onwards, there were attempts to align *Lebensraum* and *Mitteleuropa* more closely by simply making race central to the envisioned organization of the heart of the continent. A prominent outcome of such inclusion was Carl Schmitt's theory of the *Grossraum* – as an economic macro-region (Europe) dominated by a racially defined German State at its core.[32] Furthermore, the traditional concept of *Mitteleuropa* existed alongside the *Grossraum* vision, even after 1940.[33] The conflict (or alliance) between the two concepts can also be seen in the above-mentioned dichotomy of Nazi foreign policy. Elvert provided further evidence of the continuity of concepts (at least of the spatial imagination inherent within them) by pointing to the parallels between ideas and practices the German authorities pursued during World War I in the areas east of Germany, and the visions of Nazi planners after 1933.

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27 Michael Heffernan, *The Meaning of Europe: Geography and Geopolitics* (London: Arnold, 1998), 145-146.
28 Elvert, *Mitteleuropa!*, 391.
29 Prehn, "Die Entgrenzung," 175.
30 Heffernan, *The Meaning of Europe*, 146.
31 Mazower quotes a Goebbels interview dated April 5, 1940: "If anyone asks how you conceive the new Europe, we have to reply that we don't know. Of course we have some ideas about it. But if we were to put them into words, it would immediately create more enemies for us … Today we talk about Lebensraum. Anybody can interpret it as they wish. When the time comes, we will know very well what we want." Mark Mazower, *Hitler's Empire: How the Nazis ruled Europe* (New York: Penguin Press, 2008), 121.
32 Schmitt's ideas from different points of view are discussed in: Elvert, *Mitteleuropa!*, 335-337; Patricia Chiantera-Stutte, "Space, Grossraum and Mitteleuropa in Some Debates of the Early Twentieth Century," *European Journal of Social Theory* 11, no. 2 (2008): 185-201.
33 Elvert interpreted the Nazi "Neuordnung" plans for a federal Europe of 1943-1945 as a resurfacing non-racial *Mitteleuropa* concept, in a form befitting the current situation on the war fronts. Elvert, *Mitteleuropa!*, 379-387.

Transforming the once envisioned and now gradually acquired *Lebensraum* into a smoothly functioning unit required immense investment in the completion and unification of infrastructural networks. The designers of the *Grossraumwirtschaft* were well aware that their success depended largely on the quick development of the ties binding the territory.[34] Given Czechoslovakia's former attitudes towards the waterways scheme, the unchallenged acceptance of the profitability of waterways that were implicitly incorporated in the Czechoslovak-German Protocol of 19 November 1938 saved the canal promoters a lot of work. The decision to ignore the economic aspects of the project clearly illustrates the Nazi fascination with the symbolic and, more so, geopolitical qualities of the waterways' development program.[35]

Apart from geopolitical matters, the architects of the Reich Waterway Development Policy were mainly concerned with the economic interests of the *Third Reich*. The waterway network they envisioned would open the markets of the Balkans to German industrial goods and simultaneously secure a source of cheap agricultural products and raw materials for German industry. Typically, such considerations, enhanced by the symbolic power of the large technological projects, underlay the *Rhein-Main-Donau Gesetz* of 16 May 1938. Designed along the lines of the 1886 special law issued by the late German Emperor for the construction of the North Sea-Baltic Sea canal (also known as the Kaiser-Wilhelm-Kanal), this act promised to reduce the construction period of the RMD canal

34 Development of the German autobahn network is typical of such an attitude: James D. Shand, "The Reichsautobahn: Symbol for the Third Reich" *Journal of Contemporary History* 19, no. 2 (1984): 189-200. From the perspective of Nazi geopolitics, the multiple infrastructural utilization of the north-south transport corridor through Moravia primarily constituted an axis of Germanization and a tool with which to control the ethnically Czech territory. Besides the existing railway, the Wroclaw (Breslau)-Vienna *Autobahn* (highway), the Oder-Danube canal, and gas and electricity connections would link Silesia to Austria via Moravia. The corridor between Olomouc and Brno connected Austria to Germany in the narrowest part of the protectorate, where the two German populations were divided by not more than 60km and transport infrastructures should serve as *Landesbrücke* (land bridge), especially the extra-territorialized *Autobahn*. In January 1939, a construction of German autobahn connecting Breslau and Vienna across the still independent Czechoslovak state started the infrastructural incorporation of the country into the Nazi *Grossraum*. The highway achieved ex-territorial status and formed a materialized bridge that connected Germans through Czech Moravia. The Reich assumed all construction costs, including interconnections with the existing Czechoslovak road network, and agreed to open the highway for local users. Josef Bartoš, "Projekty propojení okupovaných území severní Moravy a Slezska s jižní Moravou a Rakouskem v letech 1938-1945," *Historie okupovaného pohraničí 1938-1945*, vol. 3 (1999): 7-29; Andělín Grobelný, "Projekt dálkového plynovodu Horní Slezsko-Ostravsko-Vídeň v hospodářské politice nacistů v letech 1940-1944," *Průmyslové oblasti*, vol. 7 (1980): 201-257.

35 The telling example of such an attitude solves the question of the dimension of locks on the DOE agreed at the commission of experts' first meeting. The final decision was to be based on water consumption calculations, detached from any economic considerations. Report of the commission of experts' first meeting held in Berlin on December 20 and 21, 1938; Zpráva o I. zasedání komise znalců pro stavbu a provoz odersko-dunajskho průplavu konaném v Berlíně ve dnech 20 a 21 prosince 1938 (MZA, H42, b. 275).

Figure 3.2 – The waterway network envisioned by Nazi experts in 1942 was situated in the seemingly borderless territory. The European area, as the map's title indicates, formed a unified entity. Note, what the authors of the map consider the "European area." By excluding France, while including Ukraine, the map projects a Europe resembling Mitteleuropa. Source: Durchganagwasserstrassen im europäische Raum, map developed by Arbeitskreis für Donaufragen der Südosteuropa-Gesellschaft a.V., Süddeutsche Wassestrassen 18, no. 1 (1942): 12-13.

from fifty years to no more than seven. The vice-secretary of state for inland navigation at the German Ministry of Transport, Gustav Königs, noted that the RMD canal's primary goal was to create a united area for inland navigation spanning the area between Vienna and the Ruhr.[36] Besides the connection to the Danube area, Königs considered the primary achievement of the project was its contribution to the construction of the unified German territory.[37] A few years later, however, the dimensions of the desired geopolitical entity were enlarged, and Königs moved the eastern border of the future unified area from Vienna to the shores of the Black Sea and the USSR, and the *Grossdeutschen Raum* substituted *Mitteleuropa*.[38]

36 Gustav Königs (1882-1945), a lawyer who held various posts in the German Ministry of Transport between 1931 and 1940, including vice-secretary of state. During the war, Königs administered enemy property in Luxembourg. In 1944, he was designated as the vice-secretary of state at the Ministry of Transport in the event of a successful coup, which, as it transpired, failed. Currently, the standard vessel type for Class III European Waterways bears his name (*Gustav-Königs-Schiff*).
37 Gustav Königs, "Das Rhein-Main-Donau-Gesetz vom 11. Mai 1938," *Süddeutsche Wasserstrassen* 14, no. 2 (1938): 43-46. In his argumentation, Königs turned to Friedrich List and his thesis on the role of infrastructural unification in national territory formation. The article is accompanied by the German Ministry of Transport press release stating the aim of the project in the above-mentioned international trade terms.
38 Gustav Königs, "Wasserstrassen in Grossdeutschen Raum," *Süddeutsche Wasserstrassen* 18, no. 3 (1942): 53-61.

In 1938, Fritz Markmann, NSDAP member and deputy mayor of the city of Magdeburg stated that further advancement of the waterway network was a crucial step in forming the *Grossraumwirtschaft*.[39] Four years later, following the territorial expansion of Nazi rule, Markmann analyzed the problem on a European scale in an updated second edition. He believed that the *Grossraum* perspective eased inland navigation from the confines of national policy and shifted the focus onto a higher, European geographical level. Markmann argued that the *Mittellandkanal*, originally planned as a shortcut connecting Berlin markets to the Ruhr coalmines without a necessary roundtrip via the Netherland Rhine ports, the North Sea and the Elbe, formed an east-west axis binding the north-south-oriented European rivers from the French Marne in the west all the way to the Russian waterway system in the east. Naturally, further extension of the *Mittellandkanal* was required. Connecting the Danube via the Transhelvetic Canal to the Rhine and the Rhône would constitute a southern parallel axis. Connecting the Rhine to the Adria might establish a north-south axis through Switzerland and the Rhine-Main-Danube and Oder-Danube canals. Markmann called such re-focusing "a tactical turn-away from the internal orientation."[40]

A year later, in 1943, a paper on the European waterway network appeared in the leading Nazi journal for spatial research *Raumforschung und Raumordnung*. The author elaborated on Markmann's visions, concluding that it was time to build an international waterway system in Europe, which did not yet have a single successful international canal project. German central authorities should secure the eastward extension of the regional *Mitteleuropean* system, in order to attach the occupied territories in the east, particularly the General Government, to the proposed European network, which would stretch from the Atlantic coast to the Caspian Sea.[41]

Indeed, since the outbreak of World War II, Nazi planners had started to extend their thinking from a *Mitteleuropean* vision to a continental one.[42] By 1942

39 Fritz Markmann, *Die deutschen Wasserstraßen* (Heidelberg: Vowinckel, 1938). Fritz-August Wilhelm Markmann (1899-1949), a lawyer by training, was counsel for the local economic association in Magdeburg from 1925; as NSDAP member, he was vice-mayor of Magdeburg between 1933 and 1945. In Magdeburg, in the spring of 1938, the German East-West waterway axis was completed with the opening of the Rothensee ship-lift connecting the Mittelandkanal to the Elbe. Martin Eckoldt, *Flüsse und Kanäle: Die Geschichte der deutschen Wasserstrassen* (Hamburg: DSV-Verlag, 1998), 403-415.
40 Fritz Markmann and Johann Thies, *Die deutschen Flüsse und Kanäle* (Leipzig: W. Goldmann, 1942).
41 Gerhard Simon, "Die Gestaltung des europäischen Wasserstrasennetze," *Raumforschung und Raumordnung* 8, no. 3-4 (1943): 117-118.
42 Applying the water metaphor, after the successful invasion of Poland, Goebbels talked about Mitteleuropa as a basis for German expansion towards the warm seas of the southeast. Edo Friš, "Formy a metody nacistické okupace v Československu," in *Nacistická okupace Evropy: Sborník referátů z 3. mezinárodního kongresu dějin evropského odboje v Karlových Varech v září 1963* (Prague: Naše Vojsko, 1966), 107-114.

the Germans controlled most of Europe's territory, far exceeding geographical *Mitteleuropa*. The Nazi Minister for Economic Affairs, Walther Funk, presented a scheme for the European Community exemplifying the growing ambitions of Nazi Germany. The scheme reflected the actual situation on the continent at the height of Nazi domination. Funk called for economic and political institutionalization of the existing unity of European nations against the coalition of the British Commonwealth and the Soviet Union.[43] Königs prepared the program for transport unification, part of which focused on inland navigation. He did not propose a network scheme, rather a regime for operation on waterways, described in contrast to the inter-war internationalization. Königs opposed the regime of the International River Commissions and instead advocated a German post-1936 solution that guaranteed freedom of shipping on national waterways to all nations "living in peace with Germany."[44]

Apart from geopolitical and economic considerations, the waterways, as part of the water management system, represented the technological advancement and superiority that Nazi politicians and ideologists boasted about. While liberal economies around the world had difficulties coping with growing pressure on water in terms of balancing conflicting interests, the Nazi system of governance allowed technocratic solutions. Instead of individual interests and economic cost-effectiveness, Nazism would govern water management with wider and more complex considerations. Centralization and "geopolitical water management," oriented towards productivity and general prosperity, replaced the previously liberal profit-oriented and un-systematic attitude.

This attitude would probably have found a ready audience among international hydraulic engineers, a prime example being Stanislav Kratochvíl, a pupil of Antonín Smrček.[45] In his 1939 paper on Nazi Water Policy, agreeing with the pervasive critique of liberal democracy in Czech society after Munich, Kratochvíl expressed admiration for the Nazis' complex and scientific approach to water management.[46] He hailed the idea of centralizing water management in each larger river basin into a single Authority, thus preventing the particular interests of business and

43 Mazower considered these plans, first articulated by Funke in 1940, to be directed mainly towards economic cooperation of no-state actors and its political content remained ambigous. Mazower, *Hitler's Empire*, 123-124.

44 Gustav Königs, "Die Wasserstrassen im Europa-Verkehr," *Süddeutsche Wasserstrassen* 19, no. 1-2 (1943): 2-4. A separate publication of part of Königs' paper dealt with inland navigation.

45 Dr. Stanislav Kratochvil, Dr. Sc., born in Brno in 1907, qualified in civil engineering at Brno Czech Technical University in 1930, specializing in water management. At the time his paper was published, Kratochvil was working at the State Office in Brno. Naďa Urbánková, "Archiv TMB: 100. výročí narození profesora Stanislava Kratochvila," *Události na VUT v Brně* 17, no. 6 (2007): 16-17.

46 Stanislav Kratochvil, "Vodní hospodářství a jeho nová organisace v říši," *Zprávy veřejné služby technické* 21, no. 2 (1939): 212-214, 221-222.

economic groups from suppressing the interests of the national economy. While Kratochvíl tried to remain an objective reporter, his writing reveals his enthusiasm for the core of the German reform, as reflected in his statement: "also in our areas these new arrangements … might in many respects set an example."[47]

Kratochvíl emphasized the interconnection of hydraulic structures with the natural environment, especially at the aesthetic and economic levels.[48] He did so following the Nazi perspective on the German landscape, and with reference to German authorities. For instance, he argued that future river channelization should not drain the adjacent fields and that flood water should not be disposed of without being used; he felt that the banks and the river bed should allow for the re-infiltration of water during periods of drought. Kratochvíl said that the regulations must be planned in cooperation with farmers, and riverbanks should be reinforced by planting trees or at least be masked by vegetation. The channelized river should fit as much as possible into the landscape, on the basis that regulation would upgrade the landscape. The same applied to any other hydraulic engineering undertaking, including canalization and other waterways.[49]

The specific Nazi form of modernization clearly had considerable support among Czech political elites and the technical intelligentsia. Kratochvíl's paper on Nazi water management reform as well as Chalupník's statement on the waterway question prove that beyond doubt.[50] The fascination with German political and technological accomplishments drove the general transformation of the independent Second Czechoslovak Republic (1938-1939) into a semi-authoritarian state, modeled after the German example. This is just one of many examples of such accomplishments. Even after the occupation in March 1939, such a perspective on the Nazi state as source of inspiration contributed to the Czechs' relatively peaceful reaction to German rule and the politics of Germanization, alongside the

47 Given the long history of attempts to achieve unification of water management in Czechoslovakia under a single central authority, Kratochvíl's supportive stance towards the German Water Management policy was probably more than just an attempt to look good in the eyes of the Nazi and protectorate authorities. In 1937, the centralized German Union for Water Management consisted of five sections, largely corresponding to Hráský's twenty-year-old proposal for Czechoslovak water management (five groups – water supply, agriculture, navigation, hydro-power and waste-water disposal). Ibid.

48 The Nazis developed a specific form of conservationism influenced by their ideology (or, more precisely, a Nazi discourse on ideology). Best articulated by the famous German garden architect and designer of the autobahn, Alwin Seifert, whose speeches opposing the desertification and degradation (*Versteppung*) of Germany were inspired by the American experience with the "Dustbowl" of the 1930s. David Blackbourn, *The Conquest of Nature: Water, Landscape, and the Making of Modern Germany* (New York: Norton, 2006), 278-293. Frank Uekötter, *The Green and the Brown: A History of Conservation in Nazi Germany* (Cambridge: Cambridge University Press, 2006).

49 Kratochvíl devoted half of his analysis of the Nazi water administration to this new "natural" paradigm. Kratochvil, "Vodní hospodářství."

50 See the opening quotation of this chapter.

authoritative and commanding presence representing Nazi power.

When German troops invaded Bohemia and Moravia, the Nazi elite faced the dilemma of how to handle the "racially inferior" Czech population and how to organize the territory. The ultimate – but unspoken – goal of the Third Reich was to eradicate Czech nationality through assimilation, deportation, and extermination.[51] The authors of the Master Plan East (*Generalplan Ost*) assumed that not more than half of the Czech people would be fit for Germanization. The rest would have to be removed, not just from Czech territories, but from Europe completely.[52] However, the ideological imperative of completely wiping out the Slavic population stood in sharp contrast to the need to efficiently exploit the Czech industrial potential, particularly the ammunition industry. Following Bismarck's maxim that politics is the art of the possible, under certain circumstances, plans to strictly apply the racial policy in *Mitteleuropa* had to be postponed until the end of World War II due to military and economic concerns. While traditional imperial visions of foreign policy did not have a great deal of influence among the Nazi elite, this traditional power politics gained clear precedence in day-to-day decision-making.[53]

Two widely-cited documents, dating back to the first years of the Protectorate, demonstrate such a struggle between the two aspects of Nazi politics: racial Germanization on the one hand, and economic utilization of Bohemia and Moravia on the other. The first document was issued on the day of Hitler's declaration of the Protectorate. In his capacity as plenipotentiary for the Four-Year Plan (*Vierjahresplan*), an economic program for the revitalization of the German economy, Hermann Göring claimed exclusive authority over the economic integration of the Protectorate into the German economic area. His efforts resulted in an enforced takeover of Czech Armaments and other large industries. Formerly a crucial industrial supplier to DOE construction, the Vítkovice Mining and Foundry Works became a part of the Nazi industrial group known as *Reichswerke Hermann Göring*.[54] The second document was a letter that Karl Hermann Frank, number two in the Protectorate and former MP for the Czechoslovak branch of the Nazi

51 Boris Celovsky, *Germanisierung und Genozid. Hitlers Endlösung der tschechischen Frage: deutsche Dokumente 1933-1945* (Dresden; Brno: Neisse-Verag; Stilus, 2005).
52 Miroslav Kárný, "Generální plán Východ," *Československý časopis historický* 75, no. 3 (1977): 345-382.
53 This applied to the dilemma of German expansion – military or peaceful within the framework of the established international order. Hildebrand, *The Foreign Policy*, 14-21; Alice Teichová, *Německá hospodářská politika v českých zemích v letech 1939-1945* (Prague: FN VŠE, 1998), 25.
54 Other aspects of economic integration included reorienting trade flows in favor of the *Altreich*, installing a customs union administered from Berlin, transitioning to the war economy, establishing a command economy, and increasing the German capital share of direct investments in the Protectorate economy. Teichová, *Německá hospodářská politika*.

party, wrote to Hitler on April 18, 1940. The letter argued that the primary concern of Nazi rule in the Protectorate should be the solution to the Czech Question; that is, the complete eradication of the Czech Nation. Hitler's response, in the summer of 1940, was a compromise: Germanization of the Czechs by gradual assimilation, so long as it did not conflict with the vital economic interests of the Reich, and simultaneous "Germanization" of Czech territory so long as it did not affect the ultimate ambition of turning the Protectorate into an integral part of Germany.[55]

This compromise resulted in the installation of a dual administration in the Protectorate. The Czech government remained formally independent and administered its internal affairs, while the Office of the Reich Protector represented German interests in the country, developing administrative structures to supervise the Protectorate government. Regarding inland navigation, the German authorities appointed Friedrich Hirche as plenipotentiary for waterways at the Office of the Reich Protector before the end of 1939.[56] Together with the majority of his subordinate officials, Hirche moved to Prague from the Saxon Government in Dresden, where he was responsible for administering the upper stretch of the navigable Elbe.[57] This transfer also symbolized the victory of *Machtpolitik* over ideology, as the decision to recruit key officials to the Protectorate from the *Altreich* (pre-1938 territory of Nazi Germany) was directed against the local members of the Nazi party, who had extremely radical attitudes towards the Czech population.[58]

Constructing the *Grossraum*

From the perspective of the DOE canal, the Nazi occupation of Bohemia and Moravia brought about a completely new and quite favorable situation. For the first time in the twentieth century, the entire stretch of the envisaged transcontinental waterway, from the Baltic and North Sea ports to the Danube at Vienna, fell under the authority of a single executive power. The new setting promised rapid

55 Detlef Brandes, *Češi pod německým protektorátem: okupační politika, kolaborace a odboj 1939-1945* (Prague: Prostor, 1999), 158-164.
56 The competences of a plenipotentiary were regulated by the Reich Ministry of Traffic (*Dienstanweisung für Wasserstrassenbevollmachtigte*) (NAČR, ÚŘP, b. 1104, August 30, 1933).
57 Letter to under-secretary Liebenow (NAČR, ÚŘP, b. 124, March 18, 1941); Report on the meeting at the Office of the Reich Protector. Niederschrift über die Besprechung beim Reichsprotektor, Gruppe Verkehr, in Prag, am Montag, dem 27.-28. November 1939 (NAČR, ÚŘP, b. 1104).
58 German historian Brandes interpreted this as a victory for Reich Protector Neurath over the secretary of state and the second-highest German official at the Protectorate, Karl Hermann Frank, in this conflict representing the *Sudetendeutsche,* being the former leader of the radical Nazi wing in Czechoslovakia. Detlef Brandes, *Češi pod německým protektorátem*, 38.

progress, given that infrastructural construction constituted the backbone of Nazi *Grossraum* politics. Driven by Berlin, the canal project enjoyed steady support from distinguished individuals among the Nazi elite, including Field Marshall Göring. The project also had the support of non-state parties, such as the DOECS and the public. Everything seemed to be progressing smoothly and even the occupation and subsequent transformation of the Second Republic into the German Protectorate did not challenge the general optimism of the canal promoters. The Protectorate administration managed the new state of affairs relatively smoothly. Officials actively aligned its goals with Nazi Germany's war economy program.

The canal retained the image of a symbolic national infrastructure throughout the existence of the Second Republic. The new state borders were intentionally designed to interrupt the main railway lines and transport corridors, thereby spoiling the coherent national infrastructural system that had developed over the previous twenty years.[59] The Czech technical intelligentsia, sensing a moral duty to help the nation, reacted by producing plans aiming to create an economically sustainable state within the new borders. The vast majority of such documents included the DOE, echoing the megalomaniac plans Baťa had presented in 1937. Czechoslovakia was facing autonomist tendencies in Slovakia and Ruthenia and the DOE seemed to offer the key to reconsolidating the territory; a symbolic tie that would bind it back together. Kjellen's river metaphor reappeared and the Czechoslovak state was depicted as being inherently structurally divided by the watershed into three river basins forming 'natural' economic units: Poland claimed the upper Oder, Hungary the Danube, and the Elbe allegedly served as an axis for the rising German influence. Supporters of the project argued that only interconnecting the three networks into a single national system would paralyze such centrifugal forces, because the "waterway network would become a backbone for other transport networks."[60]

Furthermore, the rise of technocratic tendencies in the Second Republic contributed to the general acceptance of the DOE project. The dominating interpretation of the Munich Agreement as the failure of liberal democracy elevated technocrats to power. Gradual de-politization of politics culminated in the introduction of a simplified political system consisting of only two political parties, which

59 Gebhart and Kuklík, *Druhá republika*, 165.

60 Memorandum from the capital city of Olomouc for the Ministry of Public Works in Prague. Memorandum rady hlavního města Olomouce (TMB, Smrček, b. 136, November 25, 1938); Olomouc was granted the title of Moravian capital in the eighteenth century. After the Munich Agreement, the city gained a central position within the new state borders and, from the planners' perspective, supplanted Brno as a Moravian centre. Josef Bartoš, "Město Olomouc a projekty kanálu Odra-Labe-Dunaj," *Střední Morava* 7, no. 12 (2001): 17-26.

were mutually interconnected in "loyal opposition."[61] Consequently, two members of DOECS became members of the new "technocratic" government. Dominik Čipera, general director of the Baťa Company, and a member of DOECS since its very beginnings, led the Ministry of Public Works between December 1938 and January 1942. Another member of the Society, Vladislav Klumpar, served a shorter period in the Ministry of Health and Social Administration.[62]

Within the scope of the Second Republic government's economic program, which listed the canal among its crucial national infrastructural projects, Bartovský prepared a new water-management program for the Republic.[63] The realization of the original plan, sanctioned by the Water Management Act of 1931, had lagged behind schedule ever since the program was articulated, and Czech hydraulic engineers saw the situation as an opportunity to accelerate matters. As if answering the call of Josef Chalupník, which opened this chapter, Bartovský opened his presentation of the new program to the professional press by boasting, "We are building new railways, we are building roads and highways, we are making the rivers navigable, we are building big hydropower stations, we are preparing the network of waterways." Bartovský summed up the previous twenty years and presented a vision for the next two decades. Stating that the Czechoslovak Republic's water-building program was only half completed, Bartovský called for the support of financial and business circles to enable "faster and more generous implementation." Bartovský promoted the canal as a milestone of reconsolidation of the nation. He foresaw the project being accomplished in six years and emphasized the positive social impact of the construction work. It would provide employment for 25,000 men, and thus a living for more than 60,000 people (compared to a hypothetical maximum of 20 to 50,000 covering all the other projects in the water management program's budget). Surprisingly, Bartovský interpreted the relocation of the canal's mouth to the Danube from Bratislava to Vienna, enforced by Germany, as being advantageous from a national perspective. The relocation of the confluence changed the ratio between the part of the route lying on Reich territory and the part in the Protectorate from 40:223 to 166:157 (in km). Given that both states had committed to cover construction costs in their respective territories, such a claim

61 The authoritarian tendencies led to a combination of legislative and executive powers in the hands of the government as of December 15, 1938. Gebhart and Kuklík, *Druhá republika*, 105-109.
62 Klumpar (1893-1979) was a former Czechoslovak deputy at the International Chamber Commerce and, since 1927, director of the *Ústřední sociální pojišťovna* (central social insurance company). The new building of the latter housed the latest navigation department of ŘVC, which was established in 1939 with the help of DOECS.
63 "Těsnopisecká zpráva o 156. schůzi poslanecké sněmovny národního shromáždění Republiky československé v Praze v úterý dne 13. prosince 1938," *Společná česko-slovenská digitální parlamentní knihovna*, http://www.psp.cz/eknih/1935ns/ps/stenprot/156schuz/s156003.htm. Accessed 11 October 2010.

was undoubtedly justified from a financial perspective, especially since Bratislava had become the capital of the autonomous Slovakia.[64]

Initially, the establishment of the Protectorate induced only rhetorical adjustments and no fundamental technical adaptation of the program, which Bartovský only finalized a month before the occupation. Within a few months, the Ministry, together with DOECS, had published the updated version in German. The major changes were in the general framework, given that the economic development of the Reich specified in the Four-Year Plan substituted the reconsolidation of the truncated Czechoslovak state. This Nazi economic program, which Adolf Hitler had originally written in August 1936 in an attempt to reduce unemployment and strengthen the national economy, included a lavishly designed infrastructural development program; in addition to the famous highways, waterways featured a great deal.[65] Hermann Göring, who was in charge of the program, had incorporated the Danube-Oder Canal in the plan at the latest by October 1938, immediately after the Munich Agreement and even before the signing of the Protocol.[66] Therefore, in the spring of 1939, Bartovský only had to align the national and Nazi perspectives on the project.

The so-called Water Management Four-Year Plan (*Vodohospodářská čtyřletka*) focused on accelerating the execution of the program that had already been developed under the Czechoslovak Water Management Fund since 1931.[67] The entire plan was worth 1.6 billion crowns for the period from 1940 to 1943, of which the DOE scheme accounted for almost half. Given that the average annual investment in water management in the previous two decades had only been slightly more than 150 million crowns, it is clear that Bartovský had purposefully presented a maximalist alternative and tried to take advantage of the situation. DOECS decided to publish the Čtyřletka plan in both Czech and German, supplemented with an introduction by the Protectorate Minister of Public Works, Čipera.[68] The

64 Josef Bartovský, "Labsko-odersko-dunajský průplav a velké vodní stavby ministerstva veřejných prací," *Zprávy veřejné služby technické* 21 (1939): 112-114.

65 Gerhard L. Weinberg, "Hitler's Memorandum on the Four-Year Plan: A Note," *German Studies Review* 11, no. 1 (1988): 133-135.

66 "The Sudetenland has to be exploited with all available means. General Field Marshall Göring counts on complete industrial assimilation of Slovakia. Czech and Slovakia would become German dominions. Everything possible must be taken out. The Oder-Danube Canal has to be speeded up." Göring made his views on the future of the project clear at the Air Ministry conference on October 14, 1938. Office of Chief of Counsel for the Prosecution of Axis Criminality, *Nazi Conspiracy and Aggression*, vol. 1 (Washington: United States Government Printing Office, 1946), 581.

67 Josef Bartovský, *Der Elbe-Donau-Oderkanal im Wasserbauprogramme des Reichsprotektorats Böhmen und Mähren: Übersicht und Überprüfung des Investitionsplanes* (Prague: Společnost dunajsko-oderského průplavu, 1939), 4.

68 Bartovský presented the Four-Year plan together with the publications to delegates at the Commission of Experts' third meeting in September 1939. Josef Bartovský, *Viehrjahrplan für Wassestrassen und Was-*

funds allocated for the DOE within the first Four-Year plan were expected to cover the preparatory works and the construction of dams providing water for the planned waterway. Bartovský expected the project to be completed in the second Four-Year plan, from 1944-1947, with an additional cost of approximately one billion crowns.[69]

Figure 3.3 – Map of the protectorate water structure program developed by Bartovský in 1939. By then, Czechoslovakia had ceased to exist. The red territory indicates the Protectorate Bohemia and Moravia. Slovakia was an independent state and except for a short stretch of border with Poland on the north-east, the Protectorate was surrounded by the German Third Reich. Here the DOE is drawn as key to the planned waterway grid in Hitler's Empire. The Adolf Hitler Canal, located in the upper right corner and connecting the Oder port of Kozle (Cosel) to Gliwice (Gleiwitz), marked the first step in this direction. It was opened in the autumn of 1939. Source: Josef Bartovský, Der Elbe-Donau-Oderkanal im Wasserbauprogramme des Reichsprotektorats Böhmen und Mähren: Übersicht und Überprüfung des Investitionsplanes, Prague: Společnost dunajsko-oderského průplavu, 1939, 32.

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serwirtschaftliche Bauten in Böhmen und Mähren. Bau des Donau-Oder-Kanals. Entwurf eines Investitionsprogrammes. (Prague: Gesellschaft der Donau-Oder-Kanals, 1939).

69 A brief summary of Bartovský's Four-Year plan focused on the DOE. Bartovský later presented on various occasions, including in December 1939 at the opening celebration of the Adolf Hitler Canal. Report on the development and state of preparations for the construction of the Danube-Oder canal in Bohemia and Moravia. Zpráva o vývoji a stavu příprav pro stavbu odersko-dunajského průplavu na území Čech a Moravy (MZA, H42, 275), 9.

Paradoxically, the German occupation, in the form of the Protocol and the Expert Commission, gave further momentum to the formerly "national" project. The unprecedented mobilization of resources and consolidation of the formerly fragmented spectra of supporters of the DOE, inspired by escalated nationalism in Czechoslovakia during its last years of independence, survived the short-lived Second Republic. At the time of Hitler's stay in Prague in March 1939, the ŘVC navigational department commenced operations, supported by DOECS. For the first time since the fall of the monarchy, the canal project employed significant numbers of engineers. Josef Bartovský, who was simultaneously head of the Water Management Department of the Czechoslovak Ministry of Public Works, member of the Central Committee of DOECS, and editor-in-chief of its journal, managed to retain his extensive powers and his positions after the establishment of the Protectorate. Hence, from the perspective of the DOE canal, the Second Republic and the first stages of the Protectorate seemed to be a time of growing activity and optimistic expectations.

The second meeting of the Commission of Experts on the DOE, originally scheduled for March 1939, finally took place two months later, once the situation had settled down and Nazi rule in the Protectorate had been consolidated. In the meantime, however, the commission had lost its international status.[70] While the informal dominance of the German side characterized the first meeting, the representatives of the Protectorate administration realized in the second session that they should act more as technical body responsible for the preparation of the project on the respective territories.

During the talks held in Prague in May 1939, the German delegates again pushed forward in all aspects of enlarging the canal dimensions. The most visible articulation of this perspective came in the re-emphasized preference for "long pounds and minimization of the number of locks" in the longitudinal section of the canal.[71] Apart from the issues settled earlier (particularly the standard type of vessel and related measures), other technical dimensions and measures came to the foreground, including the type of locks, propulsion on canal pounds, and the clearance above water level.[72] The last issue clearly illustrated that, from the Nazi

70 As had the canal. At the first meeting, Hoebel spoke of mutual free shipping on the canal "according to rules valid for the Danube." Report from the Commission of Experts' first meeting on the construction and operation of the Danube-Oder canal held in Berlin on December 20 and 21, 1938; Zpráva o I. zasedání komise znalců pro stavbu a provoz odersko-dunajského průplavu konaném v Berlíně ve dnech 20. a 21 prosince 1938 (MZA, H42, b. 275), 2.

71 Niederschrift betreffend zweite Tagung der Sachverständigen Kommission für den Bau und Betrieb des Oder-Donau-Kanals vom 10-13. Mai 1939 (MZA, H42, 121), 4.

72 Niederschrift betreffend zweite Tagung der Sachverständigen Kommission für den Bau und Betrieb des Oder-Donau-Kanals vom 10-13. Mai 1939 (MZA, H42, 121).

perspective, the DOE primarily represented an extension of (or a connection to) the Danube. The German delegation attempted to align the clearance above water level on the DOE with the Danubian standard (6.4 m), which also applied to the RMD canal.[73] Correspondingly, the question of the standard technical dimensions of the envisioned Nazi waterway network was resolved in favor of the Eastern enlargement. The "natural" differences among waterways, most visibly demonstrated by the distinction between man-made canals on the one hand and navigable rivers on the other, required a central authority and the introduction of common standards in order to form a coherent network. These standards clearly reflected the push towards the East. In 1939, the Hamburg-based *Institut für Schiffbau*, together with the *Zentral Verband für Deutsche Binnenschiffahrt* in Berlin, developed a classification of inland navigation vessels mandatory for the Reich waterways, and for the trans-watershed canals (namely the DOE and RMD).[74] They recommended the type based on the Danube boats.[75] It reflected the ongoing debate on the suggested territorial framework of the Nazi waterway network.

These general considerations set the scene for discussions regarding the type of locks. Based on the report[76] presented by Georg Franzius of the Wroclaw Oder Authority, the commission agreed on 225m-long twin locks that were suitable for operating towboats; these were the largest lock dimensions of all the considered alternatives. The Wroclaw research institute provided an economic argument for such a decision, estimating the future annual traffic on the canal to be 6-8 million tons.[77] Franzius was aware that the enlargement of locks would push the utilization of available water resources to the limit and recommended some form of water-saving mechanism. Apart from the twin sluice option (fifty percent saving), the alternative was to install a water-saving basin (sixty-five percent saving). However, even when combined with the triple water-saving basin (which would save approximately sixty-five percent of water in each fill-empty cycle) at each of sixteen

73 Nazi authorities evidently saw both these trans-watershed canals as equally important for the envisioned *Grossraum* network.

74 Emil Bendel, "Průběžná doprava ze Severního a Baltského moře přes Dunajsko-odersko-labský průplav k Černému moři," *Plavební cesty Dunaj-Odra-Labe* 2, no. 5 (1941): 94-95, here 94.

75 Measures 75x2, 5x9m, a bit shorter than the boats for the *Mittellandkanal* (80m). Ladislav Beneš, "K otázce nejvhodnějšího typu člunů pro Dunajsko-oderský průplav," *Plavební cesty Dunaj-Odra-Labe* 2, no. 6 (1941): 121-124.

76 Berechnung des Leistungsfähigkeit der Schleusen für den Oder-Donau-Kanal. Anlage 3 zur Niderschrifft betreffend 2. Tagung der Komission für den Bau des Oder-Donau-Kanals am 10. Mai 1939 in Prag. (NAČR, ÚŘP, 759).

77 However, the *Schlesischen Institut für Wirtschafts- und Konjunkturforschung* declared it almost impossible to estimate the traffic on the canal, which would not be operated before 1945, due to the unpredictable political and economic future of the region. Schleusen des Oder-Donau-Kanals. Anlage 2 zur Niderschrifft betreffend 2. Tagung der Komission für den Bau des Oder-Donau-Kanals am 10. Mai 1939 in Prag (NAČR, ÚŘP, 759).

locks, the entire canal route equipped with twin locks that the commission chose would require a flow rate of four m^3/s,[78] an amount that actually exceeded the low flow of the middle Morava during drought.[79] While such calculations did not overturn the decision in favor of maximal lock dimensions, they did turn the problem of water provisioning into the central issue of the project development.

The pressure to reduce the number of locks naturally complemented the push to enlarge their capacity. While the old Czechoslovak project proposed eight locks on the Protectorate stretch of the lateral canal along the Morava, the German delegates would not accept more than six steps, which conflicted with local farmers' interests.[80] Furthermore, the commission established a special subcommittee to investigate the technical solution of connecting the summit reservoir to the Oder and Morava valleys. The Germans, following their vision of the canal as a high capacity transport route, proposed installing ship lifts at both ends rather than a set of chamber locks.[81]

After the session in Prague, delegates visited the town of Přerov, considered the best location for the start of the construction at the time.[82] Still optimistic, the delegates decided to meet again in the second half of July, at which time they believed they would finally solve the complete routing.[83]

From now on, the DOE scheme was effectively set in motion. Unofficially, construction was expected to start before the end of the year. Such a tight schedule for preparatory works demanded swift action. Bartovský, who was in charge of the project on Protectorate territory, hosted a meeting of the DOECS Central Committee at the Ministry shortly after the commission's session.[84] DOECS

78 Calculations based on the estimated maximum of 16 hours of operation per day. Berechnung des wasserverbrauches. Anlage 4 zur Niderschrifft betreffend 2. Tagung der Komission für den Bau des Oder-Donau-Kanals am 10. Mai 1939 in Prag (NAČR, ÚŘP, 759).

79 Measured by Kroměříž, a few kilometers downstream, towards the Danube from Přerov, where the canal route enters the Morava river valley. In November 1939, the Land Water Management Union organization of lower Morava valley agricultural producers submitted a position paper on their water needs; Dobrozdání o vodohospodářských potřebách při stavbě dunajsko-oderského průplavu (MZA, H42, 275).

80 See the debate on the canalization of the Morava in Chapter 2.

81 ŘVC report on the alterations of the DO canal project, determined at the Expert Commission's second meeting. Zpráva ředitelství vodních cest o změnách na projektu průplavu dunajsko-oderského, určených při II. zasedání komise znalců ve dnech 10.-13.května 1939 (MZA, H42, b. 275).

82 Bartovský, "Labsko-odersko-dunajský průplav," 112. The Expert Commission's second meeting started with sessions in Prague; the delegates then traveled to Morava Valley and Přerov, then by car along the proposed route of the summit pound of the canal to Moravská Ostrava; Reiseprogram für die Schaufahrt der Sachverständigenkomission für den Bau und Betrieb des Oder-Donau-Kanals vom 11. bis 13. Mai 1939, in der Strecke Prerau – Mährisch Ostrau (NAČR, ÚŘP, 759).

83 Niederschrift betreffend zweite Tagung der Sachverständigen Kommission für den Bau und Betrieb des Oder-Donau-Kanals vom 10-13. Mai 1939 (MZA, H42, b. 121), 8.

84 Secretary General Kačírek participated in the Expert Commission's field trip. There is no report on the meeting in the archives, only the very brief program. However, given the link with the Expert Commission, and the fact that this was only the central committee's second meeting and the first since the German

subsequently took over part of the work to prepare the project, especially matters relating to the Elbe branch, which had been omitted from the official negotiations since the signing of the Protocol.[85] DOECS also assumed responsibility for studying issues with the operation and economics of the canal, for which both the ministry and its technical agency, the ŘVC, lacked the necessary expertise.[86] By the end of May, Bartovský informed all state institutions involved of the tasks arising from the commission meeting and assigned responsibility for their implementation. The state machinery set in motion and launched geological and pedological surveys along the entire Protectorate route. The Hydrological Institute in Prague began work on the new water provision project as part of the envisioned grand scheme of the General Protectorate's Water Management Plan. The Moravian Provincial Office revived and pushed forward the dam projects anticipated by the 1931 Water Act. Bartovský orchestrated the entire set of Protectorate administrative institutions, research institutes, and NGOs (in addition to DOECS, MŘPS also remained active), and simultaneously represented the canal project in negotiations with the Nazi authorities. [87]

Questions concerning the detailed routing of the canal on Protectorate territory dominated the discussions at the Expert Commission's third meeting. This took place on the site of the future waterway in Přerov and Zlín in Central Moravia from September 21-23, 1939. The vast majority of the 17 items on the agenda concerned specific local solutions for the routing of the canal. Considerable attention was paid to re-considering the German suggestion to harmonize the measures above water level with the Danubian standard.[88]

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invasion, the main theme of the discussions was probably the status of the project and the DOECS. The Nazis nationalized several companies including the steelworks and mines in Vítkovice, main sponsors of the organization; Program 2. schůze ÚV konané 16/5/1939 o 10.hod. v zasedací síni MVP (MZA, H42, 122).

85 Usnesení technického odboru společnosti dunajsko-oderského průplavu na schůzi konané dne 21. června 1939 v ministerstvu veřejných prací (MZA, H42, b. 275, June 21, 1939).

86 Letter from the Ministry to the DOECS requesting an economic study of the most appropriate location of ports and their equipment (MZA, H42, b. 275, July 1, 1939).

87 In his efforts, however, he forgot to ask MŘPS for their opinion, which Smrček bitterly noted in his letter to DOECS (MZA, H42, b. 275, July 10, 1939).

88 The agenda items illustrate the "technical" character of the commission: (1) Financing of the Oder-Danube canal, particularly the supply of Dutch construction company Amsterdamsche Ballast Maatschappij; (2) The possibility of increasing the pound level above the weir Koblov in order to exclude the need for another weir in front of the entrance of the canal in the Oder and continuation of the canal towards Ratibor; (3) The location of ports in Ostrava; (4) Routing between Slavíč and Pohl and disposition of the ship lift; (5) Change of the routing between Radvanice and Lipník; (6) Construction of a navigable aqueduct to carry the canal over the Bečva river by Přerov and the location of ports; (7) Reducing the height of the canal pounds between Přerov and Lanžhot for agricultural reasons; (8) Level crossing with the Morava by Baťov; (9) The impact of increasing the clearance under the bridge from five to six meters above the normal water level on the canal; (10) Construction of dams that provide water supply for the canal; (11) Execution of the necessary bore holes in the Přerov-Lanžhot section; (12) Routing between Lanžhot and

The session, held three months later than originally planned, took place only a few weeks after the Nazi invasion of Poland. This prompted a change of German opinion on the routing downstream from Ostrava. After the occupation of the formerly Polish right bank of the Oder, there was no reason to transfer the canal across the Oder, and the issue of the precise routing of the canal stretch in the Ostrava region was re-opened. The German delegates urged acceleration of the project, and extension of the navigable Oder became a top priority; Ostrava's industrial and mining companies should connect to the Reich's waterway network via the Upper Oder within four years.

At the meeting, Bartovský again raised the question of funding. In reaction to the enlargement of locks proposed by Germany, the Protectorate administration challenged the original agreement based on the territorial distribution of costs. Bartovský argued that the German project of a high-capacity waterway would generate additional costs of about six hundred million crowns, an increase of more than thirty percent on the part of the Protectorate alone.[89] In response, Bartovský presented the proposal from a group of Dutch investors to participate in the canal's construction, which appeared for the first time in January 1939.[90] Following the conclusion of the Protectorate administration, Bartovský suggested turning down the offer on the condition that the Reich would take responsibility for the extra cost on Protectorate territory.[91] Representatives of the Protectorate Ministry of Finance supported Bartovský's position and pledged to provide funding for the canal's construction and related water management structures exactly as in Bartovský's proposal for the Four-Year plan. The reaction of the German delegates was rather positive, though they did not commit to anything and requested a detailed cost analysis.

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the Danube; (13) Dispositions of the entries and exits of lock chambers; (14) Broadening of the canal in curves with a small radius; (15) Regulation of the Oder below and above Moravská Ostrava; (16) Consideration of agricultural needs and appropriate use of water resources; (17) Consolidation of the agricultural land fragmented by the canal in the Protectorate. Zpráva pro třetí zasedání komise znalců pro stavbu a provoz odersko-dunajského průplavu, September 1939 (MZA, H42, b. 275).

89 Report on the planned agenda of Commission of Experts' third meeting. Zpráva k pracovnímu plánu třetího zasedání komise znalců pro stavbu a provoz odersko-dunajského průplavu (MZA, H42, b. 275), 1.

90 Dutch investors had investigated participating in financing the canal already in 1935 through Prague banker Miroslav Beznoska; Letter from Beznoska to MVP (NAČR, MVP, b. 292, September 10, 1935).

91 Report on the meeting held at the Ministry of Public Works on August 25 concerning the financing of the Danube-Oder Canal, namely the Dutch developer's offer. Zápis o poradě konané 25. srpna 1939 v ministertsvu veřejných prací ve věci financování odersko-dunajského průplavu, zvláště nabídky holandské stavební společnosti (MZA, H42, b. 275). The meeting followed initial negotiations on the Dutch offer (Grundlagen der hollandische Finanzgruppe für weitere Entwicklung der Frage der finanzierung des Baues des Donau-Oder-Kanal) as agreed at the personal meeting in Prague on January 11-13, 1939 (MZA, H42, 275, November 13, 1939). Among the members of the consortium led by Ballast Maatschappij was the mayor of Amsterdam and interestingly a representative from the Baťa Company for the Netherlands, Dr. Fiksl. It seems Baťa did not lose sight of the canal idea.

Following the meeting, Bartovský summoned representatives of the subordinate offices and other institutions involved in the project. Urging them to implement the conclusions of the meeting, he pointed out three top-priority areas for the coming months: the final solution of the routing in the area of Moravská Ostrava; issues related to water provision of the canal, including a set of dams in the upper areas of the Morava and Oder river basins; and preparation of the documentation for the official audit of the canal routing on Protectorate territory.[92]

The commission eventually accepted the new longitudinal profile of the canal prepared by the Committee for Construction of Ship-lifts (consisting of one ŘVC representative and one delegate from the German side) in cooperation with the ŘVC. While the position of individual structures also changed in the course of the preparatory works, the general situation and technical parameters (number of locks and lifts and the altitude of the summit reservoir – 279 m.a.s.l) set at this session remained stable after the third meeting.

From Grand Opening to Inauspicious End

Looking at the historical records through the "lens" of the DOE canal, it seems the Nazi authorities generally ignored former *Mitteleuropean* alliances. Neither the *Mitteleuropäischer Binnenschiffahrtsverband* nor the MWT appeared in negotiations, nor was any reference even made to them. While the former never managed to find a stable position, the latter moved its focus and orientation in the 1930s almost exclusively towards the Balkans.[93] In January 1940, Antonín Smrček closed the MEI bank account in Brno in a final act that forcefully disbanded the organization launched by the Nazis immediately after the establishment of the Protectorate.[94] The Nazis preferred official negotiations at national level.

In October 1939, Julius Krohne invited Czech private interest groups to Wroclaw to a meeting of the *Verein zur Wahrung der Oderschiffahrttsinteressen* in order to re-establish informal communication across the border. For this purpose, he revived the canal supporting initiative that had been active until 1937 as

92 Minutes of a consultation held on October 20 at the Ministry of Public Works. Záznam o poradě konané 20. října v ministerstvu veřejných prací o postupu prací, uložených ředitelstvím pro stavbu vodních cest zemskému úřadu v Brně, plavebnímu ředitelství a hydrologickému ústavu výnosem z 9. října 1939 (MZA, H42, b. 122, October 20, 1939).
93 Carl Freytag, "'Die Tür zwischen Deutschland und Donauraum ist geöffnet': Südosteuropa-Konzepte und Positionierung Mitteleuropäischen Wirtschaftstags nach dem 'Anschluss' Österreichs 1938," in *'Mitteleuropa' und 'Südosteuropa' als Planungsraum*, ed. Carola Sachse (Göttingen: Wallstein, 2010), 141-166.
94 Miroslav Jeřábek, *Za silnou střední Evropu: Středoevropské hnutí mezi Budapeští, Vídní a Brnem v letech 1925-1939* (Prague: Dokořán, 2008), 224.

a German part of the Danube-Oder Committee.[95] Expert Commission members (Gährs, Franzius, and Hirche) met with those active in the canal project since the inter-war years such as Krieg or Krohne, and also with representatives of local authorities such as the mayor of Wroclaw, prominent member of the Nazi party Hans Fridrich, and the president of the occupied area of Upper Silesia and head of the Wroclaw Chamber of Commerce, Otto Fitzner. Kačírek and Bartovský represented the interested groups in the Protectorate.[96]

Despite the outbreak of the war, delegates generally remained optimistic concerning the realization of the canal project. The fact that the budget of three million RM, originally reserved in the 1939 German national budget for the project, would not be available due to increased war-spending, did not cast a shadow on such expectations. Gährs and Bartovský, referring to the current status of the project, both agreed that construction should start at the beginning of 1940 and that the canal could be operational within six years. Otto Fitzner believed that the construction would soon significantly contribute to the consolidation of the occupied territories suffering from high rates of unemployment.[97]

Soon after the Wroclaw conference, DOECS received another invitation, this time from the Reich Transport Ministry. The German authorities prepared a grand ceremony to celebrate the opening of the Adolf Hitler canal, a new waterway extending the navigable Oder from the port of Cosel to the Silesian industrial city of Gliwice (Gleiwitz). On that occasion, the Nazis decided to launch the construction of the DOE – the extension of the navigable part of the river from Cosel to Moravská Ostrava – as the first phase of the project. The main speaker, Adolf Hitler's deputy in the Nazi Party, Rudolf Hess, said: "Six years ago, we started building a 41km long canal … today we are putting it into operation, and simultaneously we start constructing another one, 320km long."[98] Hess, like Bartovský two months earlier in Wroclaw,[99] depicted the canal as the first "project of peace" launched in the

95 *Arbeitsauschuss für den bau des Oder-Donau-Kanals*, Letter from Krohne to Bartovský (MZA, H42, b. 275, September 28, 1939).

