

*Routledge Studies in Modern European History*

# THE RHINE AND EUROPEAN SECURITY IN THE LONG NINETEENTH CENTURY

MAKING LIFELINES FROM FRONTLINES

Joep Schenk



# The Rhine and European Security in the Long Nineteenth Century

Throughout history rivers have always been a source of life and of conflict. This book investigates the Central Commission for the Navigation of the Rhine's (CCNR) efforts to secure the principle of freedom of navigation on Europe's prime river.

The book explores how the most fundamental change in the history of international river governance arose from European security concerns. It examines how the CCNR functioned as an ongoing experiment in reconciling national and common interests that contributed to the emergence of European prosperity in the course of the long nineteenth century. In so doing, it shows that modern conceptions and practices of security cannot be understood without accounting for prosperity considerations and prosperity policies. Incorporating research from archives in Great Britain, Germany, and the Netherlands, as well as the recently opened CCNR archives in France, this study operationalises a truly transnational perspective that effectively opens the black box of the oldest and still existing international organisation in the world in its first centenary.

In showing how security-prosperity considerations were a driving force in the unfolding of Europe's prime river in the nineteenth century, it is of interest to scholars of politics and history, including the history of international relations, European history, transnational history and the history of security, as well as those with an interest in current themes and debates about transboundary water governance.

**Joep Schenk** is lecturer at the History of International Relations section at Utrecht University, Netherlands. He worked as a post-doctoral fellow within an ERC-funded project on the making of a security culture in Europe in the nineteenth century and is currently researching international environmental cooperation and competition in historical perspective.

## **Routledge Studies in Modern European History**

### **76 Europe between Migrations, Decolonization and Integration (1945–1992)**

*Edited by Giuliana Laschi, Valeria Deplano, Alessandro Pes*

### **77 Steamship Nationalism**

Ocean Liners and National Identity in Imperial Germany and the Atlantic World

*Mark Russell*

### **78 Transatlantic Anarchism during the Spanish Civil War and Revolution, 1936–1939**

*Morris Brodie*

### **79 Emotions and Everyday Nationalism in Modern European History**

*Edited by Andreas Stynen, Maarten Van Ginderachter and Xosé M. Núñez Seixas*

### **80 Black Abolitionists in Ireland**

*Christine Kinealy*

### **81 Sinti and Roma in Germany (1871–1933)**

Gypsy Policy in the Second Empire and Weimar Republic

*Simon Constantine*

### **82 German Neo-Pietism, the Nation and the Jews**

Religious Awakening and National Identities Formation, 1815–1861

*Doron Avraham*

### **83 Child Migration and Biopolitics**

Old and New Experiences in Europe

*Edited by Beatrice Scutaru and Simone Paoli*

### **83 The Rhine and European Security in the Long Nineteenth Century**

Making Lifelines from Frontlines

*Joep Schenk*

### **84 Garibaldi's Radical Legacy**

Traditions of War Volunteering in Southern Europe (1861–1945)

*Enrico Acciai*

For more information about this series, please visit:

<https://www.routledge.com/history/series/SE0246>

# **The Rhine and European Security in the Long Nineteenth Century**

Making Lifelines from Frontlines

**Joep Schenk**



**ROUTLEDGE**

**Routledge**

Taylor & Francis Group

LONDON AND NEW YORK

First published 2021  
by Routledge  
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

and by Routledge  
52 Vanderbilt Avenue, New York, NY 10017

*Routledge is an imprint of the Taylor & Francis Group, an informa business*

© 2021 Joep Schenk

The right of Joep Schenk to be identified as author of this work has been asserted by him in accordance with sections 77 and 78 of the Copyright, Designs and Patents Act 1988.

Trademark notice: Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

The Open Access version of this book, available at [www.taylorfrancis.com](http://www.taylorfrancis.com), has been made available under a Creative Commons Attribution-Non Commercial-No Derivatives 4.0 license

*British Library Cataloguing in Publication Data*

A catalogue record for this book is available from the British Library

*Library of Congress Cataloging-in-Publication Data*

Names: Schenk, Joep, author.

Title: The Rhine and European security in the long nineteenth century : making lifelines from frontlines / Joep Schenk.

Description: 1 Edition. | New York : Routledge, 2020. | Series: Routledge studies in modern European history | Includes bibliographical references and index.

Identifiers: LCCN 2020031722 (print) | LCCN 2020031723 (ebook) |

ISBN 9780367345761 (hardback) | ISBN 9780429326660 (ebook)

Subjects: LCSH: Inland water transportation–Rhine River–History. | Inland water transportation–Europe–History. | Shipping–Rhine River–History. | Europe–Foreign relations. | Central Commission for the Navigation of the Rhine–History.

Classification: LCC HE662 .S24 2020 (print) | LCC HE662 (ebook) |

DDC 341.4/4209409034–dc23

LC record available at <https://lcn.loc.gov/2020031722>