96 It is worth noting that Georg Franzius attended the meeting in his capacity as head of the *Wasserbaudirektion* Breslau, recently renamed *Wasserdirektion für Oder und Oder-Donau-Kanal.* Report on the meeting organized by *Verein zur Wahrung der Oderschiffahrttsinteressen in Breslau* on October 11, 1939 in the palace of the Chamber of Commerce; Zpráva o pracovní schůzi, kterou pořádal 11. října 1939 Verein zur Wahrung der Oderschiffahrtsinteressen in Breslau v paláci obchodní a průmyslové komory (MZA, H42, b. 275).

97 Fitzner also offered positions for workers skilled in ship building, in reaction to the widely shared view that it would be impossible to obtain a sufficiently large fleet within six years; that is, before the planned opening of the canal. Ibid., 4.

98 "Odersko-dunajský průplav se začal budovat," *Lidové Noviny*, 10 December 1938.

99 Bartovský closed his speech stating, "We are preparing great work that is intended to ensure the peaceful economic cooperation of many central European countries." Report on the development and state of preparations for the construction of Danube-Oder canal on the territory of Bohemia and Moravia. Zpráva

midst of the war. However, the optimistic atmosphere of Wroclaw had evaporated. A delegate to the Protectorate Government, Minister of Agriculture Ladislav Feierabend, noted that a representative of the Reich Transport Ministry who kept him company on the eve of the celebration in Gleiwitz deplored the fact that "the war has suspended any further development of the DOE canal."[100]

While Hess presented the standard ideological cliché, Minister of Transport Julius Dorpmüller drew a broad picture of the future transport network of the *Grossraum*, which Germany would provide to its working people, and emphasized the enormous importance of the DOE canal for "Silesia, Germany, or even Europe." Dorpmüller envisioned the circular navigable line running through Germany, connecting the river basins and waterway systems of the Danube, the Rhine, the Elbe, the Weser, and the Oder into a single whole, thus linking the Baltic, North, and Black Seas. Furthermore, Dorpmüller saw the possible future extension of the Adolf Hitler Canal to the east as a tool for expanding German influence along the Vistula and further east towards the Dniester. Ultimately, Dorpmüller rather formally assured his audience that it would be possible to continue work on the DOE in spite of the war, and that armaments must naturally be the top priority on the agenda of the economic Four-Year plan.[101]

In his speech in Gliwice, Franzius declared preparatory works on the DOE to be virtually complete; however, such claims did not correspond to the situation at the turn of the decade. The adaptation of the Czechoslovak project to the demands of the Nazi *Grossraum* policy, signified by the profound change to the standard dimensions, required almost complete re-processing of the project. The deputy of the ŘVC's Canal Department, Jozef Karlický, described the real situation. When urging the MVP to assign reinforcements to his office, he noted that "some basic prerequisites" for the final execution of the general project (namely water provision) were not yet established, and that this was hampering preparation of the detailed local solutions for on-site examination.[102] As of January 30, 1940, the Canal

o vývoji a stavu příprav pro stavbu odersko-dunajského průplavu na území Čech a Moravy (MZA, H42, b. 275), 10.

100 Feierabend was not a competent authority on the subject; that would have been the Protectorate Ministry for Public Works. As he recalled later, Feierabend took part in the event because no one in the Protectorate government found pleasure in attending Nazi festivities. The members of the Protectorate government had devised a secret mechanism for delegations and this was Feierabend's turn. Ladislav Karel Feierabend, *Politické vzpomínky I* (Brno: Atlantis, 1994), 245.

101 The official Protectorate delegation consisted of Expert Commission members Topol, Bartovský and Zástěra. Their German counterparts at the event were Gährs, Franzius, and Krieg. "Otevření průplavu Adolfa Hitlera a zahájení stavebních prací na Odersko-dunajském průplavu," *Zprávy veřejné služby technické* 21, no. 2 (1939): 245-246.

102 Proposal for the allocation of technical and auxiliary forces. Dunajsko-oderský průplav. Návrh na přidělení pomocných a technických sil (NAČR, GŘVC, b. 15, February 19, 1940).

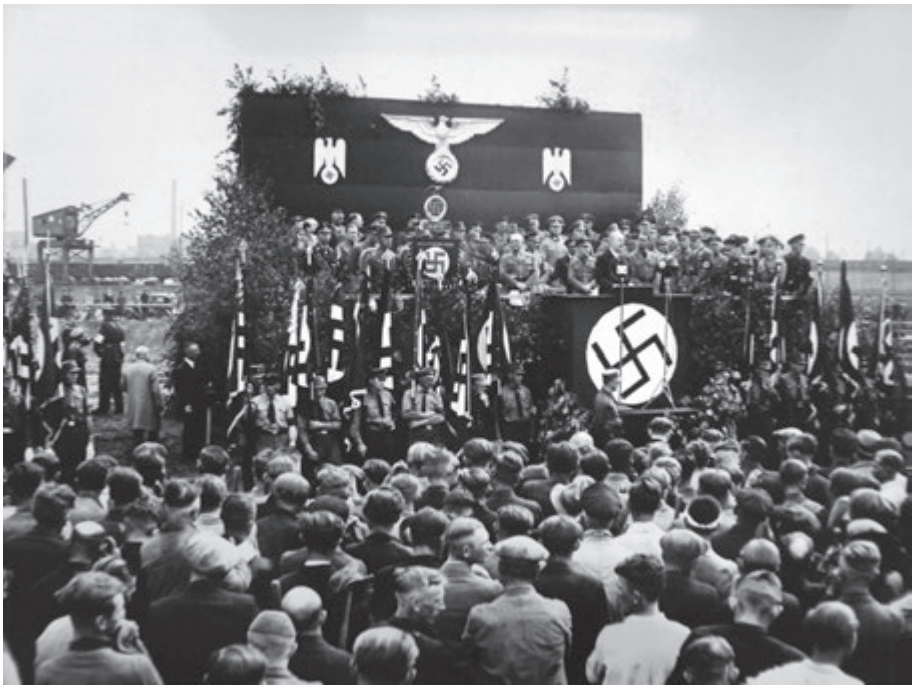

Figure 3.4 – The opening ceremony of the Adolf Hitler canal was accompanied by a DOE canal groundbreaking celebration. In their speeches, Nazi politicians hailed the canal as a step towards a peaceful future and prosperity. Digging started simultaneously at both ends of the canal. The two short stretches built in Vienna and close to Kozle still exist. Source: NAČR, Fotodokumentace 1897-1975, b. 17, no. 2648.

Department had 59 employees (28 engineers and 31 other professionals, including a lawyer). That number included employees originally contracted by DOECS, taken over by the Protectorate Administration as of February 1940.[103] Karlický demanded at least another 30 men in order to quickly produce what Franzius had announced to be already complete.

However, instead of focusing on the key unresolved issues identified by Karlický, the German delegates presented a brand new set of questions.[104] At the Expert Commission's fourth meeting in Prague in mid-March 1940, Georg Franzius tabled new designs of canal cross-sections that the Reich Transport Ministry had approved on November 22, 1939 without discussing with Protectorate authorities.[105]

103 Letter from MVP (NAČR, GŘVC, b. 15, March 13, 1940).
104 Niederschrift über die vierte Tagung der Sachverständigen-Kommission für den Bau und Betrieb des Oder-Donu-Kanals vom 15. bis 16. März 1940 in Prag (MZA, H42, b. 275).
105 Erlass vom 22. November 1939 W 7 B 9038-39.

Promoting the ecological perspective on waterways derived from the Nazi nature conservancy policy, the new design took the aesthetic dimension of the canal into consideration, as well as its incorporation into the landscape. The integration of waterways into the natural terrain should be secured "by removing overly steep slopes and sharp heels and rounding the corners and edges" and also "by planting the banks with reeds, shrubs, and trees," perhaps "even tree-lining can sometimes be achieved."[106] Indeed, the proposals that Franzius presented did include tree-lining. Besides such ecologically-motivated changes, as Bartovský bitterly noted, the new cross-sections contained yet further widening of the channel. The original Czechoslovak design allowed for a width of 34m, the *Mittelandkanal* standard was 37m, and the new proposal operated with 41m; this increase required a corresponding increase in water.[107]

Water provisioning added a new friction line to the debate – besides national affinities, river basin affiliation influenced the negotiations. A month before the Commission's fifth session, the Special Committee for Water Provision for the canal met in Prague. While the German representatives had originally agreed to a water transfer of 0.27m^3/s from the Oder into the Danube watershed, a report from the Wroclaw Oder Authority (*Breslauer Wasserbaudirektion*) presented at the meeting did not consider such a possibility. Furthermore, and seemingly defying common sense, the report required the dams on the tributaries of the Oder to be enlarged, including the planned reservoir at Ostravice on Protectorate territory.[108] The Oder Authority gave distinct preference to the water demands of the Oder Valley over those of Moravia. The summit reservoir was to be supplied by water exclusively from the Morava basin.[109] In addition to depriving the southern stretch of the DOE of the Oder waters, the new scheme actually provided for a reverse direction of water flow. At its second meeting, the commission had proposed utilizing electric water pumping on each lock, in order to cover the increase in water consumption related to the canal enlargement. The delegates from Wroclaw proposed employing the same principle on a larger scale to secure the large amounts of water necessary for operating the canal by water transfer (pumping) from the Danube.[110] By turning the entire canal into a kind of pumped storage facility, the

106 Georg Franzius in his Erläuterung to the Querschitte der Oder-Donau-Kanals, dated December 14, 1939 (NAČR, ÚŘP, 1114), 1-2.
107 Report from the Expert Commission's fifth meeting. Zpráva pro 5 zasedání komise znalců (MZA, H42, 122), 2.
108 The special committee report on the DOE canal's water consumption. *Sitzung des Sonderauschusses zur Festellung des Speisewasserbedarfes für den Oder-Donau-Kanal* (MZA, H42, b. 121, March 14, 1940).
109 Report on water provisioning for the DOE. *Zur Wasserversorgung des Oder-Donau-Kanals, Breslau, den 7. März 1940* (NAČR, UŘP, b. 1114).
110 After another meeting of the special committee held on December 8, 1941 in Prague (MZA, H42, b.

canal itself would produce the electricity necessary for pumping. Such alteration would require the installation of hydropower generators on locks and the adjustment of one of the upper canal pounds into a reservoir basin.[111] Excess power might be used for further electrification in the country.[112] However, the debate on water provision remained open.

There was a lack of understanding of the complaints expressed by Karlický and that the unresolved technical issues remained open. As well as the water supply, the standard lock was not prepared either, although Krieg assured Bartovský that the Reich Ministry was testing the models.[113] The exact location of both shiplifts, a prerequisite for further development of their design, had not been specified due to the unresolved crossings of the canal route with the planned rail tracks. The Protectorate representative, on behalf of the Moravian agricultural circles, disputed the solution for the southern stretch of the canal between Vienna and Lanžhot as proposed by the Viennese Water Authority, because the canal would be located below the Morava riverbed and thus threaten to drain adjacent fields. On the other hand, Franzius rejected the new study of the routing through the city of Moravská Ostrava and the coal-mining district, being mindful of the recently realized dangers of construction in undermined areas.[114] Slovakia's entry into the commission made things even more complicated.

During the rest of 1941, the Protectorate Authorities focused on eliminating as many remaining bottlenecks as possible. Throughout the year, the MVP pursued the standard political procedure necessary to realize the canal project and organized public consultations, during which the project was exhibited in towns and villages directly affected by the canal route.[115] While Bartovský considered all crucial

121), the detailed version of the study of water provision for the DOE was finally completed, in time for the commission's sixth meeting. The *Erläuterungbericht* (explanatory part) alone consisted of 45 pages (MZA, H42, b. 122). Protectorate representatives managed to limit the amount of water available for the summit pound supply from Bečva basin in order to secure a stable water level, not only for the canal stretch in the Morava valley, but also for agricultural needs there. Minutes of the meeting held on September 4, 1941 in the MVP on the supply of water to the Oder-Danube canal; záznam o poradě konané dne 4. září 1941 v MVP o zásobování odersko-dunajského průplavu vodou (NAČR, MVP, b. 535).

111 ŘVC prepared this study in the summer of 1941: The Oder-Danube canal water provision. Electricity consumption for pumping. Zásobování odersko-dunajského průplavu vodou. Spotřeba proudu pro přečerpávání (NAČR, MVP, b. 535, June 5, 1941).

112 Report of the Commission of Experts' fifth meeting, Autumn 1940. Bericht für die 5. Tagung der Sachverständigen-Kommission für den Bau nd Betrieb des Oder-Donau-Kanals (MZA, H42, b. 275), 30.

113 Testing was undertaken by the *Versuchanstalt für Wasserbau und Schiffbau* in Berlin. Report on the Commission of Experts' fourth meeting. Niederschrift über die vierte Tagung der Sachverständigen-Komission für den bau und betrieb des Oder-Donau-kanals von 15. bis 16. März 1940 in Prag. (MZA, H42, b. 121), 4.

114 Report of the Commission of Experts' fourth meeting, February 1940. Zpráva pro 4 zasedání komise znalců (MZA, H42, b. 122), 2.

115 Protocol regarding public consultations for the canal routing on Protectorate territory. Protokol o

questions to have been solved (including location of ship-lifts, ports, and routing through Ostrava), many municipalities and individuals voiced their concerns at the public debates. For instance, the representatives at Přerov, otherwise staunch supporters of the scheme, expressed their fears regarding the massive 180m wide body of the canal elevated almost 15m over the landscape on the outskirts of their town.[116] Some of the complaints could be resolved, but not others. However, the public consultations marked a significant step towards realizing the DOE.[117]

Apart from reports on positive developments in the Protectorate, the Commission of Experts' fifth session saw another round of alignment with Reich's standards. The Protectorate office delegate, Dr. Martini, urged greater participation by the Reich Agency for Natural Resources' geologist in the surveys related to the canal, and representatives of the Reich Transport Ministry presented a Directive on Fishing, Sport and Landscape Planning; in the case of the DOE, this mainly concerned wastewater purification.[118]

After the session, however, war again interfered with preparatory works. The spring of 1941 saw the first significant drop in labor mobilized for canal project. As head of ŘVC's Canal Department, Karlický complained that during the first half of the year he had lost 17 out of 79 employees and that under such conditions the department would not be able to meet its requirements. While these complaints were regular, and by autumn of 1940 the number of employees had dropped (due to temporary transfer within the MVP to a "disposal of military constructions"), this time it marked the breaking point.[119] The reductions signified the war-induced change of priorities away from the canal issue. While the invasion of Poland led to the suspension of construction work, the attack on Russia restricted even preparatory works.[120]

přehlídce trasy v trati Lanžhot-Přerov-Hranice a St.Ves – Mor. Ostrava-Hrušov konané v Brně ve dnech 12. a 13. července 1940 podle min. nařízení ze dne 23. dubna 1903 ř. z. čís. 90; (MZA, H42, b. 91).

116 Ibid., 39.

117 Report on the Commission of Experts' fifth meeting. Zpráva pro 5 zasedání komise znalců (MZA, H42, 122), 26.

118 Report on the Commission of Experts' fourth meeting. Niederschrift über die vierte Tagung der Sachverständigen-Kommission für den Bau und Betrieb des Oder-Donu-Kanals am 9. und 10. Januar 1941 (MZA, H42, b. 275).

119 Request to complete staff and return transferred work-forces. Žádost o doplnění personálu a vrácení oddisponovaných sil (NAČR, GŘVC, b. 15, September 16, 1940); Replenishing Canal Department staff. Doplnění osobního stavu u průplavní skupiny (NAČR, GŘVC, b. 15, June 20, 1941).

120 In contrast to the situation at ŘVC, the Expert Commission continually grew in number. By its sixth session in December 1941, it had no fewer than forty-eight delegates, about ten more than a year earlier at the fifth meeting. Compared to the second meeting (the first was rather specific), the number had multiplied by a factor of 2.5. This situation was partly due to the different agenda. The focus had switched from general questions to local solutions requiring the participation of local experts.

At the same time, the canal lobby was achieving significant political success. In the spring of 1941, the Reich authorities issued the Ordinance on the Oder-Danube Canal to regulate canal-related issues on Reich territory.[121] This document confirmed the Protectorate Administration's executive powers over the canal project on its territory; however, paragraph 25 declared the Oder a Reich Waterway that included the as-yet unnavigable stretch in the Protectorate, up to the planned ship-lift in Jeseník.[122] The Ordinance responded to the Protectorate's political rearrangement of its definitive incorporation in the Reich as of 16 September 1940, and in its subsequent calls for a corresponding update of the 1939 Protocol.[123] As a counterpart to the Ordinance, the Protectorate administration prepared a governmental directive on the construction of the DOE focusing on administrative technicalities. The new Protocol between the Reich and the Protectorate was signed independently on November 12 and December 5, 1941, and was effectively an updated copy of the original.[124]

Both the Ordinance and the Protocol mentioned the Elbe branch of the canal, thus giving back the project its "three-seas connection" quality. Whereas the DO canal's progress had become almost indiscernible for outsiders since its celebratory launch back in 1939, business circles and municipalities along the Elbe revived the idea of the Elbe-Donau connection. The main argument, apart from the standard talk of prosperity, was based on a comparison with the Danube-Oder connections. From the perspective of Hamburg traders, the direct connection to the Balkans and Black Sea seemed more promising than the diverted connection via the Oder or the RMD. By 1940, the Saxon Chamber of Commerce had prepared a Memorandum arguing in favor of the Danube-Elbe canal. The document compared the predicted traffic on the Oder and Elbe branches of the DOE and clearly documented the superiority of the latter. Elaborating on this result, the authors of the Memorandum interpreted the Elbe-Danube connection as a necessary part of the emerging *Grossraum*. Instead of the official plan to create the Elbe branch only after constructing the DO, they called for both projects to run parallel.[125]

121 Letter from the Reich Protector's Office to MVP regarding implementation of the Ordinance. Durchführung der Verordnung über den Oder-Donau-Kanal (NAČR, MVP, b. 530, September 3, 1941).
122 ŘVC report for MVP: Allocation of construction costs. Rozdělení stavebních nákladů (MZA, H42, b. 122, November 24, 1939).
123 Report on the Commission of Experts' fifth meeting, autumn 1940. Bericht für die 5. Tagung der Sachverständigen-Kommission für den Bau nd Betrieb des Oder-Donau-Kanals (MZA, H42, b. 275), 2.
124 The protocol was signed by Protectorate Minister for Public Works Čipera in Prague in November and by Gaehrs as representative of GIWE in Berlin on December 5. Protokoll über den bau des Oder Donau Kanals festgestellt in Einvernehmen mit dem Reichsprotektor in Böhmen und Mähren (NAČR, UŘP, b. 1114).
125 Dr. Thoelke Nadermann, "Der Verkehrsweg Elbe-Donau. Die Verkehrsbedeutung der Elbe-Donau-Verbindung Pardubitz-Prerau," (NAČR, ÚŘP, b. 1114).

The Protectorate had not forgotten the Elbe question. In addition to occasional publications and studies, DOECS delegates supported the activities and visited the Convention in Hamburg in 1941.[126] Eventually, the Reich Transport Ministry answered the interested parties' calls and, for the first time, allocated 50,000 RM in its budget for preparatory works on the Elbe branch.[127] The Protectorate Government was to cooperate on the project with the Saxon Ministry of Economy and Labor in Dresden who was responsible for conducting work in the Sudetenland territory. From 1942 onwards, the Protectorate was to cover the works on its territory from its own budget.[128]

Within the context of growing Germanization, as a final goal of the assimilation strategy, Protectorate institutions gradually lost importance and independence in favor of the parallel German administration. By 1941, the Water Construction Department of the Reich Protector's Office, led by Hirche, fundamentally extended its activities. It took over the on-site control and management of those water-construction works which had survived the restrictions imposed by the increasing demands of the war economy. By the autumn of 1941, Hirche emphasized in internal communication within the Protector's Office regarding the organizational reshuffle of the Protectorate Government, that the water-related agenda under the proposed Ministry of Transport and Technology should encompass not only the respective departments of the Ministry of Public Works, but also those of the Ministry of Agriculture. The reshuffle aimed to align the Protectorate administration structure with that of the Reich, and the main issue was to concentrate the transport agenda in one place. Until then, the issue of transport had been divided between the Ministry of Railways and the Ministry of Public Works, with the latter in charge of roads and waterways. Referring to a recent edict by the Führer on July 29, 1941, establishing the Inspector-General for Water and Energy, Hirche claimed that such an arrangement was to follow the example of the *Altreich*.[129]

126 The event was organized by the *Verein zur Wahrung des Elbeschiffahrtinteressen*. "Výroční zpráva společnosti dunajsko-oderského průplavu za rok 1941," *Plavební cesty Dunaj – Odra – Labe* 3, no. 2 (1942): 31-43, here 34. Most publications on the topic came from the production of DOECS: *Spojení Labe s průplavem dunajsko-oderským. Díl II, Trať Pardubice-Olomouc (česká větev)*, Knihovna časopisu Plavební cesty Dunaj-Odra-Labe (Prague: Společnost dunajsko-oderského průplavu, 1941); *Spojení Labe s průplavem dunajsko-oderským. Díl I, Trať Přerov-Olomouc (moravská větev)*, Knihovna časopisu Plavební cesty Dunaj-Odra-Labe (Prague: Společnost dunajsko-oderského průplavu, 1941). However, DOECS was not alone in its interest in the elbe branch. Reichs-u-Landesplanung Landsrat Niemayer of Berlin demanded and ordered a detailed report: Julius Fiedler, František Radouš: Gutachten über die schiffbare Verbindung der Stromgebiete der Donau und Elbe (MZA, H42, b. 94, February 5, 1940).
127 Letters from Reich Transport Ministry (Gährs) to the subordinate offices: Ministry in Saxony and relevant department of Protector's Office, dated July 8, 1941 (NAČR, UŘP, b. 759, July 8, 1941).
128 Undated letter from Hirche to the Protectorate Prime Minister (NAČR, ÚŘP, b. 759).
129 Re-shuffling of Protectorate ministries. Neugliderung der Ministerien der Protektoratregierung (NAČR, ÚŘP, b. 1104, December 1, 1941).

By virtue of the afore-mentioned edict, Hitler established a single new institution – the Inspector-General for Water and Energy (*Generalinspektor für Wasser und Energie*) – to handle the water-related planning agenda for four ministries (the Prussian and Reich Ministries of Transport and Agriculture).[130] The jurisdiction of this new institution covered Reich territory, including the Protectorate.[131] The establishment of the office aimed to centralize planning on a national level, especially regarding energy production and construction of the nationwide electricity grid. However, the orientation towards energy planning drove the general preference for industrializing rivers as a source of energy production over other uses.[132] Hirche went beyond such a degree of centralization and managed to concentrate the waterways and water management under his auspices at the Protector's Office in the newly created department.[133]

The centralization of the water-related administration in the Reich (including the Protectorate) affected the agenda at the Commission of Experts' sixth meeting. The application of the Reich Waterways standardization program launched by recently appointed Reich Inspector-General for Water and Energy and former highway planner Fritz Todt, required further enlargement of the canal cross-section. The official reasons for adjustment were purely technical: to avoid accidents whilst passing, to avoid abrasion of the banks, and to increase the cruising speed. Especially the latter echoed the general emphasis that Nazi planners had placed on the maximal transport capacity of the canal.[134]

The delegates at the sixth meeting approved the updated version of the Wroclaw water provision scheme quite smoothly and accepted several designs, plans, and reports. However, this otherwise uneventful event was disturbed by the third round of the canal enlargement debate, as well as unexpected objections to the accepted canal route through the city of Moravská Ostrava. A lobby group of miners operating in the area informed the commission of its opposition to any

130 The respective ministries remained in charge of operating the waterways or irrigation, but not of their development and planning. *Erlass des Führers und Reichskanzlers über den Generalinspektor für Wasser und Energie vom 29. Juli 1941*.

131 "Úprava kompetence říšských úřadů ve věcech hospodaření vodou a energií," *Plavební cesty Dunaj – Odra – Labe* 2, no. 5 (1941): 108-109.

132 Bernhard Stier, "Nationalsozialistische Sonderninstanzen in der Energiewirtschaft: Der Generalinspektor für Wasser und Energie 1941-1945," in *Hitlers Kommissare: Sondergewalten in der nationalsozialistischen Diktatur*, ed. Rüdiger Hachtmann and Winfried Süss (Göttingen: Wallstein, 2006), 138-158.

133 The General Inspector's office, which initially objected, finally accepted Hirche's plan to concentrate all water-related agendas in November 1942 and suggested using the name "Gruppe Wasserwesen." Organisation und Stellenplan der Wasserwirtschafts-Verwaltung beim Reichsprotektor in Böhmen und Mähren (NAČR, UŘP, b. 124, November 24, 1942).

134 Guidelines for the channel cross-section design for operating 1000t vessels. Richtlinien für die Ausbildung eines Kanalregelquerschnitts für den Verkehr mit dem 1000t Schiff (NAČR, MVP, b. 530, December 9, 1941).

routing that would cross the coalmines or deposits, and presented an alternative.[135] However, the proposed detour around the coal basin also meant a detour around the city of Moravská Ostrava and the Protectorate stretch of the Oder.[136] Together with the unsettled solution for the trans-border stretch below Hodonín, re-opening of the Oder route issue meant that the commission, after three years of existence, was unable to finalize the routing at either end of the canal, mostly due to long-standing local skirmishes.

Given the sorry state of the planning, it is hardly surprising that the progress of the construction and preparatory works was even worse. Since the first directive limiting construction works in the Protectorate to strategic structures (*Kriegwichtigsbauen*), only a few selected engineering bodies continued working on the canal project. The Ban on New Constructions issued in the spring of 1941 made it clear that construction would not start before the end of the war.[137] Complaints from the ŘVC geometers setting out the canal polygon illustrate the harsh reality: they had to mark the polygon with oak wheels due to the lack of stones and give up on the high-fidelity nivelization marking due to an almost total scarcity of cement on the market.[138] Gährs assured attendees at the Commission's session that both the Reich, and the new Inspector-General Todt personally supported the project and that "construction already commenced would be continued even during the war, using prisoners of war."[139] The fact that some fieldwork continued such as the exploratory works, signified the persisting interest of the

135 The delegate from the mining company Severní dráha Ferdinandova (*Bergwerksgesellschaft Ferdinand Nordbahn*) that had opposed the canal project since Austrian times presented these objections. The source of surprise was the unexpected opinion change on the part of the company, which had accepted the routing at public consultations in the summer of 1940 with only minor objections. Report on public consultations for the canal routing. Protokol o přehlídce trasy v trati Lanžhot-Přerov-Hranice a St.Ves – Mor. Ostrava-Hrušov konané v Brně ve dnech 12. a 13. července 1940 podle min. nařízení ze dne 23. dubna 1903 ř. z. čís. 90 (MZA, H42, b. 91), 47.

136 However, even this part of the river had previously been transferred under the governance of the *Wasserbaudirektion Breslau*. The new routing suggested the relocation of the canal from Protectorate to Reich territory. From the summit pound, the channel would not descend directly to the Oder Valley and Ostrava, but run parallel to the river on the hillside. Naturally, the interested Protectorate parties did not welcome such a sudden twist. The creator of the routing, Professor Berger from the Breslau School of Technology (*Technische Schule*), had previously cooperated on preparing the left-bank alternative, which Germany presented at the first commission meeting. Prof. Berger's Routing. Průplav O-D. Trasa profesora Bergera. (NAČR, MVP, b. 530, December 16, 1941).

137 This new build ban (*Neubauverbot)* was issued by the Protectorate government. Regierungsverordnung vom 7.Mai 1941 über das Neubaugebot (NAČR, UŘP, b. 1109).

138 Report on the DO canal survey. Průplav O-D. Měřické práce a průplavní polygon – zpráva (NAČR, MVP, b. 530, December 16, 1941).

139 Report on the Commission of Experts' sixth meeting for ŘVC, dated December 20, 1941. Zpráva pro ŘVC o 6.zasedání komise znalců pro stavbu a provoz O-D průplavu (MZA, H42, b. 122, December 20, 1941), 1.

Protectorate administration and the Nazi establishment in the project.[140]

By early 1942, all major technological issues (locks, water provision, channel dimensions, and the general route) had been clarified and the only unresolved question concerned the projected time at which the end of the war would enable the once celebratory-launched construction works to resume. At least such a message was leaked from the minutes of the Water Management Committee's session held at the Protectorate Chambers of Commerce in January 1942.[141] Bartovský's official duties prevented him from attending in person, but he did submit a contribution. The main message of his report on the state of water management planning in the Protectorate was clear: there was simply not enough water available to meet all the demands, which were often contradictory. The Morava River Basin simply could not provide enough water for navigational, industrial, and agricultural purposes. Therefore, Bartovský concluded, "it is no longer possible to separate the navigational undertakings from water management and vice versa." Bartovský considered water management planning to be a crucial element in the future well-being of the Protectorate. He saw a high degree of centralization as a necessary precondition for the successful advancement of the "building program and the financial plan for constructing dams and waterways, for water supply, and use of water power in the ongoing electrification of Bohemia and Moravia."[142]

At a time when any practical execution of large water-management structures and waterway schemes was illusory, Bartovský focused on preparing the institutional environment. Aligning the traditional technocratic ideology of Czech hydraulic engineers with the political reality of the Nazi occupation, he actually proposed applying the Leadership Principle (*Führerprinzip*) within the Protectorate administration. Bartovský's vision of a new organization of water management, presented in the form of a draft governmental directive, consisted of establishing a central authority – a Directorate for Water Management (*Ředitelství vodního hospodářství*) within the Ministry of Public Works. The slight change in name from the existing ŘVC was symptomatic of the suggested reform. Competencies

140 Bartovský prepared a long list of constructions he considered vital and requested their exemption from the ban. The department of the Reich Protector's office which had final authority on the matter granted exemptions for some of these, including a survey of the canal route. These exemptions lasted until the end of the war. Einschränkung und Feststellung des Bauvolumens für die Zeit vom 1. Oktober 1941 bis 30. September 1942 (NAČR, UŘP, b. 1109); Monthly reports on the preparatory works document that the project was also active in the following years (NAČR, UŘP, b. 1109).

141 Minutes of the Water Management Committee meeting of the Central Chambers of Commerce (*Ústředna OŽeK*), held in Olomouc on January 15, 1942. Zápis o schůzi vodohospodářského výboru Ústředny obchodních a živnostenských komor, konané 15. ledna 1942 (NAČR, MVP, b. 531).

142 Josef Bartovský, "Overview of Water Management and Waterway Planning in Bohemia and Moravia." Přehled vodohospodářského a vodocestného plánování v Čechách a na Moravě (NAČR, MVP, b. 531, January 9, 1942), 7.

that had been in place since Austrian times, pursued outside the administration of the Waterway Act and the ŘVC (damming, river canalization and maintenance, flood protection, etc.) were all to be concentrated under the new institute. Once the Inspector-General was installed as united authority on waterways in the *Grossraum*, Bartovský attempted to simplify and centralize the political administration of waterways.[143]

However, Bartovský's attempt at centralization was victim to the more profound reorganization of the Protectorate administration. As of March 1, 1942, Hirche *de facto* substituted for Bartovský as acting head of the Water Management Department. Within the context of Heydrich's harsh administrative reform that abolished the formal autonomy of the Protectorate government, Hirche was given the title of *Dezernent* (department head) and acquired an authority equal to the Czech Protectorate Ministers, with a mandate to directly approach the respective ministerial referees.

That same year, 1942, witnessed an important general administrative reform (Governmental directive no. 208/1942 dated June 15, 1942), which applied principles developed in the Third Reich. The Protectorate government abolished the Ministry of Public Works and shifted the water management program to the newly created Ministry of Transport and Technology. Simultaneously, the water-related agenda of the Ministry of Agriculture (agricultural water construction, water resource management, and water rights) also moved to the same area. However, the reform did not affect either the ŘVC as independent technical agency or Bartovský's office, which transferred to the new ministry; there were only minor personnel and organizational changes.

The reform reflected the age-old preference of using hydraulic engineers for central planning. At this time, discussions on canal routing and dam construction were largely impacted by the insufficiency of water resources in the Odra river basin, which was the subject of industry representatives' complaints.[144] The discussions, led by the platform of the Commission of Experts, among others, revealed the intricacy and complexity of water management in society at the time. Farmers, industry, municipalities, and states all had specific and often contradictory demands regarding water flows.

143 Reorganization of the water management administration – an outline of the governmental directive. Reorganizace vodohospodářské služby – osnova vládního nařízení (NAČR, ŘVC, b. 33, November 3, 1941).

144 For instance, at the above-mentioned meeting, engineer Ludwig Hesky stressed the need to properly calculate and take fully into account the water demands of the North Moravian industrial area. Minutes of the meeting of the Water Management Committee of the Central Chamber of Commerce (*Ústředna OŽeK*), held in Olomouc on January 15, 1942. Zápis o schůzi vodohospodářského výboru Ústředny obchodních a živnostenských komor, konané 15. ledna 1942 (NAČR, MVP, b. 531), 2.

These sweeping institutional changes characterized the situation in the Protectorate, whose incorporation in the Third Reich continued to change throughout its existence, depending on the war front situation. The terror that followed the successful assassination of Deputy-Reich Protector Reinhardt Heydrich on May 27, 1942 was the turning point. Until then, the pressure of Germanization had grown gradually. When a group of Czechoslovak soldiers sent by the London based Czechoslovak government-in-exile succeeded in killing Heydrich, the Nazis retaliated with a ruthless campaign against the Czech population. While the reform itself had been in preparation under Heydrich's leadership and did not reflect the terror, from February 1, 1943 onwards, German became the only official language of internal communication in the Protectorate administration.[145]

The demands of the war economy no longer allowed the commission to reunite. By the summer of 1942, the Red Army had stopped the advance of the German offensive on the Eastern Front. The Commission's seventh meeting, scheduled for December 1942, did not take place. In addition to an almost standardized set of reoccurring items, the planned agenda included only one new topic: the possibility of a towing service on the canal.[146]

However, the Protectorate administration had not lost sight of the canal. In the spring of 1943, in the wake of *Wehrmacht* losses in the east, the terror was replaced with a period of relative easing.[147] This development cleared the way for the preparation of a special governmental directive on the construction of the canal on Protectorate territory, and following the positive outcome of the public consultation held in the summer of 1940, was nearing completion. Postponed by the re-negotiation of the canal routing through the coal-mining region of Moravská Ostrava, the final document appeared in August 1943.[148]

The directive was the swansong of the Nazi DOE project. When the executive power in the Protectorate shifted from Reich Protector to the newly-established State Ministry for Bohemia and Moravia on November 4, 1943, Hirche remained the head of an inclusive water authority – the section Waterways within the Transport and Technology Department.[149] Regardless of his passive but supportive

145 Announced in: *Věstník ministerstva dopravy a techniky*, no. 3 (1943): 1.
146 Commission of Experts – preparation for the seventh meeting. Komise znalců pro přípravu DO průplavu. Příprava pro 7. zasedání (MZA, H42, b. 122, October 31, 1942).
147 Brandes, *Češi pod německým protektorátem*, 333.
148 Instead of taking the form of a government directive, it emerged as a decision by the Ministry of Transport and Technology on the routing and the Oder-Danube canal project in general. Entscheidung des Ministeriums für Verkehr und Technik (Öffentliche technische Verwaltung) über die Trasse und über das generelle Projekt des Oder-Donau-Kanals (G.-Z. 1/279-I/4-1943 vom 18. August 1943) (NAČR, MVP, b. 91, August 18, 1943).
149 "Erlass über die Gliederung des deutsches Staatsministerium für Böhmen und Mähren," *Verordnungsblatt des Deutschen Staatministers für Böhmen und Mähren*, no. 27 (1943).

stance towards the canal scheme, Hirche's activities in the new position followed other, more pressing priorities directly connected with the war.[150] Bartovský survived the re-shuffle and retained his position, but failed to keep much of his effective influence, as the Protectorate Administration gradually lost its formal independence and sovereignty over available resources. Furthermore, the general shortage of both manpower and materials restricted all activities related to the canal: the ŘVC experienced another drop in its workforce and the DOECS journal, *Plavební cesty Dunaj-Odra-Labe*, published fewer issues in 1944 and none before the end of the war in Europe in May 1945. Nonetheless, the preparatory works continued virtually without interruption, even during the spring of 1945.

Conclusion

The canal project played its part in the construction of a *Grossraumwirtschaft* Europe, in transformation of the continent into German large economic area. Nazi Germany pushed forward the DOE canal as a geopolitical project aimed at establishing a closely intertwined economic unit under German rule – *Mitteleuropa/ Grossdeutschen Reich* – as part of the continental European Community of (Aryan) nations. At Gliwicze in the summer of 1939, as representative of the Reich Transport Ministry, Gustav Königs described the idea thus: "The Oder-Danube canal is an expression of the great transport unity that emerged after the collapse of political borders between [by then only] Silesia and Ostmark … which at some point will develop into a [by then only] Mitteleuropean transport route of [the] highest significance."[151]

The general technical Nazification of the project, seen as an adaptation of the technical dimension of the canal to the Nazi geopolitical ideas of the *Grossraum* and related technical standards, drew heavily on German waterway building

150 Hirche's view on the project remained firmly in line with official Nazi policy. When presenting the Protectorate water management program at the *Verkehrschau* at the Prague Autumn Fair in 1940, Hirche highlighted that "out of a few possibilities to connect [by a waterway] the northern seas to the Danube, three lay on Bohemian-Moravian territory." Then he falsely claimed that, since the autumn of 1938, the *Grossdeutschen* Reich had pursued all three of them "with particular emphasis." However, the other two (Danube-Vltava and the Elbe branch of the DOE) recived much less attention than the DOE. Die bestehenden und die zukünftigen Wasserstrassen im Protektorat Böhmen und Mähren von Oberregierungsbaurat Friedrich Hirche. Abhandlung für die Verkehrsschau im Rahmen der Prager Herbstmesse 1940 (NAČR, ÚŘP, b. 1114).

151 His address to the *Verein zur Wahrung der Oderschiffahrtinteressen* was quoted in the meeting report published in the Protector Office's official German language newspaper *Der Neue Tag*. Quoted by Andělín Grobelný, "Místo odersko-dunajského průplavu v nacistických projektech přestavby vnitrozemské vodní sítě v letech 1939-1941," *Časopis Slezského muzea* 29, no. 1B (1980): 231-241, here 233.

traditions, as exemplified by Otto Franzius' canonic publication.[152] Franzius' treatise, published in 1929, achieved prominence as a standard reference guide for engineers involved in waterway planning. Although the publication was often disputed and not blindly applied, it reappeared in discussions on the technical layout of the canal throughout the Protectorate's existence. While it was not unknown to Czech engineers before the war, the fact that the ŘVC had to order a copy in 1939 was evidence of its rise in importance.[153]

The canal design produced during the war bore specific marks reflecting the values of the period. The engineers on the project and also the Nazi ideologists pushed forward their specific visions of the canal and the network it should serve. Rather than simply listing all the changes distinguishing this particular project from its predecessor, it is more beneficial to focus on crucial amendments.

To celebrate the third anniversary of the Protectorate, all the Ministry of Public Works departments provided materials on their activity during that period.[154] Ladislav Vavrouch, a regular visiting member of the Expert Commission, in his capacity as head of the Canal Department (of the Water Management and Inland Navigation Section led by Bartovský) listed five crucial characteristics of the new canal project within the Nazi Reich Waterways program.[155]

The first three points on Vavrouch's list concerned the construction of the planned Reich network: its spatial framework, technical standardization, and the emphasis on a significantly higher transport capacity. Such requirements translated into the limited number of locks and the significant enlargement of almost every dimension of the waterway; this typically took the form of duplication of locks and a fundamental gradual broadening of the cross-section. In addition, plans for a united European network appeared for the first time, as this became an ideological tool of the Nazi war against Russia and Britain and simultaneously expressed the real territorial delimitation of Nazi rule. The most obvious feature of

152 Otto Franzius, *Der Verkehrswasserbau: Ein Wasserbau-Handbuch für Studium und Praxis* (Berlin: J. Springer, 1927). Otto Franzius was a member of the German dynasty of hydraulic engineers, professor of hydraulic engineering at the Technical University of Hanover (1913-1936) and an ardent Nazi supporter who served in 1933-1934 as rector. His uncles, Ludwig Franzius (1832-1903) and Georg Franzius (1842-1914), were prominent civil engineers. While the former gained world-wide recognition for his correction of the mouth of the Weser and reconstruction of the port Bremen, the latter achieved the position of Hafenbaudirektor (director of harbor construction) in Kiel. Otto's cousin Georg (1880-??) entered the DOE canal negotiations in his capacity as head of the *Strombau Oder* in Wroclaw.

153 See, for instance, its application within the discussions on channel sealing. Průplav O-D, Příčný profil. Těsnění (NAČR, MVP, b. 531, April 27, 1942).

154 This formed the background material for such celebratory publications as: Emanuel Moravec, *Tři roky v Říši: Protektorát Čechy a Morava* (Prague: Orbis, 1942).

155 The material consisted of two separate reports: one on canals and a second on inland navigation. The list in question is located on page six of the first report. Activities of the department for the last three years. Činnost oddělení za poslední tři roky (NAČR, MVP, b. 531, February 25, 1942).

the high-capacity waterway network serving the *Grossraum* was the preference for ship-lifts. During the debates at the time of the Austrian Empire, Antonín Smrček had convinced the international committee that ship-lifts did not suit the DOE, based on arguments agreed by the PIANC back in 1905.[156] Since then, all designs resolved water level differences through the use of lock chambers. However, the inter-war German waterway program revived the idea of ship-lifting on canals. The Commission of Experts agreed to the German proposal for the ship- lift solution of the DOE summit reservoir. This proposal involved three lifts – two on the southern descent to the Morava Valley, and a single one on the descent to the Oder. Remarkably, the ship-lift located by Slavíč and designed to overcome the 47m difference, would be the highest ship-lift in the world.[157] The vertical water level difference did not allow for a hydraulic system or one with floats, and the only viable option seemed to be the recent German invention – the counterweight ship-lift, as executed on the Hohenzollern Canal in Niederfinow in 1927-1934, which overcame an elevation difference of 36m.[158] However, the exact location of Slavíč's ship-lift was only determined after the Commission of Experts' sixth session. Despite the special working group on ship-lifts established under the Commission at its second session in 1939, the actual designing never took place.

The fourth point on Vavrouch's list dealt with conflicting water uses. The water supply on the Reich Waterway "must be in accordance with general water management planning." The discussions on water provision led to a resolution of the Commission's fifth meeting, calling for a complex water management plan for the DOE canal, which was provided by the engineer Professor Jan Bažant.[159] His work is generally considered to be the first modern water management plan developed in the Czech lands.[160] The urge for comprehensive planning ultimately led to institutional centralization and, from the perspective of the canal, to a significant

156 Permanent International Association of Navigation Congresses, *Report of proceedings* (Milan: PIANC 1906), 217.

157 In the comprehensive overview of the navigational facilities on rivers and canals, MVP engineer Jaroslav Kratochvíl (not to be confused with Stanislav Kratochvíl, also a hydraulic engineer, by that time at Brno Technical University) stated that "There will be a ship-lift on the DOE as well, with a vertical gradient of 47m. Once constructed, it will be the highest ship-lift in the world." Jaroslav Kratochvíl, "Splavňovací stavby na řekách a průplavech," *Plavební cesty Dunaj-Odra-Labe* 2, no. 5 (1941): 96-106, here 104.

158 Michael Braun, "Das Schiffshebewerk in Niederfinow, 75 Jahre in Betrieb," *Bautechnik* 86, no. 12 (2009): 810-814.

159 The Water Management Plan for Moravia (*Moravský vodohospodářský plán*) covered the Protectorate land of Moravia (a part of former Czechoslovak Moravia-Silesia). Professor Bažant communicated with Czech members of the Commission (namely Vavrouch). Nonetheless, there are no signs that the plan would have been instrumentally altered to serve the Czech engineers' intentions; Průplav O-D. Zásobování vodou – vodohospodářský plán moravský (NAČR, MVP, b. 535).

160 *Plán hlavních povodí České republiky, schválený usnesením vlády ČR ze dne 23. května 2007 č. 562*, (Prague: Ministerstvo zemědělství, 2007), 7.

shift in its meaning. What had previously been a single-purpose transport route became reinstated as part of a wider water management scheme. It was not yet an active part, and mostly detached from other water infrastructures, but was set within the new perspective on water as a limited natural resource.

The fifth and the final point concerned the social and economic function of the canal, which, according to Nazi planners, should bring prosperity to the areas along the canal corridor. Following the pattern applied for the *Mitellandkanal*, the DOE was not only intended to connect other waterways in a network, but also the cities along the route. The project discussed at the commission included branch canals to Brno and Olomouc (as the first part of the canal's Elbe branch). Furthermore, in the summer of 1942, when Dr. Schumacher of the Reich Protector's Waterways Department requested a wall map of the waterways for his office in Prague, he also insisted that the considered connection between Prague and the Elbe (a shortcut eliminating the lower Vltava) be included.[161]

Vavrouch evaluated the crucial changes from the perspective of an engineer. Apart from the technicalities, however, the canal-designing process also reflected social and cultural factors aligned with Nazi ideology. These concerned a perspective on nature, articulated in both the requirement of "harmonious fitting into the landscape" and the ecological consideration of wider interactions related to the water cycle within a river basin. Another feature concerns the authoritative system within which the project was developed; specifically, the emphasis on centralization and planning appealed to Czechoslovak hydraulic engineers to the extent that they embraced the ideas of the Leadership Principle (*Führerprinzip*). Indeed, the Czech engineers at ŘVC and MVP cooperated enthusiastically on the canal project with the Nazi occupants and embraced their ideals in a manner characteristic of former Czechoslovak society. After the war, when such an attitude became a stigma, the Czech engineers tried to distance themselves from Nazi ideology and even from cooperation with German engineers on the canal project. In 1946, Bartovský noted that he and his colleagues intentionally pursued the canal design that "was so fundamentally over-dimensioned and over-priced that in the agreed form, it became absolutely unsuitable for rational utilization." However, as the archives clearly showed, it was the Nazis who urged for enlargement.[162]

Finally, the Nazi authorities interpreted the canal as a multipurpose object; not in the sense of a multifunctional water infrastructure, but rather as a tool of a

161 Request for the DOE Canal wall map. LOD -nástěnná mapa 1:200.000 (NAČR, MVP, b. 531, June 11, 1942).

162 Josef Bartovský, *Vodní cesty a vodohospodářské plánování v Čechách a na Moravě. Přehled a bilance práce dvou generací, další úkoly dvouletka a pětiletka* (Prague: Společnost Dunajsko-oderského průplavu, 1946), 50.

multi-layered process of Germanization. The core value of the canal was the physical interconnection of the future *Grossdeutsches Raum*, of Nazi-ruled Europe. The canal also represented the conduit of Germanization, in the sense of the *Landesbrücke* (land bridge) concept providing Germanization of the Czech territory, or the Czechs themselves. This double integration perspective – one following traditional *Machtpolitik* (power politics); the other inspired by racial ideology – added to its appeal.

Chapter 4
Linking the Soviet Volga; not the Rhine!

"Water will stir the blood in the veins of our Industry and Czechoslovakia will become a state on a sea shore. Let's build the port in the heart of Europe. Let's build a new Czechoslovakia"[1]

Towards the end of the war, the Protectorate and Nazi authorities both paid less and less attention to the canal project. The exception was the *Wehrmacht*, which requested a copy of the canal plans in March 1945, when the Red Army entered Silesia and moved along the Oder towards Moravská Ostrava.[2] However, information included in the canal design did not help the Germans to stop the advancing Soviet troops. Ironically, the Moravian Gate, described by Baťa and others as the Czechoslovak key to (Central) Europe, served as the entrance from the east.

The canal idea re-surfaced soon after the German surrender and re-establishment of Czechoslovakia in the debates on post-war reconstruction and the new political organization of Europe. Now eighty-three years of age, Smrček met with his colleague from the days of the Paris Peace Conference, the diplomat Hugo Vavrečka, to discuss preparing the Czechoslovak strategy and demands for the upcoming Peace Conference in Potsdam. Recalling how a lack of background material had limited the Czechoslovak delegation's bargaining power back in 1919, they pushed for very detailed preparation. In September 1945, the Masaryk Academy of Labor initiated a meeting with the minister of transport, at which representatives of the inter-war technocratic movement, often closely linked to DOECS (the Danube-Oder-Elbe Canal Society) such as Smrček or Kačírek, presented their expert opinion on a wide range of transport issues. Generally, they attempted to repeat the post-World War I solutions, such as the internationalization of rivers, or delimitation of borders in a way that secured the viability of border states. This time, the main issue was the construction of dams and the production of electricity.

Moravian business circles led the efforts to pursue construction. Vitkovice's

1 Voiceover in the post World War II movie on the canal: *Přístav v srdci Evropy* by Elmar Klos (1946).
2 The Wehrmacht required a copy of the canal plans (NAČR, MVP, b. 533, March 7, 1945).

director, František Kačírek, helped to revive DOECS and its journal (the first post-war issue was published on October 12, 1945). DOECS activities culminated in the spring of 1946, when a Memorandum on the Danube-Oder Canal (Memorandum o dunajsko oderském průplavu) was presented to the state authorities, together with a proposal for the international funding of the DOE. The document followed the earlier initiative, aiming to add the DOE to the peace conference agenda. The Memorandum's authors delimited "necessary gains," areas to be reclaimed on Austrian and German territories as part of post-war reparations, to enable the construction of the canal on the territory of a single state. Following the fruitless international discussions of the inter-war period, such an arrangement was widely acknowledged as the best, and most probably the only plausible set-up for its completion. More daring minds even considered territorial gains at the expense of Poland, and proposed requesting the area along the unnavigable Oder downstream from Ostrava to the Polish port of Koźle (formerly German Cosel).

DOECS and other supporters again managed to make the canal a live issue in the public discourse.[3] Baťa Film Studios in Zlín had finally completed and presented to public a short documentary, a kind of a newsreel, describing the advantages of the proposed waterway. The production of the movie had started in 1939, but the war delayed its completion. The film, entitled "The Port in the Heart of Europe" (Přístav v srdci Evopy), depicted Czechoslovakia as uniquely unfortunate, because it was a landlocked country – a characteristic it shared with only five other "civilized states": Bolivia, Uruguay, Hungary, Austria, and Switzerland. The film claimed that access to the sea is key to international trade and, therefore, to overall economic progress and cultural development. For instance, the dense waterway and sea shipping route network made Europe the most developed continent. The DOE, connecting three seas in Czechoslovak territory, had the potential to put the country symbolically on the coast, which would compensate for its historical imperfection. Simultaneously, the canal, with its cheap water-borne transport, would make Czechoslovakia a European crossroads, as it would become an important node on the pan-European waterway network, connecting Czechoslovakia to the USSR and Western Europe.[4]

3 This was the main goal of the society's postwar program, as expressed by its chairman Ivan Petr at the DOECS Central Committee meeting on April 2, 1946. "Zpráva pro valnou hromadu Společnosti dunajsko-oderského průplavu v Praze, konanou dne 29.ledna 1946," *Plavební cesty D-O-L* 8, no. 5-6 (1946): 92-96, 96-98.

4 *Přístav v srdci Evropy*, (1946). In 1966, one of the directors of the movie, Elmar Klos, received an Academy Award for Best Foreign Language Film for *The Shop on Main Street*, which he co-directed with Ján Kadár.

Figure 4.1 – The war negatively affected the state of waterways in Europe. Necessary repairs required enormous efforts, but simultaneously opened the door to bold reconstruction schemes. The picture shows a ship-wreck on the Danube, which remained in this position long after the war ended, well into 1946. Source: NAČR, CPU, b. 96.

Smrček, Bartovský, and Zimmler – all former leaders of the community supporting the DOE project – published their views in quick succession on the importance of the project and its role in the new political setting. Above all, they each stressed the great economic potential of the canal project.[5] None showed a deeper understanding of the situation or aligned the canal debate with the most pressing issue of the time. While the DOECS organized the Waterway Convention in 1947 in Přerov, modeled after those of the 1920s, Communist leaders were preparing for the Sovietization of the country.

On Sovietization

During the Cold War, the direct influence of the USSR transformed East European states and societies profoundly and in a seemingly uniform fashion. That is the indisputable core of the notion Sovietization. However, the use of the term "Sovietization" in literature is neither clear nor straightforward and includes

5 Smrček and Bartovský on the pages of the journal *Plavební cesty DOL*, Zimmler in an introduction to the book on waterways by Cvrk.

innumerable temporal, spatial, and thematic variations and subtleties. After almost a century of service in political and later also in historical debates, the notion is loaded with divergent meanings, and sometimes carries a value judgment.

Generally, it is possible to derive two dominant meanings of Sovietization from the literature: primarily political and primarily cultural. The former focuses on the process of establishing the Soviet type of communist regimes in new territories and incorporating them into the Soviet power-sphere (creation of a bloc). The latter draws attention to the specificity of the Soviet modernization concept. Application of the Soviet model did not stop at the political level, but also involved deeper social and cultural transformations. While these were certainly inspired by a specific Soviet version of modernization, the USSR controlled them only to a limited extent (if at all).

Unfortunately, the literature on the topic is hard to systemize with differing time frames, and aspects of the process make it extremely difficult to impose any kind of order on the situation.[6] Instead of trying to classify such a chaotic collection of material, it might be more fruitful to look at the use of the term "Sovietization" as employed by the historiography of Eastern Europe; at that level, at least some nuances disappear.

A comparison of three studies on the Sovietization of Eastern Europe published between 1959 and 2009 provides an illustrative "genealogy" of the notion. Starting from the simple recognition of the construction of the Eastern Bloc by its contemporaries, the three volumes (all published under the exact same title within a period of more than fifty years), reveal how historiography deepened its understanding of a term that now covers the sophisticated, albeit rather chaotic clutter of analyses of incentives, agents, and aspects of the transformative process.

When, in the midst of the Cold War, German scholars Neumann and Birke published an account of the sweeping transformations taking place in Eastern Europe, their main concern was to show how institutional, cultural, and intellectual Soviet-like unification was being driven. They saw a process in motion that could lead to a reality of the dissolution of formerly independent states within the Soviet realm. What they witnessed and described was the relatively rapid and smooth homogenization of formerly specific national cultures and nationally specific organizational patterns into the image of the USSR. The development of a planned economy's international system added to the growing entanglement of

6 In his analysis of the uses of the concept, Jiri Vykoukal showed how different historical experiences shaped the interpretation of the process in local historiographies. For instance, the connotation of Russification is quite strong in Poland and the Baltic states, while almost completely lacking in the case of Hungary or Czechoslovakia. Jiří Vykoukal, "Sovětizace jako výkladový problém," *Moderní dějiny* 15, no. 1 (2007): 287-301, 289.

Eastern Europe into a single entity that worked according to Soviet rules and under Soviet leadership. It is important to note that, in accordance with the overall aim of the publication, the volume covered the period from 1945 to 1957.[7]

Generally speaking, the Cold War atmosphere on the western side of the Iron Curtain in the 1950s produced a negative and essentialist picture of the Sovietization process. In the writings of contemporary German Ostforschung and American Sovietology, which were limited to Eastern Europe in the final decade of Stalin's rule, the concept of Sovietization stood for the enforced establishment of Soviet rule over Eastern Europe. [8] The volume by Birke and Neumann is considered to be among the few balanced scholarly contributions to the problem produced in the 1950s and 1960s.[9]

After 1989, the domestic historiographies of Eastern Europe adopted the theme of Sovietization and developed a specific political conception of it. The crucial question behind inquiries into the problem was whether there was an alternative to Sovietization after 1945. What role did local politicians play in the adoption/imposition of Soviet/communist rule? To what extent could they influence its final shape? Where was the point of no return on the time axis? Given this framework for research, it is hardly surprising that virtually every text on the topic published in Czech historical literature since then operates within the rather narrow temporal range of 1944-1953. In order to understand the installation of communist

7 Eugen Lemberg Ernst Birke, and Rudolf Neumann, , *Die Sowjetisierung Ost-Mitteleuropas. Untersuchungen zu Ihrem Ablauf in den Einzelnen Ländern*, vol. 1 (Frankfurt/Main: A. Metzner Verlag, 1959). Although the title includes East Central Europe, it also has a chapter on the Balkan Peninsula. See the introduction for the basis of their understanding of the Sovietization process.

8 These two parallel scholarly disciplines are oriented on the analysis of the Soviet sphere, both suffering from scarcity of information and largely dependent on second-hand sources, official publications and influenced by emigrées, who by definition, are hesitant to create anything other than negative images of the USSR. As American historian Alexander J. Motyl stated in the late 1980s, "Contemporary Sovietology represents an awkward amalgam of data collection, policy analysis, and journalism that is as divorced from scholarship as sense impressions are from theory." Alexander J. Motyl, *Sovietology, Rationality, Nationality: Coming to Grips with Nationalism in the USSR* (New York: Columbia University Press, 1990), 1.

9 Tejchman singles out this quality of the edited volume in his brief bibliographical account of the literature on the political version of Sovietization. However, even Neumann and Birke, otherwise scholarly correct, completely ignored the role of the Nazi occupation of Eastern Europe. It has been argued elsewhere that this first-hand experience with Western totalitarianism paved the way for the Sovietization of Eastern Europe. Miroslav Tejchman, "Geopolitika a revoluce," in *Sovětizace Východní Evropy: Země střední a jihovýchodní Evropy v letech 1944-1948*, ed. Miroslav Tejchman (Prague: Historický ústav, 1995), 261-283, here 282. It is important to note that Western Cold War historiography tends to interpret Sovietization as inherently evil, while the American stance in the conflict is defended as ideologically correct, firm, and democratic. A recent example of such attitude is the concept of New Cold War history developed by American historian John Lewis Gaddis, in John Lewis Gaddis, *We Now Know: Rethinking Cold War History* (Oxford; New York: Clarendon Press; Oxford University Press, 1997). Naturally, a number of East European historians have objected to this view and tend to see the USA and the USSR as both practicing their specific form of *Realpolitik*. See, for instance, László Borhi, *Hungary in the Cold War, 1945-1956: Between the United States and the Soviet Union* (Budapest; New York: Central European University Press, 2004), 322-323.

regimes and Soviet rule in the region, it is only natural to focus on the immediate postwar period, or the last years of Stalin's rule.[10] The *Sovětizace Východní Evropy* collection, published in 1995, represents a solid example of such an attitude. Its authors saw Sovietization as a "full integration of East European countries into the Soviet sphere, leading to their actual loss of sovereignty."[11] Following this logic, 1948 marks the end of the process. By the end of that year, all respective countries were fully governed by communists and set firmly within the Soviet Bloc; that is, outside the Marshall Plan and on the brink of the Comecon.[12] The authors constructed the process as an interaction between the inner transformation (formation of the communist regimes and society on a domestic level) and the outward expansion (formation of the Soviet Bloc driven from Moscow). Based on a detailed comparative analysis of the pro-Soviet communist regimes and their roads to power in East European countries between 1944 and 1948, the authors concluded that endogenous sources were, ultimately, clearly inferior to the pressures from Moscow.[13] This "political" conception of Sovietization narrows down the notion's explanatory potential almost exclusively to the USSR's subjugation of East European countries.

However, important objections could be raised against the narrow political perspective. Such a conception of Sovietization, strictly oriented on the political

10 For instance, Jiří Vykoukal dated the Sovietization of East European countries to 1944-1948. Others who discussed the issue in the specific contexts of cultural politics (Knapík), military (volume edited by Danielová), aircraft industry (Roeser) or press (Bystrov), also keep to this delimitation. Polish author Andrzej Koryn and German historian Michael Lemke took similar stances. Vykoukal, "Sovětizace"; Jiří Vykoukal, Bohuslav Litera, and Miroslav Tejchman, *Východ: vznik, vývoj a rozpad sovětského bloku, 1944-1989* (Prague: Libri, 2000), 95-102; Jiří Vykoukal, "Sovětizace, lidová demokracie a komunismus," in *Sovětizace Východní Evropy: země střední a jihovýchodní Evropy v letech 1944-1948*, ed. Miroslav Tejchman (Praha: Historický ústav, 1995), 7-38; Libuše Danielová, ed. *Sovětizace armád střední a jihovýchodní Evropy po 2. světové válce: sborník příspěvků z konference* (Brno: Vojenská akademie v Brně, 2004);Vladimír Bystrov, *Svobodná nesvoboda: některé příklady postupující komunizace a sovětizace mediální krajiny v Československu a snah komunistů umlčet český nekomunistický a církevní tisk v letech 1945-1948* (Prague: Vyšší odborná škola publicistiky, 2006); Jiří Knapík, *Únor a kultura: Sovětizace české kultury 1948-195*0 (Prague: Libri, 2004); Matthias Roeser, "Sovětizace a militarizace Československého leteckého průmyslu v letech 1949-1953," *Soudobé Dějiny* 3, no. 1 (1996): 60-71; Andrzej Koryn, "International Aspects of the Sovietisation of Central-Eastern Europe, 1944-1947," *Acta Poloniae Historica*, vol. 92 (2005): 99-116.; Michael Lemke, ed. *Sowjetisierung und Eigenständigkeit in der SBZ/DDR (1945-1953)* (Weimar; Köln; Wien: Böhlau Verlag, 1999).

11 Tejchman, "Geopolitika a revoluce," 261. The literal translation is "Sovietization of Eastern Europe." Miroslav Tejchman, ed. *Sovětizace východní Evropy: země střední a jihovýchodní Evropy v letech 1944-1948* (Prague: Historický ústav, 1995). In a way, this volume builds on the work of Neumann and Birke, who actually intended to devote the second volume of their analysis to the comparative and more theoretical evaluation of changes in Eastern Europe, unbound from the confines of the national perspective. See introduction in: Ernst Birke, *Die Sowjetisierung*, 1.

12 Vykoukal, "Sovětizace," 299.

13 Confusingly, the presence of Soviet military forces is seen as a hindrance to Sovietization (understood as a communist road to power). The installation of the Soviet party-state model was much smoother in Albania and Yugoslavia, where local communist partisans led the liberation process without direct involvement of Red Army troops. Tejchman, "Geopolitika a revoluce," 262, 266.

anatomy of the take-overs, does not actually need to employ the term. The standard "establishment of communist regimes in Eastern Europe" seems appropriate.[14] Furthermore, considering the history of the Danube-Oder-Elbe Canal, even the institutional and organizational (political) changes took longer than just those few years of Stalinism. Also, the corresponding changes in technical lay-out (such as re-orientation towards the east) were incorporated even later than that, but not before 1958 and, in its fully-elaborated form, not before 1964.

The phenomenon of Sovietization clearly extended the narrow political field. Apart from ongoing pressure from the USSR and Moscow-trained local party leaders, independent Sovietizing efforts were also in operation. Many areas of life were Sovietized (adapted to the Soviet model) by domestic players with various motivations or through the operation of international institutions standing outside the effective political control of the Kremlin.[15] It seems it was precisely the formation of a new "Sovietized" political elite and the strong presence of the Soviet element (either symbolic or through the physical presence of the Red Army and the Soviet Secret Police NKVD) that secured a favorable environment for the gradual application of the Soviet Model in all spheres of society, including technical standards. It was only after 1948 that East European nations began to experience Sovietization on a deeper level. This continued, to a varying degree, up to 1989.[16] The first generation of graduates of "Sovietized" universities replaced the technical cadres educated in the inter-war period. By the mid-1960s, young people occupied most of the leading positions in the programs involving hydraulic engineering and the canal scheme; specifically, in the scientific (institutes), political (ministries), and administrative (regional water administration) fields. Therefore, Sovietization should also be seen as a cultural phenomenon that was, to a certain extent, parallel to the nineteenth century Central European experience with Germanization or the simultaneous process of the Americanization of Western Europe. While Americanization is often

14 Norman M. Naimark and L.I.A. Gibianskii, *The Establishment of Communist Regimes in Eastern Europe, 1944-1949* (Boulder, CO: Westview Press, 1997).

15 Soviet control over Comecon activities was certainly limited and changed over time. See Metcalf's discussion on the changing ability of Soviet leaders to achieve their objectives. Lee Kendall Metcalf, *The Council of Mutual Economic Assistance: The Failure of Reform* (Boulder: Columbia University Press, 1997).

16 Again, the definition of the term is crucial. For some Romanian historians, the Sovietization of the country ended in early 1960, when the direct influence of the USSR in Romania weakened. These historians simply refer to the further development of central economy and the party state as Communization. Catalin Turliuc, "Romania's Sovietization. Sociocultural Aspects," in *Sovietization in Romania and Czechoslovakia: History, Analogies, Consequences*, ed. Alexandru Zub and Flavius Solomon (Iaşi: Polirom, 2003), 57-66, here 57. However, given that the Soviet model shaped the formation of communist regimes in all European countries, even the post-1960 transformations in Romania principally followed the Soviet institutional system. E.A. Rees, "Introduction. The Sovietization of Eastern Europe," in *The Sovietization of Eastern Europe: New Perspectives on the Postwar Period*, ed. Balázs Apor, Péter Apor, and E.A. Rees (Washington, DC: New Academia Pub., 2008), 1-28, here 4-9.

characterized as "Empire by Invitation," the creation of the Soviet Bloc might be characterized as "Empire by Coercion."[17]

The third volume, *Sovietization of Eastern Europe* (2008), builds on exactly this argumentation and employs the notion in the broadest possible sense, defining it simply as a "transplantation of the Soviet Model."[18] Accordingly, contributions to the book cover the entire period of the USSR's existence, a country where the Soviet model was not only developed, but also applied for the first time. A wide range of historical sub-disciplines addresses the theme and releases it from the domain of exclusively political histories.[19]

Furthermore, the notion of Sovietization was originally used by actors to describe a transformation to a pre-defined civilizing project based on messianic aspects of communist ideology (class struggle) and Russian imperial traditions (Russification).[20] It was exclusively an invention of post-war *Ostforschung*/Sovietology scholars such as Neumann, Birke or Gaddis; they only exploited its analytical potential. The architects of the process, the soviet leaders, had coined the term as a normative category during the first years of the Soviet regime to describe the specific Soviet socialist strategy of modernization.

Precisely this modernization layer comes to the fore when approached from a cultural point of view. As a specific vision of progress, or more exactly a non-capitalist version of modernity, the Soviet model (when not seen as inherently imperial and Russian) became acceptable and perhaps even desirable among various circles of Czechoslovak society, even before the Communist coup of 1948.[21] However, this is not to say that the takeover would have been possible without the presence of Soviet power. Even in Czechoslovakia, whose population was the most prone to Communist ideals among the East European countries (at least according to the 1946 elections), the situation would hardly have developed into such a far-reaching application of the Soviet model of Communism.[22]

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17 Geir Lundestad, "Empire by Invitation? The United States and Western Europe, 1945-1952," *Journal of Peace Research* 23, no. 3 (1986): 263-277; László Borhi, "Empire by Coercion: The Soviet Union and Hungary in the 1950s," *Cold War History* 1, no. 2 (2001): 47-72.

18 Balázs Apor, Péter Apor, and E.A. Rees, *The Sovietization of Eastern Europe: New Perspectives on the Postwar Period* (Washington, DC: New Academia Pub., 2008).

19 Cultural approaches dominate the volume. Of the fifteen contributions, three are devoted to the Sovietization of historiography, one to the evolution of the concept itself, two to economic issues (from a cultural viewpoint), two to religion, and the remaining seven to either leisure or rituals of Soviet communism.

20 For a detailed discussion on this notion and its historical development, see Tarik Cyril Amar, "Sovietization as a Civilizing Mission in the West," in *The Sovietization of Eastern Europe: New Perspectives on the Postwar Period*, ed. Balázs Apor, Péter Apor, and E.A. Rees (Washington, DC: New Academia Pub., 2008), 29-46.

21 Tejchman, among others, summed up the pro-Soviet moods. Tejchman, "Geopolitika a revoluce," 278.

22 For the Czechoslovak elections of 1946 see Vykoukal, Litera, and Tejchman, *Východ*, 144-147. Czechoslovakia's national model of socialism, which did not include collectivization, was abandoned in favor of the Stalinist concept in 1948, immediately after the Communist Party came to power. The process was also

Apor and Reese's volume stresses the dual dimension of Sovietization; besides the unification of political and economic structures and organizational forms directed from Moscow, the newly-established Soviet democracies also attempted to import the Soviet way of life on a broader scale.[23] In a way, this second "cultural" aspect bears a strong resemblance to the endogenous political forces that formed political Sovietization, as described by Tajchman et al. In this way, Apor and Rees paraphrased the above-mentioned duality of the process: the imposition of the Soviet system (incorporating the state into the Soviet Bloc) and appropriation of the Soviet way of life by domestic players (governments, etc.). However, such appropriation of Soviet models in their Stalinist form into the very different environments of Eastern Europe, inevitably collided with local traditions and settings, which did not leave the scene without a fight. In the end, "indigenous" forces, through resistance or appropriation, took part in the final shaping of the local/national/sectoral versions of Sovietization.[24]

A shift from political to cultural interpretation of the process inspired a re-evaluation of its major driving forces. The standard image of Soviet party commissars operating in the shadows, assisted by the NKVD and local communists as their collaborators, is clearly incomplete. There were at least two other important groups of Sovietizers. Operating on the receiving end were partly non-communist supporters or carriers of the modernization program, such as scientists, engineers, and professionals active in the voluntary adoption of the Soviet model in their specific area of expertise. At the other end, Soviet advisors were sent to supervise or directly manage the transformation in economic, political, and military spheres.

It would be highly unjust to state that Sovietization was imposed on Czechoslovak society completely against its will, although recent mainstream Czechoslovak historiography tends to underplay such events. In fact, it initially received a warm

affected by the Stalin-Tito split and ensuing attacks on "nationalism excesses." Václav Průcha, *Hospodářské a sociální dějiny Československa 1918-1992. 2. díl, období 1945-1992*, vol. 2 (Brno: Doplněk, 2009), 262. John Connelly, *Captive University: The Sovietization of East German, Czech and Polish Higher Education, 1945-1956* (Chapel Hill: University of North Carolina Press, 2000), 55.

23 Such attempts ranged from the adoption of Lysenkism in Biology to the suggested import of Soviet cornflakes and the subsequent Sovietization of the Czechoslovak diet. Anna Matalová and Jiří Sekerák, *Genetics Behind the Iron Curtain: Its Repudiation and Reinstitualisation in Czechoslovakia* (Brno: Moravian Museum, 2004); Martin Franc, *Řasy, nebo knedlíky? Postoje odborníků na výživu k inovacím a tradicím v české stravě v 50. a 60. letech 20. století* (Prague: Scriptorium, 2003), 198.

24 The existence of national versions of Sovietization is one of the main claims of Connelly's study of educational systems in Central Europe. Connelly, *Captive University*. Jakub Rákosník builds his story about the Sovietization of the welfare state in Czechoslovakia around the interaction of historically determined structural factors and the impact of contingency factors. i.e. installation of a soviet-style communist regime. Jakub Rákosník, *Sovětizace sociálního státu: lidově demokratický režim a sociální práva občanů v Československu 1945-1960* (Prague: Filozofická fakulta Univerzity Karlovy, 2010).

welcome from a significant part of society as a remedy for the failure of the liberal democratic model and its main representatives, namely the West European countries that had betrayed Czechoslovakia before the war by signing the Munich Agreement.[25] Also, some non-communist political representatives admitted being attracted to the Soviet model, and the literature has described their actions in various fields of social activity.[26] Naturally, hydraulic engineers, so famously fascinated with planning, were no exception to the rule.

The concept of "self-Sovietization" was adopted for the activities of people and organizations independent of the regime, who seemed to have an obsessive interest in introducing Soviet methods and practices. John Connelly has fruitfully exploited the notion (originally coined in the context of standard "political" discussion over Sovietization in the GDR) in his study on the Sovietization of universities in communist countries of Central Europe.[27] However, he used the term in a relatively narrow sense to describe the efforts of "compulsive Sovietizers" among communist functionaries. In the case of the Danube-Oder-Elbe canal project, this role was also adopted by some non-communist hydraulic engineers who were fascinated by communist values and technology and their emphasis on "planning," similar to the experiences of the (then) recent period of Nazi occupation. As soon as life went back to normal, some Czechoslovak water/hydraulic engineers began promoting the qualities of the Soviet model of water management in the Czechoslovak trade press.[28]

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25 Published under the subtitle "Dobrovolná Sovětizace – Voluntarily Sovietization," Sviták's interpretation of the process challenges the popular image of Czechoslovakia as a helpless victim left exposed to the USSR once it was betrayed by the West at the Yalta Conference, much in the same way as happened a few years earlier in Munich. Such interpretation forms a dominant discourse in Czechoslovak context and is generally referred to as the "Munich complex". Sviták argued that Czechoslovak diplomats during the war viewed the USSR as a viable alternative to the West and that this stance, known at least to the British delegation, affected the negotiations at Tehran and Yalta. Such a view has attracted greater support in recent Czech historiography; see the seminal volume on the last years of World War II by Hrbek. Jaroslav Hrbek, *Draze zaplacená svoboda: osvobození Československa 1944-1945* (Prague: Paseka, 2009); Ivan Sviták, *Veliký skluz: dobrovolná sovětizace 1938-1948* (Prague: Orbis, 1990). For more on the "Munich complex," see: Jan Tesař, *Mnichovský komplex: jeho příčiny a důsledky* (Prague: Prostor, 2000).

26 In the case of natural sciences, the scientists themselves (not communist party members or supporters) initiated Sovietization in their specific fields. Jiří Jindra described this group as "young progressive scientists lacking sufficient experience" and prone to "parroting of soviet results"; he also characterized them as "opportunistic". Jiří Jindra, "The Sovietization of Natural Sciences in Czechoslovakia (1945-1960)," in *Sovietization in Romania and Czechoslovakia: History, Analogies, Consequences*, ed. Alexandru Zub and Flavius Solomon (Iași: Polirom, 2003), 44-56, here 45.

27 It is important to note that, in the standard political debate on Sovietization as the establishment of communist regimes, this notion has been strongly opposed for implying that the USSR's role was not vital for the result. It was, of course, and "Self-sovietization" must be understood as just one, and definitely not the most important, mode of the Sovietization process. Connelly, *Captive University*, 45-46.

28 Alois Bratránek, *Organizace hydrologické služby v SSSR ve srovnání se službou v ČSR* (Prague: SÚH, 1946).

After 1948, self-Sovietization became a prominent tool with which to gain or maintain influential positions within the system. Furthermore, in the context of political trials, it also became a matter of life and death and insufficiently zealous Sovietizing activity could be considered as betrayal.[29] Local Communists did their best to Sovietize the country, closely following Stalin's famous quote that "a revolutionary is he who, without arguments, unconditionally, openly and honestly … is ready to defend and strengthen the USSR …"[30] However, these individuals were limited in their endeavors by a lack of Soviet guidance. They often had to improvise and work out how the Sovietization of a given branch or sector should develop and to what end. To a certain extent, experts in the given fields were allowed, or even invited, to shape and control the process, as politicians logically lacked the necessary expertise.[31] In the case of the DOE, this resulted in disputes on the meaning of Sovietization, based on the functional versatility of the project among specialists from all sectors of the national economy involved: transport, agriculture, water-management, construction, power engineering, and ideology.[32]

However, in the crucial power sectors such as military and heavy industry, the course of action was determined and controlled by advisors appointed by the USSR.[33] Throughout the 1950s, the Czechoslovak government often asked for their presence and counsel in other spheres of the national economy and for specific branches of state administration, such as culture or education.[34] In the most important arenas, and where advice was available, the whole consulting process worked on the basis of virtually undisputed adoption of Soviet advisors' opinions, such as during preparations to reorganize a sector of the Czechoslovak economy.[35] Over time, and with changing international relations within the bloc, the system of advisors, ambassadors of Sovietization, left in favor of the multilateral discussions within Comecon.[36] Although the Soviet advisors kept their position of final

29 Connelly, *Captive University*, 55. Czech communist Rudolf Slánský, one of the fourteen leading party officials sentenced to death in 1952, was accused of treason for slowing down the economic development of the country by "delaying the invitation of Soviet advisors in the economic sector." Karel Kaplan, *Sovětští poradci v Československu 1949-1956* (Prague: Ústav pro soudobé dějiny AV ČR, 1993), 10.

30 Quoted in English by Zbigniew Brzezinski, "The Challenge of Change in the Soviet Bloc," *Foreign Affairs* 39, no. 3 (1961): 430-443, here 430.

31 Jindra, "The Sovietization of Natural Sciences," 45.

32 See the discussion below of the "extra-official party committee" on the canal in 1951.

33 These critical areas were: uranium mines and military education (1945-1949); national security, army, economic planning (since 1950); Kaplan, *Sovětští poradci*, 10.

34 Generally up to 1957; later only on exceptional occasions. Ibid., 96-98.

35 In 1951, Soviet experts provided 46 documents, analysis and recommendations that were "perceived and treated as binding guidelines" by the Czechoslovak authorities. Ibid., 48-60.

36 Following the shift from Stalin's concept of general laws of transition to socialism (that is, the one and only proper way was the Soviet one), to Khrushchev's less rigid stance, which allowed for some national peculiarities.

authority until the early 1960s, they did not interfere automatically and had to be asked for assistance, as in the case of the Czechoslovak railway reforms in 1962.[37]

The international system of the Soviet Bloc, first labeled as "socialist camp," and later "socialist world system" or "socialist commonwealth," formed another important arena for articulating the Sovietization process.[38] As Valentina Fava and Matthias Uhl illustrated in the cases of Comecon and the Warsaw Treaty, respectively, these bodies represented a platform for negotiating the actual configuration and content of the process. At the outset, East European countries tried to comply with Soviet demands and implement Soviet experiences and models as much as possible. However, it soon became clear that the literal transplantation of Soviet production methods into different environments of Eastern Europe would not be smooth and unchallenged.[39] Likewise, debates on the nuclear-missilization of the Warsaw Treaty showed that, notwithstanding its dominant position, the USSR never fully relied on its eastern allies in military terms; the Sovietization of their respective armed forces in the sense of subjugation to common command was partly a by-product of the Warsaw Pact.[40] In this way, Sovietization efforts were largely left to the local communist authorities and experts, who had to find a way to implement the measures agreed on at an international level in the given policy

37 Although the Soviet advisors were generally called back to the USSR by 1957, they were also sent abroad on direct request later on. For instance, when Czechoslovak railways faced a capacity crisis in the early 1960s, the authorities asked for more Soviet advisors. According to Minister of Transport Bruno Kohler, "comrade Osincev, advisor at the Ministry of Transport, can't manage it all by himself." New advisors arrived and prepared the re-organization of the railways administration, and later cooperated on the Czechoslovak transport policy, especially on the preparation of the railway connection to the USSR and construction of the wide-gauge (Russian) railway to Košice Steel works. Board Meeting of the CzCP Central Committee (NAČR, KSČ-ÚV-02/1, sv. 6, aj. 5-14, January 22, 1963).

38 On the so-called Zhdanov doctrine, which defined post-war Europe as basically consisting of two antagonistic "camps," see Zhdanov's speech at the first meeting of Cominform in 1947. Andrej Aleksandrovič Ždanov, *O mezinárodní situaci: referát na informační poradě představitelů několika komunistických stran, konané v Polsku koncem září 1947* (Prague: Redakce Světových rozhledů, 1947). For details on Khrushchev's vision of the "Socialist Commonwealth," see the respective chapter in his edited memoirs: Nikita Sergeevich Khrushchev and Sergei Khrushchev, *Memoirs of Nikita Khrushchev, vol. 3* (University Park, PA: Pennsylvania State University, 2004), 386-397. In accordance with general Soviet policy, Czechoslovak delegates at the UNECE ICT referred to the other socialist countries as ZST (*země zocialistického tábora* – countries of the socialist camp; sometimes abbreviated as "socialist camp" or "peace camp") or LD (*lidové demokracie* – people's democracies) till 1956-1957. After Khrushchev's critical speech at the twentieth CPSU congress, Czechoslovak transport experts adopted the new doctrine and referred to their bloc partners as socialist system countries (*státy socialistické soustavy*) or simply "socialist states." Even then, however, abbreviations like ZST appeared from time to time (AMZV, archival groups of the Department International organization 1945-1975).

39 Valentina Fava, "Between American Fordism and 'Soviet Fordism': Czechoslovak Way Towards Mass Production," in *The Sovietization of Eastern Europe: New Perspectives on the Postwar Period*, ed. Balázs Apor, Péter Apor, and E.A. Rees (Washington, DC: New Academia Pub., 2008), 47-64.

40 Matthias Uhl, "Sovietization and Missile-ization of the Warsaw Pact, 1958-1965," in *The Sovietization of Eastern Europe: New Perspectives on the Postwar Period*, ed. Balázs Apor, Péter Apor, and E.A. Rees (Washington, DC: New Academia Pub., 2008), 65-76.

sector. In return, such localized Sovietization affected negotiations on an international level.

The Soviet system of rule combined hard and soft controls, even before its expansion into Eastern Europe.[41] Together with previously mentioned factors, this creates a somewhat "entangled whole" picture of Sovietization. The multiple forces operating on various geographical and societal hierarchical levels shaped the final results. Structural factors interacted with decisions made by individuals and were influenced by older traditions or technological dependencies.

However, as the available literature suggests, and as sources confirm, Stalin's death marked a significant shift in the general *modus operandi* of Sovietization. During the rather fierce imposition of pro-Soviet regimes, accompanied by unconditional acceptance of Soviet leadership, the new communist elite came into power in all East European countries. The year 1953 marked another turning point in this respect, this time in favor of the soft controls of the de-Stalinization period. The already Sovietized elite secured future loyalty to the Kremlin by integrating nations deeply in the Soviet system using cultural attractions, ideology, and international institutions. The best example was the growing activity of the bloc's international organizations, in a way supplanting direct Soviet control. An illustrative case was the revival of the Danube Commission. Sovietized in 1948 already, it only became fully operational in 1955 after the Bratislava Agreements finally regulated the conditions for international navigation on the river. Similarly, only in 1955 did all East European countries (except the GDR) finally join the United Nations. Furthermore, Comecon had entered a period of multilateral economic coordination a year earlier, when its Secretariat was established to slowly take over the administrative agenda of the council from Soviet state institutions.[42] Last but not least, the Warsaw Treaty, signed in 1955, also based the bloc's military cooperation on an international foundation. The rapidly developing transnational organizational structure of the bloc signified a new form of Sovietization. However, as in the case of Comecon, it took a few more years before these bodies became fully independent in their areas of expertise and replaced the Soviet planning office (GOSPLAN) as main coordinating body. Furthermore, although Comecon membership was limited to individual European communist countries, it also

41 For the interwar period, see the description of soft and hard-line tools employed in the USSR's ethnic policy explicitly analyzed in: Terry Martin, *The Affirmative Action Empire: Nations and Nationalism in the Soviet Union, 1923-1939* (Ithaca; London: Cornell University Press, 2001), 21-22. Postwar developments are similarly described in standard histories of the Cold War and Eastern Bloc such as Jeffries and Bideleux or Pearson, as well as in the analysis of the bloc integration, which always stresses the military dominance of the USSR, for example in the standard text by Brzezinski.

42 Michael Charles Kaser, *Comecon: Integration Problems of the Planned Economies* (London; New York: Oxford University Press, 1965), 65.

cooperated with various international organizations outside the bloc.[43]

Thus the process of Sovietization can be divided into several periods: the political Sovietization of 1944-1948; Stalin's hard Sovietization of 1948-1953, during which the reality of the Iron Curtain was finally drawn; and a softer variant based on international cooperation when the direct influence of the Soviet Union was substituted by international cooperation, more precisely in the form of the Khrushchev doctrine of "two systems." In the wake of de-Stalinization, Khrushchev rearticulated the Cold War conflict in peaceful terms as a contest between socialism and capitalism. In order to fully exploit the perceived comparative advantage of the socialist system – namely, the lack of irrational market competition – Khrushchev strived to employ economic planning on an international scale through Comecon.

The origins and functioning of Comecon in the context of Sovietization remain largely mysterious. The literature on the topic is divided into two streams. The first describes Comecon as a deliberate attempt to bind socialist countries by economic links under the rule of the USSR (a tool of Soviet hegemony, and political incentive). The other views its establishment as a natural reaction to the closure of Western markets and the subsequent urgent need to coordinate flows of international trade within the bloc; this was later revived and upgraded in reaction to the integration processes in the West and the Rome Treaties (economic incentive).[44] The combination of these approaches seems to create a third option, in which Comecon constitutes a platform for discussing Sovietization, created and led by the Soviets in response to calls from local "self-sovietizing" politicians and experts. They not only required economic cooperation after the loss of Western markets and products, but also an exchange of opinions in order to reduce uncertainties concerning Sovietization.[45]

Nonetheless, the decisions made by the respective bodies of Comecon undoubtedly contributed to the process and affected the shaping of the region; in

43 Similarly, after World War II, Czechoslovak representatives only started attending conferences organized by the Permanent International Association of Navigation Congresses (PIANC) in 1957 – no East European delegates attended the 1947 and 1953 congresses. See reports on the proceedings of these 17th-19th Congresses (1947-1957).

44 Such a distinction is clearly demonstrated in available descriptions of the very first days of the organization: Comecon was established in January 1949, allegedly as a response (or substitute) to the Marshall Plan and OEEC; it was either imposed or extorted by East European countries. Discussed in: Robert Bideleux, "The Comecon Experiment," in *European Integration and Disintegration: East and West*, ed. Robert Bideleux and Richard Taylor (London; New York: Routledge, 1996), 174-204, here 175-176.

45 Kaplan's account of the process whereby GOSPLAN and Comecon substituted the direct presence of Soviet advisors in the late 1950s seems to support such an interpretation. Local Sovietizers were not happy with the Soviet decision to withdraw advisors, which they saw as possibly endangering the "proper" development of their country. Kaplan, *Sovětští poradci*, 95-97.

other words, they contributed to the convergence of local Sovietization processes. As Valentina Fava argued in her analysis of the automobile industry in the 1950s, decision-making at Comecon level was hampered by nationalistic tensions, combined with Soviet hegemonic ambitions. This situation could be seen as a re-negotiation of nationally specific methods of Sovietization, with the authoritative visions of the USSR, which were represented not only by regular delegates, but also by special advisors, whose position within Comecon was extremely influential, at least in the 1950s.[46]

A simple analysis of the titles (let alone the content) in the major periodical for Czechoslovak water engineering *Vodní Hospodářství*, illustrates the first phase of the Sovietization process.[47] It is immediately apparent that the impact of Stalinism was extremely strong – almost one-quarter of the ninety full-length articles published in 1952 can be labeled "Sovietized;" that is, they either introduce methods developed in the USSR or directly discuss the Soviet model (ten articles in 1951, twenty-one in 1952, and only two in 1953). This period ended when Stalin died (followed by the first Czechoslovak Communist President, Klement Gottwald, who died only a week later). The following year formed a kind of break; perhaps because after the hard Stalinist period, there was a huge backlog of articles for publication that did *not* deal with the USSR.

Projecting a Soviet Canal

In the first years after World War II, the idea of the Canal gained wide public and political support. The revival of the pre-war image of the Danube-Oder-Elbe connection as a national display of technology made it almost impossible to openly oppose the idea; at least that is what the idea's opponents complained of later.[48] DOECS led the camp of canal supporters, although many initiatives such as those promoted by the Baťa company were organized without its direct participation. DOECS, established in 1937 by industrialists from the Ostrava coal basin, survived the war and maintained a relatively stable membership; only the names of companies changed, having been "Nazified" during the war. From the late 1940s onwards, all large industries were renamed after a Soviet or Communist hero or a

46 For a discussion of the role of Soviet advisors within Comecon, see: ibid., 44-49.
47 Established in 1951 and based on the authors, tradition, and readers of the DOECS Journal *Plavební Cesty DOL*.
48 Fuxa's Report on DOE, discussed at the third meeting of the extra-official committee. A copy of Fuxa's 1949 report in: Zápisy ze schůzí mimoúřední stranické komise pro vypracování zprávy o D-O průplavu – Záznam o třetí schůzi (MZA, H42, b. 280, November 30, 1930), annex.

famous Red Army battlefield. The number of institutional DOECS members grew to over 50 in 1941. After the Communist coup of 1948, four ministries joined the society: the Ministries of Finance, Industry, Domestic Trade, and Agriculture, which showed the communist regime's strong interest in the canal.

Shortly after the Communist takeover in February 1948, DOECS attempted to blend in with the new regime. The organization proposed transforming itself into part of the envisioned "national company," assigned with developing the canal project. Such an attempt reflected the wave of "nationalization" of strategic industry after World War II. Under the new circumstances, whereby most of the biggest members and investors had become state-owned, the society's leaders saw a national company, established by a special act, as being best suited to coordinate the preparatory works, fundraising, and overall management of the DOE project. The most striking feature of the proposal was its emphasis on the "national" management of the water route. In sharp contrast to its own recommendation of April 1946 (Memorandum), DOECS suggested avoiding international financing or loan arrangements.[49] Overall, after World War II, the "national" aspect of the canal again took precedence over the "European" or "international" dimension in its Czechoslovak promoters' rhetoric.

However, even sacred national interests were already under noticeable pressure of Sovietization, at least in terms of their articulation. Clearly influenced by young Soviet volunteers on the Byelomor canal construction , the Youth committee of the bottle factories in Ústí nad Labem in 1947 passed the following resolution: "The Czechoslovak Youth do not want to lag behind and therefore suggest entrusting our youth with the construction of the long planned Elbe-Oder and Danube-Oder canals."[50] Here the Sovietization of methods did not affect the ideas; above all, young workers saw the importance of the canal in its capacity to place Czechoslovakia at a "European crossroad." [51]

The inherent international aspect of the canal project resurfaced after Czechoslovak efforts to re-draw national borders failed. While cooperation with Austria was not necessary, because there was an opportunity to build the lateral canal to the Danube on the left (Czechoslovak) bank of the Morava, the situation on

49 Proposal to establish National Enterprise DOE, dated April 1948. Návrh na zřízení "Národního podniku DOL" (NAČR, MD I., b. 814).

50 "Urychlit přípravné práce pro stavbu dunajsko-oderského průplavu," *Rudé právo moravskoslezské*, 6 February 1947.

51 The Soviet model was later applied in the form of the so-called "Stavby Mládeže" (Youth Constructions). Byelomor canal volunteers were known in Czechoslovakia from the propagandistic Soviet journal *SSSR na Stroike*. Jan Lomíček, "Časopis "SSSR na strojke" jako pramen ke studiu témat sovětské meziválečné propagandy," Člověk, no. 13 (2008), http://clovek.ff.cuni.cz/pdf/lomicek_studie_13.pdf. 13-19. Accessed 16 July 2009.

the Upper Oder was different. In March 1947, Czechoslovakia and Poland signed an *Agreement on Friendship and Mutual Help*, mediated by the Soviet Union.[52] The USSR advanced the agreement as a key to stabilizing relations between the two states, which had been problematic since World War I due to the unclear and often disputed delimitation of borders. Under this agreement, a body for transport study was established in the summer of 1947.[53] The construction of the DOE canal received prominent attention and a special subcommittee for its construction (Study Committee for Preparation of the DOE) soon began work.[54] Although this expert committee and its working groups met 18 times between March 1948 and April 1950, the Czechoslovak authorities viewed its activity with suspicion from the very start – especially due to its enforced formation as a part of the Polish-Czechoslovak reconciliation.

A member of the Czechoslovak-Polish committee, Josef Fuxa, had been a prominent critic of the canal project. As clerk at the inter-war Ministry of Industry and Trade, Fuxa joined DOECS in 1938. After the War, when he became head of the Transport Department of the national economic planning institute (the Economic Council), he entered the debate on the DOE. In his new capacity, Fuxa organized and chaired the National Evaluation Committee on the Danube-Oder-Elbe Canal.[55] He launched a survey among industrial groups and business chambers on the potential cost-effectiveness of the canal in the new circumstances of postwar Europe. Eventually, a group of experts was invited to take part in evaluating the procedures. On June 14, 1948 delegates of several ministries, shipping companies, the Masaryk Academy of Labor, and of course DOECS, attended the final evaluation meeting, hosted by Fuxa. However, the most important outcome was a report, prepared by Fuxa alone, for the Communist Party. Although written for the purposes of the new establishment, the text was surprisingly devoid of standard ideological ballast. Openly articulated as a defense of railways as the most important means of transport from the national point of view, Fuxa's report presented a negative standpoint towards the construction of the canal.[56] His key

52 Karel Kaplan, *Československo v poválečné Evropě* (Prague: Karolinum, 2004), 91-95.
53 Čs.-polská dopravní komise (NAČR, MD I. 1945-1953, Prague; b. 53-54).
54 Čs.-polský studijní komitét pro věci vodní cesty Odra – Dunaj (NAČR, MD I.; b. 808, 814); Ibid. (MZA, H42, b. 186).
55 Governmental institute established by presidential decree in 1945 to coordinate economic development and prepare a national economic plan.
56 In the contemporary situation, a railway line parallel to the trajectory of the planned canal still had free capacity. Given the state of the Austrian economy under postwar reconstruction, it is hardly surprising (and definitely a strange thing to be omitted from the text) that such a situation would most probably have changed in the future. A copy of Fuxa's 1949 report in: Zápisy ze schůzí mimoúřední stranické komise pro vypracování zprávy o D-O průplavu – Záznam o třetí schůzi (MZA, H42, b. 280, November 30, 1930), annex, 30.

objections could be summed up under the heading of "economic nationalism."[57]

The evaluation meeting took place a few months after the Czechoslovak communist *coup d'etat*. Under the new conditions, Fuxa's report was soon seen as outdated in both its premises and methods; as a Communist Party member named Šťastný, who oversaw the re-evaluation of the project, noted, on the road to communism and in the heated up Cold War, "political reasons cannot be numbered in crowns." He continued, "It is necessary to take into account the international importance of the canal and the development of the economy and transportation in neighboring peoples' democracies… Our economy turns more and more eastwards. And as for the construction costs, we should also consider the employment of *brigády mládeže* (youth construction groups)."[58]

The image of the canal was significantly altered along with the symbolic significance assigned to its construction. The basic claim remained unchanged; that is, that the canal was not only a matter of economic viability, but also one of national pride and cultural maturity of the nation. However, instead of paying a debt to Europe, the task was now to promote the Sovietization of the nation and its territory.[59] Besides economic and political criteria, ideological qualities also became important when assessing the viability of the project. The canal had to fit the Soviet Modernization model, or at least the perceived image of it held by the Czechoslovak Communist decision makers.

In an introduction to a popular article on the DOE published in *Technická Práca*, Dr. Tille (a leading member of DOECS and, in this capacity, a member of the Extra-Official Party Committee) articulated the idea of the canal as a possible

57 Basically, Fuxa presented the canal as a potential threat to the national economy. Most of his objections concerned the economic viability of the project from the perspective of the command economy. Firstly, construction costs should be based on individual states' interests and profits; according to Fuxa, Poland should get more than fifty percent of the profits and therefore pay for construction. Secondly, construction would negatively affect the viability of nationalized railways (current freight on the line along the planned canal route was significantly lower than the projected capacity of the canal). Thirdly, construction works would draw human forces, financial capital, and construction material away from the national economy, which needed to employ them in other places and projects. Ibid.

58 Záznam ze třetí schůze mimoúřední stranické komise pro vypracování zprávy o Dunajsko-oderském průplavu (MZA, H42, b. 280, November 30, 1950), 3.

59 A significant amount of the materials produced by DOECS in the 1950s reflected this re-articulation of the meaning of the canal. Its monthly bulletin (1954-1959) was filled with material on the USSR and its waterway building scheme. Moravian Land Archive (MZA, H42, b. 288, Zprávy Společnosti D-O průplavu). The first lines of a speech by Jan Šeba, Czechoslovak consul general in Hamburg, at the Waterway Conference on March 7, 1923 in Brno illustrated the former, European image of the canal: "Due to our geographical location, we owe the construction of the Danube-Oder-Elbe canal to Europe. The fact that we will build it only confirms the prestige of our country and will prove our maturity, about which we like to boast, but have not proven by any impressive feat so far …"; Quoted from the speech proposal approved by the Ministry of Foreign Affairs. Archives of the Ministry of Foreign Affairs (AMZV): "Projev generálního konzula Jana Šeby na schůzi Moravského říčního a průplavního spolku" (AMZV, IV, b. 169).

Figure 4.2 – Screenshot from the movie Přístav v srdci Evropy [The Port in the Heart of Europe], presenting an optimistic image of future cooperation among European nations, in which the canal would play a central role. The arrows represent the flows of goods. The DOE and adjacent waterway network promised a smooth circulation of goods and new markets for Czechoslovak producers. Source: Elmar Klos, Přístav v srdci Evropy, 1946.

tool of Sovietization. In Tille's view, the large-scale hydraulic technologies of communism, which promised to change the entire region into an image of a Soviet utopia, were characterized by three dominant aspects. Firstly, the technologies constituted an extension of the electrification plan, and therefore marked an important step on the path to industrialization. Secondly, they formed a vital part of a plan to transform the natural environment by solving the problem of irrigation as well as producing electricity. The third aspect was the transport function, specifically the connection to the world by the river and sea ports. In Tille's opinion, these constructions would make an immense contribution to the material base of communism and, from this angle, the DOE should be seen as a future great structure of socialism.[60] Corresponding with the Sovietization of the "meaning" of the canal, the same thing was happening to its promised outcomes, although not only on purely rhetorical grounds. *The European Crossroads* and the *Canal of the Three Seas* were suddenly transformed into the *Gate to the USSR* (via the Danube).[61]

60 Jan Tille, "Funkce dunajsko-oderského průplavu v systému evropských vodních cest," *Technická práca* 5, no. 10 (1953): 624-628, here 624.
61 Kliment Velkoborský, manuscript *Central European Waterways and the possibility of the transport relations with the USSR*. Vodní cesty Střední Evropy ve vztahu k možnostem dopravních styků se SSSR a lidově demokratickými státy; around 1950 (MZA, H42, b. 282).

The claim of Sovietness might appear to be little more than a feeble attempt to argue in favor of the DOE, in the hope of gaining wider support, and to make the idea of the DOE more attractive and appealing for the ruling Communist regime. In the overall context of Stalinism, however, the entire situation can be seen in a different light. Czechoslovak society, and especially Czechoslovak Communist leaders, expected the USSR to lead them gradually on the way to socialism; they were surprised that, in many respects, the road plan for Sovietization was not available. Such uncertainty, combined with an atmosphere in which virtually anybody could be arrested and even executed for treason or sabotage of the socialist order, gave reasonable force to the argument for "proper Soviet" technology.[62] Where there was no direct instruction from Moscow or no Soviet advisor available, the real "Soviet" point of view had to be negotiated locally.[63] Given the Soviet regime's well-known fascination with large water technologies such as Dneprostroi or the Volga-Don canal,[64] the efforts of the DOECS to present the DOE as its Czechoslovak counterpart seemed relatively promising. Furthermore, Czechoslovak engineers were far from immune to the promises of Soviet technology. As early as the 1930s, articles in the trade press written by such prominent engineers as Jan Bažant and Antonín Smrček, celebrated Soviet achievements in the field, along with those of the Germans and Americans.[65]

However, the response of the state authorities was not in favor of such interpretation. The first document on the canal, the above-mentioned 1949 Fuxa Report, provided full information for the Central Committee of the Communist Party of Czechoslovakia (CC CzCP). It included marginal but explicit refutation of the canal's putative "Soviet quality."[66] In 1952, in an evaluation of the findings of the

62 In the Czechoslovak case, this includes such prominent figures as the general secretary of the Communist Party (1946-1951) Rudolf Stránský, who was arrested in 1951 and executed in 1952. Karel Kaplan, *Report on the Murder of the General Secretary* (Columbus: Ohio State University Press, 1990).

63 There are well documented cases from the first half of the 1950s showing how Soviet advisors (*sovetnik*) were originally assigned to help the head of an institution make important decisions. In some cases, the advisor took over the office – even at relatively high hierarchical level. For instance, Kaplan quoted Minister of Defense Karol Bacílek who admitted that he simply "trusted the Soviet advisors and did not scrutinize their advice and recommendations at all." Kaplan, *Sovětští poradci*, 9.

64 Paul R. Josephson, "'Projects of the Century' in Soviet History: Large-Scale Technologies from Lenin to Gorbachev," *Technology and Culture* 36, no. 3 (1995): 519-559, here 534-536.

65 In the 1930s Jan Bažant regularly published short reports on soviet hydraulic structures in the Czechoslovak engineering journal *Technický obzor* and after the war he summed up his writings on Dneprostroi and Russian waterways for the new water management journal: Jan Bažant, "Vodní stavby v SSSR," *Vodní Hospodářství* 1, no. 1 (1951): 8-11. Jan Bažant (1881-??), professor of water construction at the Brno Technical University, author of the first water management plan for Moravia (1940) and of several variants of the DO (E); a disciple of professor Smrček. Stanislav Kratochvíl, Stanislav Kratochvíl, "Prof. inž. Jan Bažant osmdesátníkem," *Vodní Hospodářství* 11, no. 10 (1961): 484.

66 As, for example, in the report prepared by Josef Fuxa, head of the transport department of the Economic Council (Hospodářská rada, a governmental central economic planning board, 1945-1948); A copy of Fuxa's

Extra-Official Committee, the Ministry of State Control, stressed that it was impossible to compare the potential effect of the DOE on the Czechoslovak economy with the role of Soviet canals in the USSR. The ministry's reasoning was that "their usefulness lies not only in transport, but above all in their capacity to provide water for irrigation and subsequent fertilization of large areas of steppe and also in the utilization of hydro power."[67]

The crucial site for negotiating the "Sovietness" of the canal was the special "Extra-Official Party Committee," set up in the autumn of 1950 by representatives of several ministries to re-examine the original Fuxa Report.[68] The situation since 1948-1949 had changed profoundly in that a constellation of international relations and the main directions of international trade were being rapidly reoriented in an Easterly direction. Under the new circumstances, the Communist Party exerted a newly-acquired interest in the canal issue. Furthermore, a clear and final decision on the project was required in order to prepare the first National General Water Management Plan, issued in 1953. Some voices even argued that the non-existence of the final word on the canal blocked the socialist industrialization of Moravia (that is, Sovietization of its production capacity for constructing heavy industry).[69]

On October 26, 1952, the Czechoslovak Government passed Resolution no. 206 on the Danube-Oder canal. The resolution again put a halt to the project, which had previously been heralded as an "iconic national enterprise."[70] While the first governmental program of 1945, the Two-Year plan of 1946, and even the first Five-Year plan of 1949 included indistinct remarks on the future realization of the canal, by 1952 the Communist Government had set its main concerns differently and the project was abandoned.[71]

The resolution formed an integral part of the general Sovietization of Czechoslovak economic planning.[72] During 1951, a significant change occurred in

1949 report in: Zápisy ze schůzí mimoúřední stranické komise pro vypracování zprávy o D-O průplavu – Záznam o třetí schůzi (MZA, H42, b. 280, November 30, 1930), annex.

67 Statement by the Ministry of State Control regarding the report on the state of the preparatory works for the D-O canal, prepared for the government by the Ministry of Construction (NAČR, ÚPV-B, b. 1363, June 17, 1952), 3-4.

68 A typical example of the emerging party state, in which the structures of official political administration are paralleled by analogous party structures.

69 An opinion expressed by Jan Šťastný during discussions on the canal at the unofficial party committee's second meeting. Zápisy ze schůzí mimoúřední stranické komise pro vypracování zprávy o D-O průplavu – Záznam ze druhé schůze (MZA, H42, b. 280, November 16, 1950).

70 Ironically, they did this on the 34th anniversary of Czechoslovak independence.

71 Ministry of Building Industry: Danube-Oder Canal. Draft report for the government on the state of study, research and design work (NAČR, ÚPV-B, b. 1363, September 5, 1952), 1.

72 An important factor was the general militarization of the Eastern bloc economies driven by Stalin and Soviet advisors. In the Czechoslovak case, the "Soviet model" of industrialization consumed 28 percent of

the government's economic policy, which definitively abandoned the promised national path to communism. Instead, the government uncritically adopted the Soviet modernization model, based on the introduction of heavy industry. This started the "industrialization of an already industrialized country."[73] Accordingly, the standpoint of the State Planning Office (SPK – the Czechoslovak version of GOSPLAN) on the canal, which was crucial for the Government's decision, prioritized investments more in accordance with such demands.[74] In addition, the first Five-Year plan of 1948-1953 (already approved) had other priorities regarding infrastructure investments, most notably the electrification of railways, the construction of a second east-west transnational railway *magistrála* (Plzeň-Havlíčkův Brod-Brno and Zvolen-Košice), and the reconstruction of the road network. Concerning water management, the main share of investments was directed into electrification; this complied with Lenin's famous definition of communism as the "sum of electrification and soviet power."

Despite the fact that the canal promoters eventually lost their battle with the first Sovietizing wave, the war was not over. An instruction accompanying the resolution ordered the institutions involved in the project to store all relevant technical materials completed by that time in one place for possible future use.[75] Therefore, the decision to stop the canal project, and thus reject more than half a century of detailed planning as incorrect and unsuitable under the new circumstances, was not an unambiguous and definitive statement. Indeed, it would have been an immense waste of resources given the existence of an updated canal design produced by a group of experts of the international Polish-Czechoslovak Committee on Transport (1948-1950).[76] At the first meeting of DOECS after the negative governmental decision, the secretary noted: "by accomplishing the Volga-Don canal, new evidence was produced that all the ideas connected with canal construction in our country are not fictitious. It will be up to us to learn our lessons properly. … Although pressing investments in certain industrial sectors required temporary

GDP in 1952, which led to a financial crisis and the currency reform of 1953. Zdeněk Jirásek, "Čtyři roviny měnové reformy 1953," in *Fenomén Stalin: náhoda, nebo nevyhnutelnost? Padesát let od měnové reformy*, ed. Marek Loužek (Prague: Centrum pro ekonomiku a politiku, 2003), 107-111.

73 Karel Půlpán, *Nástin českých a československých hospodářských dějin do roku 1990. 1. díl* (Prague: Karolinum, 1993), see the Introduction.

74 The decision to prefer industry to infrastructure investments seems paradoxical, given the general belief in the close dependency between the two, usually seen as two sides of the same coin. In this case, intermodal competition between railways and waterways had a profound effect on the development of the canal negotiations. From the very beginning, railways were the preferred mode of transport within the context of Sovietization.

75 Government resolution no. 232/1952. Information on a draft government resolution. Informace k návrhu vládního usnesení (NAČR, ÚPV-B, b. 1363, October 25, 1952).

76 Čs.-polská dopravní komise (NAČR, MDI; b. 53-54). Čs.-polský studijní komitét pro věci vodní cesty Odra – Dunaj (NAČR, MDI, b. 808, 814).

postponement of the DOE … it is our duty to continue showing to respective authorities and the people … the versatile usefulness of the canal."[77] Indeed, the defeat did not halt the canal promoters' activities; they simply worked harder on presenting their dear canal from a Soviet perspective: as a source of power and electrification, a source of water for industry and irrigation, and also as a water source for socialist workers, whose numbers were expected to multiply at unimaginable speed.

However, there was more to Soviet water politics than a discourse on water. The theory was accompanied by daily practice, which strongly affected the institutional environment surrounding the DOE. The first significant corresponding change occurred in the early 1950s and marked the start of almost twenty years of constant change in water management governance, during which the half-century-old national institutional landscape of canal negotiations underwent turbulent times. At the start of 1949, the Directorate for Waterways (*Ředitelství vodních cest*, ŘVC) was disbanded and its administrative agenda was distributed among the respective regional authorities.[78] The canal department of ŘVC survived for a while under the Ministry of Technology, and in 1950, during another reorganization of the state administration, its agenda and employees were dispersed among various ministries. The most active core, built around the engineer Ladislav Vavrouch, who by 1945 had substituted Bartovský, formed the Water-management Office of the Ministry of Constructions (VKMSP: V*odohospodářská kancelář Ministerstva stavebního průmyslu*).[79] Private efforts and activities were suppressed and regional associations supporting the canal were either disassembled or transformed into branches of the only organization acknowledged by the state – DOECS.[80]

Administrative bodies dealing with water-related issues, which had been scattered among various ministries, were united under the Central Administration of Water Management (*Ústřední Správa Vodního Hospodářství*, ÚSVH) in 1953. The brand new central institution linked three crucial administrative bodies: the Water Research Institute (VUV), the Water Management Center (VRS), and Water Constructions (Hydroprojekt). The latter was actually a Sovietized (in title

77 Report Zápis o schůzi ústředního výboru Společnosti, dunajsko-oderského průplavu v Praze, konané dne 10. listopadu 1952 v Olomouci (MZA, H42. b. 279).
78 As of January 29, 1949, the Ministry of Technology disbanded the Directorate for Construction of Waterways in Prague without any substitution. Ministerial decree no. 4/66.
79 Ladislav Vavrouch had been active in propagating and designing the canal since the 1930s and a member of DOECS throughout its existence. In addition to engineering work, Vavrouch contributed on a regular basis to all the major technical journals in Czechoslovakia on canal issues (including the DOECS publishing activity in PCDOL, VH, ZSPDO).
80 Including the oldest DOE-promoting organization, *Moravský říční Spolek in Přerov* (established in 1904) and *Spolek pro stavbu Labsko-oderského průplavu v Pardubicích*.

and agenda) successor of the Stavoprojekt, an organization created in 1948 as specialized engineering body for water constructions. It was established by the engineer Čestmír Štoll, who during the 1950s and 1960s became the director of the VKMSP, USVH, and other water-management bodies.[81] All across Eastern Europe appeared analogous "images" of the original Soviet *Gidroproekt* Institute.[82]

While the water-related agenda was centralized, the waterway agenda was split among two bodies replacing the former ŘVC. The Central Administration of Water Management (ÚSVH) was, logically, the central organ of water management investments. As such, it was also responsible for the development and maintenance of the navigation infrastructure, while the actual use of the infrastructure – waterborne transport – remained with the Ministry of Transport. While this could be seen as a rather standard division of competences, in the case of the DOE it met with rather fierce criticism from the DOECS.[83] This was easily understandable: a special governmental Institute for Development of Water Transport (ŘVC) that had been active for half a century was not just replaced, but disbanded.[84]

81 Čestmír Štoll (1908-1983) was a pre-war communist, a graduate of the Czechoslovak Technical University (ČVUT) in Prague (1930), a research assistant at the same institution (1930-1940), an employee and from 1945 leading actor in the nationalization of *Ústřední elektrárny* (a partly state-owned corporation for constructing power plants established in 1920). Štoll also cooperated on the articulation of the first Five-Year Pan (1948). In 1948, he established the center that designed large water structures (Stavoprojekt), later fully sovietized into the Czechoslovak version of Hydroprojekt (1952). From 1951, he was director of the VKMSP and deputy minister there from 1953, responsible for creating the ÚSVH (government decree of November 11, 1953). He then became its chairman until its abolition in 1958. From 1959-1960, Štoll was the deputy minister of energy and technology and from 1960 professor at Prague Technical University. j.j., "Padesát let Ing. dr. Č. Štolla," *Vodní Hospodářství* 6, no. 7 (1961): 190.

82 The institute was established by hydrologist Sergei Yakovlevich Zhuk and acted as the central organ for complex solutions of hydraulic structures in the USSR emerging from the Soviet electrification plan and canal projects in the 1930s. "80th Anniversary of the Birth of Academician Sergei Yakovlevich Zhuk," *Power Technology and Engineering* 6, no. 9 (1972): 893-893, 36-37; Paul R. Josephson, *Industrialized Nature: Brute Force Technology and the Transformation of the Natural World* (Washington DC: Island Press/ Shearwater Books, 2002).

83 See the DOECS perspective on the reorganization of water management published in its bulletin: Ladislav Vavrouch, "Zákon o vodním hospodářství," *Zprávy Společnosti dunajsko-oderského průplavu* 2, no. 11 (1955): 3-6, here 6; "Diskusní příspěvek SDOP k dopisu UV KSČ," *Zprávy Společnosti dunajsko-oderského průplavu* 5, no. 2 (1958): 1-2, here 2.

84 However, in a wake of the "new wave" of Sovietization and subsequent new economic policy of "decentralization" of state administration (see Průcha, quoted below), the ÚSVH was disbanded in 1958. Its agenda was transferred to the new Ministry of Energy and Water Management, within which the Directorate for Water Management Works (*Ředitelství vodních děl*, ŘVD) was created as the central authority over water constructions, and municipalities and district administrations gained considerable powers in this respect. Even this turn of events soon saw a reverse move. After the Danube flood of 1965, when many levees and flood banks kept by local authorities could not sustain the pressure and broke down, the state took over the maintenance of the river banks and the central authority was re-established as an independent organ. In addition to the revived ÚSVH, the Directorate of Water Resources (*Ředitelství vodních toků*, ŘVT) was created, organized according to the six main river basins – three of which (the Morava, the Elbe, and the Oder) were directly involved in the DOE project). Václav Průcha, "Hospodářský vývoj v letech 1945-1992," in *Studie o technice v českých zemích 1945-1992*, ed. Jaroslav Folta (Prague: Encyklopedický dům, 2003), 13-60, here 39.

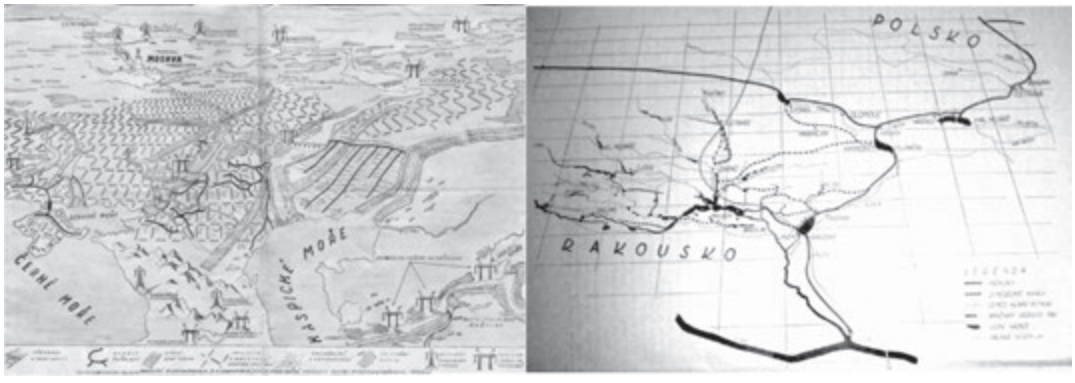

Figure 4.3 – Early 1950s representation of the DOE (on the right), was clearly modeled after the famous Soviet propaganda image of the Volga-Don Canal. The Soviet image shows how complex utilization of the Volga would contribute to the Sovietization of adjacent areas. Rectangular irrigation systems, hydro-power plants, and rivers as a transport routes would turn a backward and peripheral area into a modern part of the USSR and leading industrial region. By mimicking the visual representation, the DOE is presented as a parallel to the Grand Soviet scheme. Source: Jindřich Kumpošt, "Dunajsko-oderský průplav z hlediska brněnského kraje," in Dunajsko-Oderský průplav edited by Společnost dunajsko-oderského průplavu (Prague: SNTL, 1953), 64. The Soviet image is from a reprint in the Zprávy Společnosti dunajsko-oderského průplavu, vol. 2, no. 4.

The institutional and ideological Sovietization of water management affected the further development of the DOE. The first State Water Management Plan of 1953 not only acknowledged the idea of the canal, but specified principles of the complex utilization of water resources, and thus the future design of the waterway.[85] Instead of the former fascination with the canal as a connection to seas and world markets, socialist engineers saw it as a threat to national water balance (or a tool to secure it, depending on the general position on the canal). An important factor in the development of the Water Management Plan was the extreme drought of 1947, which resulted in a twenty-two percent drop in the harvest. The most fertile lowlands were the worst affected, including the Morava valley. Furthermore, the Upper Oder Basin, with its industrial areas around Ostrava, suffered from a "negative water balance," because consumption threatened to exceed the available supply; the Nazis had already noted this in their development plans for the region.

"Social needs" replaced economic profit as a crucial category in calculating the cost-effectiveness of the canal. As Kornai famously postulated, needs are always higher than planned and not calculated on the basis of demand, but rather on the redistribution of available products.[86] It was precisely along this line of argu-

85 Václav Plecháč, *Vodní hospodářství na území České republiky, jeho vývoj a možné perspektivy* (Prague: EVAN, 1999), 162. In official English translantions the plan was called the *State Aquacultural Plan*. "English Resume," *Vodní Hospodářství* 10, no. 5 (1960): 35.
86 János Kornai, *Economics of Shortage* (Stockholm: Institute for International Economic Studies, University of Stockholm, 1979).

mentation that the authors of the SVP argued it would be necessary "to make allowances for a 162 percent increase in drinking water requirements; of industrial water by more than 50 percent; of irrigation water by 32.1 percent; attending to the harmless drainage of waste water increased by 72 percent"; and they were happy to conclude that it was possible "to amplify the utilization of hydropower by 495 percent."[87]

The geographical allocation of sources of hydropower also acted against the canal project. Czechoslovakia consisted of four historic lands, which geographically corresponded approximately to the five main watersheds. While the Elbe River basin (Bohemia) accounted for 36 percent of the hydropower potential of the whole country, and the hilly landscapes of Slovakia in the basins of the Danube and Vistula for 54 percent, the Moravian and Silesian flatlands, drained by the Morava and the Oder, respectively, comprised a mere 10 percent.[88] Given the fact that the Five-Year plans were calculated on a sectoral basis, any investments in the hydropower utilization of the Morava or Oder were deemed virtually impossible. The Vltava Cascade and hydro-energy utilization of the Váh in Slovakia, both built between 1951 and 1966, depleted the financial resources allocated to water management. By the end of the second Five-Year plan in 1960, the capacity of the hydraulic power plants had risen by 420 percent compared to 1945.[89]

Indeed, the planned "economic" and "balanced" water management, which the SVP had promised and delivered, was quickly replaced by a preference for hydropower structures.[90] Large-scale water structures (hydropower and dams) consumed more than half of the sector's budget within these ten years; the water supply network received considerable attention as well, but river regulations and amelioration almost disappeared from the agenda.[91] The continuity of the canal idea, in the rapidly changing institutional environment, was secured by the

87 Jan Rosík, "Státní vodohospodářský plán a zásady pro další plánovité řízení vodního hospodářství," *Vodní Hospodářství* 4, no. 4 (1954): 99-103. Jan Rosík was a former employee of ŘVC.

88 E. Polák was a hydropower specialist at the Ministry of Energy (in 1960). Emil Polák, "Hydroenergetika," *Vodní Hospodářství* 10, no. 5 (1960): 186-189, here 187.

89 Ibid., 189.

90 The plan had four main targets: (1) mapping of all possible water resources; (2) securing conditions for efficient and economical water management; (3) determining measures necessary to accomplish targets 1 and 2; and (4) reaching maximal efficiency in construction and implementation of suggested measures. Jan Košler, "Význam státního vodohospodářského plánu pro vodní hospodářství," *Vodní Hospodářství* 10, no. 5 (1960): 223-225, here 223.

91 The government's share of spending on water management in 1945-1960 was as follows: hydropower (37.6 percent), other dams (12.6 percent), water supply network (21.3 percent), sewer system (12.4 percent), river regulations (9.5 percent), amelioration (2.3 percent), other investments (4.3 percent). Based on the report of fifteen years of Czechoslovak water management published by the Deputy Minister of Energy and Water Management, J. Málek, "15 let našeho vodního hospodářství," *Vodní Hospodářství* 10, no. 5 (1960): 177-183, here 179.

DOECS. Although much more modest in its goals and appearance, the society managed to keep the canal idea alive and circulating, through occasional publications in popular journals and newspapers, and by keeping the interested community of hydraulic engineers, municipal authorities, and industrial enterprises informed and active. An important part of this effort was the revival in 1954 of its own journal in the form of mimeographed copies. The bimonthly publication provided interesting information on just about anything connected to the canal issue. For instance, it regularly informed readers about both domestic and foreign publications (books, journals, newspapers) that related to the DOE canal topic in some way.[92]

The other uninterrupted line was the activity of former ŘVC employees and individuals with a person interest in the project, most notably hydraulic engineers. While Smrček, Bartovský, and Zimmler had left the scene, their younger colleagues, some of whom had been involved in the project since the early 1920s, worked elsewhere within the water management governance system and had access to materials assembled for potential future use according to the governmental resolution of 1952.[93] The most prolific among this new generation was Kliment Velkoborský, a former ŘVC employee and life-long active DOECS member who led the Waterway Department at the Ministry of Transport.[94] Velkoborský led the negotiations on the canal in 1957-1958 in Poland and Germany on behalf of Czechoslovakia and also informed DOECS members about the latest developments by publishing articles in the bulletin.[95] Equally important was Ladislav Vavrouch at the Ministry of Construction. Other engineers found new positions at the Transport Research Institute and the Academy of Sciences.

The exclusion of the public from decision-making processes usually tops the list of "trademarks" of the Soviet model. Only a relatively closed group of selected experts could join the debates and gained access to relevant data, because the state had a monopoly on information and international relations. Therefore, private initiatives, although led by the very same experts and supported by state firms and local state administrations, were not able to pursue their goals efficiently, and had problems accessing information. Finding itself in such a situation, and facing the

92 From both sides of the Iron Curtain (see Chapter 4), and only very rarely from outside Europe.
93 Antonín Smrček passed away in 1951, followed by Bartovský in 1955.
94 After his graduation, Velkoborský worked at the Czechoslovak Navigation Office (*Československý plavební úřad*) until 1942, when he was transferred to Prague ŘVC. From 1949, he led the Inland Navigation Department at the Ministry of Transport. J.M. Jiroušek, "Za inž. Klimentem Velkoborským," *Vodní Hospodářství* 11, no. 10 (1961): 456.
95 For instance, he published the official report from these meetings with only minor changes – Kliment Velkoborský, "Informace o námětu spojení Dunaje s Odrou, Vislou a průplavy NDR," *Zprávy Společnosti dunajsko-oderského průplavu* 6, no. 4-5 (1958): 1-10, (MZA, H42, b. 288).

threat of forced termination because of the illegality of private societies, DOECS "voluntarily" disbanded itself in 1959.[96] At a meeting of the Central Committee of DOECS in 1957, delegates debated the possibility of merging with one of the sector's Scientific-Technical Societies (*vědecko-technické společnosti*; VTS).[97] The heated discussion between proponents of water management issues and the transport sector reached a stalemate, which resulted in unsuccessful negotiations with VTS for Water Management in Ostrava. Hence DOECS remained, strictly speaking, an illegal society, and as such, fell easy victim to the final Sovietization of public space, which was ironic after it had survived the period of Stalinist Sovietization.

An important aspect of this decision was Comecon, which had started to show interest in the DOE at that time. Such developments reassured members of the society that the case was not altogether lost.[98] The disbanding of DOECS marked the final act of the gradual Sovietization of the canal project's institutional background.

Sovietization "Beyond the State"

While domestic Sovietization almost killed the canal project, Sovietization at transnational level helped it survive. The impact of Sovietization, together with generational change, weakened the "institutional memory," which until then had helped maintain the idea of the canal. The 1952 governmental resolution postponing the canal project, together with the wide-sweeping institutional and societal transformation of the early 1950s, resulted in de-mobilization of the political and social capital gathered during the previous fifty years' support of the DOE. However, when Sovietization took the form of infrastructural integration of the bloc, it also worked in favor of the canal. The Czechoslovak government based its decision to stop the project on the DOE reports, developed from the perspective

96 This was despite the fact that they had the option to join the Czechoslovak Scientific-Technological Society (ČSVTS), a professional association of Czechoslovak engineers. However, negotiations failed. Zápis o schůzi Společnosti dunajsko-oderského průplavu, konané dne 9. července 1957 v Praze (MZA, H42, b. 288).
97 The Soviet model of trade organizations was based on a sector principle (as opposed to "capitalist" engineering societies based on the status of engineers), established in Czechoslovakia in 1955 by the Government Resolution 594 of March 16. Instead of the former Association of Engineers and Architects (*Spolek inženýrů a architektů* (SIA), 1866-1951), the new communist associations were open to anyone active in a given technical field and willing to cooperate in its development. Minutes of the DOECS central committee meeting held in Přerov on March 8, 1957. Zápis o schůzi ústředního výboru společnosti dunajsko-oderského průplavu konané dne 8. Března 1957 v Přerově; private archive of Jaroslav Kubec.
98 Letter from DOECS central committee to all members on the disbandment of the society, circulated as the final issue of the company's bulletin. "Oznámení členům společnosti," *Zprávy Společnosti dunajsko-oderského průplavu* 6, no. 10 (1959): 1-2, (MZA, H42, b. 288).

Figure 4.4 – "Let us Learn Russian. Let us Learn from the Soviet People to Work, Think and Live in a New Way." The1951 picture visualized the confluence of waterway constructions and Sovietization. Source: James Aulich and Marta Sylvestrova, Political Posters of Central and Eastern Europe, 1945-1995 (Manchester: Manchester University Press, 2000), 140.

of the national economy. However, the authors of these reports often explicitly stated that their evaluation of the canal would have been different once the project became in the "common interest of people democracies."[99]

The revival and re-organization of Comecon soon fulfilled this condition. The bulk of the literature, whether of Eastern or Western origin, speaks of Comecon, with some exaggeration, as a fig leaf that concealed Soviet domination.[100] The Western literature frequently dismisses Comecon (and its program for the Socialist Economic Integration) as an unsuccessful project. While the former statement is disputable, the latter is undoubtedly true as far as measures of economic integration are concerned.[101] However, some authors argue that the primary aim of the

99 Ministry of Building Industry: Danube-Oder Canal. Draft report for the government on the state of study, research, and design work (NAČR, ÚPV-B, b. 1363, September 5, 1952), 9.
100 Which is indeed disputable, especially when analyzed "from below" rather than as an instance of Soviet hegemony. As Valentina Fava argues in her analysis of the automobile industry in the 1950s, decision making at Comecon level was hampered by nationalistic tensions combined with Soviet hegemonic ambitions. Valentina Fava, "COMECON Integration and the Automobile Industry: The Czechoslovak Case," *EUI Working Papers* 2008, no. MWP 18 (2008), http://cadmus.eui.eu/handle/1814/8710. Accessed 15 October 2010.
101 Jozef M. van Brabant, *Socialist Economic Integration: Aspects of Contemporary Economic Problems in*

organization was to build up a protected environment within which the socialist camp would prosper and ultimately win the "contest of two systems."[102] In January 1949, the third paragraph of the minutes of the founding session of Comecon acknowledged the importance of transport for the constitution of the autarkic economic bloc. The proposal for a common transport policy stated that "plans to enlarge transport and transit facilities were to be worked out jointly in order to keep pace with the growth of other economic relations."[103] Similar proclamations appeared regularly in all Comecon proclamatory documents.

Despite such proclamations, the initiative failed, because at that time the Soviet leaders preferred bilateralism in economic relations within the bloc and prioritized military investments. During Comecon's rather formal and shadowy existence, the infrastructural integration of the Socialist Bloc followed other paths. Regarding waterways, the Danube Commission and the meetings of directors of the Danube shipping companies formed central platforms for negotiations in the early 1950s. After World War II, when the Soviets revived the international regime on the Danube in 1948, the convention of the new Danube Commission prohibited riparian member states from reviving bilateral negotiations and projects (regarding police, constructions, standards, etc.) operating in the inter-war period. This measure was not directed against "capitalist" countries (none had joined the commission by then), but was supposed to prevent any international cooperation outside the control of the commission, and thus the USSR.[104] While such "Sovietization" of the Danube Commission was organized prior to the establishment of Comecon, the 1956 Bratislava Agreement marked the final incorporation of the river into the Comecon intergovernmental economy.[105] This was a restrictive cabotage agreement between the riparian national shipping companies (usually one state-owned company per country) that allowed vessels to trade only to or from their home countries.

The national development programs of the Danube riparian socialist states, such as the First Czechoslovak Five-Year Plan 1948-1953, included utilization of the Danube. Following the Soviet example, utilization of available water resources

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Eastern Europe, Soviet and East European studies (Cambridge; New York: Cambridge University Press, 1980), 245-250.

102 Vladimir Sobell, *The Red Market: Industrial Co-operation and Specialisation in Comecon* (Aldershot, Hants, England: Gower Pub. Co., 1984), 3.

103 Brabant, *Socialist Economic Integration*, 42.

104 David T. Cattell, "The Politics of the Danube Commission under Soviet Control," *American Slavic and East European Review* 19, no. 3 (1960): 380-394, here 382-383.

105 The Soviet Union dictated that a new Danube Commission covering the length of the Danube was to be composed only of riparian states; therefore, Britain and France were omitted. Austria became a full member in 1960 while Germany did not until 1989. Josef Šír, *Mezinárodní vztahy v dopravě* (Prague: Nakladatelství dopravy a spojů, 1985), 71-72.

Year	Central state authority	Subaltern bodies
1945	Ministry of Transport	Directorate for Construction of Waterways (ŘVC)
	Ministry of Technology	
1948		Hydroprojekt (HDP)
1950	Ministry of Building Industry	
1951		Regional Water Management Administration (KVS)
1953	Central Administration of Water Management (ÚSVH)	
1954		Regional Water Supply and Drainage (ZVAK)
		Water management departments of regional administration (KNV)
		Hydrometeorological Institute (HMÚ)
1958	Ministry of Energy and Water Management	Directorate for Water Management Works (ŘVD)
		Water Sources (VZ)
		Water Conditioning Plant (ZÚV)
1960	Ministry of Agriculture, Forestry and Water Management	District Water Management Administration (OVHS)
		Regional Water Management Development and Investment Center (KVRIS)
		Labe-Vltava organization

Figure 4.5 – The history of water management governance reforms in Czechoslovakia after the World War II – the impact of Sovietization resulted in two turbulent decades, when the administration experienced various, and at times contradictory reforms often modeled after what was considered the Soviet example. The water research institute (VUV est. 1919) and the centralized hydraulic engineering agency (Hydroprojekt est. 1948) operated throughout the Soviet period. The turbulent developments were not limited to water engineering. Other organizations in electricity production and research faced similarly complicated institutional development. Sources: Ladislav Votruba, "Vodohospodářské poměry, legislativa, organizace," in Studie o technice v českých zemích 1945-1992. 3, ed. Jaroslav Folta (Prague: Encyklopedický dům, 2003), 1987-1991, here 1989; Libor Záruba, "Hydroprojekt," in Plavební příručka, ed. Vratislav Teklý (Prague: Nadas, 1962), 195-196; Marcela Efmertová, "K institucionálnímu vývoji výzkumně-vývojové základny slaboproudé elektrotechniky v Československu v letech 1945-1965," Studie z dějin techniky, no. 1 (1988): 291-446, here 296.

was to play a crucial part in Sovietization; that is, the electrification of the country. Initially, bilateral commissions on border waters ensured a certain amount of coordination, as did the direct presence of Soviet experts.[106] Czechoslovakia pursued negotiations over joint projects to develop border stretches of the Danube as a potential source of hydroelectric power with Hungary and Austria.[107]

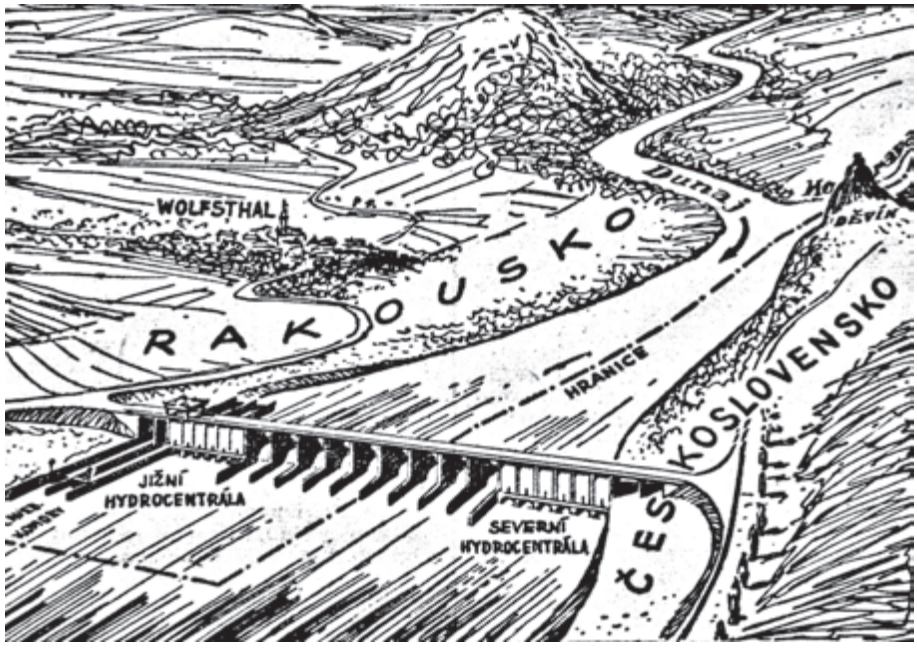

Figure 4.6 – The utilization scheme for the Danube developed by Comecon was fragmented through bilateral negotiations. Throughout the 1950s, Czechoslovakia negotiated utilizing the river with Hungary. Simultaneously, the country also negotiated the damming of the Danube with Austria. The DOE played a role in the Czechoslovak plans for Danube, as the planned entry of the canal to the Danube would be affected by dams. Source: "Postavíme s Rakouskem společné vodní dílo na Dunaji," Svobodné slovo, May 13, 1957.

106 Their role was absolutely crucial. For instance, in the case of the plan to utilize the Czechoslovak stretch of the Danube, the government wanted to consult the plan with Soviet experts in 1952. However, the Ministry of Construction that prepared the project, had difficulties securing such expertise (NAČR, UPV-B, b. 1363, April 7, 1953).

107 Report on the meeting. Dunajská Plavba: využití Dunaje 1956 (AMZV, MO-OMO, b. 128). Czechoslovakia withdrew from negotiations with Austria over the Wofstahl Dam project in 1960, the same year that Austria joined the Danube Commission. The decision was based on calculations showing that national hydropower stations on the Vltava and Váh were economically more efficient. Furthermore, the third Five-Year plan was generally marked by a shift away from investments to large water management projects. Resolution of the political bureau of the CC CzCP no. 105 (NAČR, KSČ-ÚV-AN II, b. 169, June 28, 1960).

At the March 1956 Moscow meeting of hydraulic and electrical engineering experts on the Danube, which Czechoslovak representatives called "the training at the Moscow Gidroprojekt," delegates of the two members of the bloc that did not have access to the Danube appealed to their Czechoslovak colleagues to summon a special expert group on the DOE canal.[108] Czechoslovakia was eventually assigned to investigate the possible navigation connection of the GDR, and Poland to the future transport axis of the bloc.

Following this meeting, Comecon adopted the Danube scheme. The new Soviet leadership encouraged the organization to be more active, which led to a rapidly expanding administrative structure, most notably to the establishment of the permanent Secretariat (1954) and the first twelve Standing Commissions (1956) at the 7th Session in Berlin in 1956. The program for complex utilization of the Danube was launched at the same meeting, based on the recommendations of the abovementioned expert meeting.[109] To this end, the Commission for the Exchange of Electric Power among Members of the Comecon and for the Use of the Hydroresources of the Danube was created.[110] Under its auspices, the Czechoslovak Hydroprojekt produced *A Study on the Navigation Connection of the Danube with the Oder, Vistula and the Canals of GDR* in the summer of 1958.[111]

The study was the first official document related to the DOE canal in almost six years. The resolution of 1952 was the start of the longest break in the state-funded preparatory works on the canal since the Austrian Waterways Act of 1901. The change in institutional policy and considerable weakening of personal continuity, together with the significant influence of the Soviet Model, set the scene for a fundamental alteration of the canal's design. In the form of a brief and general draft, the authors of the study compared three basic routing alternatives. They eventually selected the riverine one as superior to both the lateral canal along the Morava and the rather obscure connection of the Oder to the Danube via the Váh River on Slovak territory.

108 Report on the meeting of the Comecon group of experts on Danube Utilization in Moscow June 26-29, 1956 (AMZV, MO-OMO 1955-1965, b. 128).
109 Czechoslovak report on the VII session of Comecon held in Berlin, May 18-25, 1956. Protokol o VII. zasedání RVHP konaném od 18.-25. Května 1956 v Berlíně (NAČR, KSČ-ÚV-AN II, b. 31), 177-185.
110 Typically, the available files on this commission in Czechoslovak archives are dispersed among several institutions: reports on the first meetings in Berlin and Warsaw in January 1958 (AMZV, MO-OMO 1955-1965, b. 128); report on the second and final meeting, held in July 1958 in Prague (MZA, H42, b. 280, Protokol z jednání pracovní skupiny RVHP pro plavební spojení Dunaje s Odrou, Vislou a průplavy NDR, uskutečněného June 25-July 3, 1958).
111 Studie plavebního spojení Dunaje s Odrou, Vislou a průplavy NDR – discussed in Kliment Velkoborský, "Informace o jednání pracovní skupiny expertů o spojení Dunaje s Odrou , Vislou a průplavy NDR," *Zprávy Společnosti dunajsko-oderského průplavu* 5, no. 8 (1958): 1-4, (MZA, H42, b. 288).

In 1958, however, the Special Comecon Commission on the Danube fell victim to a relapse in Soviet-Yugoslav relations.[112] Subsequently, the talks continued on a bilateral basis for each stretch of the Danube, coordinated only through the Standing Commission on Electric Power.[113] The waterway agenda transferred to the Standing Commission on Transport.

Because the bloc suffered from significant transport problems in the late 1950s, the Standing Commission on Transport (SCT) was established at the 7th Session of Comecon. The insufficient capacity of railways, which accounted for more than two-thirds of intra-bloc transport in the early 1950s, required immediate attention.[114] From 1953 onwards, traffic volumes between the individual Comecon countries and the USSR grew significantly. The most rapidly increasing goods were oil, corn, and iron ore; therefore, the capacity of inland waterborne transport, which was underutilized at the time, seemed to offer a solution to the problem.[115]

Comecon Standing Commissions were established in order to overcome the economic nationalism of "state socialisms" operating within the organization and to create a technocratic apparatus devoted to the idea of socialist internationalism as expressed in the concept of international socialist division of labor. As Kaser pointed out, the delegates were not foreign service officials, but experts, and thus "the consideration of specific problems could be competently dealt with at this level. It was these working parties of experts in Moscow which … made the recommendations on bilateral specialization … Although the decisions were not binding, a certain national commitment was thereby made, because decisions could only be taken at delegates' meetings if the chief delegates were present in person."[116] In a similar manner, Brabant argued that the existence of the Conference of Shipping Directors (later a permanent part of the Comecon, but outside the competence of the Standing Commission) was opposed to delegating duties to formal Comecon bodies, because that would have implied "the transfer of power from the national to the regional level, whereas the relatively loose framework of a conference can meet the need for consultation and exchange of useful information."[117]

The first item on the agenda of the First Meeting of the Comecon Working Group on Transport was to coordinate plans of all types of transport between the Comecon member states (a point justified by increasing transport costs), transport

112 Kaser, *Comecon*, 68.
113 Romania and Yugoslavia eventually decided to pursue the scheme under the Danube Commission.
114 Józef Wilczynski, *Technology in Comecon: Acceleration of Technological Progress through Economic Planning and the Market* (New York: Praeger, 1974), 228.
115 Czechoslovak position on the 8th session of Comecon. Československé stanovisko k VIII. zasedání RVHP (NAČR, KSČ-ÚV-AN II, b. 31), appendix 3 – report on the session, 14.
116 Kaser, *Comecon*, 65.
117 Brabant, *Socialist Economic Integration*, 192.

volumes, and the need to plan the use of available capacities in advance, in order to maximize outcomes. At this first session held in Warsaw in August 1957, the DOE appeared on the agenda. During discussions over the possible use of inland navigation, which would relieve overloaded railways by transferring a part of the Soviet exports of heavy substrates to the waterways, the Polish and GDR delegates suggested examining the link between the Oder and the Danube.[118] They also referred to the five-year-old results of the Polish-Czechoslovak Committee on the canal. Pushing forward the improvements of the Oder and Danube navigation, considered necessary to mobilize available capacities, Poland asked the Czechoslovak representatives about the state of the Danube-Oder connection.[119]

Generally speaking, inland navigation topics were relatively well represented. Out of twenty-six items, two were purely administrative, three were on coordination of planning, eight on railways, seven on maritime navigation, and five on inland waterways.[120] Hence, waterways were given rather undeserved priority, considering that with the exception of the Danube, the Elbe, and the Oder, there were no other truly international navigable rivers on the territory of Comecon member states (apart from GDR canals).

In January 1958, at the second meeting of the Comecon Working Group on Transport, the participants compiled a list of permanent national representatives. Significantly, all Comecon countries delegated employees of their respective transport ministries, with the exception of the USSR, which was represented by an official from the State Planning Institution GOSPLAN.[121] The leading role of Moscow was further confirmed at the meeting of Czech and East German engineers over the DOE project, held at the same time, at the Commission on the Danube. Both sides agreed that once all necessary documentation had been prepared, it would be passed to Gidroproekt Moscow with a request to pursue the DOE project through Comecon.[122] The pleas of engineer František Krýsl, one of the co-authors of the

118 Report from the First Meeting of the Comecon Working Group on Transport, Warsaw August 13-21, 1957 (NAČR, MZO-FMZO, odd. 20, b. 4).

119 The personal change following the 1948 communist coup was so profound that Czechoslovak representatives were rather surprised to hear that there was a special committee on the DOE within the Polish-Czechoslovak Transport Committee; at least, a substantive question mark on the side of the protocol suggests this. Ibid.

120 The last issue was the complicated task of finding a way to transport Albanian fruit to Czechoslovakia and Poland via Yugoslavia.

121 Minutes of the Second Meeting of the Comecon Working Group on Transport. Zasedání pracovní skupiny pro dopravu čelnských zemí RVHP, Warsaw January 20-29, 1958 (NAČR, MZO-FMZO, odd. 20, b. 4), annex 13.

122 Reports on the first committee meetings to examine the navigation connection of the Danube with the Oder, the Vistula, and the Canals of GDR held in Berlin and Warsaw in January 1958. Zpráva o poradách zástupců ČSR, LRP a NDR, konaných v Berlíně a ve Varšavě v lednu 1958 o předběžném projektu spojení Dunaje s Odrou, Vislou a průplavy NDR (AMZV, MO-OMO 1955-1965, b. 128).

final report, confirm that the study was indeed sent to Moscow. At one of the last events organized by DOECS, Krýsl noted, "we sent the final project to Moscow GOSPLAN, and since then, after half a year, we have still received no information at all."[123] Furthermore, such a complaint suggests that the communication between the hydraulic engineers at the Czechoslovak Hydroprojekt, and their colleagues representing the country in Comecon, was rather limited.

At the next meeting held in Warsaw in October 1958, the working group became the Standing Comission for Economic and Scientific-Technical Cooperation in the Field of Transport (SCT), equipped with its own subcommittees for waterways and airways.[124] By this time, the STC had addressed and assessed the development of the waterway systems of Comecon member states from the viewpoint of international transport.[125] The final scheme included three main routes: the DOE (the north-south Danube-Oder-Vistula connection), the northeast-northwest Neman-Vistula-Oder-GDR waterways link, and the southeast-southwest Dnieper-Bug-Vistula link.[126] This sketched out the basic measures for the proposed Comecon network. The aim to establish a complementary east-west transport link led to experiments with existing infrastructures on the route from Kaliningrad (USSR) to Magdeburg (GDR), making use of the ruined Augustow canal. A trilateral committee was established under Comecon to analyze the promises and pitfalls of the route. It took about four years (1956-1960) and two trial cruises before the project was called off.[127]

The Permanent Working Group on Waterways met for the first time before the end of 1958. Its general agenda consisted of standardizing vessels and port equipment; developing a network (both inland and maritime); coordinating planning in production and use of vessels (originally for the period to 1965, and then to 1975 "in perspective"; in cooperation with the Standing Commission on Machinery);

123 The study completely disappeared from the Czechoslovak archives. Kliment Velkoborský, "Přednáška o dnešním stavu studijních prací na DO průplavu," *Zprávy Společnosti dunajsko-oderského průplavu* 6, no. 5-7 (1959): 1-11, (MZA, H42, b. 288).

124 Several subcommittees called "sections" were established within STC: the original two permanent working groups established at the first meeting on air (5) and water transport (3) were gradually complemented with sections on coordination (1), railways (2) and road transport (4) working group. Finally, a special body on containerization (section 6) was established. STC shared the Comecon/socialist transport integration agenda with the OSJD (or OSZhD), which was established in 1957 exclusively for railway and road transport.

125 At this point, almost all Comecon's activities and plans were framed as being those of "Comecon member states" – not socialist camp, not people democracies, not communist, etc., always strictly formal – see Minutes of Comecon SCT (NAČR, MZO-FMZO, odd. 20, b. 4-14).

126 See point 6 of the work plan of the STC. Protocols of the Comecon SCT – I/58 (NAČR, MZO-FMZO, odd. 20, b. 5), annex 5. The latter two connections had actually been in operation in the nineteenth century – Augustow Canal (built 1839) and Dnieper-Bug Canal (built 1775, reconstructed 1848).

127 Comecon SCT Protocols (NAČR, MZO-FMZO, odd. 20, b. 4-5).

and finally, managing waterways (again, both inland and maritime). Given the generally poor situation of the transport sector throughout the bloc, debates on the measures to achieve an increase in transport utilization of the Danube, such as the stimulation of tariff policy, gained prominent attention.

However, the main item at the first session was the Soviet delegation's proposal. A few months earlier, the Soviets had presented a plan to the Committee on Inland Navigation of the United Nations Economic Commission for Europe (UNECE) regarding the construction of the pan-continental waterway network. The UNECE was virtually the only organization in the 1950s that facilitated regular cooperation between both parts of the continent divided by the Iron Curtain. The UNECE accepted the proposal and the Soviets then pursued the idea in Comecon. The SCT, together with the Danube Commission, was to prepare background materials that would reflect the interests of Comecon member states. Under the Soviet proposal, the waterway projects considered by Comecon had a wider economic context, and connecting the Danube and GDR canals to the West would provide a vital route for the cheap transportation of raw materials, agricultural products, coal, and oil across the Iron Curtain. Among the suggested topics for inquiry by the SCT were the determination of individual projects on Comecon territory, preparation of general classification of waterways (a necessary precondition for interconnection of different waterway systems), and articulation of the international status of the European network.[128]

The Soviet involvement in and support for the plan clearly came from their own experience with waterway construction. Completion of the Volga-Don Canal in 1952 connected the Caspian and Black Seas. Czechoslovak engineers greatly appreciated this symbolic achievement, so they started reconstructing the Baltic-Volga waterway. This established what later became known as the United Deep Inland Waterway System of European Russia.[129] Improving the Danube, as well as its connection via the Danube-Main canal towards Western Europe, and via the DOE to Poland and the GDR, would provide a significant extension of the Soviet system. In addition, due to the different railway gauge in the USSR, transport by rail within Comecon required trans-shipment, which made the mixed water-railway solution competitive. Of course, other Comecon countries would profit from their position on the network. Furthermore, Poland often complained at STC meetings about Czechoslovakia's insufficient utilization of the Oder. Most of the Southeast European countries expressed similar feelings about the Danube

128 Protokoll der 1. Tagung der Ständigen Arbeitsgruppe für Schiffahrt in Berlin, 16.-20. Dezember 1958 – Anlage 2, Vorschläge der UdSSR (BA, Archiv DDR, DM 5195).
129 A.A. Belyakov, "Water Network of Russia," *Power Technology and Engineering* 27, no. 5 (1993): 287-294.

and complained that Czechoslovakia profited excessively from the railway transit to the West.

While the Soviet proposal envisaged the establishment of an Expert group under the SCT, realization of cooperation on the waterway network under Comecon ultimately took a different form. Instead of preparing joint standpoints for talks at the UNECE, the SCT Working Group on Waterways decided to develop a separate plan for an interconnected waterway network of the Soviet Bloc (*edinaia set' vnutrennikh vodnykh putei stran-chlenov SEV*). The DOE was a crucial part of this plan; it was designated to "link Poland and Germany to the Danube" and, in so doing, connect the only two European Comecon countries that stood outside the system of the Black Sea.[130]

Work on the plan was delegated to respective national authorities; in the case of the DOE, Czechoslovakia was put in charge of gathering all materials and producing the final report. All the individual plans were then to be sent to the Soviet GOSPLAN, which was to devise the general report on the waterways. The task was more precisely outlined at the Fifth Meeting of the SCT in 1960, when the report on the work of the Standing Working Group on Water Transport (SWGWT) was discussed.[131] The SCT agreed that:

> regardless of the increasing traffic volume … these transport routes [inland waterways] are insufficiently exploited. The reason is the unfavorable distribution of inland waterways, which does not correspond with the development of waterborne transport. In order to overcome such a drawback, it is necessary to establish a set of links connecting individual rivers, mainly the Danube and the Oder and the Pripyat to the Bug and the Vistula.

The Czechoslovak representation was asked to prepare a report on the standardization of inland navigation vessels, the GDR worked on the classification, and the USSR was entrusted with preparing a list of problems related to the establishment of the unified network. Finally, in 1962, the Eighth STC meeting in Warsaw accepted the finalized scheme, which included more than fifteen individual waterways (rivers as well as canals or canal projects). For the first time since World

130 Wilczynski, *Technology in Comecon*, 236.

131 Important meetings were held in the summer of 1960. The first was a special conference in Prague (July 8-13) devoted to discussing two reports: "On the establishment of the unified system of inland waterways" and "On the necessary measures for the development of inland water transport between Comecon member states." At the end of the month, at the Third Meeting of the SWGWT in Berlin, the Soviet delegation presented their general report on the development of waterways. Unfortunately, neither of these documents was available to the author.

War II, the plan also included the Elbe branch of the DOE.[132] In the autumn of the same year, another session agreed on the classification and standards of planned waterways and on the methodology for calculating the viability of the waterway projects.[133] However, the real core of the scheme formed only three main routes: two from the original proposal of 1958 (DO (E) and Dnieper-Pripyat-Bug-Vistula) completed to full circle by a lateral sea canal connecting the Dnieper to the Danube along the Black Sea.[134]

Figure 4.7 – For its scheme of a unified waterway network (here in 1964), Comecon remarkably did not use the term Europe. While interwar canal promoters were building "Mitteleuropa," and Nazis their "European Economic Area," Comecon called its waterway network plan simply "Waterways of Comecon Member States." The alliance with the USSR was central. The lateral canal along the Black Sea coast secured the link to the USSR by connecting the Danube River with the Don, which in its turn was connected to the Volga. Source: General Study of the Water Transfer from the Danube to Moravia. Rámcová studie přečerpávání vod Dunaje na území Moravy NAČR, KSČ-ÚV-02/1, sv. 48, aj. 51-10, 1964.

132 Protocols of the 8th Session of the Comecon SCT (NAČR, MZO-FMZO, odd. 20, b. 5).
133 Protocols of the 9th Session of the Comecon SCT (NAČR, MZO-FMZO, odd. 20, b. 5).
134 Intermediary report on the problem: Creation of the united inland waterway network of the Comecon member states. Promezhutochnyjj doklad po probleme: Sozdanie edinojj seti vnutrennickh vodnykh putei stran-chlenov SEV, Protocols of the 21st Session of the Comecon SCT (NAČR, MZO-FMZO, odd. 20, b. 5), annex 12:5.

However, the initial idea of building connections between the Danubian system and the Polish waterways on the one side and the Soviet waterway systems on the other, as effectuated in the Comecon studies of the Vistula-Pripet-Dnieper waterway and of the coastal canal Danube-Dnieper, proved overly optimistic. The navigation conditions on the Volga and Danube were too different to be managed efficiently. Closer examination of these links revealed the principal obstacle facing any attempt to integrate the two systems; namely, the difference between Soviet and European standard dimensions. Standard IV-class vessels, fully suitable for navigation on all main European waterways, would only be able to reach the Dnieper; the Lenin Volga-Baltic System required vessels that were capable of short sea-navigation and constructed to withstand a wave regime of large artificial reservoirs. Merely by linking the hitherto separated networks, it was still not possible to link the Soviet waterway system to the rest of the continental waterways.[135] Negotiations over the planned scheme became even more complicated after 1964, when the Executive Committee of Comecon listed the waterway unification project among the most important "scientific-technical inquiries" that required a higher degree of coordination.[136] The program became less focused on transport issues (the basic technical-economic calculations had already been done) and was spread among different organs of Comecon (standing commissions on water management, electricity, agriculture, scientific-technical cooperation, etc.). The waterway network scheme was renamed TRA-1 in the Comecon transport research task of 1965 and also appeared several times over the next few years in STC negotiations, but disappeared from its agenda completely around 1968.[137] During the late 1960s, waterways gave way to other means of transport, at least in the planned construction of the unified network, and Comecon concentrated on the development of inter-modal transport on the Danube.[138]

In addition, the political tensions within the Socialist Bloc had a significant influence on the fate of the plan. Romania and Yugoslavia decided to fulfill their common project on damming the Danube Gorge at Iron Gates through the

135 Jaroslav Kubec, "Hlavní směry výstavby vodních cest v Evropě a jejich souvislost s budoucím rozvojem lodní dopravy " in *Vliv plánované výstavby evropských vodních cest na rozvoj československé lodní dopravy po roce 1970*, ed. Jaromír Kozák (Prague: ČSVTS, 1968), 7-29, here 20.

136 Intermediary report on the problem: Creation of the united inland waterway network of the Comecon member states. Promezhutochnyjj doklad po probleme: Sozdanie edinojj seti vnutrennikh vodnikh putei stran-chlenov SEV Protocols of the 21st Session of the Comecon SCT (NAČR, MZO-FMZO, odd. 20, b. 5), annex 12:2.

137 Protocols of the 16th Session of the Comecon SCT (NAČR, MZO-FMZO, odd. 20, b. 5), annex 5.

138 See, for instance, the *Agreement on International Direct Mixed Rail-water Transport (MZhVS),* which aimed at "more rational utilization of rail and water transport," especially on the Danube and was signed by the European Six and the USSR in Warsaw on December 19, 1961. Protocols of Comecon SCT 4/60 (NAČR, MZO-FMZO, odd. 20, b. 5).

Danube Commission rather than through Comecon. Furthermore, the change in the Soviet technology policy also played an important role. Following the fascination with hydro-power stations during the Stalin era, Khrushchev's administration initially emphasized other aspects of large hydraulic structures, most notably soil reclamation and irrigation. Consequently, water-related issues generally received wide support from the Kremlin in the Khrushchev period. Vladimír Chmelár, a Slovak water engineer who had worked on the Gabčíkovo dam since the emergence of the idea to dam the Danube on the Austrian/Czechoslovak border in 1952, and who lived to see it finally raised in 1992, noted: "in 1960, we lost one dam on the Danube, Bratislava/Wolfstahl, due to the incompetence of President Novotný's advisors; then, in 1964, Khrushchev lost interest in the Danube and we almost lost Gabčíkovo as well."[139]

The Final Plan

After the first version of the canal design produced in 1958 by Hydroprojekt, the Comecon network scheme initiated another round of studies of the problem. This time, however, a brief analysis of options was insufficient, and Hydroprojekt had to cooperate with other institutions, most notably national research institutes.[140] The National Territorial Planning Office (*Státní ústav územního plánování*, SÚÚP) was put in charge of the project. Unlike the 1958 study, the fully-fledged project could clearly embrace the new approach towards waterway planning based on the Soviet concept of "complex utilization." Indeed, in some ways the Sovietization of the canal project became just that: "complex". All of the past designs were accused of being single-purpose transport routes and, as such, dismissed as partial and sector solutions. The word "complex" entered the Czechoslovak hydraulic engineering vocabulary with the analysis of Soviet waterways.[141] Although there was

139 Vladimír Chmelár, *Gabčíkovo do prevádzky! Uvedenie vodného diela Gabčíkovo do prevádzky dočasným riešením* (Žilina: Electa, 1991), 6.

140 Most notably the Water Management research institute (VÚV) and the Transport Research Institute (VÚD- represented by Jaroslav Kubec). Komplexní technicko-ekonomická studie spojení řek Dunaje, Odry a Labe 1965 (NAČR, MD III), 7. The archival group is not yet fully organized and the boxes containing the study are not numbered. I would like to thank archivist Miroslav Kunt for making the document accessible.

141 Instructive in this sense were first translations, printed as authored texts, of the selection of articles from Soviet journals on the large hydraulic technology projects. Oldřich Vitha, a new graduate from the CVUT, published them in two versions in 1950 and 1951. A proper translation of the Soviet original appeared in 1953. Vitha later became one of the leading figures in Czechoslovak water management. Oldřich Vitha, *O velikých stavbách komunismu v Sovětském svazu* (Prague: SČSP, 1950); Oldřich Vitha, "Sovětský svaz – vzor pro naše vodohospodáře," *Vodní Hospodářství* 1, no. 9 (1951): 274-277; Oldřich Vitha, *Veliký boj sovětského lidu – stavby komunismu* (Prague: Svět sovětů, 1952); Oldřich Vitha, *Vodní bohatství SSSR a jeho využití*

some American inspiration, the Saint Lawrence and TVA projects appeared in Czechoslovak literature as "pioneers," rather than fully covering the "complex" nature of river basin water management.[142]

The new "complex" design reflected the 1950s discursive Sovietization of the canal, which emphasized its triple functions. In the early 1960s, the "Needs" calculated by economic planners started to overlap with the suggested capacities of the waterway. The third five-year plan, designed in the late 1950s and declared in 1960, marked a significant shift in national water politics from the rapid development of hydraulic power plants towards other forms of water use.

The water balance of the North Moravian region became an issue due to the rapid growth of metallurgical and mining industries in the region, which were supposed to make it the "steel heart" of the Republic. Oldřich Vitha, the young director of the National Directorate for Water Management Development (*Ředitelství vodohospodářského rozvoje*, ŘVR), led studies on the possibility of water transfer from the Danube, either across the watershed with the Vltava – following the old Austrian Danube-Vltava-Elbe project – or up the Morava.[143] Arguing in favor of the latter, Vitha stressed that the planned off-take from the Danube to Czechoslovakia had already been incorporated in the Comecon Danube scheme.[144] If such a scheme was to solve the water balance problem of Northern Moravia, it would have required construction of the canal connecting the Morava and Oder river basins – the Danube-Oder connection. Vitha pointed out the Soviet example of the water transfer scheme (the recently accepted Irtysh-Karaganda project aimed to solve Kazakhstan's water balance problems), which, according to Vitha, "appears to be efficient solely as a water management measure, without power or

(Prague: Osvěta, 1952). *Velké stavby komunismu. Sborník článků sovětských autorů*, Hospodářsko-politický atlas světa Velká řada (Prague: SNPL, 1953).

142 The inherent inability of capitalism to deal with water issues in their complexity, and thus ensure the common good and not serve particular interests of various sectors and lobby groups, was strongly pronounced, not only in connection with the re-organization of water management, but also directly in discussions about the canal (as compared to American or colonial projects, but never German, French, or any other European projects). Instructive in this sense are articles published by the then-chairman Oto Dub and Secretary Jan Tille of the DOECS in the first year of the *Vodní Hospodářství* journal: Jan Tille, "Případ řeky Sv. Vavřince," *Vodní Hospodářství* 1, no. 4 (1951): 110-111; Oto Dub, "Vodní hospodářství za kapitalizmu a socializmu," *Vodní Hospodářství* 1, no. 2 (1951): 33-37.

143 Oldřich Vitha (1924-2008), was a graduate of the Technical University of Prague. His initial fascination with communist ideology resulted in the publication in 1951-1952 of leaflets on the Soviet achievements in the field of hydraulic engineering. After graduation, Vitha finished his PhD in 1965 with a dissertation on "Economic Efficiency of Hydraulic structures." In 1958-1960, Vitha worked as a consultant in China. In 1961, he became a director of the *Ředitelství vodohospodářského rozvoje*. Milan Doležal, Zdeněk Švec, and Václav Bečvář, "In Memoriam ing. Oldřich Vitha, DrSc," *Vodní Hospodáství* 58, no. 1 (2009): 16.

144 Minutes of the plenary session of the Commission for Water Managemnet, held on Thursday October 17, 1963. Záznam o plenárním zasedání komise pro vodní hospodářství ČSAV konaném ve čtvrtek dne 17. Října 1963 (AAVČR, KVH, b. 15, October 17, 1963).

navigation utilization, while having to overcome greater length and greater altitude differences."[145] Such a project actually fulfilled the three demands of Sovietization: 1) taming nature, which it achieved by pumping water from the Danube up the Morava Valley to the regions with ("in perspective") negative water balance; 2) the canalization of the Morava for the purposes of flood protection; and 3) reclamation of a relatively significant acreage of arable land.[146]

The railway crisis of 1962, during which a shortage of wagons significantly affected the country's economy, contributed to the revival of the canal as a viable alternative in national transport infrastructure. The brand new National Transport Policy (*Dopravní koncepce*) of 1963 aimed to "restore the balance between transport capacities and industrial production." Apart from reviving the idea of highways, which had been put to one side in 1950, the document emphasized the possibilities of waterways, especially the Elbe branch of the DOE. The argument for its implementation was purely national: the east-west direction was much more important for the Czechoslovak economy than the north-south link, which mainly interested other countries.[147]

On a regional level, however, the re-evaluation of the canal as transport corridor was already underway, thanks to the individual initiative of another young engineer, Jaroslav Kubec, who stood behind the revival of the canal idea in 1960 at the KVRIS Ostrava. Kubec challenged the 1952 variant of the routing through the undermined area of the Silesian coal basin.[148]

The 1963 report on the "transfer of water from the Danube," which preceded the study on the canal, combined all three anticipated shortages (needs) to support construction of the proposed waterway. Here, the third function, electrification, also appeared. According to its authors, the entire Morava River Basin was going to suffer from insufficient water resources by 1980 (as the Oder Basin already did).[149] Similarly, the main east-west railway connecting the Northwestern coal

145 Vitha's proposal for the utilization of the DOE canal to transfer water from the Danube to Moravia. Ibid., 3.

146 "In perspective" was a socialist newspeak term used for long-term planning (for a period of several Five Year Plans).

147 Such evaluation of the project is repeated in virtually every official complex report on the project.

148 Zdeněk Kreuz, "Studijní činnost v oboru úprav toků, vodohospodářských asanací v poddolovaném území a vodních cest," in *Vodní hospodářství v povodí Odry 1945-1970*, ed. Pavel Ženatý (Ostrava: Profil, 1972), 75-85, here 78.

149 During the discussion of this material at the presidium of the CC CzCP, Czechoslovak President Antonín Novotný noted that "the Soviet Union goes on the Baltic-Black Sea canal next year!" However, mistrust within Comecon was stronger than the power of the Soviet example: all other members agreed that a better solution than building future dependence on Polish coal (by constructing the canal) would be to build a nuclear power plant (in effect strengthening dependence on the USSR). General Study of the Water Transfer from the Danube to Moravia. Rámcová studie přečerpávání vod Dunaje na území Moravy (NAČR, KSČ-ÚV-02/1, sv. 48, aj. 51-10), 5.

basins with electric plants on the middle Elbe, by far the most used transportation link in Czechoslovakia, would become inadequate by 1970.[150] The Elbe branch of the canal follows the route of this railway. The last problem that the canal had to solve was the electricity supply of the Morava Basin; flatlands did not allow for efficient hydropower utilization. The construction of the canal would enable cheap transportation of Polish coal for thermal power plants, and dams supplying water for the waterway could provide cooling for nuclear power stations. In connection with the projected drop in coal production in Czechoslovakia and the rise of imports after 1980, the planned plants were also expected to heat the water, thereby ensuring navigability on the canal for 330 days a year.[151]

A detailed new study appeared in 1964, and in updated form a year later, under the heading "Complex economic-technical study on interconnection of the rivers Danube, Oder, and Elbe."[152] The Czechoslovak government accepted the study, which led to further examination of the canal project. Finally, in 1968, Hydroprojekt presented a new canal design: the General Solution. As one of the engineers argued later, "another extreme of the contemporary notion of the waterway functions originated in megalomaniac ideas of volumes of water transfer, in uncritical extrapolation of constantly increasing water demands, as well as in the belief in the 'limitless possibilities' of the socialist economy."[153] In a way, such an evaluation seems fair: the project calculated traffic of forty million tons per year on the Danube-Oder connection, while the highest estimate to date had been fifteen million tons. The canal was expected to provide water for irrigating four hundred and twenty thousand hectares of agricultural land, and the water amounts transferred from the Danube expected to reach fifty m^3/s. The system of transfer resembled the one envisioned in rough contours during the Nazi period; each lock was to have a hydropower plant. However, there was no reference to the Nazi proposal either in the Complex Study or in the General Solution. Unlike the Nazi proposal, however, the new design preferred smaller locks that would enable piecemeal navigation of push-convoys, which had been introduced on European Rivers after World War II. The introduction of the *tolkatch* (boat designed for pushing barges) had been discussed at STC meetings from the early 1960s. Otherwise, the standards applied followed Class IV of the common UNECE/Comecon classification.

Furthermore, the canal route exploited the current riverbeds to the greatest possible extent, which was somewhat contradictory to the earlier "canal" solution.

150 Ibid., 14.
151 Ibid., 9.
152 Komplexní technicko-ekonomická studie spojení řek Dunaje, Odry a Labe (NAČR, MD III).
153 Jaroslav Kubec, Josef Podzimek, and František Nepil, *Křižovatka tří moří: vodní koridor Dunaj-Odra-Labe* (Prague: Your ARTillery, 2007), 62.

Without exception, all the older versions until the first Hydroprojekt study of 1958 preferred lateral canals. The canal sections were proposed for high sections only and wherever routing through the riverbed was not efficient. The gigantomania reflected in the water transfer measures, and the "taming of nature" symbolized by channelization of the whole stream of the river, are both typical characteristics of the so-called Soviet technological style.[154] The straightening of the streams of Moravia respected nothing except purely technical objectives; namely, the three functions mentioned above.[155]

Nonetheless, the traditional fascination with German canals (which was actually part of the still-preferred notion of a Central European Network substantially distinct from the Soviet Russian Volga-Baltic system) continued uninterrupted. The general solution of 1968 was accompanied by a set of photographs of German canals, taken on a study tour in 1969 during the final evaluation period of the General Solution. The West was not the only source of experience and Czechoslovak experts also paid a visit to Soviet experts in the same year.[156]

The final round of evaluations took quite a long time (from 1966 to 1971), partly due to the turbulent political situation in Czechoslovakia during and after the Prague Spring of 1968. Václav Plecháč, another young hydraulic engineer who, by then, was already head of the International Department of the Water Management Section of the Ministry of Forestry and Water Management, chaired the special Governmental Committee (*koordinační meziresortní komise*) on the DOE. Ultimately, the chosen form of viability calculation decided the fate of the project. While the rather shadowy developmental function of the project was rejected immediately, including its possible utilization for electricity production, the other two functions did not compare with the more economical alternatives. The enlarged capacity of the existing railway (which would allow it to handle growing traffic), as well as separate construction of a water transfer system without navigation structures, would both have been cheaper than the DOE canal. According to Plecháč, the DOE would not be economically viable without direct financial participation from Comecon member states.[157] Following Plecháč's recommendation,

154 Josephson, "Projects of the Century."
155 Danube-Oder-Elbe Canal: General solution Průplavní spojení Dunaj-Odra-Labe: Generální řešení, souhrnné provedení, 1968 (NAČR, MZO-FMZO, odd. 20, b. 66).
156 Zpráva ze služební cesty do SSSR/Report from the business trip to the USSR, July 1969 (NAČR, MZO-FMZO, odd. 20, b. 67). In 2010, Plecháč recalled that when the experts arrived in Moscow, nobody had a clue why they had come. He considered the trip largely useless and recalls that the state of Soviet waterways was strikingly bad. Interview with Plecháč, conducted by the author in autumn 2010.
157 Report on the results of the evaluation of the General Solution of the Danube-Oder-Elbe waterway developed by the Ministry of Forestry and Water Management (MLVH). Zpráva o výsledcích posouzení generálního řešení průplavního spojení Dunaj – Odra – Labe (AVÚV, January 29, 1971).

Figure 4.8 – In 1968, Czechoslovak engineers made a series of study trips to West Germany, the Netherlands, and the USSR. The experience in Germany influenced them most. This picture, taken during the trip to the RMD construction site, shows the water saving basins of the RMD lock at Erlangen. Source: Zpráva ze studijní cesty do NSR a Holandska k ekonomickým problémům vnitrozemské plavby (AVUV) [Year 1968].

the government passed Decree no. 169/1971, which postponed the final decision on the DOE construction to 1990 and imposed a moratorium on constructing the planned route of the canal until that time.

What seemed to be a purely technical matter was, in the eyes of some of the involved hydraulic engineers, a rather personal affair. In the mid-1960s, the canal project was backed by the rehabilitated Communist politician Josef Smrkovský. A member of the Central Committee of the Czechoslovak Communist Party from 1946-1951, Smrkovský had been imprisoned from 1951-1955 and returned to the highest levels of Czechoslovak politics in 1965 as director of the ÚSVH. From this position, he supported the canal project and cooperated with Vitha, Kubec, and other supporters of the project.[158] However, after the Prague Spring, during which

158 Smrkovský participated at several canal-promotion events, mostly in the "debates with workers."

he again joined the CC CzCP (1966-1969), Smrkovský's political career was definitely over. Support for such a hypothesis could be found in the difference in calculations of the construction costs of the DOE. In his final report in 1971, Plecháč compared the cost of the DOE, at twenty-two billion CZK, with the alternative solutions, eleven billion CZK. A few years earlier, however, in 1967, the officially estimated canal costs had not reached ten billion CZK.[159]

Conclusion

Ironically, the negative governmental resolution of 1952 actually also marked a new beginning. It was the first step in the gradual process of Sovietization of the canal project, which was later revived in the context of far-reaching Communist societal transformations. What had failed was only an attempt to promote the idea of a national canal as a Communist project. The reason behind the failure was that the quality of the current design had been seen as not being comparable to those "great structures of Communism," the usefulness of which lay not only in a transport function, but more importantly in modernization of the affected territory: electrification enabled by hydropower, reclamation through irrigation or drainage, etc.

The transportation role was not sufficiently appealing for the new Sovietized technocracy. Although the First Five-Year Plan (1948-1953) included "preparatory works" on the DOE canal, priority was subsequently given to the Sovietization of the national industrial structure and to the legal and institutional transformation of strategic branches of the national economy (including water management). Priority was given to the development of railways and hydro-energy production, respectively.

However, the question of the DOE was raised again, this time in a properly Sovietized manner. Under Khrushchev's leadership (1953-1964), the concept of Sovietization had changed. Apart from Soviet-like industrialization, there were issues of soil reclamation and irrigation, which meant that water management in general received wide support from the Kremlin. Combined with the general need to upgrade the inadequate capacity of transport routes within the Eastern Bloc, the revival of the canal idea emerged as a logical outcome.

159 It should be noted that the 1971 estimate was calculated at 1968 prices. Rozbor připomínkového řízení komplexního posouzení výstavby průplavního spojení DOL ve srovnání s dunajskými vodními díly ve smyslu vládního usnesení č.232/1966, TERPLAN, March 1967 (AVUV).

However, the International Organization of the Council for Mutual Economic Assistance played the main role in the project's revival. In the context of the program for complex utilization of the Danube, Comecon sought to connect the detached waterway systems of northern socialist countries of Poland and the GDR to the Danube. The utilization scheme, which had originally been designed to promote Soviet industrialization through harnessing of the river, fell short of initial expectations due to the political tensions between Tito's Yugoslavia and the USSR that arose after Khrushchev's denouncement of Stalin.

Once revived, the canal remained on the Comecon agenda. The reorientation of Eastern European economies towards the USSR led to considerable transport problems, and waterways seemed to promise a relatively cheap alternative to overloaded railways. Comecon developed a plan for a regional waterway network that was designed to serve the most intensively utilized east-west transport direction. In 1960, after a few years of initial discussions, the Comecon Standing Commission for Transport launched a plan to build the unified waterway network of Comecon member states. In 1963, after setting the basic parameters for the network, work on the individual canal projects started and a brand new design of the DOE appeared in 1965.

The new "Sovietized" design was not a direct import from Moscow, but the result of Czechoslovak interpretation of Soviet influences. While some uncertainties occurred in the initial period regarding the form of Sovietization, the situation settled down over time. In January 1958, during the first Comecon project developed in the context of the Danube Utilization scheme, the Czechoslovak engineers used the meetings with their counterparts in Warsaw and East Berlin to oppose the literal application of the Soviet model. Consequently, the standards of lock dimensions proposed earlier by Moscow Gidrorpoekt were changed to fit the existing technological support network. These were mainly the standards applied on other stretches of the Central European waterway system; in this case, the lower Oder. The standards were later negotiated at Comecon.[160]

The final design, produced in 1968 as a result of the almost exclusively national debate over the 1965 general design of DOE, showed clear signs of Sovietization. This so-called "general solution" marked the most important discontinuity in project's history to date in terms of technical, institutional, and personal aspects. From a technical point of view, the general solution marked a shift from transport to water management, from lateral canal to river, from motor boats to push convoys, from ship-lifts to locks. The former leaders, who had been active since

160 Jiří Janáč, "Resistance to Sovietization in Technology," in *Crossing frontiers, resisting identities*, ed. Luďa Klusáková, et al. (Pisa: Edizioni Plus – Pisa University Press, 2010), 217-221.

Figure 4.9 – While restarted as a Comecon effort in the 1960s, by the end of the 1970s, the DOE was presented in Czechoslovak documents as a European project. Remarkably, the map accompanying 1970 Czechoslovak project documentation entirely ignores the existence of the Iron Curtain. The map actually strongly resembles those produced by Mitteleuropeanists before World War II. However, this time the area is called Europe. Source: Průplavní spojení Dunaj Odra Labe. Ekonomické podmínky a možnosti. Shrnutí k 30.11.1970 Hydroprojekt. NAČR, FMZO odd. 20, b. 67.

Austrian times, were replaced for a short period in the 1950s by a new generation of graduates from Sovietized universities: Vitha, Kubec, and Plecháč. The constant re-shuffling of the institutional landscape surrounding the canal project further contributed to the significant changes of the project. The decisions made by Comecon's respective bodies contributed to the process and affected the shaping of the canal. However, this was not done according to some pre-defined Soviet imperial plan in the form of a direct "export" of the Soviet model.

The unfortunate fate of the Comecon scheme, which gave way to development of roads and railways, heralded the negative resolution of the Czechoslovak government on the DOE. Probably not by accident, the last report on DOE for Comecon was developed in 1967, in the same year as the first voices were heard to doubt the project. In 1972, there was an important turning point, when the government officially put a stop to the project, which was no longer supported by the international organization.

Furthermore, the Comecon scheme failed in one more aspect. In the spatial imagination of the Czechoslovak hydraulic engineers, Comecon (or Socialist/Soviet Bloc) did not represent a territorial unit, and the engineers operated with

notions of Europe and Central Europe throughout the period. The working documents on the canal developed by experts, often opened with a declaration of the canal's role in a future European network, not an East European network.[161]

161 See, for instance, the debate on the installation of a ship-lift on the Orlík dam. (AAVČR, KVH, b. 15, May 11, 1961).

Chapter 5 Mastering Three Seas

The DOE water management system will either constitute a part of, or be connected to both the Comecon and West European waterway networks, and thus become an important component of European Waterways.[1]

Despite the victorious march of Sovietization and ensuing division of the continent into two halves, as epitomized by the Comecon waterway integration scheme, Czechoslovak engineers on the DOE project never abandoned the ideal scenario of a pan-continental waterways network. They tended to ignore the political barrier of the Iron Curtain that was threatening to detach their dream project from one of the three seas it once boasted to connect. The opening quotation comes from discussions on the DOE canal held in the early 1960s and shows, in condensed form, how the Comecon scheme was accompanied and enlarged by the broader picture of continent-wide integration. The situation was no different in the mid-1950s or 1970s. The bold visions sketched by Czechoslovak engineers depicted Europe as a unified whole, as if there was no Cold War.

In the 1950s, DOECS members clearly expressed their ideas on the spatial delimitations of the future waterway network containing the DOE. Advocating the necessity of the interconnection between the separated river basins of the Danube, the Oder, and the Elbe, articles published in the mid-1950s in DOECS bulletins positioned the DOE in the "European" inland water transport system or, following the then dominant force of Moscow and the USSR, the Eurasian network. Papers by engineer Karel Raba illustrate the latter.

In 1955, Raba published an article dealing with the development of Czechoslovak inland water transport and infrastructures. Raba, a lifelong crew officer on Danube vessels, turned scientist after World War II and was a member of the Czechoslovak

1 "Soustava DOL bude přímou částí a nebo bude navazovat na vodní cesty ve státech RVHP i v západní Evropě a tak se stane významným článkem evropských vodních cest." Opening words of the debate on the proposed utilization of the canal to transfer water from the Danube to Moravia held at the Czechoslovak Academy of Sciences, Commission for Water Management. Interestingly, the formulation in the final evaluation report had changed significantly: instead of West European waterways, only the RMD connection was named. Minutes of the plenary session of the Commission for Water Management held on October 17, 1963. Záznam o plenárním zasedání Komise pro vodní hospodářství ČSAV konaném ve čtvrtek dne 17. října 1963. (AAVČR, KVH, b. 15), 3.

Academy of Sciences, established in 1953 based on a Soviet model. His paper addressed the DOE's position in the construction of the transnational waterways network. Raba, ignoring the Cold War, proposed developing four continental diagonal waterway axes: a northeast-southwest connection from Moscow to Marseille; a north-south corridor from Szczecin to Trieste; an east-west link from the port of Rotterdam to Sulina through the RMD canal; and, finally, a northwest-southeast passage starting on the North Sea coast in Hamburg and terminating on the Aegean in Thessaloniki. Apart from the east-west connection consisting of the realization of the Rhine-Main-Danube canal, the other three routes would exploit a part of the DOE system. Emanating from the traditional DOECS interpretation, and from Raba's perspective, Czechoslovak territory would be the central crossroads of the "trans-European water links." The crucial novelty of his proposal lay in the incorporation of Moscow, which had not appeared in earlier proposals. Raba envisioned the "port of five seas," as he named the Soviet capital, connected to the DOE by a complicated system of trans-watershed canals and rivers instead of the Volga and the Danube.[2]

Jan Smetana, director of the Water Management Research Institute (VUV) in Prague, proposed an even more radical eastward extension of the envisioned network. He did so in the same year (1955) as Raba, in his address to the third plenary session at the Czechoslovak Academy of Sciences.[3] From Smetana's perspective, the future European network would consist of two east-west "navigational authorities." The Danube, as the southern axis, would serve the eastern part of Europe; the northern and significantly longer parallel would involve an extension of the existing Mitteland canal all the way to the Pacific Ocean. Such a Eurasian waterway artery would start in the Rhine basin and reach the Caspian and Aral Seas through German, Polish, and Soviet rivers and canals. In the context of Davidov's infamous Siberian Water Diversion Project, Smetana envisioned a connection reaching further east from there to the Baykal, and then through the River Amur along the Soviet-Chinese border to the Okhotsk Sea.

2 These rivers included the Moscow, Dnieper, Pripet, Bug, Vistula, Noteć, Warta, and Oder. Karel Raba, "Vodní cesty v Československu a úvahy o jejich rozšíření," *Zprávy Společnosti dunajsko-oderského průplavu* 3, no. 1 (1956): 1-7, (MZA, H42, k. 288). The metaphorical name for Moscow was originally coined for Rostov on the Don after the Volga-Don shipping canal was built in 1952, and later passed onto various cities along the Volga-Baltic waterway system connecting the Black Sea, the Sea of Azov, the Caspian Sea, the White Sea, and the Baltic Sea. The Volga-Don canal was also hailed as "Master of the five seas" in the bulletin, "Magistrála pěti moří," *Zprávy Společnosti dunajsko-oderského průplavu* 2, no. 7-8 (1955): 12-13, (MZA, H42, k. 288).

3 Smetana touched on the issue of waterways in his lecture "Arrangement of the waters in the people's democratic Czechoslovakia and its internal and international significance", reviewed by Kliment Velkoborský in the bulletin. Kliment Velkoborský, "Zahraniční tisk o projektu průplavu Dunaj-Odra," *Zprávy Společnosti dunajsko-oderského průplavu* 2, no. 2 (1955): 1-4, here 2-4, (MZA, H42, k. 288).

Both Raba and Smetana proposed closely associated plans for the DOE canal with the idea of an interconnected East and West, a concept that, in the mid-1950s, seemed more distant and illusionary than ever before. In the wake of World War II and the subsequent formation of a bipolar Europe, the former integrative concepts of *Mitteleuropa*, or variously formulated ideas of the Centre, ceased to constitute a viable spatial frame for waterway integration. Instead, the Czechoslovak hydraulic engineers' spatial imagination ignored the reality of a divided continent, remaining faithful to the idea of Europe or, more precisely, an eastwardly elongated European Waterway from the Rhine to the Volga and beyond. Furthermore, they were not the only ones dreaming of transnational waterway integration on a pan-continental scale. Nor were they ignorant of their foreign colleagues' visions and the DOECS bulletin at that time reported various plans for waterway network development. The French Rhone-Rhine canal project, several Swiss plans to turn the roof of Europe into its central waterway hub, the West German north-south canal, and multiple Comecon plans for the GDR-USSR waterway link, all emerged in the context of post-war reconstruction of the continent.[4]

Various waterway projects, including the DOE, fit squarely into the program of the peaceful reconstruction of the continent. Despite the Iron Curtain, which rapidly split Europe in two, efforts to construct a single network did not disappear. New international organizations emerged after World War II that sought to integrate Europe. They attempted to overcome the great divide and unite representatives and experts from east and west. Such initiatives resembled the visions of the Czechoslovak engineers and their counterparts in other parts of the continent. What Raba and Smetana foresaw, began to materialize in the very same year. In 1955, the United Nations Economic Commission for Europe (UNECE) organized the first meeting of experts on inland navigation and specialists from both sides of the curtain attended.

UNECE originated from post-war reconstruction efforts and built on experience gained from the interwar League of Nations. To supplant Allied military assistance, British and American initiatives inspired the establishment of three intergovernmental organizations to handle the restoration of European production and trade once the war ended. All European countries except Spain and the defeated powers were invited to join. Given the pan-European character of these bodies, they became known as "E-organizations." In addition to a coal and

4 All these projects featured in DOECS bulletins *Zprávy společnosti DO průplavu*. The papers were mostly lengthy excerpts of German, French, and Russian publications provided by members of the Society. Among the most diligent contributors were Ladislav Vavrouch, who had access to foreign literature in his capacity as department head at the Ministry of Construction and, since 1956, Jaroslav Kubec, a fresh graduate in hydraulic engineering (MZA, H42, b. 288).

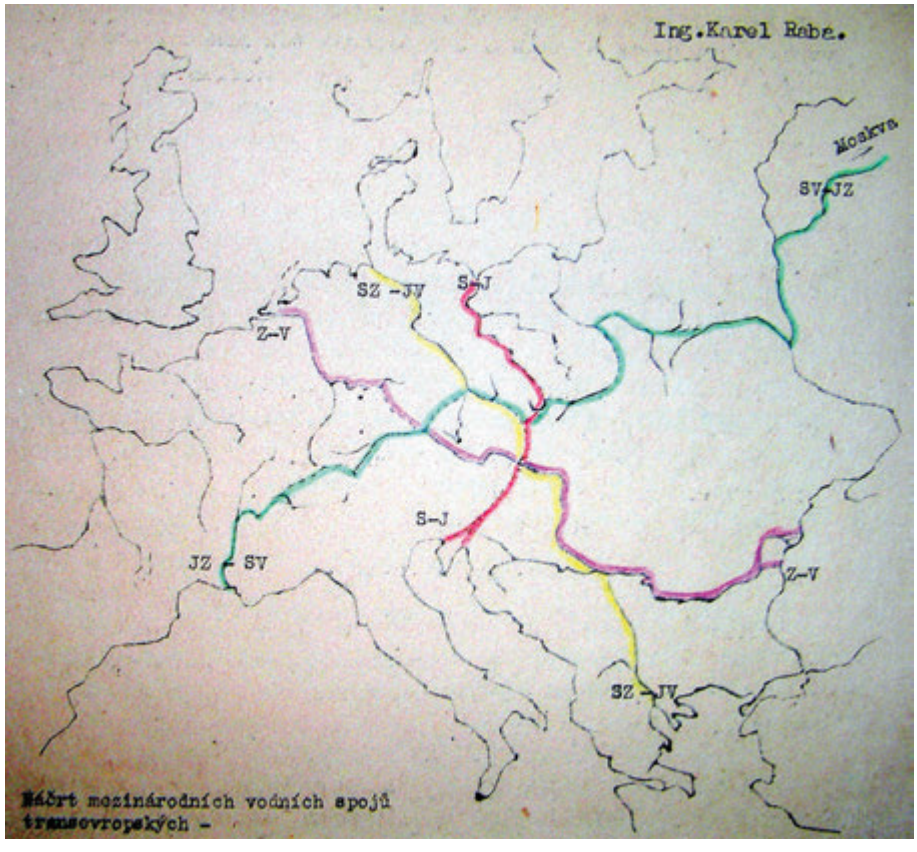

Figure 5.1 – Raba's 1956 vision of the European waterway network. Unlike the Comecon plan, the Raba design did not lose the European perspective. He proposed an eastern extension of the network instead of a self-contained and isolated Comecon network of socialist countries, showing how the idea of Europe as a natural framework for the waterways was firmly rooted in the minds of Czechoslovak experts. The DOE was a central part of his scheme, which also revived an earlier plan to connect Prague to Regensburg (Danube) via the city of Plzeň and the Berounka River, perhaps inspired by Kračmer's "de-Austrianizing plan" that had older roots. Source: Karel Raba, "Vodní cesty v Československu a úvahy o jejich rozšíření + Náčrt možných mezinárodních vodních spojů," Zprávy Společnosti D-O průplavu 3, no. 1 (1956): (MZA, H42, k. 288), 6.

a general emergency organization, the third entity focused on European infrastructures (ECITO). In 1946, the United Nations Economic and Social Council turned its attention toward the reconstruction of devastated areas in Europe and established UNECE, a regional commission for the continent that supplanted the E-organizations. Despite the general distrust between the West and East which diminished in E-organizations from 1945 to 1947 and was non-existent in UNECE's

initial years, by 1955 UNECE had become virtually the only existing platform for discussion in a divided Europe. The UNECE Inland Transport Committee (ITC) took on ECITO's agenda and, in addition to reconstructing the existing transport network, prepared plans for its development on the continent, thus answering the call of people like Raba and Smetana.

While the Comecon scheme helped to revive the idea of the DOE in the late 1950s, its further development during the 1960s and especially after the negative government resolution of 1972, was much more closely linked to the processes of pan-European infrastructural integration led by UNECE. As the opening quotation suggests, after World War II, the DOE had been developed simultaneously within two different transnational frameworks, Sovietized East European and European Continental. UNECE's work gave the Czechoslovak hydraulic engineers the chance to develop and design the DOE according to emerging pan-European standards. When Communism collapsed, they had the "Europeanized" canal design ready to present to international and national authorities.

Indeed, the processes of Sovietization, discussed in chapter three, and Europeanization, to which this chapter is devoted, ran parallel throughout the second half of the twentieth century. As popular belief suggests, Sovietization equated to de-Europeanization. The prominent Czech/French novelist Milan Kundera referred to the mutual opposition of Europeanization and Sovietization in his 1984 essay, *The Tragedy of Central Europe*.[5] He described the post-war history of the region as the endless struggle of the Czechs, Poles, and Hungarians to maintain their European identity against the forced imposition of the "new world" of Soviet Communism. To some extent, the DOE canal records support his perspective. However, they equally imply that the situation was far more complicated and that the two processes did not stand in strict opposition.

On Europeanization

Unlike Sovietization, which social science abandoned long ago and has since become exclusively an object of historical inquiries, Europeanization only recently achieved the status of commonplace term in the social sciences.[6] However,

5 The French title of the essay, which translates as *A Kidnapped West*, expressed Kundera's message more explicitly. The same title was chosen for publication in Czech. Milan Kundera, "Únos Západu," in *Západní, východní a střední Evropa jako kulturní a politické pojmy*, ed. Miloš Havelka and Ladislav Cabada (Plzeň: Západočeská univerzita, 2000), 102-115.

6 Kevin Featherstone, "Introduction: In the Name of 'Europe,'" in *The Politics of Europeanization*, ed. Kevin Featherstone and Claudio M. Radaelli (Oxford; New York: Oxford University Press, 2003), 3-26, here 3.

historians remain rather skeptical toward such concepts. In 2000, Geiger noted that they have long avoided defining or even using the term, approaching it with suspicion due to its obvious link to recent political developments and dissatisfaction with its ambiguity.[7] The history of the notion left imprints not only on its diminished potential as a clearly defined analytical category but, in a way not dissimilar to Sovietization, equipped the notion with implicit normative meanings and connotations. In contemporary literature, Europeanization typically presents not only a process of policy adjustments but also the optimal trajectory of change.[8]

The notion of Europeanization was originally a product of semantic conflation of "Europe" and "European Union," derived from the self-definition of the latter. Over the past two decades, it has enjoyed increasing popularity in European integration studies. Facing the need to conceptualize a top-down process of adapting EU (and its predecessors') organizational dynamics in the member states at a domestic, institutional, and organizational level, scholars active in the field coined the term as a fitting designation.[9] A definition supplied by Radealli also aptly sums up its meaning. When defining Europeanization, he refers to processes of construction, diffusion, and institutionalization of "formal and informal rules, procedures, policy paradigms, styles, ways of doing things, and shared beliefs and norms," which are first defined and developed at EU level and then incorporated in national discourses and political structures.[10]

Such a definition serves scholars examining the development of the EU's structures and governance system.[11] However, it also leads to a paradoxical situation by

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7 In his contribution to the very first special issues on Europeanization (in a European Studies Yearbook), Geiger studied the reaction of Irish foreign policy to various European integration plans, from the rejection of the Briand Plan through prioritization of newly acquired sovereignty, to acceptance of 1950s integration projects as a means of modernizing the country. Geiger defined Europeanization as an effect of a political integration project.Till Geiger, "Europeanization on the periphery: Irish elite responses to European Integration, 1929-63," in *Europeanization: institution, identities and citizenship*, ed. Robert Harmsen and Thomas M. Wilson, *Yearbook of European studies = Annuaire d'études européennes* (Amsterdam; Atlanta, GA: Rodopi, 2000), 105-134, here 106.

8 Břetislav Dančák, Petr Fiala, and Vít Hloušek, "Evropeizace – pojem a jeho konceptualizace," in *Evropeizace: nové téma politologického výzkumu*, ed. Břetislav Dančák, Petr Fiala, and Vít Hloušek (Brno: Masarykova univerzita, Mezinárodní politologický ústav, 2005), 11-26, here 18.

9 According to James Caporaso, the appearance of the notion was related to the observed gradual reversion of the causal flow from (1) the original "bottom-up" direction, to (2) the regional "horizontal" organization stage, into (3) the recent "top-down" process. James Caporaso, "The Three Worlds of Regional Integration Theory," in *Europeanization: New Research Agendas*, ed. Paolo Graziano and Maarten Peter Vink (Houndmills, Basingstoke, Hampshire England ; New York: Palgrave Macmillan, 2007), 23-45, here 25.

10 Claudio Radaelli, "Whither Europeanization? Concept Stretching and Substantive Change," *European Integration Online Papers* 4, no. 8 (2000), http://eiop.or.at/eiop/texte/2000-008a.htm. Accessed 20 December 2007.

11 As Dirk Lemkuhl stated in his defense of EU-ization as the true scope for Europeanization, "broadening of the perspective would aggravate the problem of attributing unambiguous causality to a European impact." Dirk Lemkuhl, "Some Promises and Pitfalls of Europeanization Research," in *Europeanization:*

challenging the "common sense" meaning of the notion and its analytical content: providing the response of domestic authorities to EU decisions is indeed negative, Europeanization in this narrow meaning could "potentially undermine European integration efforts."[12] However, as British economics historian Alan S. Milward noted, this process could not be described in terms of uni-directional diffusion or even imposition of standards and norms developed by the EU. Milward used the notion in his 1992 interpretation of the evolution of the EU as an aspect of the national reassertion of European nation states which created Europe to save their goals. He explicitly used the term *Europeanization* when discussing the establishment of a regime of protection and subsidization of agricultural production at international level in Western Europe. Unlike his contemporaries, he employed it also for the bottom-up process. Milward concluded, that by creating a common market for agricultural products, nation states managed to protect their interests against growing globalization pressures. In his perspective, Europeanization remains limited to the processes within the EU and covers both parts of the political integration process: the push for creating a European regime and its reverse application in domestic policy.[13]

As the adjective suggests, "European" transformations were hardly limited to the EU and its member states in both territorial as well as institutional terms. In its narrow meaning, Europeanization as "monopolized by scholars of the unification process between the member states of the EU and concentrating on adaptations to Brussels," hardly stands for more than mere *EU-ization*.[14] |Criticized for the EU-ization label, EU-centrism tends to overlook other cross-border relations managed through a variety of transnational regimes and institutions operating alongside the EU and having an impact on territories outside the EU.[15] A good example was the

New Research Agendas, ed. Paolo Graziano and Maarten Peter Vink (Houndmills, Basingstoke, Hampshire; New York: Palgrave Macmillan, 2007), 337-353, here 349.

12 Julian Clark and Alun Jones, "The Spatialities of Europeanisation: Territory, Government and Power in 'EUrope,'" *Transactions of the Institute of British Geographers* 33, no. 3 (2008): 300-318, here 306.

13 Chapter 5 of Milward's book has this word in its title: The Europeanization of Agricultural Protection. Alan S. Milward, *The European Rescue of the Nation-State* (London; New York: Routledge, 2000), 197.

14 While many authors go beyond Radeaelli's exclusive focus on domestic adaptation and question European-level decision making processes, the EU remains the main research site. Caporaso, "The Three Worlds."

15 Critics of EU-centrism of the narrow Europeanization concept came from European integration studies (for instance, Schimmelfennig and Sedelmeier) and other disciplines (Flockhart). For a history of technology, Johan Schot formulated and empirically proved the criticality of the role of other (in his case expert) networks for integration on the continent. Frank Schimmelfennig and Ulrich Sedelmeier, *The Europeanization of Central and Eastern Europe* (Ithaca, NY: Cornell University Press, 2005); Trine Flockhart, "Europeanization or EU-ization? The Transfer of European Norms across Time and Space," *Journal of Common Market Studies* 48, no. 4 (2010): 787-810. Johan Schot, "Transnational Infrastructures and the Origins of European Integration," in *Materializing Europe: Transnational Infrastructures and the Project of Europe*, ed. Alexander Badenoch and Andreas Fickers (New York: Palgrave Macmillan, 2011), 82-112.

UNECE. It had been pan-European in character since its establishment in 1947, and failed to pay attention to the political division of the continent.

In opposition to the narrow perspective of EU-ization stands the extremely broad concept of Europeanization framed within the narratives of European civilization. For instance, when Czech historian Josef Pekař formulated his master plan for Czech national history' at the very beginning of the twentieth century, he was placing the history of the Czechs in the context of Europeanization understood as the formation of European civilization. "We participated in the common endeavor, from the tenth to the twentieth century; in the Gothic epoch we had Europeanized ourselves to the point that we would indicate directives to Europe, our teacher and governess, that we wanted to get hold of the steering wheel."[16] Even recently, a similar approach appeared in the literature. According to Flockhart, Europeanization is an historical process dating back to the Middle Ages that consists of "cultural encounters" that mediate the transfer of norms and behavioral practices making up the identity of the community of self-aware Europeans.[17]

The all too apparent flaw of such a concept lies in the at least questionable level of Europeans' self-awareness in history. Additionally, it remains a question that actually constitutes the Europeanizing quality of a given process. In a volume Klaus Kiran Patel edited in 2010, probably the first attempt at an historical analysis of the process of Europeanization, he defined it as "a variety of political, social, economic and cultural processes that promote (or modify) a sustainable strengthening of intra-European connections and similarities through acts of emulation and entanglement experienced and labeled as 'European' in the course of history."[18] In his perspective, the notion of Europeanization roughly corresponds with the formation of European identity, and encompasses transnational transfers, flows, and patterns that occur in Europe or which historical actors defined or labeled as "European."[19]

In all these suggested meanings and with all due respect to the differences

16 "… i my účastnili se práce společné od 10. do 20. století; v době gotické zevropeisovali jsme se do té míry, že že jsme chtěli udávat směrnice Evropě, své učitelce a vychovatelka, sami se uchopiti kormidla." Josef Pekař, "Smysl českých dějin," in *O smyslu českých dějin*, ed. Josef Pekař (Prague: Rozmluvy, 1990 [1929]), 383-405, here 389.

17 However, from a historian's point of view, these considerations seem too bold, especially regarding the retrospective projection of the process. Flockhart, "Europeanization or EU-ization?" 791.

18 Kiran Klaus Patel and Ulrike von Hirschhausen, "Europeanization in History: An Introduction," in *Europeanization in the Twentieth Century: Historical Approaches*, ed. Martin Conway and Kiran Klaus Patel, (New York, NY: Palgrave Macmillan, 2010), 1-18, here 4.

19 See the paper by John Davis on the British Beat "conquering" Europe. John Davis, "'Die Briten kommen.' British Beat Music and the Conquest of Europe in the 1960s," in *Europeanization in the Twentieth Century: Historical Approaches*, ed. Martin Conway and Kiran Klaus Patel (New York, NY: Palgrave Macmillan, 2010), 229-252.

between Flockhart and Patel, Europeanization serves as a corrective to the narrow notion of political European integration. In this chapter the term is used in a less ambitious and more specific way, though also formulated as an alternative to the notion of European integration. Somewhere between the western-centered EU-ization and the rather elusive concepts of *European (identity) formation* and *European civilization*, Europeanization as applied here stands for the processes of alignment to standards that their authors define as *European*, and for all manner of related activities aimed at constructing and applying such European standards. Spatially, such processes were not limited to the EU or to any geographical definition of Europe. The principal players were seldom recruited from diplomats and governments but rather as individual experts. This definition draws on the concept of the *Hidden Integration* of Europe discussed in the Introduction. The fact that this chapter studies the Europeanization process through the perspective of a single case study, the DOE, makes it possible to settle for this rather straightforward definition.

The literature on European integration tends to reproduce the Cold War image of a continent divided by political systems into two antagonistic parts, each developing its own independent integration model. Scholars of post-war European integration have generally neglected UNECE and organizations that are primarily technical and expert in nature and operate on a continental scale. Nonetheless, among other projects, UNECE aimed to construct the European waterway network, thus actively promoting the Europeanization of the national networks beyond the territorial limits of Western political integration. The organization was not only operating on European territory but also deliberately working on its integration and the construction of at least a technically united Europe. Here the label "European" seems for once absolutely justified.

The available literature on the organizations promoting infrastructural integration on a continental scale in twentieth century Europe sheds light on their role in the history of Europe. However, this literature focuses predominantly on the western part of the continent, although the Communist countries participated and cooperated in the work of such organizations and their projects. Among the many regional organizations operating in Europe, Comecon (Council for Mutual Economic Assistance) most often attended UNECE meetings.

Transnational and intergovernmental organizations transgressing the Iron Curtain represented crucial platforms of Europeanization. Czechoslovak engineers involved with the planning of the DOE project and representatives of professional Czechoslovak institutions assigned with cooperation on an international level, that is, in the organizations focused on construction of an (at least infrastructural) integrated continent, thus represented crucial carriers of the Europeanization of

the DOE project.

UNECE took the leading role among organizations facilitating cooperation among experts from both sides of the Curtain. UNECE leaders deliberately pursued a non-political technical working style to ensure that its operation (not only agenda and resolutions) was acceptable to both socialist and capitalist countries.[20] Such a specific organizational set-up meant that the development and final adaptation of any given decision into local or national policy often depended vitally on the abilities and initiative of the experts involved. Hence, individual engineers became instrumental in pushing forward the idea of the canal at all levels of authority at a national as well as transnational European level.[21]

The cooperation between Comecon and UNECE played an important role in the Europeanization of the canal design. On technical issues and especially standards, Comecon often agreed with UNECE. Furthermore, it converted sessions of its own subsidiary bodies into a sort of regional platform within UNECE. The joint operation of Comecon states at UNECE sessions enabled more balanced harmonization of the standards valid on both parts of the continent, and allowed representatives of the Eastern Bloc to actively influence final decisions. Thus, contrary to the general image of the Cold War, the trans-border cooperation and formation of Europeanization could not be described in terms of a one-way transfer from the technologically developed West to the backward East.[22]

The alignment of Comecon and UNECE standards thanks to cooperation between the two entities, led to the establishment of a single set of recommended dimensions and regulations valid for the entire continent. While the Comecon recommendations were also "voluntary" – making the standards not absolutely binding for engineers working on the canal – because no alternative set of recommendations existed, simply led to the recommendations being adopted as European. In addition, the existence of the UNECEas virtually the only transnational or international organization pursuing the DOE project after the Czechoslovak government's negative resolution of 1972, made sticking to the UNECE the only alternative for tireless supporters of the canal. The 1972 failure to construct the canal as a national project induced growing orientation toward "higher" international structures, such as UNECE and later the EU, to secure the sheer survival of the project and to keep the idea alive. Indeed, the hydraulic engineers promoting the

20 Schot, "Transnational Infrastructures," 85.

21 Importantly, in the Socialist system (or planned economy), all international relations remained to a certain extent controlled by the state.

22 For instance in 1964, French delegates asked Soviet colleagues about their experience with incline planes on inland waterways. The USSR provided them with translations of papers by Soviet expert B.S. Malevantchik published in the journal *Transportnoie Stroitelstvo* a year earlier (UNOG, GIX 15-1 35-9).

DOE idea attempted to utilize the transnational relations achieved by and through the international organizations, and these relations kept the canal on the UNECE agenda.

Technocratic internationalism, traditionally an ideology of experts, played a crucial role in the Europeanization process. After the World War II, as Smetana and Raba's cases demonstrated, Czech hydraulic engineers substituted the *Mitteleuropean* spatial frame with Europe. Jaroslav Kubec, the leading figure in Europeanization and long-time member of UNECE working groups on inland navigation and shipping, was similar to the self-Sovietizers of the early 1950s. His extensive list of publications advocating a European waterway network and the DOE, together with his personal connections, accounted for the relatively undisputed acceptance of the European dimension of the canal project in the 1960s, although not even a decade earlier the same waterway symbolized Sovietization.

Furthermore, the experience of adapting the Soviet model to the Czechoslovak environment in the 1950s led to considerable disappointment among the public and the community of hydraulic experts. Though not openly discussed, the growing neglect by Soviet management is implied in the minutes of Academy of Science meetings. In 1955, during a discussion of waterway construction and irrigation plans for southern Slovakia, Alfred Dutka openly declared that there was nothing in the Soviet experience that might be adopted in Czechoslovak conditions, and recommended turning to the Rhine for inspiration.[23] In the very same year the UNECE started to exchange experiences with the West as advocated by Dutka.

The available periodization of Europeanization generally does not divide the post-1945 period into sub-periods, especially those using a broader definition of the term.[24] In contrast, Cold War literature divides post-war political history into four distinctive periods, which was important for the processes transgressing the Iron Curtain. The changing East-West political relations had a definite profound influence on the construction of the European waterways network, i.e., the Europeanization of the Czechoslovak waterway projects. The Bloc formation period of the high Cold War (1945-1953) saw the formation and stabilization of the two blocs, and the delimitation of their borders in Europe. Gradually, the former allies ceased to communicate even at the most basic technical level. With

23 Report on the fifth meeting of the Commission for Water Management 1955 (AAVČR, KVH, b. 15, November 25, 1955). Alfréd Dutka was an interwar diplomat who was dismissed from the Ministry of Foreign Affairs after 1948. The Secret Police kept him under surveillance as a suspicious person and probably an "Imperialist agent" throughout the 1950s and 1960s (ABSČR, MV, 707969). For the next meeting, joined by Soviet USVH expert Kubarev, Dutka even prepared a comparison of Dutch and Soviet inland navigation.

24 Flockhart, "Europeanization or EU-ization?" Ute Frevert, "Europeanizing Germany's Twentieth Century," *History & Memory* 17, no. 1 (2005): 87-116.

Khruschev's rise to power in the USSR, dialogue between the blocs emerged, which became a distinctive feature of the Peaceful Coexistence period (1953-1962). Technical organizations such as UNECE represented an important platform for the otherwise limited dialogue between the two antagonistic sides. The 1960s then marked a transition toward the period known as *the Détente*, which dominated the 1970s and 1980s. The steadily growing level of cooperation, although hampered by general distrust between the political elites of East and West, led to the Helsinki Conference on Security and Cooperation in Europe (1973-1975), also important for the level of its negotiations with experts. However, these two decades also witnessed the acceleration of separate developments in integration on both sides of the Iron Curtain. With the collapse of communism in 1989, the Europeanization introduced into Central Europe during the period of Peaceful Coexistence took on the form of EU-ization.

Czechoslovak participation in the international organizations geared to constructing the European waterway network, most notably the relevant subsidiary body of UNECE, followed a similar pattern. While renowned for their favor of international organizations during the interwar period, Czechoslovak diplomats and experts largely withdrew from these after World War II.[25] Between 1948 and 1953, few delegates from Prague attended any international organization meetings with a Western membership, whether intergovernmental or transnational technical bodies. The situation changed in the mid-1950s, but the delegates remained under strong political control. A decade later, around 1964, the situation eased further as traveling abroad became more commonplace and tolerated, even across the Curtain. Nonetheless, for the next decade, virtually all delegates traveling to the West, where most UNECE or PIANC meetings took place, had to sign a Cooperation Agreement with the Czechoslovak Secret Police, Státní bezpečnost (StB). The Europeanization of the canal designs reflected the intensity of the contact among the pan-European organizations. Initially, the Comecon project was developed according to Comecon standards, but since the early 1960s the designs gradually adopted dimensions and regulations developed and recommended by UNECE for the European network. After 1972, the Comecon network project virtually disappeared and the only available technological dimension for international waterways the designers followed for the DOE was the European one.

25 As organizers of the Berlin workshop, *How did Eastern and Western Europe meet in International Organizations (1945-1973)? A 'Post-Cold War' Perspective (June 24, 2011)* noted, it is surprising how little attention Czechoslovak historians have paid to post-war international organizations despite the important role Czechoslovak representatives played in them in the interwar period. General research is lacking. The assumptions presented here are based on the examples of people like Vojtěch Krbec.

Across the Curtain

In the immediate post-war months, transport experts complained that inland waterways are in most cases obstructed in the navigation channels by destroyed rail and road bridges, by blockships and in some cases by destroyed locks."[26] However, any attempt at reconstruction complicated the even more fragmented political map of post-World War II Europe. The situation required the continuing efforts exerted by the League of Nations and its aligned organizations iin the interwar period. Nonetheless, the results of the LoN transport conferences of the 1920s, most notably the Barcelona Statute, remained a memento of interrupted integration; often, as in the case of the canal, this did not mean a complete stop but rather a continuation of the project by other means. As expressed by Königs in 1942, the Nazi vision of the international regime actually represented a continual struggle for a generally acceptable form of river and canal administration on a continental scale.[27] The idea of an integrated waterway network, carried out by the institutional memory of several transnational organizations operating in post-war Europe, retained the appeal of a unified Europe that the Nazis had attributed to the project.

To create a consistent network out of various national waterway systems and extremely diverse inland navigation standards, which historically developed within different river basins, establishing a universal (European) régime of operation on waterways was necessary. However, whereas the basic network already existed for railways or roads and its Europeanization required the introduction of a transnational European régime of operation, inland waterways remained fragmented into isolated islands of navigation by the mid-twentieth century.

By August 1945, after his return from the Potsdam Peace Conference, U.S. President Truman publicly announced that, "one of the persistent causes for wars in Europe in the last two centuries has been the selfish control of the waterways of Europe … The United States at Berlin proposed that there be free and unrestricted navigation of these inland waterways. We think this is important to the future peace and security of the world. We proposed that regulations for such navigation be provided by international authorities. The function of the agencies would be to develop the use of the waterways and assure equal treatment of them for all nations …"[28] Although Stalin immediately rejected the proposal, the vision of

26 E.R. Hondelink, "Transport Problems in Europe," *International Affairs* 21, no. 4 (1945): 512-521, here 517.
27 Gustav Königs, "Die Wasserstrassen im Europa-Verkehr," *Süddeutsche Wasserstrassen* 19, no. 1-2 (1943): 2-4.
28 Louis B. Wehle, "International Administration of European Inland Waterways," *The American Journal of International Law* 40, no. 1 (1946): 100-120.

transnational governance survived and resurfaced later through the efforts of various organizations, predominantly the United Nations and PIANC.[29]

The U.S. representatives presented free navigation on international waterways, in terms of an interwar state of affairs, as key to a peaceful future for the continent. Even without actual archival evidence, assuming such plans also had a similar background seems correct and justifiable, namely that the principles of internationalization of the Danube after 1918 enabled the British to obtain economic influence in the area and American intervention could hardly be free of analogous intentions.[30]

In addition to diplomats, experts on inland navigation also made efforts to rapidly improve and reconstruct European waterways. The first post-war meeting of the restricted PIANC executive committee took place in Brussels in December 1946, eleven years after the last congress at the very same location. American, British, Dutch, and French delegates participated.[31] The committee decided to postpone the first post-war congress until 1949 to achieve "suitable and judicious organization, which has always been a characteristic of the congress."[32] However, such a decision had a negative effect on attendance. With the Soviet bloc withdrawing from the international stage, only a few papers were from beyond the Curtain.[33]

At the opening session of the congress in Lisbon, Major General Phillip B. Flemming, chairman of PIANC's American section, called for opening a broader perspective than the traditional focus on strictly engineering problems. Emphasizing the need to plan the development of inland water transport infrastructure as part and parcel of the integrated inland transport system, he called for international cooperation on the re-construction of the navigable network and, in a rather straightforward manner, advertised the activities and measures undertaken by the freshly established UNECE in this respect. Stating "the canal

29 A fact often depicted in U.S. literature as an insult from Stalin, though given Soviet control over the Danube and Truman's proposal to organize the international river commissions based on the big three, France and the riparian states, the Soviet position seems understandable; for the debate in Potsdam from an American perspective, see Robert D. Murphy, *Diplomat Among Warriors* (Garden City, NY: Doubleday, 1964), 277-279. For an example of the American "insult" interpretation, see Gregor Dallas, *1945: The War that Never Ended* (New Haven: Yale University Press, 2005), 574.
30 Alice Teichova and Penelope Ratcliffe, "British Interests in Danube Navigation after 1918," *Business History* 27 (1985): 283-300.
31 Permanent International Association of Navigation Congresses, *Account of the XVIIth Congress, Lisbon, 1949* (Brussels: General Secretariat of the Association, 1950), 5.
32 Ibid. Letter to heads of national PIANC committees from Secretary-General Joseph Millecam in 1946, reprinted in the Preface. Despite the post-war situation and general decline in membership, the number of papers submitted to the congress was higher than the previous two congresses in 1931 and 1935 (altogether 110 papers and 12 reports), proving that, organizationally, its goal was achieved.
33 Four of them were from Czechoslovakia. Ibid.

systems must be so planned as to give the communities – regional and national – the best and most efficient service," he actually meant that they must be built to serve Europe.[34]

While universalistic in its aims, PIANC remained a mostly European enterprise well into the second half of the twentieth century. Although it boasted of covering the whole world, in membership and focus it was mainly a European agency, at least until the 1960s. In 1953, Joseph Millecam, PIANC Secretary-General, touched on the issue of European dominance in his Foreword to the Report of the work of the 18th Congress. Attempting to justify why Rome and not Brasilia was chosen as location, he pointed out that "10 out of 11 congresses since 1905 were held in Europe, 1136 out of 1866 members reside in Europe (61%), 20 out of 39 governments supporting PIANC are situated in Europe (50%), 76% of subsidies and subscriptions come from European countries." In fact, except for the United States which hosted the event in 1912 and 1961 and a trip to British Egypt and Suez in 1926, the first Congress held outside Europe took place in Osaka in 1990, followed by Sydney in 2002.

Under the heading acceleration of transport on inland waterways, the Lisbon Congress covered issues on the establishment of a regional network at both a material and operational level. After all, in the eyes of some delegates, national, institutional and administrative regulations were the crucial factors slowing down waterborne traffic and limiting its competitiveness. Among the measures discussed was the international cooperation required, especially regarding the standardization of waterway and vessel measures. Reporters on the issue approached the problem from various angles, though several important points can be derived from the gathered data. Most of the contributors (virtually exclusively Europeans except for the U.S.) described the existing national waterway classifications. Classification into categories representing vessel types was seen as most useful, namely for constructing new and reconstructing older waterways and navigation structures.[35] Again, the American delegates were most vocal on this point, insisting, "the broader the territorial extent of this uniformity, the greater the resulting benefits."[36] However, the picture emerging from the national reports only documented the fragmentation of the continent's inland waterways. The French

34 Ibid., 69.
35 René Graff, "General Report," in *XVIIth International Navigation Congress Lisbon 1949, Section 1 – Question 1. Acceleration of Transport on Inland Navigable Waterways*, ed. Permanent International Association of Navigation Congresses (Brussels: General Secretariat of the Association, 1950), 1-9, here 8.
36 Frederick M. Rademacher, Adolphus J. McCorkle, and John B. Newsom, "Paper," in *XVIIth International Navigation Congress Lisbon 1949, Section 1 – Question 1. Acceleration of Transport on Inland Navigable Waterways*, ed. Permanent International Association of Navigation Congresses (Brussels: General Secretariat of the Association, 1950), 57-80, here 77.

classification developed for the reconstruction and improvement of the national network heavily damaged during the war recognized four categories of canals by dividing the 600t carrying capacity in two. Since 1879, two standards had been operating, one for principal waterways (fitting the French self-propelled vessel type *Peniche* 5x38, 5x1.8 m), the other for smaller local canals. By 1931, the Dutch had developed a classification of five classes and the Rhine 2000t vessel. Nonetheless, regardless of the Southern and Northern Peninsulas' isolated systems or absenting Eastern Europe, the documents showed a tendency in Western Europe to adopt three main standards derived from the following vessel types: the Rhine barge over 2000t, the 1200-1350t Rhine-Herne canal barge, and the traditional 300-350t lighters, with intermediate types such as the 1000t Dortmund-Ems canal barge or 600t Belgian *Campine* barges.[37]

The Congress opened with a debate on the basic standards for a future regional network, foreseen by certain delegates as a natural outcome of reconstructing the destroyed or damaged ports and waterways. However, ultimately PIANC only assisted international organizations in implementing the plans. The results of the discussion launched at the Lisbon Congress were taken up by other international organizations.

The support for UNECE expressed by General Flemming, the American representative at the Congress, aptly characterized general U.S. foreign policy on the post-war reconstruction of Europe. American policy makers identified nationalism in its various forms (economic, ethnic, etc.) as the crucial cause of the War; thus, they intended to curtail the powers of European nation states and direct them towards cooperation. The economic superiority of the U.S. allowed it to enforce the establishment of some form of supra-national governance on the continent, which it exercised through the Marshall Plan. The program's architects deliberately designed it in a way that required some degree of integration. At first, they considered entrusting UNECE with running the program, but decided to create a brand new organization to meet the task, the Organization for European Economic Cooperation (OEEC), in response to the Cold War. OEEC membership was restricted to non-communist countries.

Although the Americans remained present at UNECE, they pushed for integration focusing on the western part of the continent, and it was here that the ideas expressed by Flemming in Lisbon first came to life. Within the parameters of the OEEC, a special body was created for transport in 1953, The European Conference of Ministers of Transport. By its first meeting, the participants had declared interest

37 See other Lisbon Congress reports.

in developing and improving the state of the inland waterway network and laid the foundation for developing the unified West European waterway network.[38]

Unlike the OEEC, UNECE's goal was to facilitate interaction between both parts of the continent. From the very beginning, UNECE's chief executive, Gunnar Myrdal, strongly pushed for preserving it as continent-wide organization and was prepared to put considerable effort into gaining the confidence and cooperation of socialist countries.[39] Initially, however, the envisaged East-West collaboration yielded minimal results. From about 1950, East European countries gradually withdrew from all subsidiary bodies. Apart from continued Polish membership on the Coal Committee, the OEEC had virtually become a West European agency and thus lost part of its justification for existence.[40] Until 1953, the subsidiary bodies consisted of exclusively West European experts and delegates carried out almost all the work.[41] Furthermore, the position of the East European countries within UNECE has been much debated by contemporary critics of Myrdal's politics. He was often accused, especially by the Americans, of being overly active and obliging in his attitude towards the Eastern bloc.[42] The fact that Hungary, Czechoslovakia, and Poland had left the scene (except the vital Coal Committee), together with the USSR, clearly suggests that political mechanisms were in operation.

The organizational structure of UNECE and its mode of operation corresponded with the intentions of its designers. The annual plenary sessions of the Commission, mostly attended by diplomats and permanent delegates of member countries, often staged rhetorical battles between representatives of the competing social systems, similar to many international Cold War organizations. UNECE's smooth operation secured the secretariat, whereas its technical committees conducted the core of the work. Both the plenary and subsidiary bodies refrained from majority voting, and projects without consensual support were withdrawn from the agenda. Such measures protected the committee sessions from splitting along political lines. Issues of standardization and subsequent integration of the transport systems came under the authority of the Inland Transport Committee (ITC). UNECE also actively cooperated with other transnational organizations, especially technical ones. Regarding inland navigation, international commissions

38 Erich Seiler, "Die Klasseeintelung der europäischen Wasserstrassen und ihre Bedeutung für die Binnenschiffahrt," *Die Wasserwirtschaft* 45, no. 10 (1954-1955): 245-258.
39 Václav Kostelecký, *The United Nations Economic Commission for Europe: The Beginning of a History* (Göteborg: Graphic Systems AB, 1989), 56.
40 David Wightman, "East-West Cooperation and the United Nations Economic Commission for Europe," *International Organization* 11, no. 1 (1957): 1-12, here 4.
41 Jean Soitis, *ECE in the Emerging European System* (New York: Carnegie Endowment for International Peace, 1967), 45.
42 Wightman, "East-West Cooperation," 5.

for both the Rhine and the Danube existed (those for the Oder and the Elbe were not revived after the war) in addition to PIANC. However, in the organization's initial years, developments on the Danube remained unknown as communist countries neither invited UNECE to the negotiations nor informed it.[43]

Transport, and especially waterways, is a prominent item quoted in the literature to illustrate UNECE's successful mediation in East-West cooperation.[44] At the very first ITC session, waterways appeared on the agenda within the broader discussion of post-war reconstruction and future operation of European transport networks. The interruption of the committees' work attributable to the withdrawal of Eastern Europe did disrupt the attempts to reconstruct the existing waterway network in Europe.

Only in 1953 did the isolationism on the east side of the Iron Curtain begin to thaw. Czechoslovak representatives identified the 1953 talks held at the UNECE Council in Geneva between Comecon member states and capitalist representatives on the resurrection of international trade as a turning point in the commercial/technological sphere.[45] The Soviet bloc representatives saw UNECE as an opportunity to cooperate with the West and benefit particularly in the field of technology. The USSR promoted wider cooperation in the transport sector and saw UNECE's ITC as a bridge to facilitate interaction between the newly established socialist transnational railways and the West European system.[46] The UNECE founding members from people's democracies such as Czechoslovakia, Poland, and the USSR, resumed full participation before 1955, and the other East European communist countries Albania, Bulgaria, Hungary, and Romania entered UNECE for the first time that year.

Otakar Šimůnek, then head of the permanent Czechoslovak delegation at Comecon, clearly stated the Czechoslovak standpoint toward the UNECE in his speech at the Council's seventh session. In the wake of the 20th congress of the Soviet Union's Communist Party, he openly criticized the shortcomings of

43 Note by the secretariat on relations with international organizations for inland waterway transport. Prepared for the third session of the UNECE Inland Transport Committee. UNECE document TRANS/34, 28 September 1948.

44 Wightman, "East-West Cooperation"; Gunnar Myrdal, "Twenty Years of the United Nations Economic Commission for Europe," *International Organization* 22, no. 3 (1968): 617-628.

45 From the conference paper based on Czechoslovak sources. Wightman offers the standpoint of the UNECE as mediator that achieved its goal to bring the East back to Geneva through these informal trade consultations in April 1953. Ludovit Hallon and Miroslav Londák, "Facilities, Forms and Areas of Economic Activities of Firms in Neutral and in Socialist Countries During the Cold War: The Slovak Case," *XIV International Economic History Congress* (2006), http://www.helsinki.fi/iehc2006/papers3/Londak.pdf. Accessed 12 June 2008. See also, Wightman, "East-West Cooperation," 4.

46 The USSR, unlike Czechoslovakia, was not a member of the UNECE: Report on the utilization of Czechoslovak membership for the Inland Transport Committee. EHK: Zpráva o využití čs. členství ve výboru pro vnitrozemskou dopravu (AMZV, MO-OMO, b. 68, April 5, 1965).

Comecon member states' cooperation. He identified a certain isolationism on the part of the organization, arguing in favor of establishing broader cooperation with capitalist countries based on the "peaceful co-existence policy."

> Among capitalist international organizations, the United Nations Economic Commission for Europe is the most important one for European socialist countries … However, it is necessary for Comecon countries to consult on the means of proceeding in UNECE in order to secure further development of mutually benefiting relations between East and West … Joint action and active participation of experts from socialist countries in UNECE working groups would enable us to exploit and actively influence the UNECE organs dealing with tasks that are extremely important for our countries (he also lists "some modes of transport").[47]

The year 1955 marking the restoration of the UNECE pan-European integrative approach, was also significant for the first ad hoc meeting of experts on inland waterway problems held under the auspices of UNECE at Geneva in May. The debate aimed to solve practical problems such as the unification of police regulations, signs and signals, boatmen's papers, and ships' certificates. Political tension with the socialist Danube Commission caused a slight delay in waterborne transport compared to other means of transport that had fully established their own permanent working groups by 1955.[48]

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47 Among the benefits of mutually exchanging experiences with capitalist states, Šimůnek listed the growing purchasing potential, removal of discriminatory economic barriers, and enhancement of knowledge on progressive technology. He also mentioned the opportunity to obtain statistics on the development of European economies. He warned: "despite the expected improvements, materials provided by the UNECE could not solve all the economic issues in socialist countries. That would be the task of the Council and its bodies to help member states solve specific problems arising from economic planning." Otakar Šimůnek (1908-1972) was a Czechoslovak communist politician, chemical engineer, and minister for the chemical industry (December 1951 – June 1954); minister and head of the Czechoslovak State Planning Office/State Planning Commission from June 1954 to July 1962 (Czechoslovak GOSPLAN, until 1960 *Státní úřad plánovací*, later on *Státní plánovací komise*; this change reflected the common East European pattern, with one powerful central planning office subdivided into departments replacing industrial ministries); at the same time Deputy Prime Minister from 1959, Czechoslovak Permanent Comecon representative responsible for Czechoslovak affairs within Comecon from 1962, and responsible for developing economic relations with other countries in his capacity as head of the State Commission for Economic and Scientific-Technical Cooperation since 1965; long-term member of the CzCP central committee and member of parliament; after 1968, he gradually lost his positions.

48 Tension arose concerning the international status of the Danube and the Sovietized version of the Danube Commission established in Belgrade in 1848. At the first ad hoc Meeting on Inland Waterway Problems organized by UNECE, representatives from Great Britain opposed the participation of the Danube Commission delegate, stating that the only proper Danube Commission was established in 1921 by the Treaty of Versailles. The delegate's affiliation to the Commission was deleted from the minutes. Meeting of the Ad hoc Working Group of the Economic Commission for Inland Waterway Transport in Geneva, May 31-June 3, 1955. Zasedání pracovní skupiny Evropské hospodářské komise pro vnitrozemskou vodní dopravu v Ženevě 31.5.-3.6. 1955 (AMZV, MO-OMO, k. 65, July 4, 1955).

In exact accordance with Šimůnek's proposal, Comecon member states coordinated their participation in UNECE meetings right from the start, by coordinating the course of action and the attendance (who goes where; where the common standpoint needs support from a permanent delegate or an otherwise non interested party; the expert groups on the agenda of a particular country, etc.).[49] Delegations of experts in Geneva unavoidably defrayed in western currencies and heavily burdened the sending institutions' budgets. As a result, the insufficient numbers of delegated experts due to financial constraints and limited manpower led to the Czechoslovak participation at UNECE being highly criticized from the outset. One of the first inland waterways reports, namely on the post-session meeting of socialist countries at the permanent Soviet delegate's residence, emphasized that insufficient attendance by experts from the "peace camp" at meetings limited their ability to be properly informed and prepared.[50]

The East-West divide affected negotiations within the working group. Although Karel Hoblík, a Czechoslovak representative at its first meeting in 1955, stated in his report to the government that the situation could "by no means be characterized as a dispute between delegates from peace camp countries and others. Quite to the contrary – on many occasions the views of the Soviet delegation or any peace camp country were supported by capitalist countries and vice versa."[51] For example, during the discussion on standardizing signaling and marking waterways, Austria rather illogically voted against the adoption of the Danube standard in favor of the Rhine.[52]

The integration of European waterways in UNECE started with the Soviet initiative. The motivation for the Soviet proposal to establish a unified European waterway network at UNECE's 23rd Session in 1958 was probably to gain free access to the not yet internationalized waterways in the western part of the continent.[53] At least the Czechoslovak officials decided to support the opportunity to "use not only the existing waterways and Elbe-FRG canals, but also the future Danube-Rhine connection."[54] For the USSR and its allies, the idea of a network provided

49 For instance, the plan for Czech participation at UNECE meetings in 1955 was coordinated with the Polish plan then forwarded to the permanent Soviet UNECE delegate. UNECE – participation at meetings. EHK – účast na zasedáních 1955 (AMZV, MO-OMO, b. 65).

50 Report on the meeting of the UNECE Working Group for Inland Water Transport in May 1956. Zasedání PS EHK pro otázky vnitrozemské vodní dopravy od 22. do 25. 5. 1956 v Ženevě – zpráva o výsledcích pro PV (AMZV, MO-OMO, b. 66).

51 Report on the meeting of the UNECE Working Group on Inland Water Transport in June 1955. EHK: Pracovní skupina pro vnitrozemskou vodní dopravu – zpráva o průběhu a výsledcích (AMZV MO OMO 1955-65 b. 65, June 8, 1955), 7.

52 UNECE document Trans/WP 31/SG 1/2, 1956.

53 UNECE document W/TRANS/256, 1958.

54 A draft of guidelines for the Czechoslovak representative at the 13th session of the ITC UNECE, Geneva,

the potential exploitation of cheap transport on international rivers — transport fully operated by socialist vessels not requiring to be hired and paid in hard currency. This idea led to the establishment of the special Group of Experts on Problems involved in Establishing a Unified System of Waterways of International Concern in Europe, as a subordinate body of the ITC sub-committee for Inland Water Transport.[55]

Going back to the materialization of Cold War sentiments in the UNECE, it is important to mention that the USSR separately pushed forward the construction of an integrated waterway network within Comecon objectives. The first draft for the network, the *Program for the further study of issues related to the establishment of the unified inland waterway network of the Comecon member states*, issued in 1960, mentioned UNECE; the second article of the "opening remarks" stated that the Program included all issues necessary for the economic and technical evaluation of the purposefulness of establishing the Comecon network, and "simultaneously it takes account of problems establishing the unified European network of inland waterways of international importance as set out in the UNECE Group of Experts' action program."[56]

A crucial point in the development of a unified system was establishing a comprehensive classification of European inland waterways, which imposed order on the rather incoherent array of artificial canals and navigable rivers. The technical aspects of existing infrastructures varied immensely because of the differing natural conditions and applied national or regional standards. When starting to develop a universal standard, the Group adopted a classification developed by Professor Seiler in 1954 for the Rhine Basin and the Coal and Steel Community, based primarily on vessels' carrying capacity.[57]

By 1960, at the onset of negotiations on which classification to adopt, the Group of Experts agreed that the links connecting the main basins should be Class IV and higher (enabling vessels of 1,000-1,500t carrying capacity to navigate) and that the capacity of these waterway links (at locks, for example) should allow pushed barge convoy traffic.[58] Both sides also agreed that the lowest two classes of Seiler's classifications were too variable for any standardization. The debate centered on class III, some of which were the most important waterways of international concern,

December 15-19, 1958 (AMZV, MO-OMO, b. 68).

55 By 1966 (at its sixth session), the group was renamed Working Party for the Development of Waterways.

56 Program for further studying issues related to establishing the unified inland waterway network of Comecon member states. Comecon Protocols SCT TP/8/62 (NAČR, MZO-FMZO , odd. 20, b. 5), annex 10.

57 Seiler, "Die Klasseeintelung."

58 Report on the Group of Experts' fourth session. UNECE document TRANS/WP34/3, 15-8-1960). The same specification was the core of the Comecon unification scheme (with pushed-barge convoys – *tolkatch* – as technical novelty).

such as the German *Mittellandkanal*. The West German delegate announced that the canal could not be upgraded to Class IV, but at the same time was reluctant to include class III in the internationalized European network.[59]

Indeed, the issue created tension, so much so that at the 23rd session of UNECE ITC (January 20-25, 1964, Geneva), West European countries declared the idea of a unified European waterway system an "East European interest." However, Austria showed interest and so it remained on the agenda. Czechoslovak delegates reported with some regret that the much-expected deeper analysis by the subcommittee on inland water transport and its work on a unified waterway network did not happen.[60]

Establishing a unified European waterway network also required high capacity links to be constructed, thus forming a continent-wide waterway system out of the, up till now separated networks of Soviet Russia, the Rhine, and the Danube. To this end, economic studies were carried out for the Rhine-Main-Danube, Danube-Oder, and Dnieper-Vistula-Oder water connections.[61] For each of the three projects, a special *Group of Rapporteurs* composed of interested parties started operations in 1964, led respectively by representatives of the FRG (RMD), Czechoslovakia (DO), and Poland (DVO).[62]

The struggle between the two worlds escalated again in 1966 at the sixth meeting of the experts on integration, at which the classification battle resumed with new vehemence. The West European delegates met twice before the meeting to prepare arguments for the dispute over classification (within the framework of the European Conference of Ministers of Transport), which was finally helped by the independent stance held by Romania who was not at the meeting but had submitted its own proposal. Nor did Poland and Ukraine attend the meeting. Given that Bulgaria had not taken part in the working group, the Czechoslovak delegates, together with the USSR and Hungary, were heavily outweighed by Austria, Belgium, France, the FRG, the Netherlands, Switzerland, the USA, and Yugoslavia. Eventually, class III was also protected from standardization (and internationalization) by western countries.[63]

59 Report on the Group of Experts' third session on Problems involved in Establishing a Unified System of Waterways of International Concern in Europe. Zpráva o 3. Zasedání expertů pro stadium otázky sjednocení evropských vodních cest (AMZV, MO-OMO, b. 68, November 16, 1962).
60 Report on the 23rd meeting of the UNECE ITC. Zpráva o průběhu 23. zasedání 20-25.1.64 Ženeva (AMZV, MO-OMO, b. 68).
61 Report on the Group of Experts' second session, UNECE document TRANS/WP34/6, June 1, 1961.
62 Report on the Group of Experts' fourth session, UNECE document TRANS/WP34/12963.
63 Report on the Group of Experts' sixth session on Problems involved in Establishing a Unified System of Waterways of International Concern in Europe. Zpráva o 6. zasedání expertů pro stadium otázky sjednocení evropských vodních cest (AMZV, MO-OMO, b. 68, October 15, 1965).

In a way, this situation ushered in the ensuing developments. The Group of Rapporteurs (GoR) on the DOE experienced severe difficulties coping with the hostile attitude of western and allegedly neutral countries towards the GDR. In 1967, the Elbe branch was included in the DOE project, thus directly involving the GDR in the scheme. However, the Austrian delegation, faithful to the western position, argued that the GDR could only be invited to the group as occupied territory, based on article 10 of the UNECE Charter, which was an unacceptable condition. In 1968, the USSR and Hungary joined the GoR, holding observer status and Yugoslavia and Romania were invited to cooperate. In addition, the International Rhine and Danube Commissions (CCNR, DC) were allowed to join the group.

The GoR met only five times on the DOE, and the last meeting was at Vienna in December 1968. The next session, originally planned for November 1969 in Děčín (Czechoslovakia), was cancelled by the GoR chairman, who failed to find a way to ensure the GDR experts could participate and followed the general Comecon line.[64] On the same grounds as at the 25th session of the UNECE Working Party on the Development of Inland Waterways, the Polish delegate stated that the GoR on the Dnieper-Oder did not intend to start work because the GDR, a riparian state on the Oder, was not allowed to participate due to its unclear position outside UNO structures.[65]

With the report on the Rhine-Danube canal delivered and others postponed, the Group of Experts on unification ceased to meet regularly after 1967. This somewhat contradicted the 1967 claim by Jean Soitis that "bipolarity has been replaced by … a power subsystem" in which "the hegemony of Superpowers is withering away … With very few exceptions, the only problems whereby the USSR can still rely on the support of other East European countries seem to be the Vietnam War and the threat of German militarism."[66] To that, it seems we should add solidarity with the GDR.

By aligning European and Soviet standards, UNECE activities naturally affected the technical layout of the DOE canal, and perhaps even more profoundly, its economic implications, as free shipping on West European rivers underpinned the idea of the Comecon and European waterway network. The process of applying the waterway standards developed by UNECE, as well as utilizing the

64 As occupation zones, both Germanies could send their representatives to ECE meetings, although the GDR did not take part before the mentioned trade consultations of 1953 (Soitis, *ECE in the Emerging European System*, 49). After the Paris Treaty, the UN (ECOSOC) accepted the FRG but not the GDR based on U.S. policy that considered communist Germany still an occupation zone due to the non-existence of free elections; the GDR only became a member of UNO in 1973 despite regular attempts by East Europeans to open the issue in the 1960s.

65 UNECE document E/ECE/TRANS/544, 20-1-1966, 65-67.

66 Soitis, *ECE in the Emerging European System*, 8.

experience gained by cooperating with colleagues on the other side of the Iron Curtain, depended largely on the experts and delegates attending the meetings on behalf of Czechoslovakia. As mentioned above, UNECE presented itself as an apolitical, purely technical organization because the resolutions made in Geneva had to be implemented and adapted in a national context by local experts on a voluntary basis. Thus, the entire Europeanization process – that is, the application of "European" standards developed at UNECE – fell on the shoulders of individuals whose position within state ranks allowed them to influence crucial decisions. These experts did often attend UNECE meetings and took part in the standard setting process.

Thus, we should focus attention on the experts involved in the actual creation of the standards applied to the canal designs – the Czechoslovak representatives at UNECE. A striking feature in the first years of the European Network plan was the difference between the experts attending Comecon meetings and those going to Geneva because both inland waterway sections of the Comecon Standing Commission on Transport and the UNECE Inland Transport Committee shared a similar agenda. Experts delegated to UNECE meetings were politically more reliable and linguistically well-equipped state officials. Experts sent abroad had several levels of reliability. Some engineers were simply not allowed to leave the country on any official mission, others were restricted to socialist countries (Comecon), third-world countries or other countries in-between, and finally only the most reliable represented Czechoslovakia in capitalist states.[67] To some extent, such a distinction recreated the Iron Curtain even within the group of Czechoslovak hydraulic engineers, as those working on the Danube-Oder project at UNECE were in a way separated from the engineers attending Comecon meetings on waterways. However, the need to coordinate Czechoslovak representation at international organizations dealing with transit led to the decision to make institutions representing Czechoslovakia at Comecon STC also responsible for other international organizations.[68]

The Czechoslovak representatives who attended meetings of the UNECE ICT Working Party on Inland Water Transport were carefully selected from appropriate

67 Profiles of engineers nominated for promotion always included a note indicating their degree of reliability, such as "delegated to countries of the socialist camp," etc.; for Oldřich Vitha's profile, see Zásady organizační přestavby odvětví vodního hospodářství, 1966 (NAČR, KSČ-ÚV-02/1, sv.129, aj.137-3). After 1964, this policy softened, as the case of Czcehoslovak scientists show: Soňa Štrbáňová and Antonín Kostlán, *Sto českých vědců v exilu: encyklopedie významných vědců z řad pracovníků Československé akademie věd v emigraci* (Prague: Academia, 2011), 5.

68 The organization coordinating international relations, letter from the Ministry of Transport to the Ministry of Foreign Affairs. Organizace koordinačních pracích v oboru mezinárodních vztahů (AMZV, MO-OMO 1955-1965, b. 68, January 9, 1963).

institutions. Since 1955, Karel Hoblík, an ardent communist lawyer of working class origin and high ranking state official at the *Ústřední správa plavby* (Central Office for Navigation) had represented Czechoslovakia. He was accompanied by hydraulic engineer Svatopluk Hlava, who did not have such a glossy political profile but had mastered several languages. This was clearly a politically motivated choice. The appropriate candidate would have been engineer Kliment Velkoborský, head of the Prospective Planning Department's navigation section at the Ministry of Transport, who had led the negotiations over the DOE Comecon project in 1957 and 1958.[69] When Velkoborský retired, his successor Rudolf Vachuda was suddenly delegated to UNECE as well as Comecon.

Rudolf Vachuda (1925-??) was originally a joiner by trade, but in 1949 the Youth Union (*Svaz mládeže*) at the factory where he worked sent him to study at University of Political Science and Economics, a freshly established institution focused on training the new communist technocracy.[70] After graduating in 1953, he joined the Ministry of Transport. From the summer of 1958 he was senior engineer in the Prospective Planning Department as specialist in inland water transport. Vachuda proved his loyalty to the communist regime by also spying on his colleague Velkoborský, who was suspected of espionage. However, only after Vekoborský's retirement did Vachuda, a member of the communist party since 1949, become a Secret Police informer (until 1970).[71] He also chaired the GoR on the DOE on behalf of Czechoslovakia. Since the early 1960s, at the meetings related to the DOE, Vachuda was usually joined by Václav Plecháč, who, as shown in the preceding chapter, fundamentally influenced the history of the canal.

Western literature often depicts UNECE as an apolitical institution governed and run by experts; however, for Czechoslovak delegates in the 1950s and 1960s, the situation was not that simple. Before going to Geneva, they usually received meeting guidelines from the Ministry of Foreign Affairs, and before the actual UNECE session started, they met with representatives from other socialist countries at the Permanent Soviet Delegate's residence to prepare joint action. While UNECE was by definition a technocratic organization established to bridge the gap between the eastern and western part of the continent on technical grounds, Comecon is often seen as a fig leaf covering Soviet imperialism. Paradoxically, as seen from the eastern perspective, the situation was reversed. While engineers within the Comecon structures were able to act independently (as in the case of changed lock

69 *Oddělení perspektivního plánu.*
70 Markéta Devátá, "Vysoká škola politických a hospodářských věd jako nástroj indoktrinace marxisticko-leninského vědeckého světového názoru," in *Proměny diskursu české marxistické historiografie*, ed. Bohumil Jiroušek (České Budějovice: Jihočeská univerzita, 2008), 193-204.
71 He "signed" on January 15, 1959 (ABSČR, MV, 642778).

dimensions at the previously mentioned Berlin negotiations of 1958), nothing like that ever happened at UNECE, where Czechoslovak representatives were barely more than Soviet puppets. They were the only ones to support the Soviet proposal of 1958 by a special letter (demanded by the USSR), acting always in accordance with the USSR, unlike Romania, Yugoslavia or even Hungary and Poland.[72]

This Czechoslovak loyalty sometimes created amusing situations. For instance, in his report on the second Meeting of Experts on the Unification of Waterways, Vachuda bitterly complained that, in reaction to the Soviet proposal, the Czechoslovak delegation committed to summarizing the methodology of the complex justification of waterways as practiced in socialist countries, "despite asking the Soviet delegation to take up the task."[73]

Europeanization of the Canal Design

Remarkably, the debate over the construction of the transnational network encompassing the DOE in the Czechoslovak trade press focused almost exclusively on the UNECE initiative; in other words, the European aspect. The Comecon alternative, though in a way politically less problematic, surprisingly did not find its way into public discourse. With the exception of the journal *Plánované Hospodářství* (Planned Economy), which had published some Comecon SCT activities and materials, the plans for the Comecon waterway network passed generally unnoticed. The central transport journal *Doprava,* as well as the main water management monthly, *Vodní Hospodářství*, followed only the progress of the UNECE plan ever since Rudolf Vachuda had published an account of the prepared UNECE classification in 1961.[74] Similarly, when Czechoslovak shipping companies organized a national conference on inland water transport in the autumn of 1967, the title emphasized the continental rather than the "Eastern Bloc"

72 EHK – ITC: sovětský návrh jednotné vodní sítě / UNECE ITC: Soviet proposal for a unified waterway network, preparation of Czechoslovak standpoint, March 23, 1959 (AMZV, MO-OMO, k. 68). However, even Czechoslovak delegates sometimes expressed an independent (i.e. not Soviet ordered) opinion at UNECE for instance, during negotiations on the interwar convention regarding responsibility for navigation damage . Czechoslovakia did not support the Soviet attempt to change the convention because, unlike in the USSR, the Czechoslovak law did not contradict its principles. However, even such a rational decision was only accomplished because of a Soviet note saying, "holding a common stance is not necessary in this point." Report on the meeting of the UNECE Working Group for Inland Water Transport (May 22-25, 1956). Zasedání PS EHK pro otázky vnitrozemské vodní dopravy (AMZV, MO-OMO, b. 66).
73 Report on the second meeting of experts to study the unification of European Waterways. Zpráva z II. jednání expertů pro studium sjednocení evropských vodních cest (AMZV, MO-OMO, b. 68, June 26, 1961), 5.
74 Rudolf Vachuda, "Připravuje se nová klasifikace evropských vodních cest," *Doprava* 3, no. 1 (1961): 13-16.

dimension of the Danube-Oder-Elbe Canal project. The event went under the title, "Impact of Planned Construction of European Waterways on Czechoslovak Water Transport."[75] Furthermore, when the Czechoslovak authorities published a special informatory leaflet on the project, they decided to devote it to the twentieth anniversary of UNECE rather than celebrate Comecon SCT's tenth year. While the publication hailed UNECE and its efforts to create a unified Europe, it was printed in Russian as well as in English, French, and German and distributed within Comecon.[76] That was perhaps why Plecháč, one of the authors, concluded that the publication was not presented as "background material" for negotiations as originally intended, but only as a promotional leaflet.[77] Thus, despite all the Sovietization efforts, the canal remained a European affair from the perspective of Czechoslovak society throughout the 1960s, similar to Raba and Smetana's promotion in the 1950s.

However, from a technical point of view, the situation was not so straightforward. Until the mid-1960s, engineers working on preparations for the Danube-Oder canal project launched by both Comecon and the Czechoslovak government in 1958, hardly applied any of the knowledge and experience derived from UNECE, although the problem of the waterway network had been debated concurrently in both organizations. Usually, all problems raised at UNECE were first debated within Comecon, such as the socialist cost-efficiency calculation methodology of 1962, the classification of waterways in 1962, determining crucial "missing links" in the planned network, and classes of trans-watershed connections, among others.

The first direct "European" influence came in 1964, when Czechoslovak waterway experts visited France, Belgium, the Netherlands, and the FRG. The trip fostered among them the belief that the technical concept of the DOE was correct and feasible and that the winter traffic regime, similar to the one planned for the DOE, was not at odds with the efficiency of inland navigation, and worked "under conditions similar to ours" (in a blunt link to the incomparable Soviet experience).[78] UNECE's role in organizing the visit remains veiled in mystery, as no official documents on the trip exist; however, the IWT subcommittee discussed the possibility of mutual study trips across the Curtain between 1961 and 1963.[79]

75 Vliv plánované výstavby Evropských vodních cest na rozvoj čs. vodní dopravy.
76 Jaroslav Čábelka, *Navigation-Canal System Dunaj-Odra-Labe* (Prague 1968).
77 Vyšný's note on talks with Plecháč (NAČR, MZO-FMZO, odd. 20, b. 66, April 30, 1968).
78 The DOE System: Technical Economic Study. Soustava Dunaj-Odra-Labe, technickoekonomická studie, Ředitelství vodohospodářského rozvoje Praha, pracoviště Brno, December 1965 (AVUV), 133.
79 See the UNECE ITC Subcommittee reports on IWT meetings V-VII.

Given the circumstances of the evolution of European standards, their application in the DOE design is difficult to determine. The Comecon classification presented at the ninth session of the SCT in 1962, generally complied with the updated Seiler version debated at UNECE. Unlike its predecessors, the Complex Study of 1964 was based on operating push units consisting of a push boat and 1,560t barges, coinciding with vessels of the UNECE/Comecon Class IV fitting the 85 x 12 (x 3.5)m lock chamber. Class IV was chosen on Comecon's recommendation and positive experience with the standard on West-European waterways. Furthermore, it accommodated vessels operating on the Elbe, the German canals, and the Oder, as well as most of the Danube ships.[80]

The 1965 Technical-Economic Study, developed to supplement the Complex Study and as basis for its revision, applied the dimension recommended for international waterways, although its authors noted that such measurements were larger than necessary for the planned transit volumes.[81] However, some parameters were based on national Class B standards: 28-32m width of the waterway at 2.5m below water level and 50m at water level, depth of 2.8m at riverine stretches and between 3.5m (dredged) or 4.5m (embankment) in the canal stretch, and a curve diameter of 800m or 400m in riverine parts.[82]

The discrepancy between national norms and the parameters of the DOE waterway did not go unnoticed during the thorough reviews of the study following its presentation to the government in 1966. Several pages of critical remarks and comments dealt with this problem.[83] Ordinance no. 27 of January 31, 1964 of the Ministry of Transport was taken from older Czechoslovak legislation and thus did not fully comply with the Class IV standard.[84] However, the differences were marginal and the Czechoslovak standards often required larger dimensions. A typical and most often highlighted example was bridge clearance, which should be 6.5m

80 A comprehensive assessment of the canal construction linking the Danube, the Oder, and the Elbe, including the joint Czechoslovak-Austrian dam project on the Danube near Bratislava, in terms of economic efficiency and comparison with the joint Czechoslovak-Hungarian Danube water works in chronological order of construction phases, December 15, 1966. Komplexní posouzení výstavby průplavního spojení Dunaje, Odry a Labe včetně dunajského díla rakousko-československého u bratislavy z hlediska ekonomické efektivnosti a porovnání s československo-maďarskými vodními díly na Dunaji z hlediska časového pořadí etap výstavby (AVUV), 53.
81 Ibid., 58.
82 Ibid., 101.
83 Analysis of the consultation process to comprehensively assess the construction of the DOE canal compared to the Danube water works related to government resolution no. 232 (1966). Rozbor připomínkového řízení komplexního posouzení výstavby průplavního spojení DOL ve srovnání s dunajskými vodními díly ve smyslu vládního usnesení č.232 (1966), TERPLAN, March 1967 (AVUV).
84 Developed by the Transport Research Institute with a science grant I-0-15-10/1 in the first half of the 1960s. (Unfortunately, materials on the history of the norm are not available, as parts of the VUD archives have been lost or destroyed.)

according to the Czechoslovak ordinance and only 5.25m according to the Class IV standard.[85]

European inspiration went far further than simply applying Class IV. The Czechoslovak experts' visit in 1964, as well as renewed interest in PIANC and UNECE, enabled Czechoslovak engineers to study the latest navigation structures erected in the West. This was also the case before the 1950s, but in much more modest terms.[86] To calculate the capacity of lock chambers, the coefficients were verified using the FRG's statistical surveys.[87] Naturally, studies concerning the DOE often operated with the data and experience derived from the RMD. The suggested usage of inclined planes on the Elbe branch was based on the Belgian experimental ship-lift built in Ronquiéres that had almost the same parameters. Czechoslovak engineers boasted that during the design process, the Belgians made use of former DOE projects.[88] Unlike during the 1950s, when any document on the DOE started with the Volga-Don project, now the introduction of official documents hailed developments in Western Europe. For instance, the three-page-long introduction of the study submitted to the government in 1966 only once mentioned the USSR. The account of "the Development of the inland waterways in Europe after World War II" only briefly touched on its plan to increase inland navigation's share of the general transport volume. On the contrary, the text highlighted West European projects such as the French lower Seine, the Belgian Charleroi-Brussels (with Ronquieres), or the West German Rhine-Main-Danube and Elbe-Seitenkanal connecting Hamburg to the Mitellandkanal. Most notably, even the notion of "complexity" suddenly seemed a "western" invention and, of course, there was none of the Soviet rhetoric "taming of nature." In this sense, the notion was much less ambitious, as proven by the chosen model on the increase in industrial productivity in the RMD corridor, even before its full completion.[89]

Remarkably, in the context of an otherwise openly "European" discourse on the canal, the technical studies prepared by experts often ignored the existence and work of UNECE. The 1965 ŘVR study recognized only two classifications, that of Comecon and that of "Western-Europe" (Seiler's).[90] Even in 1967, the classification

85 Rozbor připomínkového řízení komplexního posouzení výstavby průplavního spojení DOL ve srovnání s dunajskými vodními díly ve smyslu vládního usnesení č.232 (1966), TERPLAN, March 1967 (AVUV).
86 Although proving such an assertion with any hard numbers would be difficult.
87 Ibid., 13.
88 Ibid., 13.
89 In a way, Czechoslovak engineers embraced the narrative of backwardness and accepted the role of the "East"; Czechoslovak materials quote a Munich-based IFO-Institute study, which claims that industrial productivity in the RMD area is 3.4 times higher than elsewhere in the FRG, attributing this to the existence of the waterways. Ibid., 6.
90 The DOE System: Technical Economic Study. Soustava Dunaj-Odra-Labe, technickoekonomická studie, Ředitelství vodohospodářského rozvoje Praha, pracoviště Brno, December 1965 (AVUV), 62.

applied in the DOE design was considered to be a Comecon product merely "accepted in the West," without ever mentioning UNECE.

It is indeed interesting how Cold War patterns and an East-West perspective, dominated Czechoslovak engineers' thinking, as far as official documents can prove. The reviews of the Technical-Economic Study offer an illustrative example of this point, and simultaneously capture a rare appearance of UNECE in the debate. One of the reviews recommends using the study in question as background for further negotiation at UNECE level, only "after making the amendments necessary from a political point of view." Indeed, UNECE remained viewed as "the other" not only by the Czechoslovak state but also by the experts, and was to be approached with caution by experts as well as the state.[91] The Cold War, as presented in the study in the form of the two classifications, resurfaced once again in the résumé, which foresaw the DOE becoming an "efficient transport route of international significance, fully connected to both Comecon and West European waterway systems."[92] However, the calculated transport volumes only considered intra-Comecon trade and, more precisely, traffic between the USSR, Czechoslovakia, Poland, and the GDR without the USSR-GDR transit, which was impossible to determine.[93]

Ultimately, 1967 brought about significant Europeanization of the debate thanks to UNECE GoR's economic analysis of the Danube-Oder canal.[94] The preliminary results report of the technical part of the socialist 1968 canal project (up to December 31, 1967), which unveiled the reasons behind the significant increase in planned costs, stressed the "change of parameters for the waterway according to the demands of the Ministry of Transport (still based on Class IV, but altered to encompass experience from new European waterways)."[95] The text also stated there were several points more prone to change than others, and thus needed to be updated: routing and weirs/steps; transport and port capacities; amounts of water transferred from the Danube; the volume of required works; and investment costs.

To gain even more experience operating Class IV canals, the Ministry (MZLVH) organized other trips to Germany in the summer of 1968. In July, Czechoslovak DOE experts visited Rhine-Main-Donau AG and the IFO Institute in Munich and discussed the justification and economic efficiency of waterways. Then they

91 Reviewers report on the technical economic study of the DOE system by Professor Vilibald Bezdíček dated January 27, 1966. Ibid., 137.
92 Ibid., 130.
93 Ibid., 131.
94 Economic study of the Danube-Oder connection – report on the GoR's second session. UNECE document W/TRANS/WP34/49, March 21, 67.
95 The canal – preliminary results. Průplavní spojení DOL, předběžné výsledky (NAČR, NAČR, FMZO, odd. 20, b. 66, January 18, 1966).

went to the Netherlands to study Dutch waterways with the help of the Transport Research Institute in Rotterdam.[96] Only two months and one Soviet invasion later, Czechoslovak hydraulic engineers made another study trip to the FRG, this time focusing exclusively on the RMD.[97] Indeed, evaluating the contribution and effect of these trips on the further development of the DOE is difficult, except to confirm the technical feasibility of the DOE and its design.

Another European aspect of the General Solution was financing. Several documents proposed sharing the cost based on calculated profits or another more or less illusory and hard-to-prove ranking. Talks with Poland proved a fiasco, while Austria, Hungary, and the GDR were never approached. Besides such bilateral solutions, more ambitious propositions appeared. The Czechoslovak Permanent Mission in Geneva submitted a proposal to establish a joint stock company in which Czechoslovakia would hold 60 percent of the shares with a foreign investor holding the remainder. UNECE should guarantee the investment and prepare the general agreement on the company and the canal's operations. The intergovernmental committee on the DOE did not consider the proposal a viable option.[98] A not dissimilar idea, to apply for funding from the UN Development Program, was dismissed as both discreditable and useless given its preferences.[99]

In the context of preparing the General Solution, the question of international cooperation on the canal was raised and the economic part of the General Solution should have included a chapter on an evaluation of the canal from the international division of labor and foreign trade perspective.[100] However, in the end, the document fell short of expectations due to the limited participation of foreign

96 Report on the trip to the FRG and the Netherlands to study the economic problems of inland navigation, July 2-10, 1968. The trip was specifically organized to help Czechoslovak experts evaluate and develop the economic potential of the DOE. The delegation consisted of Rudolf Vachuda, Václav Plecháč, one engineer from Hydroprojekt, and one engineer from Terplan, the regional planning institute in Prague. Zpráva ze studijní cesty do NSR a Holandska k ekonomickým problémům vnitrozemské plavby (AVUV).
97 Also organized by MZLVH, this time by water management experts at Hydroprojekt and ŘVT, and Plecháč's deputy at the Ministry, engineer Kabele. Report on the study trip to the GDR concerning preparation, construction, and operation of the Rhine-Main-Danube Canal and other West German Waterways, September 8-15, 1968. Zpráva ze studijní cesty do Německé spolkové republiky k problematice přípravy, výstavby a provozu průplavu Rýn-Mohan-Dunaj a některých dalších západoněmeckých vodních cest (AVUV).
98 This was due to international legal issues concerning the construction of the Danube-Oder-Elbe canal. K některým mezinárodně-právním otázkám výstavby kanálu Dunaj-Odra-Labe, November 1967 (NAČR, MZO-FMZO, odd. 20, b. 65).
99 UNECE-DOE: Minutes of a meeting at Comrade Bušniak. EHK-DOL: Záznam o poradě u soudruha Bušniaka 1967 (AMZV, OMEO, b. 42, July 5, 1967).
100 Required by Governmental resolution no. 232 (1966) on further study of the canal. Draft outline of the economic section of the General Solution. Návrh osnovy ekonomické části generálního řešení soustavy DOL: podklad pro jednání meziresortní řídící komise (NAČR, MZO-FMZO, odd. 20, b. 66, February 2, 1968).

institutes and lack of Czechoslovak initiative. Regarding financing, the only option discussed was the national budget, more precisely the water management and transport sectors.[101]

The final episode of evaluating the General Solution, led by Plecháč, heavily underplayed the European aspects of the project. Indeed, with Comecon turning away from inland navigation and the UNECE GoR facing stalemate over the GDR, the possibility of finding financial sources and general support outside Czechoslovakia seemed unlikely. Plecháč stated as much in his final report for the government, concluding that the DOE is indeed "an extremely costly scheme, which has to be considered a European project, the realization of which depends on the extent of participation by other interested countries." However, Czechoslovakia only entered into negotiations with Poland, and its position was rather negative. With reference to the not-yet completed studies on the DOE developed by UNECE and Comecon, he suggested consultations with other neighboring states in the coming years and preparing the DOE project for realization after 1990.[102]

Although the work on the DOE within UNECE was suspended and the Comecon network proposal put aside, the European waterway network remained an issue of debate. The opening of the port of Nuremberg and the rapidly progressing work on the RMD canal in West Germany interested East European planners. The opening, planned for 1981 according to the GoR report presented at the UNECE in 1967 and then postponed to 1985, was close enough to influence socialist countries' mid-term economic planning. Hence, the European waterway network did not disappear from the discourse; only the Rhine-Main-Danube substituted the DOE as crucial East-West waterway connection even in Czechoslovakia.

By 1970, the Czechoslovak Danube Shipping Company (*Československá plavba dunajská*) launched a research program on its potential role in future traffic on the Rhine-Main-Danube canal. At one of its meetings, Vachuda spoke as guest expert about ECE activities and shed light on the standard dimensions, the most pressing technological issue of the RMD. As with the DOE, the RMD was designed according to Class IV, and Vachuda claimed that all vessels and structures on the Danube should adapt to that standard because "No one will adapt to standards valid on the Danube, as its traffic volume will never reach the quantities which are and will be transported on the Rhine."[103] In addition, he mentioned the poor state of the

101 Danube-Oder-Elbe Canal: General solution Průplavní spojení Dunaj-Odra-Labe: Generální řešení, souhrnné provedení, 1968 (NAČR, MZO-FMZO, odd. 20, b. 66).
102 Report on the General Solution evaluation of the Danube-Oder-Elbe waterway. Zpráva o výsledcích posouzení generálního řešení průplavního spojení Dunaj – Odra – Labe (AVÚV, January 29, 1971).
103 Minutes of ongoing external examination of the research project "Inquiry into traffic flows on the

Danube, which did not comply with Class IV, attributable to different standards set by the Danube Commission (longer, wider, and flatter vessels) and the inability of Danubian countries to improve the waterway. Furthermore, Vachuda saw the danger of navigating on the RMD while developing the Danube. In the foreseeable future, the lower parts of the river might accommodate four 5,000t vessels, while the Austrian stretch and the RMD were built according to Class IV standard for 1,500t ships. The required transshipment would negatively affect the RMD and might divide the traffic into two branches: from Austria toward the Rhine and from Czechoslovakia towards the Black Sea.

Also on a personal level, the notion of European cooperation did not easily fade. Since 1967, Czechoslovak hydraulic engineers (interested in inland navigation) had organized their own annual meetings. Following the interwar tradition of waterway conventions and taking inspiration from Germany, they called the event *Plavební dny* (Inland Navigation Days, derived from the double meaning of the German word *Tag* – both a convention and a day). Jaroslav Kubec, as head of the navigation department at the Transport Research Institute, became a crucial agent for these activities and in 1973 invited colleagues from West Germany. While not a groundbreaking achievement, and in the context of the détente initiated largely by West Germany, such cooperation was not extraordinary; nonetheless, the StB were suspicious of Kubec's activities. They had already interrogated him about his contact with German experts and his "suspicious appearance" at the official opening of the new port Nurnberg in 1972. The official Czechoslovak delegates reported to the police their surprise at meeting him there, as Kubec had received an invitation from his UNECE GoR colleagues. Nonetheless, when the StB asked him to use his contacts for their purposes, he declared that in the past he had communicated mostly with delegates from socialist countries at international congresses primarily because of the different background of "westerners" who usually represented business circles.[104]

When Vachuda decided to suspend GoR meetings, he noted that restoration of its activities required the fulfillment of one of three conditions: a Europe-wide conference on security; a summoned meeting of the Working Group on Waterways

RMD system and ČSPD's role." Záznam z priebežného oponentského konania výzkumné úlohy "Priezkum tovarových prúdov na sústave RMD a podiel ČSPD na preprave" (NAČR, MZO-FMZO, b. 65, February 24, 1971), 3.

104 Interview dated April 21, 1972. The Czechoslovak Secret Police (StB) intended to use Kubec's knowledge and contacts to obtain information on the development of inland navigation in West Germany, especially regarding the current state of the Main-Rhine-Danube canal (ABSČR, ZSGŠ, 00108007). Kubec came to the StB's attention after the celebratory reception thrown by Bavarian Prime Minister Alfons Goppel for the opening of the new port of Nurnberg and completion of its connection to the Main-Danube Canal, (ABSČR, MV, 707969).

Unification as a superior body; or pressure from Austria.[105] Although the GDR entered the UNO in 1973 — an option Vachuda did not really think of — the GoR did not resume its activities and the UNECE Working Group on Unification, which celebrated its elevation from a mere expert group at its last session, did not meet.

However, when the pan-European Conference on Security and Co-operation in Europe in Helsinki actually fulfilled the first of Vachuda's conditions, initially he did not revive the GoR. The Helsinki Final Act, signed in 1975, included a chapter on transport noting that "the speed of technical progress in the various fields of transport makes desirable a development of co-operation … and information exchange." The document called for the elimination of disparities applying to traffic on inland waterways and urged the participating member states of the CCNR and the DC to further develop the work and studies carried out "in particular within the United Nations Economic Commission for Europe." While this proclamation responded to concerns expressed by Vachuda, the conference meant little or nothing from the perspective of the DOE project as a part of the European network.

The DOE GoR resumed its activities in 1976. However, the motives for its revival had more to do with bilateral Czechoslovak-Polish initiatives. During an evaluation of the General Solution in 1967, a bilateral Czechoslovak-Polish committee was established to plan the trans-border section of the DOE and the necessary Polish participation on the upper Oder. The outcome of the committee's negotiations was not positive, and its final report was one of the first official documents to openly doubt the economic feasibility of the project.[106] Nonetheless these negotiations gave birth to a renewed interest in the extension of the Oder. Once the DOE project was conclusively halted in 1972, the Czechoslovak government had to face pressure from north Moravian industries requiring direct access to inland water transport. Rudolf Peška, director of the steelworks in Vítkovice (by then *Vítkovické železárny Klementa Gotwalda*), was most instrumental and he rose to the position of relatively unchallenged leader of the entire region, even becoming a member of the Central Committee of the Communist Party at national level.[107]

105 UNECE – Further actions by the GoR chairman. EHK – další postup předsedy zpravodajů (AMZV, OMEO, b. 68, November 28, 1969).

106 A committee of Czech and Polish experts developed two studies between 1967 and 1969. They proved the technical feasibility and utility of the project, but admitted that economically speaking, it was not cost effective, at least if only Poland and Czechoslovakia were sharing the costs. Souhrnná zpráva o výsledcích generálního řešení soustavy Dunaj-Odra-Labe, Vodohospodářský rozvoj a výstavba závod Brno, July 1970 (AVUV), 54-55.

107 Rudolf Peška (April 25, 1924-January 14, 1996), director of the Steelworks (1970-1979) and then Director General of the "economic production unit" *VHJ koncern Vítkovice*, a socialist concern he helped to form (1979-1989). As World War II hero and successful manager, he became a member of the Central Committee of CzCP in 1971 and held the position until 1989.

In 1975, to persuade the national authorities of the feasibility of navigation on the Oder and to prove the usefulness of inland navigation for the steel works, he organized experimental shipping on the Oder from the improvised port of Bohumín on the Czechoslovak-Polish border.[108]

Figure 5.2 – Vessels setting sail for the Baltic from the improvised port on the Oder in Czechoslovakia. Unlike their predecessors, experts in Socialist Czechoslovakia considered the Oder navigable. In 1975 Vítkovice Steelworks tried to prove the point by dispatching a small load of pipes via a vessel from Bohumín. The trip was meant as a gesture supporting the plans to make the Oder navigable into Czechoslovak territory. Source: Jiří Matějček and Jiří Výtiska, Vítkovice: Železárny a strojírny Klementa Gottwalda (Prague: Práce 1978), 84.

108 Trial transportation on the Oder from Bohumín, information for the minister. Zkušební přeprava z Bohumína po Odře, informace pro ministra (NAČR, FMZO, odd.20, b. 64, April 23, 1975).

While the experimental shipping hardly proved anything as the state of the river did not allow the transportation of a sufficient volume of steel to make the event a proper test, the Czechoslovak government responded positively, even before the event took place. The Czechoslovak-Polish committee of experts on navigation was created under the heading Permanent Czechoslovak-Polish Transport Commission, at its 22nd meeting in March 1975, and a new study on the DOE appeared before the end of the next year.[109] The four Czechoslovak delegates at the first meeting of the Czechoslovak-Polish committee in Ratborz from May 12-16, 1975 included Plecháč and his two colleagues from the Ministry, together with a Vítkovice Steelworks representative.[110]

Although developed by two socialist countries, thus not the best example of East-West cooperation, the study built on the Helsinki atmosphere, depicting the DOE as a contribution to "the development of European economic cooperation between states with different social and political regimes" that would "create opportunities for such cooperation even during the construction period."[111] Unlike previous studies, this time the calculated expected transport volumes on the canal also included Austrian transit and shipping to and from West European countries. Led by Plecháč, the protagonists on the Czech side also considered financial issues. At this point, they came up with the idea of a joint application by Czechoslovakia and Poland to the Comecon International Investment Bank.[112] The study also introduced a slightly altered technical layout of the navigation structures as the push unit principle became more prominent.

As is often the case, instead of straightforward solutions, the expert negotiations gave rise to a rather long list of new technical issues. The Committee subsequently turned into a quasi-permanent body and inefficiently met almost every year until 1989.[113] The Vikovice Steelworks crucial role was confirmed by the presence of

109 Report by the Czechoslovak-Polish working group on integration of waterways and inland navigation works executed in 1975-1976 for the joint study of canal links on the Danube-Oder for the Czechoslovak-Polish Permanent Commission on transport. Zpráva československo-polské pracovní skupiny pro otázky integrace vodních cest a plavby pro Stálou československo-polskou dopravní komisi o pracech, provedených v letech 1975-76 na společné studii průplavního spojení Dunaj-Odra (NAČR, MZO-FMZO, odd. 20, b. 265, January 21, 1977).

110 Business trip report of the Czechoslovak-Polish committee's first session. Cestovní zpráva ze služební cesty do Polské ldivé republiky na I. zasedání československo-polské pracovní skupiny (NAČR, MZO-FMZO, odd. 20, b. 64).

111 Zpráva československo-polské pracovní skupiny pro otázky integrace vodních cest a plavby pro Stálou československo-polskou dopravní komisi o pracech, provedených v letech 1975-1976 na společné studii průplavního spojení Dunaj-Odra (NAČR, MZO-FMZO, odd. 20, b. 265, January 21, 1977), 18.

112 R. Stone David, "CMEA's International Investment Bank and the Crisis of Developed Socialism," *Journal of Cold War Studies* 10, no. 3 (2008): 48-77.

113 There were three different Czechoslovak-Polish expert working groups, each holding an annual session: *Pracovní skupina pro vodohospodářské plánování v hraničních vodách* (water management planning in border waters), *Pracovní skupina pro integraci vodních cest a plavby* (integration of waterways and ship-

its representatives in the Czechoslovak delegation alongside Plecháč and his colleagues from the Ministry. While the study concerned the DOE as such, the committee focused on the extension of the navigable Oder into Czechoslovak territory. By 1977, only the lowest part of the river downstream from Kostrzin allowed 1,500t Class IV vessels, and the middle navigable part up to Kozli was scaled for Class II 400t vessels. Kozli was about 40km downstream from the Czechoslovak border and even more distant from the steelworks. Nonetheless, for extra-large factory products such as machinery components for the chemical industry and nuclear power plants, the waterway would be by far the most efficient mode of transport.[114]

Ultimately, at the third committee meeting in the autumn of 1975, the delegates agreed to revive the UNECE GoR on the DOE.[115] They hoped to obtain the data necessary for their own, above-mentioned study. The first revived meeting (actually the sixth meeting of the Group) took place in Poland; Vachuda remained the chair. Furthermore, to interest as many cooperating (and co-financing) states as possible, the organizers invited delegates from other socialist Danubian states, besides the former three member countries Czechoslovakia, Poland, and Austria. The GDR and the USSR became full members of the GoR, while Bulgaria, Romania, Yugoslavia, and Hungary gained observer status. Over the next five years, before the final report was completed and submitted to the IWT Working Party, more than 130 experts had participated in GoR work, including some from other countries such as Greece, who intended to gain experience for their Danube-Aegean canal project.[116] The economic viability of the project was evaluated based on the standard comparison of costs and profits instead of a comparison with alternatives, as was the case in the General Solution; Austria objected to applying the socialist evaluation methodology. Naturally, the report found the DOE economically efficient and advocated its construction. However, the study did not provide as complex an evaluation as the authors would have liked due to the limited cooperation of the countries involved. In particular, not all participants were ready to share all required data, as several tables in the final report clearly show.[117] The

ping), and *Skupina projektantů k problematice splavnění Odry* (Group of designers for navigation of the Oder). All these groups held more than 13 sessions before 1987 (NAČR, FMD, b. V2 70).

114 To this end, in July 1966 Hydroprojekt in cooperation with MZLVH developed *Technical and Economic Study of Making the River Oder Navigable to Ostrava* as background document. Technicko Ekonomická studie splavnění Odry do Ostravy (NAČR, MZO-FMZO, odd. 20, b. 265).

115 Minutes of the third meeting of the Polish-Czechoslovak Working Group on the integration of waterways and inland navigation, November 10-14, 1975. Zápis ze třetí zasedání polsko-československé Pracovní skupiny pro otázky integrace vodních cest a plavby (NAČR, FMZO, odd. 20, b. 64).

116 Jaroslav Kabele, "Průplavní spojení Dunaj-Odra-Labe ve studii pro Evropskou hospodářskou komisi OSN," *Vodní Hospodářství*, no. 12a (1981): 317-325.

117 Kabele, a member of the group in his capacity as Plecháč's deputy at the Ministry, mentioned this fact

UNECE Working Group for Inland Water transport finally accepted the GoR report on the DOE at its 42nd session in 1981.

While Vachuda presided over the GoR, top expert and hydraulic engineer Jaroslav Kubec took the lead in its work. A long-time supporter of the DOE scheme and one of the last active members of DOECS in his capacity as head of inland navigation at the Czechoslovak Transport Research Institute, Kubec led the practical development of the UNECE study. He was also responsible for Czechoslovak data and background materials. From a technical point of view, the report drew on the General Solution and the Czechoslovak-Polish Study of 1977 and did not introduce anything new, as it focused mainly on the transport-economic evaluation of the project. While the 1970 Plecháč report, which decided the fate of the General Solution, doubted the expected transport volume of 42 million t per year, the UNECE study almost doubled the estimate to 79.5.

Nonetheless, one technical feature of the project was re-evaluated. By 1960, Kubec had opposed ship-lifts on the DOE, anticipating the future rise of pushing units to the detriment of motorboats.[118] While the General Solution substituted lifts on the Danube-Oder connection with a set of locks, on the Elbe branch two inclined planes were positioned to overcome the highest altitude differences. To accommodate higher transport volumes, the UNECE study proposed a set of locks even on the Elbe branch. The lift could only take one barge while others would have to wait, thus significantly delaying the transport of a push convoy consisting of several barges. In contrast, a set of twin 190 x 12m locks could move several barges up or down at once. Furthermore, new experiences with push convoys led to a general enlargement of navigation structures fitting Class IV; for safety reasons, the recommended lock dimensions were 190 x 12m instead of the former 170 x 12m and a waterway width of 38m instead of 32m in the canal stretches.[119]

Kubec expressed his point clearly in an article published in 1974. He noted that the existing Seiler/Comecon classification merely "reflects the historical evolution of vessel dimensions" and thus provided a precise and useful characterization of existing waterways. However, it did not serve well as guideline for future developments. Kubec concluded that a modern classification system should be based on the module principle instead of the historically developed standard vessels. A module would consist of a single type of standardized barge and a push boat. Classification would then reflect the size of the push unit; more precisely, the

in his account of the GoR's work. Ibid., 323.

118 Jaroslav Kubec, "Ke kategorizaci vodních cest v ČSSR," *Doprava* 3, no. 7 (1961): 237-238; Jaroslav Kubec, "Vývoj studijních prací na vodní cestě Dunaj-Odra-Labe a jejich dnešní stav," *Doprava*, no. 1 (1964): 34-42.

119 Economic study of the Danube-Oder (-Elbe) connection, UNECE document TRANS/SC.3/105 (1981).

number of barges and the type of push boat.[120] Indeed, the early 1970s finally saw a breakthrough of push convoys on European rivers, especially on the Rhine and the Danube, and a massive introduction on both rivers was often seen as a precondition, or at least favorable factor for their integration and operation of the RMD.[121] Until then the standards had been diverse. The ECMT standard barge Europa II was half a meter wider than barges used on the Danube (11m).

In cooperation with other experts on inland navigation at the Czechoslovak Academy of Science, in the second half of the 1970s Kubec worked on an updated national classification of waterways.[122] During the preparation of the Czechoslovak-Polish Study of 1977, their results were ignored on the basis that the "DOE as an international waterway must meet Class IV standards." Working on the report prepared under UNECE allowed Kubec and his colleagues to adjust the dimensions, despite the fact that the new classification proposal submitted in 1979 had not been implemented.[123]

While Kubec's initiative could be seen as a departure from the European, though undeclared, standard, his intentions were precisely the opposite. He saw the Czechoslovak waterways as an integral part of the future European network and, while working on the new national classification, he studied the European waterways in detail. Thus, the national classification was actually a derivative of the European one. While submitting one proposal to the Ministry of Transport, he submitted the other simultaneously to the Czechoslovak Transport Research Institute's bulletin, formulated as a draft of the new European classification of waterways, both based on the same principles.[124]

The trend away from inland water transport toward roads was reversed in the late 1970s in the wake of the oil crisis. The 16th Congress of the Czechoslovak Communist Party (CzCP) declared for the years 1981-1985 (7th Five-Year Plan) to return to the transport investments policy favoring "energetically economical" water transport and railways, "knowing that by that we are cutting the investments

120 Jaroslav Kubec, "Rozvojové tendence plavby a vodních cest," *Vodní Hospodářství* 23, no. 5 (1974): 122-130, here 125.
121 Erich Seiler, "Die Schubschiffahrt als Integrationsfaktor zwischen Rhein und Donau," *Zeitschrift für Binnenschiffahrt und Wassestrassen*, no. 8 (1972): 300-312.
122 The Ministry of Transport ordered the study by the Transport Commission of the Academy in 1977 to secure a coordinated and efficient introduction of push convoys into the national transport system. Jaroslav Čábelka, "Činnost komise pro dopravu ČSAV a její příspěvek k rozvoji vodních cest a plavby," *Vodní Hospodářství*, no. 6a (1978): 160-161.
123 The proposal was turned down due to its authors' emphasis on the "future." The main objection of the ministries, transport, and MZLVH, was the document's overly theoretical tone and insufficient attention to the existing inland navigation infrastructure. Proposal for new classification of Czechoslovak waterways. Návrh nové klasifikace československých vodní cest (NAČR, FMD, b. V2 72, July 6, 1979).
124 JaroslaV Kubec, "Studie k návrhu nové klasifikace evropských vodních cest," *Zborník prác Výskumného ústavu dopravného* 17 (1978): 13-42.

originally designated to roads and highways."[125] Thus, the final UNECE report on the DOE came at a favorable moment.

In reaction to this report, the Czechoslovak government urged incorporating the waterway scheme in the Czechoslovak investment plans for 1990-2000. Furthermore, the government appealed to experts, members of the Czechoslovak-Polish committee, to develop guidelines for launching diplomatic negotiations with Poland regarding the extension of the navigable Oder. Tellingly, the resolution boasted dealing with "the development of waterways and their connection to the system of waterways in Europe." In fact it only considered connections to the Eastern bloc and Hamburg, at least until the opening of the RMD or signing of the agreement on mutual free shipping on national waterways with the FRG. The specifications of the Czechoslovak waterway program, as envisioned by the 16th Party congress, finally appeared in 1984. However, the main investment was for modernizing ports and vessels, and only a minor part for possible extension of the navigable Oder across the border and of the Elbe to Pardubice. The work on the DOE was mostly limited to negotiations with Poland and other interested states, namely Austria.[126]

To maintain momentum, Vachuda submitted a proposal to the Council for International Economic and Scientific-Technical Cooperation (*Rada pro mezinárodní hospodářskou a vědecko technickou spolupráci*) to further progress the DOE project. This institute emerged in the wake of the socialist integration movement launched under Comecon in the 1970s to coordinate Czechoslovak participation in the international division of labor, especially within Comecon. The proposal emphasized the extension of the navigable Oder to Czechoslovakia as a most needed and achievable goal.[127]

In connection with the unrelenting efforts of Vítkovice Steelworks management to secure waterway access, the Czechoslovak government finally addressed the question of the Oder. However, the impulse came directly from the USSR, which considered inland navigation the optimal mode of transport for nuclear power station components.[128] According to the 1974 agreement between the USSR and Czechoslovakia, Vítkovice was assigned to produce parts for nuclear

125 Quoted according to Václav Plecháč, "Rozvoj vodní dopravy a vodních cest v ČSSR," *Vodní Hospodářství*, no. 7A (1982): 173-179, here 178.
126 Czechoslovak Government resolution no. 54/1982.
127 Draft guidelines for initiating concrete negotiations with Poland on making the Oder navigable to Ostrava. Návrh směrnic pro zahájení konkrétních jednání s Polskem o splavnění Odry do Ostravy (NAČR, FMD, b. V2 71, December 23, 1988).
128 Paul R. Josephson, *Red Atom: Russia's Nuclear Power Program from Stalin to Today* (New York: W.H. Freeman, 2000), 95.

systems, and by the early 1980s, the plan finally approached realization.[129] The waterways seemed an obvious choice, but their current state in Czechoslovak territory, including the technical equipment at the ports, did not allow their utilization. Although the Explanatory Memorandum on the topic, prepared for a government session in 1984, pleaded for investment in waterways, the resolution only addressed road and railway transport.[130] A few months later, at the insistence of Vítkovice, the Czechoslovak government passed another resolution directly addressing the Czechoslovak Oder. Despite expressing a general will to make the Oder navigable, the resolution was actually negative as it included a rather long list of yet unresolved issues requiring attention before work could commence. Mostly, these open issues related to the Polish Ratborz reservoir project, which would raise the water level on the Oder to make it navigable and simultaneously block drainage of the Ostrava coal basin.[131]

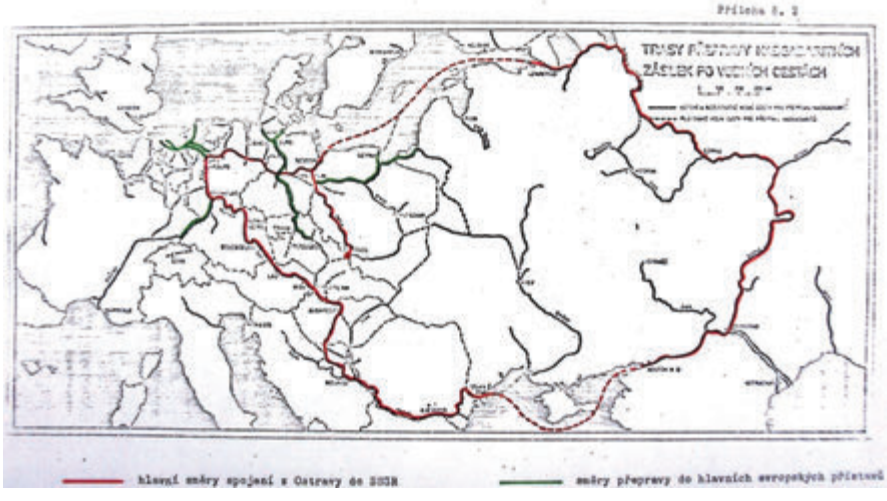

Figure 5.3 – Although Comecon had decided to discontinue its waterway construction program in 1970, the idea soon resurfaced in the wake of an oil crisis. Strong support came from another Comecon plan: the development of nuclear power plants. Due to their size, some of plants' parts could only be transported by water. The map shows waterways connecting Vítkovice Steelworks to the USSR and main European ports. The red lines indicate the routes (among them the Oder) for transport to and from the USSR; the green lines suggest links to European ports. Remarkably, RMD substitutes the DOE as a crucial part of the "red circle" representing the main waterway infrastructure network. Source: Part of the documentation on the issue of transport of over-sized parts for nuclear plants. Appendix to Czechoslovak Government resolution no. 155/1978.

129 The heaviest item, the steam generator for the VVER 1000 reactor type weighing 368t, was to be produced in Vítkovice. Czechoslovak Government resolution no. 49/1974.
130 Explanatory Memorandum, appendix to Czechoslovak Government resolution no. 54/1982. Důvodová zpráva (NAČR, ÚPV-F, March 4, 1982), 2.
131 Czechoslovak Government resolution no. 104/1984 (NAČR, FMD, b.V2 71).

The reserved attitude of the Czechoslovak authorities towards the Oder reflected their occupation with the other, southern end of the DOE. Throughout the 1970s and 1980s, the impact of the forthcoming opening of the RMD received growing attention among central European politicians and transport experts. The most debated topic was managing operations on the new waterway connecting the West with the East, and the Czechoslovak representatives often tried to link the DOE question to the RMD debate.[132]

While the RMD would physically integrate two main European river basins dominated by two adversary political systems, it actually fueled antagonism between the two. The atmosphere of cooperation epitomized by the Helsinki Conference evaporated from European waterways in the late 1970s.

The antagonism began even before Helsinki. Since 1973, the USSR and Hungary had discussed establishing an international navigation regime on the new waterway with the FRG. However, Germany preferred a bilateral to a multilateral agreement and the USSR considered this decision a political strategy aimed at gaining political influence in the Danubian basin, thus targeted against the USSR.[133] To avert this threat, in 1974 the USSR called a meeting of the remaining four cooperating Eastern Bloc Danubian countries, Bulgaria, Czechoslovakia, the USSR, and Hungary (a.k.a. "*Čtyřka*", or "the Four"), at which they agreed on coordinated action.[134] Since the 1960s, Romania and Yugoslavia have stood aside.

Thus, the European waterway network became a highly political issue, once again drawing the attention of governments, and not only experts. Such re-politicization of the waterway issue escalated in 1979, when West European countries signed the Strasbourg Revised Convention on Rhine Navigation, limiting free shipping on the Rhine to riparian countries and members of the European Economic Community.[135] Naturally, socialist countries considered this new arrangement an attack on the Eastern Bloc. Furthermore, neither the expert-driven UNECE nor the similarly limited Danube Commission (confined to technical and administrative, but not economic issues) offered a firm basis for negotiation with the CCNR. In 1980, at another meeting of the "Four," Czechoslovak delegates pursued the idea of establishing a special body to negotiate terms for the RMD on

132 Experts from the USSR, Hungary, Bulgaria, and Czechoslovakia met in Sofia in February 1985. Jednání expertů SSSR, MLR, BLR a ČSSR v Sofii (NAČR, FMD, b. V2 71).
133 Report on the consultative meeting on the future status of the Rhine-Main-Danube, November 25-27, 1974. Zpráva o kozultativní poradě o budoucím statutu kanálu Rýn-Mohan-Dunaj (NAČR, FMD, b. V2 71), 5.
134 Ibid.
135 The protocol was signed in Strasbourg on October 17, 1979 and came into force on February 1, 1985. Additional Protocol no. 2 to the Revised Convention for Rhine Navigation, (1979), http://www.ccr-zkr.org/files/conventions/ProtAdd2_en.pdf. Accessed 6 August 2011.

behalf of socialist states, possibly within Comecon structures. However, not even this small group of four states was able to reach an agreement. While the USSR and, as always, Czechoslovakia, pushed the multilateral solution, Bulgaria and Hungary preferred bilateralism. In the wake of the meeting, the "Four" prepared a Statement on the Strasbourg Additional Protocol, accusing it of a protectionist character that preferred the CCNR and EEC member states.[136]

By the early 1980s, only two rivers (Rhine and Danube) in Europe provided free navigation to all countries, though the actuality of such "freeness" was as diverse as capitalist and socialist legal thinking and language can be. To reach a consensus, the USSR proposed dealing with free navigation at UNECE. The navigation law experts of European Comecon member states (except Romania) met in Moscow to discuss the Soviet proposal before its presentation at Geneva in November 1984. Before discussing the drafted Principles, they noted with bitterness that Comecon had tried for a long time to put the unification of legal regulations of inland navigation on the European network on UNECE's agenda, but without success.[137] The Principles were set in the tone of the Helsinki Conference, and the Strasbourg Revision was interpreted as a "slap in its face."

When the CCNR Strasbourg Addendum came into force in January 1985, at another meeting of the "Four" in Sofia, Czechoslovakia proposed an Addendum to the original Belgrade Agreement, allowing the Danube Commission to retaliate.[138] While intended to be submitted at the latest to the Commission's 46th session in 1987, ultimately the document never appeared on the agenda due to lack of consensus among its socialist members states.[139]

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136 Statement on the Additional Protocol to the Act of Mannheim on Rhine Navigation, February 1981. Prohlášení k dodatkovému protokolu k Mannheuimské akte o plavbě na Rýně (NAČR, FMD, b. V2 71).

137 Report of the Comecon member states meeting on basic legal principles governing international navigation on the unified network of European inland waterways of international importance, Moscow, August 22-24, 1984. Zpráva o zasedání členských států RVHP o základních právních principech upravujících mezinárodní plavbu na sjednocené síti evropských vnitrozemských vodních cest mezinárodního významu (NAČR, FMD, b.V2 71).

138 The "Additional Protocol to the Convention on Navigation on the Danube signed in Belgrade on August 18, 1948, concerning the functions of the Danube Commission in the area of transport-political and economic issues" would entitle the Danube Commission to influence tariff policy and develop a policy regulating non-member countries shipping on the river. The meeting of experts from Czechoslovakia, the USSR, Hungary, and Bulgaria on the issue of inland waterway transport in Europe was held in Prague on November 17-21, 1986. Jednání expertů ČSSR, SSSR, MLR a BLR o problematice vnitrozemské vodní dopravy v Evropě (NAČR, FMD, b. V2 71).

139 The need to consult other members of the Danube Commission significantly slowed the negotiation process and the generally acceptable version of the document was not completed until 1989. Furthermore, some experts voiced their fears that the *Addendum* meant a revision of the Belgrade Treaty as such, thus creating the possibility for the FRG to become a full member of the Commission. That was seen as potentially beneficial, as it would force the FRG to accept the general terms of free shipping on the Danube for the currently non-free parts between Regensburg and Kelheim on the future RMD. In addition, according to the Statutes, the Four could hardly hope to enforce the *Addendum* without help from at least two other

The political and technical aspects of inland navigation were mixed up in the second half of the 1980s, a period viewed as the last phase of the political Cold War. However, Soviet and Czechoslovak efforts aimed at strengthening the political and economic antagonism of the two blocs failed, as the Eastern bloc proved unable to achieve common action. Indeed, by 1988, bilateral agreement negotiations on shipping on inland waterways between the FRG and individual socialist Danubian countries were almost complete.[140] Simultaneously the Danube Commission started preparations for opening the RMD by discussing the adoption of many UNECE standards, such as the European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways (AND) and others. A special meeting of DC experts on this point was held in Budapest in December 1987 and others were to follow.[141] While diplomats took part in escalating the conflict, among them occasionally Rudolf Vachuda in relation to his position in the UNECE GoR, the hydraulic experts acted in concert.[142] When the Czechoslovak-Polish Working Group on Integration of Waterways and Inland Navigation finally produced a report in 1988 on the extension of the navigable Oder to Ostrava, it referred to the UNECE report on the DOE as a "grand design" that the parameters of the future waterway should meet.[143] However, these were far too large for the transport volumes considered for this stretch of the river, as well as for the current state of the Oder. Furthermore, in the second half of the 1980s, when Kubec at the Transport Research Institute developed a project on "Technological Integration of Inland Navigation of Comecon Member States" in response to the growing importance of push convoys, standards-wise he put the problem in the context of his 1970s research. However, this time it was set within the revived 1960s Comecon network scheme without really addressing the links

Commission members. While the USSR, Czechoslovakia, Bulgaria and Hungary could easily outvote Romania, Yugoslavia, and Austria, the ratification procedure for such a significant amendment required the support of at least six member states. Consultation with Ministries of Transport in Bulgaria, Czechoslovakia, Hungary, and the USSR, and representatives of Ministries of Foreign Affairs, Ruse June 10-13, 1987. Konzultace náměstků ministrů dopravních resortů BLR, ČSSR, MLR a SSSR s účastí představitelů MZV těchto států v Ruse, June 10-13, 1987 (NAČR, FMD, b. V2 71), 1-3.

140 Bilateral agreements with Hungary and Czechoslovakia were prepared for ratification in 1987, and negotiations with Bulgaria were close to finalization. The USSR required the FRG to first join the Danube Commission, thereby making the RMD fully international. Ibid., 4-6.

141 Guidelines for the meeting of Transport Ministry experts from Czechoslovakia, the USSR, Hungary, and Bulgaria held in Moscow, January 19-21, 1988. Směrnice pro jednání: zasedání expertů ministerstev dopravy ČSSR, SSSR, MLR a BLR v Moskvě (NAČR, FMD, b. V2 71, December 23, 1987), 6.

142 Internal letter no. 183/81-22 urging Vachuda's participation at the meeting in his capacity as leader of the GoR on DOE (NAČR, FMD, b. 71, May 5, 1982).

143 Československo-polská studie splavnění Odry v úseku Ostrava-Kozlí, část technická / Czechoslovak-Polish study on making the Oder navigable in the section between Kozlí and the Ostrava-technical part, 1988 (AVUV Brno), 36.

Figure 5.4 – In the late 1980s Jaroslav Kubec proposed to create a circular "Magistrala" in the Comecon area, thus reviving the Comecon scheme that faded away rather than officially terminated. In this map, he acknowledged official national foreign policy, trying to make it work in favor of the DOE project. Source: Jaroslav Kubec," Integrace plavební sítě členských zemí RVHP z hlediska zavádění progresivnich technologií ve vodní deprave, "Zborník prác Výskumného ústavu dopravného 50 (1987): 72-88.

beyond the curtain.[144]

Canalizing Europe

The last year of the Cold War witnessed a revival of DOE debates across various geographical levels, and all these activities intersected in the small Moravian village of Slušovice. In a fashion not dissimilar to the story of Vítkovice director Rudolf Peška, the director of the local agricultural cooperative Agrokombinát Slušovice, František Čuba, became an important figure in the region and at national level. He

144 Jaroslav Kubec, "Integrace plavební sítě členských zemí RVHP z hlediska zavádění progresivnich technologií ve vodní dopravě," *Zborník prác Výskumného ústavu dopravného* 50 (1987): 72-88.

was a big industrialist in the socialist system and developed unique business trust. The Agrokombinát Slušovice activities ranged from farming, crop cultivation and breeding to production and development of electronic equipment. Furthermore, Čuba pictured himself as heir to the interwar industrialist Baťa who resided in the nearby city of Zlín, and naturally became interested in the project once pursued by Baťa.[145]

In September 1987, the Slušovice local congress center hosted a conference with Czechoslovak inland water transport experts who studied the possibility of utilizing the Morava.[146] At national level, the RMD scheme and expected increase in Danube traffic contributed to the idea of extending the Danube waterway network into Czechoslovak territory by making the lowest part of the Morava up to Zlín navigable.[147] Simultaneously, Rudolf Vachuda decided to revive the UNECE group of experts on the DOE by summoning a meeting in Slušovice for February 1988.[148] While little is known of the background of the reunion, that it took place in Slušovice indicates Čuba's involvement. The official reason Vachuda presented to the Working Party on Waterways was the need to update the study.

A year later, Jaroslav Kubec and his colleague approached František Čuba with a plan to revive the DOE idea. The meeting went well and, to this end, in less than half a year the first joint-stock company in socialist Czechoslovakia was established. Čuba used his political and economic influence, and companies situated along the proposed (and since 1972 protected) canal corridor swiftly collected significant funds to allow the launch of preparatory works on the updated DOE design. The name chosen for the new company reflected the recent upheaval of the green movement and alluded to an image of inland water transport as the "greenest" mode of transport, Ekotrans Moravia.[149]

The DOE project faced opposition from environmentalists, who represented probably the strongest public movement tolerated in communist Czechoslovakia.[150]

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145 Elsewhere in his 1988 book called *The Road to Prosperity,* he compares his achievements and methods to those of Baťa. František Čuba and Emil Divila, *JZD Agrokombinát Slušovice – cesty k prosperitě* (Slušovice: Agropublik, 1988).

146 *Konference o dopravním využití řeky Moravy: sborník přednášek* (Slušovice: 1987).

147 Miroslav Cihlář, "Rozvoj přeprav čs. vodní dopravy v 9. a 10. pětiletce s výhledem do roku 2010," *Doprava* 30, no. 2 (1988): 113-126, here 120. The navigability of the Morava was of course discussed while preparing the report for UNECE, but since then the priority was the extension of the Oder. At the 10th Waterway Convention (*Plavební dny*) in 1980, several participants addressed the possibility of making the Morava navigable: *10. plavební dny 1980. Vyšší využití vodní dopravy* (Ostrava Dům techniky ČSVTS, 1980).

148 UNECE document TRANS/SC.3/R.129, *Information on the 1st Meeting of Experts on the Economic Study of the Danube-Oder (Elbe) Connection,* October 6, 1988.

149 Registered on August 26, 1989, accepted by Ministry of Transport decree 64/88-KM, June 28, 1989.

150 Miroslav Vaněk, *Nedalo se tady dýchat: ekologie v českých zemích v letech 1968 až 1989*, Historia nova (Prague: Maxdorf, 1996).

In an attempt to make the canal project more environmentally friendly, Kubec proposed its combination with the planned fast railway along the canal route and a set of adjustments responding to "ecological demands."[151] The engineers invited ecologists to cooperate in developing such a "sustainable" (they called it "antropoecological") design, though without much success. The final drafted design was based on a compromise between the riverine and canal alternative. Instead of maximal utilization of existing rivers, as was the case with the General Solution and DOE study of 1981, the new design employed only those parts of the riverbed already adapted for navigation. Thus, the much appreciated natural environment of meandering stretches of both the Morava and the Oder and natural habitats in environmentally protected areas along the canal route would survive untouched during the construction and operation of the waterway. The southernmost part of the canal returned to the old routing proposed as national alternative after World War I by Smrček. Furthermore, the new design limited water consumption (the pumping system on locks on the Morava) and, following the example of the almost completed RMD canal, reinforcing embankments with vegetation was proposed.

In the political turmoil following the collapse of Communism in Czechoslovakia in the autumn of 1989, Ekotrans leaders slowly accepted that the "atmosphere" in society was against the project, portrayed in the media as a bequest of communist megalomania and a fatal threat to the environment. Instead of investing in the canal, Ekotrans invested the funds gathered from stakeholders into a broad range of potentially profitable business activities. The final goal to realize the DOE remained along with projects started by Ekotrans directly related to the development of inland navigation; most significant was perhaps the cooperation with Hamburg shipping company Eurokai on the Elbe.[152]

In addition to its "communist" and "anti-ecological" character, the new "post-communist" national transport and water policy also played against the DOE. The second 1990 issue of Ekotrans' eponymous journal reprinted the cartoon joke that became famous in Czechoslovakia during the days of the so-called "Velvet Revolution" in the autumn of 1989. The cartoon depicted two groups of people holding signs, one saying Back to Europe and the other saying Back to

151 "Aktualizovaný generel integrace vodních cest v Československu," *Ekotrans Moravia* 1, no. 3 (1990): 8-35.

152 Ekotrans' activities were numerous. The company was involved in the World Business Centre project in Prague, developed a freightliner terminal close to the border with Germany (Transmotel by Sokolov), a trans-shipment station on the Elbe by Mělník, a Euroro transport system in Mělník-Hamburg, established a travel agency, bought a botel (boat hotel) in Prague and a castle close to the German border at Bor u Tachova, developed a Yacht hotel project in Prague, started a program on the production of bottled water (at the time non-existent in the Czechoslovak market), participated in plans for gas and peat extraction in Czechoslovakia, opened a car rental in Zlín, and others.

Asia. The symbolic power of the metaphorical "return to Europe," from which Czechoslovakia and East Central Europe had allegedly been "stolen" by the USSR with the silent agreement of the West, left virtually no space for an alternative integration framework. The cartoon posed the question either Europe or Asia. An essay on the future of the European integration process and the position of waterways in the new Europe accompanied the picture. The essay foresaw a process of regionalization dividing the periphery of the European Economic Community. It depicted Czechoslovakia as standing at the crossroads of various integration models, most notably the post-socialist revival of Central Europe (together with Hungary and Poland) and the Alpine region integration led by Austria and Italy. While Czechoslovakia had indeed joined several such organizations by the early 1990s, the Italian-led Central European Initiative (CEI), as well as the Visegrad Group or CEFTA, served mainly as preparation for full European Union membership — the unchallenged goal of economic and political transformation.[153] The coalescence of Europe with European institutions was clear, and the EU overshadowed all others. Accordingly, investments in transport were oriented towards the reconstruction and speedy completion of the neglected highway system. Rather than large construction projects, the new regime focused on economic transition and general reorientation toward the West, and restricted infrastructural investments to improve the existing network and its alignment and interconnection with West European networks.

After 1989, Czechoslovakia, together with its neighboring former socialist countries, entered European institutes linked to post-war integration processes in the western part of the continent.[154] In the field of transport, a prominent organization was ECMT, which expanded from its original 19 member countries in 1953 (the same as in 1989) to 44 in 2007.[155] The crucial, if mostly symbolic, event in the development of a pan-continental waterway network occurred in Budapest on September 11, 1991. At the Ministerial Conference on the Most Timely Issues of European Inland Waterway Transportation, 25 European Ministers of Transport from both sides of the former Iron Curtain met to celebrate the opening of the

153 By joining the EU, countries automatically left CEFTA. Martin Dangerfield, "CEFTA: Between the CMEA and the European Union," *Journal of European Integration* 26, no. 3 (2004): 309-338.
154 Accordingly, these countries developed transport policies aimed at integrating their national networks with those in Western Europe. The Czechoslovak transport policy of 1993 is a typical example, as it reads as the journey to harmonize the Czech transport sector with standards developed in European Communities, in both the material and institutional sense. Transport Policy of the Czech Republic for the 1990s. Dopravní politika české republiky pro devadesátá léta. Czech Transport Ministry, August 2, 1993.
155 Frank Schipper, *Driving Europe: Building Europe on Roads in the Twentieth Century* (Amsterdam: Aksant, 2008), 282.

Figure 5.5 –Cartoon from the Ekotrans journal. The group on the left is holding a sign saying, "Back to Europe," while the other sign reads, "Back to Asia." The collapse of the USSR and Comecon is presented as an escape from Asiatic Soviet influence. Czechoslovak society embraced the European idea. In reaction, canal promoters start to present the DOE as a European, and Europeanizing, project. Previous cooperation in the UNECE made this discursive reorientation rather easy. Source: Ekotrans Moravia 1, no.2 (1990): 6.

RMD and discuss further development of the network in Europe.[156]

The institutional and material interconnection of the waterways on the continent, marked by the "eastern enlargement" of the ECMT and the opening of the link between the Rhine and the Danube, was complemented by technical unification. The problem of standardizing the European network, largely abandoned in the late 1960s, reopened in 1985 at the 26th PIANC Congress in Brussels. The Dutch delegate suggested a revision of Seiler's classification dating from 1954, as it did not consider pushed units of two, four, and six barges, thereby criticizing the standards on the same grounds as Kubec in the 1970s. Czechoslovakia was the only socialist country to participate in the special PIANC working group established to develop a new classification. The recommendation corresponded with Kubec's ideas, based on the push unit module principle.[157] ECMT had discussed the new classification proposal in cooperation with UNECE and accepted it in 1992.[158]

156 The Declaration signed by all participating delegates called for unification of the fragmentary waterway network on the continent, namely for constructing a pan-European inland navigation system based on market principles. UNECE document TRANS/SC.3/138: White Paper on Trends in and Development of Inland Navigation and its Infrastructure, (1996), http://live.unece.org/fileadmin/DAM/trans/doc/finaldocs/sc3/TRANS-SC3-138e.pdf. 87. Accessed 23 August 2011.
157 Permanent International Association of Navigation Congresses, *Standardization of Inland Waterways' Dimensions. Report of Working Group No 9 of the Permanent Technical Committee I* (Brussels,1990).
158 Resolution no. 92/2 on New Classification of Inland Waterways. Document ECMT CM (92)6/FINAL, http://www.internationaltransportforum.org/IntOrg/acquis/wat19922e.pdf. Accessed 24 March 2010.

In 1993, for the last time, Ekotrans intervened in favor of the canal. A reviewed version of the General Solution produced by Ekotrans appeared, implementing various ecological measures and following the new ECMT/UNECE classification of 1992.[159] Ekotrans also organized a trip to the RMD for journalists and public servants to get them interested in the project.[160] Furthermore, the company presented the study of the Czech Republic's waterway network in an attempt to influence the new state's transport policy.[161] On January 1, 1993, Czechoslovakia split into two separate states and the DOE lay almost exclusively on Czech territory. The authors' most important concern was the continuing subordination of waterways to the Water Management Authorities, which tended to oppose any navigational structures. Thus, the document called for reinstallation of the Directorate for Construction of Waterways (*Ředitelství vodních cest* – ŘVC), the traditional central bureau from the pre-communist period.

Simultaneously, Czech navigation experts were active at UNECE. In 1992, the group of experts revived by Vachuda back in 1988, who survived the institutional and personnel changes, presented its final report.[162] Its quality did not meet the standards, as Kubec later admitted.[163] However, by that time, he and his colleagues at UNECE were geared to another priority. Since the Budapest Conference of 1991, they had been developing European agreement on international cooperation in promoting and planning inland waterway development. Following the experts' old dream, systematic construction of the European waterway network, the group prepared a complement to the three already existing UNECE plans for European infrastructural networks, those for road (AGR 1975), rail (AGC 1985), and combined transport (AGTC 1991). The European Agreement on Main Inland Waterways of International Importance (AGN) was accompanied by the Inventory of Main Standards and Parameters of the E-waterway network (Blue Book) containing the technical characteristics of all waterways identified in AGN and main ports. Once again, Kubec was instrumental in this initiative. When the group of experts faced difficulties finalizing a generally acceptable map of the desired final shape for the network, he provided the draft, which was accepted with only minor changes.[164] The AGN text was finalized in January 1996 and representatives of the

159 General Solution for the DOE, November 1993. Generální řešení plavebního spojení Dunaj-Odra-Labe, (MZA, H42, b. 340).
160 Thematic trip to the RMD canal May 17-18, 1993. Tématický zájezd RMD (MZA, H42, b. 471N).
161 Vodní cesty České Republiky, February 1993. Part 4 was devoted to the DOE and the entire scheme was entitled "Technical-Ecological study." Technicko-ekologická studie (MZA, H42, b. 341).
162 UNECE document TRANS/SC.3/R.160, 7-9-1993.
163 Interview with Jaroslav Kubec conducted by the author in 2010.
164 Ibid.

Figure 5.6 – The map accompanying the European Agreement on Main Inland Waterways of International Importance (AGN) shows the DOE in a dashed line in the center. The UNECE provided the background for this treaty. In this scheme, Russian waterways become part of the European system. Similar to the Comecon project, it overlooked vastly different areas of the Danube, Black Sea and Volga. The unity, therefore, remained to a great extent only imagined. Source: European Agreement on Main Inland Waterways of International Importance (AGN). http://untreaty.un.org/unts/144078_158780/9/5/2638.pdf. Accessed May 29, 2007.

Czech Republic signed the document in the summer of 1997.[165] The DOE was included in its full length, but divided into two E-waterways: E-30 (Oder-Danube connection) and E-20 (Elbe branch).

Despite the successful technical and political Europeanization of the DOE project, the new political and economic circumstances of the 1990s did not prove favorable to such a huge investment project. The 1996 Czech waterway development program, as well as the general national transport policy for 1996-2005, considered the DOE a matter for the distant future, which did not require more than prolonging the protection of the route.[166] Even the charter of the revived Directorate for the Construction of Waterways (ŘVC) in 1998 did not mention

165 June 23, 1997 in Helsinki.
166 Program podpory rozvoje vodní dopravy v České republice do roku 2005 – accepted by Government resolution no. 635/1996.

the canal. Nonetheless, by being part of AGN, the DOE route was also incorporated in the Accession Treaty, on the basis of which the Czech Republic entered the EU. Echoing the words of his interwar predecessor, a Czech navigation expert and canal promoter concluded in 2002 that "it is important to realize that once the European Union considers it necessary to link the Oder with the Danube, the Union will also participate financially and the connection will be achieved. Nowhere, however, is it stated that this connection must go through the territory of the Czech Republic."[167]

Conclusion

The literature often depicts post-war Europe in terms of the Cold War as a whole divided into two antagonistic halves. Furthermore, international organizations of this period are often seen as arenas for ideological debates, in which the USSR and other members of the Eastern bloc in particular set out to demonstrate the superiority of the socialist system. The historical record of the Europeanization of the DOE contradicts such an overly simplified picture. Obviously, political tensions between East and West did not necessarily result in separate developments on both sides of the Iron Curtain. At a technical level, experts often managed to overcome ideological discrepancies. However, such cooperation was rather fragile and greatly dependent on the general political atmosphere on the continent. Episodes of relatively close and problem-free cooperation were disturbed by the conflict over the position of the GDR in the late 1960s. The aligned Danube and Rhine regulations clearly document such developments. These peaked in the 1960s and early 1970s and were revived by the late 1980s after the opening of the RMD canal, the waterway that physically connected the two separated river basins on the continent and finally created a coherent European network.

Indeed, politics played a major role in Europeanization across the curtain. In the mid-1950s, some communist politicians welcomed the opportunity of technical cooperation with the West as a potential source of superior technology. Simultaneously, the UNECE was seen as an arena fit for "peaceful competition" of the two systems, as declared by Khrushchev in the late 1950s. Regional (continental) geographical delimitation, emphasized in the UNECE charter, formed the basis for trans-curtain cooperation directed toward maximization of contacts and

167 Jaroslav Gallina, "Vývoj přípravy propojení Dunaj – Odra – Labe. Závěry zpracovaných dokumentů a jejich plnění," in *Porta Moravica 2002: Evropská vodní cesta Dunaj-Odra-Labe* (Přerov: Sdružení Dunaj-Odra-Labe, 2002), CD-ROM.

(technical) compatibility, that is to say maintaining the sense and practice of unity.

Seen through the lens of the canal design, the post-war period marked a shift toward European technical standards. The onslaught of 1950s Sovietization interrupted the continual development of the canal project and its reorientation toward the Soviet technological style. However, since the early 1960s, Comecon gradually left the position of leading transnational organization in favor of the pan-continental UNECE. Similarly, national standards deriving from local traditions and set within older national legislation, had been substituted not with a soviet model, but by UNECE recommendations.

Remarkably, visions of Europe competing over the shape of the DOE and the waterway network on the continent in the second half of the twentieth century generally acquired a pan-continental character. The shift from *Mitteleuropeanism* toward Europeanism in the spatial imagination of Czechoslovak navigation experts and hydraulic engineers represented both the rejection of the *Mitteleuropean* framework defiled by Nazi *Grossraum* visions and resistance to the adoption of the Socialist part of Europe as a territorial unit. From Raba to Kubec, Europe remained the dominant frame of the network surrounding the DOE, though extended towards the East to incorporate the USSR. The push for Comecon to cooperate with UNECE can be interpreted as a reaction to such visions; Šimůnek's statement of 1956 suggests as much. However, the limited sources make it difficult to clearly trace a link between the two.

Standards for the network set by UNECE and developed in cooperation between East and West were accepted on both sides of the Curtain. Links can be found in the literature to the UNECE 1960 waterway classification.[168] Even Viatcheslav Novikov, long-time secretary of the UNECE Working Party on Inland Water Transport, asserted in his account of UNECE efforts aimed at constructing the integrated European waterway network that the 1960 proposal for European classification derived from Seiler's work had been accepted.[169] It seems the UNECE secretariat adopted his classification to structure information on waterways in the late 1950s, and inland navigation experts accepted such a decision.

The role of individual experts was crucial in the process of aligning national, Comecon, and European (UNECE) standards in the DOE designs. Unlike career bureaucrats such as Plecháč, Jaroslav Kubec was a waterway enthusiast, as even the Secret Police noted. His activities to develop a proposal for the new Czechoslovak

168 Marko Pršić, Dalibor Carević, and Davor Brčić, "Determining Inland Waterway Parameters with Application to the Sava River," *Promet* 23, no. 2 (2011): 147-154.
169 Viatcheslav Novikov, "Building a Coherent and Modern Pan-European Inland Waterway Network," in *Porta Moravica 2002: Evropská vodní cesta Dunaj-Odra-Labe* (Přerov: Sdružení Dunaj-Odra-Labe, 2002), CD-ROM.

classification in the 1970s and in the UNECE Group of Rapporteurs a few years later, and his role in finalizing the E-waterways plan in the 1990s were instrumental for the articulation of European standards and their adoption in Czechoslovakia.[170] His late 1970s proposal for the new Czechoslovak classification rightly identified the introduction of the module principle as a basis for the European network, later reflected in the new UNECE/ECMT classification of 1992. The simultaneous introduction of push convoys and containerization on the East and West sides of the Curtain provided an opportunity for setting common standards.

Since the 1970s, Comecon gradually abandoned the waterway issue as far as network planning was concerned. Despite the considerable focus on inland navigation since the oil crisis, minimal efforts were made to interconnect and integrate navigable rivers and canals while Comecon was mainly oriented to implementing new technologies on existing waterways, especially the Danube. In this context, Kubec formulated his vision of the Comecon waterway *Magistrala* in 1987, but envisioned the adoption of UNECE and Rhine standards.

This atmosphere naturally weakened the DOE's position and its promoters had to look elsewhere for support, which further reinforced the Europeanization process. The collapse of Communism and the rapid disbandment of Comecon left space for other integration concepts. Strong Europeanism on the part of Czechoslovakia and the positive attitude of the ECE (and EU) towards post-communist countries resulted in the former West European model of "European integration" becoming the only considered option. By being incorporated in the Accession Treaty, the canal became part of the EU-ization of central European territory. Those on the Czech side responsible for negotiating transport issues with the EU claimed that the EU had initiated the implementation of the DOE in the Treaty. However, some journalists have suggested it just indicated yet again the success of the Czech canal lobby, which had managed to keep the idea alive for more than a century.[171]

170 In the early 1960s, when Plecháč substituted Mudruňka as head of the ministry department, the retiring man told him, "most probably the canal will never be constructed, but it provides an opportunity for extensive travel." Interview with Plecháč conducted by the author in the autumn of 2010.
171 Radek Svítil and Vendula Maráková, "D-O-L: průplav zahalený tajemstvím," *Ekolist* (2003), http://ekolist.cz/cz/zpravodajstvi/zpravy/d-o-l-pruplav-zahaleny-tajemstvim. Accessed 16 June 2011.

Chapter 6 Conclusion

This book has studied twentieth-century European history and the dynamics of "Europe" as an imagined community, in particular through the lens of the DOE project. This study revealed two distinctive aspects. The first was the continuity of European waterway integration in spite of various political ruptures, namely the break-up of the Austrian-Hungarian Empire, Nazification, Sovietization, and Europeanization. The second aspect was the important role of experts in the alignment of national and transnational interests and infrastructure development plans. These experts were responsible for continuity in the hidden integration of Europe, as they were able to propose the DOE as a solution in very different political paradigms in the twentieth century, linked to very different visions and images of Europe. At first glance, the historical record of the Danube-Oder-Elbe canal reads as a row of successive false starts and stops. It builds up to a story of the typical infrastructural "white elephant,"[1] destined to fail. The current situation confirms this picture: the Oder, Elbe, and Danube are still not connected and none of the governments involved (Czech, Slovak, Polish, or Austrian) currently sees the construction of the canal as a priority. However, the question remains as to whether this is the most interesting way to look at the DOE history. I would argue that it is more significant to note that it proved incredibly hard to kill the desire to build the canal. Notwithstanding the recurring negative resolutions of national governments, the canal never disappeared from public debate throughout the twentieth century. The striking ability to survive two world wars, numerous political struggles, competition from other transport modes and perspectives, and, last but not least, fundamental changes in the perception of water as part of the natural environment, represents the most tantalizing aspect of the canal project. This remarkable capacity to remain on the agenda puts the history of the canal in a different light. The question is not why the DOE has never been built, but how it survived. Instead of investigating the reasons for its failure, we should seek the reasons and mechanisms of its continued existence. There are plenty of

1 Dirk van Laak devoted one of his books to white elephants. He defined them as large-scale technological projects which "combine ambitious technology with politics and alleged massive economic gain." Dirk van Laak, *Weisse Elefanten. Anspruch und Scheitern technischer Grossprojekte im 20. Jahrhundert* (Stuttgart: Deutsche Verlags-Anstalt, 1999), 10.

factors explaining the failure, but what could account for its almost uninterrupted presence in infrastructural planning throughout the century?

The key to this question lies in the role of the experts. They were the ones who provided continuity through all the political troubles. In times of political turmoil, the experts' mandate to work on their own diminished; they had to wait for a new window of opportunity in order to put the canal back on the agenda and start the process of transnational synchronization of interests and ideas all over again. This dynamic could serve as entry point to a periodization for the long twentieth-century history of waterways' hidden integration process in Europe – hidden because it was driven by experts who preferred to work behind the scenes.[2]

When the DOE project was launched by the Austrian Imperial Waterway Act in 1901, the continent was divided into many isolated navigation "islands" with different regulations, ships, port-equipment, standards and marking. These islands had historically been developed in the individual river basins of every main river on the continent, the Rhine, the Danube, or the Elbe. From 1870 onwards, the rivers had become part of national networks promoted by the newly established German Empire. The development of such national systems required the construction of canals to overcome the watersheds dividing national territories. The DOE, at the early stage of its development, represented a typical example of such a project, driven by the Austrian-Habsburg Empire. Experts did anticipate problems, however, due to this nationalization process. They wanted to build transnational connections as well and create a European network. In the early 1880s, businesspeople and experts interested in inland navigation established the Permanent International Association of Navigation Congresses (PIANC). In this forum, the transnational history of the DOE was born. While Smrček did not attend the first PIANC meetings, he studied the results of earlier sessions. When the technical differences between the existing French and German networks created a conflict, Czech experts, together with the rest of the Monarchy, naturally joined (and even co-inspired) independent integration efforts in Central Europe. These were implicitly linked with the German *Mitteleuropa* concept and designed to enable practical cooperation on the ethnic German population scattered in the politically divided area to the west of the Rhine and to the north of the Danube. However, once the Austrian authorities drafted the rudiments of the imperial network that bound the territory of the Habsburg Empire, they had to choose between their Pan-German allegiances and natural and historical constraints. By that time, the historically developed standards on the Danube, the Rhine, and the

2 Thomas Misa and Johan Schot, "Inventing Europe: Technology and the Hidden Integration of Europe," *History & Technology* 21, no. 1 (2005): 1-19.

Elbe differed significantly. Naturally, the Austrian authorities chose the Danube as the axis of the future network and also pursued Danubian standards for its other parts, including the planned DOE link that would connect the Danube to the Vistula. Thus, the *Mitteleuropean* efforts failed. The un-linking of the German Oder to the Austrian Canal, originally planned to connect Danube to Oder, symbolized this failure.

Not until the late1920s did the *Mitteleuropean* group of experts meet again. The DOE routing was slightly adjusted in such a way as to serve Czechoslovak rather than Austrian interests. The Slovak capital of Bratislava replaced Vienna as main port on the Danube end of the canal. The DOE was represented by the Czech Smrček and the German Gothein. Also present at one of the meetings in Budapest was Kliment Velkoborský, who would become head of the Inland Navigation Department at the Ministry of Transport in communist Czechoslovakia. The official introduction of the *Mitteleuropean* standard 1000t vessel in the Czechoslovak Waterway Act of 1931 was one of the successes of these meetings. However, the Czechoslovak national government persisted in its negative attitude towards the DOE project until 1938, when it was forced to become more positive under pressure from Nazi Germany. This new effort after 1938, led by Nazi Germany, was able to build on earlier inter-war agreements. Compared to the relative success of *Mitteleuropean* efforts, the respective attempts to develop a pan-European network, promoted by the League of Nations, achieved limited immediate results. However, various proposed regulations did lay the basis for post-war waterway integration attempts stimulated by the United Nations Economic Commission for Europe.

Starting with the Nazi ascent to power, the construction of the *Grossraum* waterway network, including the DOE canal, achieved momentum. The Nazis did not have to rely on rather complicated transnational negotiations, as they were in a position to push their ideas through. The coercive nature of this phase was unique in the twentieth-century history of the DOE and its results were equally exceptional – for a short while, construction work commenced. In both personal and technical aspects, this can be seen as a transition period. Building on many of the ideas and structures developed in the previous fifty years, a new technological style emerged, epitomized by the boldly drafted ship-lifts and water management measures. While the older generation remained active, the generous DOECS endowment and Nazi government support produced a whole new generation of hydraulic engineers working on the canal, which affected the canal's future. Due to the ongoing war and the fall of the Nazi Empire, success was short-lived. Czechoslovakia became part of the Eastern bloc and fell under Soviet influence in the post-war settlement.

The Soviet waterway models and standards were more difficult to implement in Central Europe than the Nazi versions. After the communist takeover of Central Europe, structures supporting the canal project, both at national and transnational levels, fell victim to the initial phase of the Cold War. Also, the old masters of central European waterway building left the scene. It took a decade to set up a completely new institutional landscape, during which time people like Velkoborský retired. In the mid-1960s, a new generation of engineers educated in the soviet style took the lead. While they had read the DOECS papers and cooperated with some of the still active engineers from the war generation such as Rosík, they had a different perspective on the canal and the network. Basically, instead of a transport route, these new engineers envisioned a water management scheme. Instead of a Central European network, they preferred a pan-European network. They found a home for their efforts in UNECE activities. In the case of the waterways, this organization was able to overcome Cold War separation from the mid-1950s onwards. They provided a link between Comecon and UNECE efforts, also on a personal level. Yet, it is also clear that the 1950s, the period of at least partly enforced adaptation to methods and standards developed in the USSR, marked the most visible discontinuity in the DOE canal's history. The differences between the 1952 design (actually an update of the project started by the DOECS before the war then further developed by the Nazis) and the General Solution of 1968 or even the Hydroprojekt study of 1958, far exceeded the differences between any other two designs or general layout placed next to each other on the chronological axis. While the utilization of the riverbed had been debated since the mid-1920s and the water management perspective and potential for water transfer had been introduced by the Nazis, it was only the Soviet-style "complex" perspective, supported by the power (albeit mostly symbolic and imagined) of the communist party and soviet technological superiority, that allowed the corresponding changes to be applied in the canal design.

From the perspective of this generation of experts, the DOE canal development can be divided into two periods. The first period is linked with Smrček and his Central European ideals (1890s-1940), and the second is best represented by Kubec (who preferred a pan-European network). They both operated across at least two transnational integration frameworks. In between, the massive political and technological changes of World War II and its aftermath altered the scene. From a technological point of view, a similar situation arose – the canal was developed mainly as a transport route for pull boats (not ship-lifts) between 1908 and 1938, while in the 1970s, after the turbulent conflicts of World War II and initial years of the Cold War, the canal again became relatively stabilized as a complex water management system for transporting push convoys.

Indeed, the DOE's survival should be interpreted less as a result of fitting into various (geopolitical) agendas, and more as a technological love affair of a group of hydraulic and inland navigation experts who relentlessly promoted this project.[3] In his analysis of the European dimension of waterway construction in Western Europe in the twentieth century, Nil Disco concluded that the trans-basin waterway projects owe their existence to mundane national interests, rather than to grand conceptions and visions of common European interests.[4] Indeed, the engineers promoting the DOE canal often voiced local and national ambitions, although they could easily switch arguments if required. Their main priority was building the canal. The same experts often working on the national as well as transnational levels played a vital role in helping to (re-)create the demand for the canal on both levels and in keeping the idea alive. Despite witnessing profound differences in the political situation and state organization in the twentieth century, experts managed to work on the canal. When the DOE canal was perceived as a form of *Mitteleuropeanization* in the inter-war years, the atmosphere of mutual distrust among central European nations made official diplomatic cooperation aimed at creating a transnational network impossible. At first, official cooperation remained limited at the expert level as well, and the pre-World War I *Mitteleuropean Verein* (DOUV) was only revived in the late 1920s. By that time, however, Czechoslovak waterway plans had been adapted to the standards developed by German engineer Leo Sympher. Without actual transnational negotiations, Czechoslovak experts applied the dimensions proposed for the German network. They held high enough positions within the state ranks to do this without any significant interference from other national authorities. These positions helped them keep the canal on the agenda, even though the project was accused of benefiting Germany and its imperial plans. Using the authority and power of high officials and revered experts, the group of canal proponents managed to counter proposals to change the route, which would have made the canal more national. In their eyes, this change would render the project inefficient.

The fate of the *Mitteleuropean Verband* (MVB), which disappeared in the early 1930s, suggests that the experts were not initially prepared to accept aggressive Nazi rhetoric. Nonetheless, once Czechoslovakia signed the Protocol for constructing the canal after the Munich Treaty in the autumn of 1938, leading Czech experts like Smrček welcomed the agreement. By the mid-1930s, Smrček had made

3 This builds upon the argument of Bruno Latour in Bruno Latour, *Aramis, or the Love of Technology* (Cambridge, Mass.: Harvard University Press, 1996).
4 Cornelis Disco, "From Sea to Shining Sea: Making Ends Meet on the Rhine and the Rhone," in *Materializing Europe: Transnational Infrastructures and the Project of Europe*, ed. Alexander Badenoch and Andreas Fickers (New York: Palgrave Macmillan, 2011), 353-397.

it clear that his allegiances lay with the canal and the transnational network rather than the state he once helped create. In the ensuing negotiations, which continued after the Nazi occupation of Czechoslovakia, Czech experts acted more or less as a local branch of the Reich authorities and had to accept and adopt standards and demands developed at Nazi headquarters, although some room for negotiation remained. Consequently, the canal was transformed into a transnational transport route, paying little respect to the needs of the local population. Also, people like Bartovský, head of the Czechoslovak Ministry's water management department since the mid-1930s and throughout the war, proved susceptible to the Nazi style of planning and ideology.

Post-war Czechoslovakia found itself on the Eastern side of the Iron Curtain and exposed to the influence of Sovietization. Again, Czech experts were quick to adapt the general idea of the canal to the new dominant ideology and copied the soviet narrative of a "complex" water management project. However, it was only after the establishment of the Comecon that they managed to again get the canal on the agenda of national authorities. Comecon created a platform for technocratic planning of the East European network. Although individual experts played their role within Comecon, they had less power to align the national and transnational perspective. Unlike the inter-war non-governmental organizations that had pushed for *Mitteleuropeanization*, Comecon was fully controlled by official delegates of the nation-states. It was an intergovernmental organization that delegated less power to individual experts, who had to adhere to the state's official foreign policy.

While UNECE officially operated in a similar fashion as Comecon, it gave individual experts more scope. Its expert committees for waterway network planning provided the platform for expert negotiations. Unlike the Comecon setting, the Czechoslovak state foreign office representatives did not coordinate a national position. This meant that experts could work on the adoption of UNECE standards and recommendations on their own. They used this scope and managed to Europeanize the technical lay-out of the canal and create a bypass across the politically impenetrable East-West divide. At one point in the late 1980s, Kubec was working simultaneously on Soviet and European versions of the design, which differed significantly in their spatial scope.

Experts followed the specific ideology for which Schot and Lagendijk coined the term "technocratic internationalism." This was a political strategy of technification (or de-politicization) and delivered a remarkable flexibility in the face of turbulent political circumstances. Schot and Lagendijk promoted the idea that the construction of the canal should be left to those experts who were best placed to

design the canal based on technical parameters. They considered the construction of the DOE canal (which they felt was a clear missing link in the European waterway network system) to be unavoidable from a long-term perspective. The question of whether and how it should be built should not be determined by what they perceived as short-term and often misguided, official national foreign policy objectives. Their motivation to promote the canal ultimately corresponded with their expectations that building a canal would not only help overcome tensions between national and transnational interests, but also encourage national and international prosperity.

Antonín Smrček and Jaroslav Kubec illustrated this best. Both men were utterly devoted to their professions as hydraulic and waterway engineers and, as such, were both members of the PIANC, the oldest transnational network specializing in navigation matters. Smrček took part in various transnational events that aimed to establish the waterway network and create the DOE canal. In his position of generally respected authority, he influenced both governmental (at first Austrian and then Czechoslovak) policy and transnational network schemes in the first half of the century. Operating at the transnational level, he relentlessly stimulated interest in the DOE canal among local industries in Moravia, while representing them at meetings on the various *Mitteleuropean* initiatives. Smrček was instrumental in setting common standards for the *Mitteleuropean* waterway network in Central Europe and their adoption by Czechoslovak national institutions developing the DOE canal. The same could be said of Jaroslav Kubec, who joined the PIANC as Czechoslovak representative. He tried, albeit unsuccessfully, to update the national waterway dimension standardization to fit new standards emerging in Europe in the 1970s and then successfully implemented these visions in the 1981 DOE canal design developed for the EEC. After the collapse of communism, Kubec participated in the negotiations for the new classification of the European network in the UNECE after 1990 and was instrumental in creating the plan to construct the European waterway network accepted by the UNECE in 1996, which of course included the DOE canal.

The expert ideology factor explains the persistent motivation behind the hydraulic engineers and transport experts' efforts to promote the canal, which were the reason the matter remained on the agenda. The question is why they failed to make it happen. This failure can be explained by the fact that the engineers needed the consent of the Czechoslovak foreign office and political establishment. They could have won this support if they had had more time, which was not granted due to the turbulent times. The story could have been different if the Central Powers had won World War I or the Nazis World War II. Under certain circumstances,

even the separate Comecon network might have come to fruition, even in its extended version reaching the Pacific. The lead time experts needed was also a consequence of their strategy. Winning the necessary support involved several steps. Firstly, experts had to find their own way, both at the national and translation level, in updating the project to fit new political and ideological demands and in developing the appropriate technology and institutional environment which could perform the desired functions. Secondly, once successful, they had then to go back to the national authorities and present a completed design, and request their support, using acquired "transnational and international" support as an argument in favor of the project. However, this second step could not be realized. The turbulent history of Czechoslovakia in the 1900s did not provide the promoters of the canal project with a long enough period of political stability for undisturbed preparation or execution of all the necessary measures. Every time the political regime changed abruptly (1918, 1938, 1948, 1968, and 1989), they virtually had to start all over again. While the experts were strong enough to keep the canal alive, they were too weak to get it built.

Although the history of the DOE canal seems quite specific, it does correspond to developments elsewhere in Europe. In the Netherlands,[5] for instance, the first practical applications of the synthetics approach to water, as exemplified in the National Water Management Plans, appeared around 1940; that is, at virtually the same time as the first Bažant Water Management Plan for Moravia. In addition, the period during which the expert-driven exploitation of water as natural source dominated Dutch national water policy corresponds roughly to the developments in Czechoslovakia. While the Dutch *Rijkswaterstaat* adopted the concept of Integrated Water Management in 1989, allowing non-expert groups such as ecologists and municipalities to enter the design process, the collapse of communism in the same year in Czechoslovakia resulted in the swift assumption of the same model. My research suggests that strong transnational links between experts could be responsible for this shared history.

The DOE is now a European matter. The UNECE experts involved in waterway planning have produced several studies on the development of a continental waterway network since the plan for E-waterways came into force.[6] The problem was revisited in 2010 by the Platina platform within the EU's NAIADES Action

5 Cornelis Disco and Erik van der Vleuten, "The Politics of Wet System Building: Balancing Interests in Dutch Water Management from the Middle Ages to the Present," *Knowledge, Technology & Policy* 14, no. 4 (2002): 21-40, here 39.

6 See regularly updated UNECE Blue Book: Economic Commission for Europe, Inventory of Main Standards and Parameters of the E Waterway Network, (2011), http://www.unece.org/fileadmin/DAM/trans/doc/finaldocs/sc3/ECE-TRANS-SC3-144r1e.pdf. Accessed 25 May 2007.

Program. The documents identified eleven missing links in the European network and attempted to determine the level of commitment of the countries involved to deal with the problem. The DOE represented a unique case on this list. Unlike all the other projects which were strictly national regarding construction site, the DOE appeared four times. While Slovakia, the Czech Republic, and Poland all declared their support and incorporated the DOE project in their national development programs, Austria did not see it as a priority and concentrated on other improvements on the Danube. The future of the project, as the Platina paper suggested, depends on the success of the Czech initiative to include the DOE in the new TEN-T list of Priority Projects and thus obtain funds from the TEN-T budget for the 2014-2020 period.[7] The networks of experts has continued to promote the DOE idea persistently and passionately. The future will tell whether conditions could be created for its final realization.[8]

7 Platina, Inventory of Bottlenecks and Missing Links on the European Waterway Network, (2011), http://www.naiades.info/file_get.php?file=41304ce4aeb4f1690cfb771ee486329ecf8. Accessed 3 May 2011.
8 These conditions do not seem to exist at the current time (Spring 2012). The pool of organizations and individuals supporting inland navigation in the region is relatively limited. Their attempts to create larger, and thus more efficient, lobbying groups and to constitute a permanent platform for expert negotiations have so far failed.

Annex 1 List of Barge Types

Barge types in operation on European waterways in the 1970s according to Jaroslav Čábelka: Čábelka, Jaroslav. *Vodní cesty a plavba* (Prague: SNTL, 1976): 64-65 and 78.

Barge type	Loading capacity (t)	Length (m)	Beam (m)	Draft (m)	Area of Use	Seiler/ECE classification
Groß-Finow	250	41,50	5,10	1,60	GDR Central Europe	
Péniche	300	38,50	5,05	2,20	French canals	Class I
Berlin Neckar Maaspitz Saal Main Gross-Saal Niegripp	350 360 360 400 420 450 550	46,00 45,00 46,50 51,00 50,00 52,00 62,00	6,60 7,00 5,05 6,00 7,50 6,35 7,70	1,75 2,00 2,20 1,75 1,65 1,75 1,75	FRG, GDR, Central Europe	
Breslauer Gross-Breslauer	550 590	55,00 57,00	8,00 8,20	1,75 1,75	Poland Oder	
Kempenaar	620	50,00	6,60	2,50	Netherlands, Belgium	Class II
Weser	650	60,50	8,80	1,90	FRG	
Plauen	650	65,00	8,00	1,75	Poland, GDR, Oder	
Danube 675	675	63,00	8,20	1,90	Danube	
Gross-Plauen	760	67,00	8,20	1,80-2,00	GDR, Elbe	
Elbe	900	76,00	10,00	1,80	Elbe	
Amanda	1000	76,27	10,32	1,80	Elbe	
Dortmund-Ems	1000	67,00	8,20	2,50	Rhine	Class III
Danube	1000	70,00	9,40	2,20	Danube	
Elbe-canal type	1000	80,00	9,20	2,00	Elbe	
Widende Canal type	1000	75,00	10,60	1,60	Elbe	
Rhein-Herne	1350	80,00	9,50	2,50	Rhine	Class IV (Europa I)
Push Barge TČ 1000 TČ 1500	1015 1430	81,00 81,00	10,00 11,00	– 2,40	Danube, Czechoslovakia	
Rhine	2000	95,00	11,50	2,70	Rhine	Class V
Lower Rhine	1700 3000 4300	84,00 110,00 130,00	11,20 13,00 14,30	2,60 2,80 3,00	Lower Rhine	
Largest Soviet Barges	12 000 22000	150,00 210,00	21,00 28,00	4,50 4,50	Volga-Baltic Systém, USSR	Class IV

Self-propelled Barges	Length (m)	Beam (m)	Draft (m)	Loading capacity (t)	Engine power	Area of Use	Country
Theodor Bayer Oskar Teubert Karl Vortisch	48,00 53,00 57,00	5,05 6,29 7,04	2,30 2,50 2,30	370 562 605	200 250 250	FRG, Netherlands, Belgium	FRG
Rimava Junakj	63,00 67,00	8,00 9,40	– –	502 600	440 840	Danube	Czechoslovakia, Yugoslavia
MNL 5308 MNL 7300 MNL 7700 MNL 8500 MNL 11600	57,00 69,20 70,95 71,50 80,00	7,50 8,84 9,33 9,30 9,30	1,60 – _ 2,20 2,40	480 700 700 900 1170	2X150 350 700 550 620	Oder, Vistula, Elbe Elbe Elbe Elbe and Central European Network	Poland, Czechoslovakia Czechoslovakia Czechoslovakia Czechoslovakia
Gustav Koenigs	67,00	8,20	2,50	930	500	Rhine	FRG
Express 44	88,00	8,20	–	1130	900	Rhine	Switzerland
Johann Welker	80,00	9,50	2,50	1289 (1248)	700 (2x500)	Rhine, Main	FRG
DNL 1000 DNL 2000	78,65 101,50	10,00 14,18	1,90 2,40	1000 2000	2X480 2X700	Danube	Czechoslovakia
SM 2700	114,00 135,00	13,23 16,50	3,47 3,50	2700 5300	2X700 1800	Volga-Baltic System, USSR	USSR

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Personal archive of Jaroslav Kubec

Interviews.

*1 Jaroslav Kubec (*1931)*
Date: 28 September 2010.
Kubec started his professional career in Ostrava in late the 1950s, after his graduation from Faculty of civil engineering, Czech Technical University, Prague. 1963-1993 he worked for the Transport Research Institute, where he reached the position of the head of the water transport department. In this capacity at least since 1966 he has regularly attended meetings of various inter/transnational organizations (at first Danube Commission, from 1970's UNECE ITC, etc. – surprisingly not Comecon). Currently a prominent proponent of the canal construction, Kubec has authored monographs on the DOE and waterways. He is also founder and chairman of the Danube-Oder-Elbe Association, co-founder of Porta Moravica and other "lobby" groups. Since 1993 he makes his living as an independent consultant in water transportation, but still a member, or even chairman, of several UNECE committees in Geneve.

*2 Václav Plecháč (*1932)*
Date: 23 November 2010.
Hydraulic engineer by training, Václav Plecháč entered civil service early after his graduation and spend his career in various position at International departments of Czechoslovak Ministries responsible for Water Management. Regular at the UNECE and Comecon meetings, he was also a crucial figure in the evaluation of the General Solution in the early 1970s.

3 Evžen Polenka (1941)
Date: 12 December 2010.
Son of hydraulic engineer Evžen Polenka, who worked for ŘVC in the 1930s and 1940s. After graduation in hydraulic engineering from Brno Technical University, he worked for various water management authorities located in Brno. In late 1960 he was involved in preparation of General Solution and after 1972 he stood in charge of protection of DOE route at the VUV branch in Brno.

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List of Abbreviations

AGN	European Agreement on Main Inland Waterways of International Importance
CC CzCP	Central Committee of the Czechoslovak Communist Party
CCNR	International Rhine Commission
CCT	League of Nations' Advisory and Technical Committee on Communications and Transit
CEFTA	Central European Free Trade Agreement
CEI	Central European Initiative
CID	International Danube Commission
CIE	International Elbe Commission
CIO	International Oder Commission
Comecon	Council for Mutual Economic Assistance
ČSAV	Czechoslovak Academy of Science
ČVUT	Czechoslovak Technical University in Prague (*České vysoké učení technické*)
CzCP	Czechoslovak Communist Party
DC	Danube Commission
DOE	Danube-Oder-Elbe Canal
DOECS	Danube-Oder-Elbe Society (*Společnost Dunajsko-Oderského průplavu*)
DOEK	Danube-Oder-Elbe Committee (*Dunajsko-odersko-labský komitét*)
DOUV	German-Austrian-Hungarian Association for Inland Navigation (*Deutsch-Oesterreichisch-Ungarischer Verband für Binnenschiffahrt*)
DVO	Dnieper-Vistula-Oder waterway project
ECMT	European Conference of Ministers of Transport
EEC	European Economic Community
EU	European Union
FRG	Federal Republic of Germany
GDR	German Democratic Republic
GIWE	Inspector-General for Water and Energy (*Generalinspektor für Wasser und Energie*)
GoR	UNECE Group of Rapporteurs
GOSPLAN	Soviet State Planning Committee (*Gosudarstvennyy planovyy komitet*)
ILO	International Labor Organization
ITC	UNECE Inland Transport Committee
IWT	Inland Water Transport
LoN	League of Nations
MAP	Masaryk Academy of Labor (*Masarykova Akademie práce*)
MEI	Central European Institute for Promotion of Economic and Cultural Rapprochement (*Mitteleuropäische Institut, Mitteleuropa-Institut, Mitteleuropa-Institut zur Förderung der wirtschaftlichen und kulturellen Annäherung*)
MEW	Central European Bussiness Association *(Mitteleuropäischen Wirtschaftsverein)*
MLVH	Ministry of Forestry and Water Management (*Ministerstvo lesního a vodního hospodářství*)
MŘPS	Moravian River and Canal Society (*Moravský říční a průplavní spolek*)

MVB	Central European Assosication for Inland Navigation (*Mitteleuropäischer Binnenschiffahrtsverband*)
MVP	Ministry of Public Works (*Ministerstvo veřejných prací*)
MWT	Central European Economic Conference (*Mitteleuropäischer Wirtschaftstagung*)
NKVD	Soviet Secret police agency (*Narodnyy Komissariat Vnutrennikh Del)*
PIANC	Permanent International Association of Navigation Congresses
RMD	Rhine-Main-Danube Canal
ŘVC	Directorate for the Construction of Waterways (*Ředitelství vodních cest, Ředitelství pro stavbu vodních cest*)
SCT	Comecon Standing Commission on Transport
StB	Czechoslovak Secret Police (*Státní bezpečnost*)
SVP	National Water Management Plan (*Státní vodohospodářský plan*)
TRI	Czechoslovak Transport Research Institute (*Výzkumný ústav dopravní*)
Vh	*Vodní Hospodářství* Journal
VRS	Water Management Center (*Vodohospodářské rozvojové středisko*)
VUV	Water Research Institute (*Výzkumný ústav vodohospodářský*)
UNECE	United Nations Economic Commission for Europe
ÚSVH	Central Water Management Administration (*Ústřední správa vodního hospodářství*)
ZVfB	Central Association for German Inland Navigation (*Zentral Verein für Deutschen Binnenschiffahrt*)

Summary

European Coasts of Bohemia
Negotiating the Danube-Oder-Elbe Canal in a Troubled Twentieth Century

This book looks at the integration processes in Europe from the perspective of a single waterway project, the Danube-Oder-Elbe Canal (DOE). In doing so, it draws on the recent strand of scholarly literature considering the process of European integration as an outcome of transnational networking, system building and infrastructure development. Two core assumptions of such an approach, labeled "hidden integration" claim: (1) that the process of integration (and fragmentation) of infrastructures on the continent began back in the nineteenth century, and (2) the integration processes were driven by transnational expert organizations rather than diplomats representing nations states and their interests.

The DOE Canal project, though never completed, traces the history of efforts aimed at establishing an integrated inland navigation network in Europe. Unfortunately these proposals were promoted and performed with very different and often conflicting visions of Europe. The thesis identifies a set of four different integration frameworks used by transnational system builders to justify the need for integration: Mittel-Europeanization (Central Europeanization), Nazification, Sovietization and Europeanization. These frameworks represented not only the distinctive spatial delimitations of the proposed waterway network, but also specific sets of values and ideas, each represented by a single dominant international organization, the transnational system builder. The canal, situated almost exclusively on Czech territory, was planned at the junction of the national and transnational network development. The interplay between these two levels of governance in different periods forms the core of this thesis.

The book covers the entire twentieth century, a period framed by two major events: the Austrian Waterway Act of 1901, which launched the imperial waterway network program, and the 1996 European Agreement on Main Inland *Waterways* of International Importance (AGN), marking the establishment of the integrated

pan-European waterway system. The period from 1920 to 1970 is covered in more detail thanks to the availability and richness of archival material. Each of the four chapters deals in turn with a specific integration framework. The chapters are divided to more or less correspond with general political history, bearing in mind that some of these integration frameworks co-existed for some time.

Chapter one sketches the scene when the DOE was developed at transnational level as part of the envisioned waterway network in Central Europe. By the late nineteenth century, inland navigation was experiencing significant growth in the newly established German Empire. Navigable rivers had become part of the emerging national network. But such national systems required canals in order to overcome the watersheds dividing national territory. Initially the DOE was a typical example of a project driven by the Austrian-Habsburg Empire. Simultaneously, on a transnational level, a group of experts fearing the negative impacts of such nationalization promoted integration efforts implicitly linked with the German *Mitteleuropa* concept. While World War I marked the end of the Austrian waterway program and the Hapsburg empireas such, the Mitteleuropean initiative survived and resurfaced in the late 1920s. Although Czech engineers promoting the construction of the DOE actively supported such transnational efforts, the new Czechoslovak state remained suspicious of any cooperation with Germany. However, the canal project was adopted by national authorities and re-designed according to German standards in the 1930s.

The construction works, however, only began in 1939, after Nazi Germany occupied the western part of Czechoslovakia. The canal design followed the aims of *Grossraum* planning, marking a departure from earlier versions. Instead of locks, Nazi engineers preferred ship-lifts to secure higher transport throughput.

The third chapter focuses on the Sovietization of the canal project. At first, Czechoslovak engineers attempted to "sovietize" the canal to enable national authorities to support the project. Although this initial attempt failed, with the establishment of COMECON came the idea of an integrated East European transport network. The DOE was supposed to link the two socialist countries Poland and the GDR separated from the Danube to this river and via the Black Sea to Volga ports and the USSR. But the canal project, developed to meet soviet standards as a "complex water management solution" was put aside in the re-orientation of COMECON transport policy. The canal route, however, was protected by a building ban.

After World War II, running parallel with Comecon efforts, the United Nations Economic Commission for Europe was planning a pan-European waterway network. Czech experts managed to place the DOE at the heart of the envisioned

network. However, national authorities tended to ignore the project, despite Czech experts' numerous attempts to align UNECE and national development plans. Nonetheless, the Czech Republic ratified the AGN agreement and the future realization of the canal, at present fully Europeanized in its technical lay-out, remains open for debate.

This book demonstrates the crucial role experts played in aligning national and transnational interests and infrastructure developments. It shows how the DOE Canal project was continually developed as part of the wider transnational waterway network on the continent despite unfavorable political circumstances. The continuity of European waterway integration across various political ruptures, such as the break-up of the Austrian-Hungarian Empire, Nazification or Sovietization, was secured by experts devoted to the concept of the canal. However, their ability was limited to keeping the project alive.

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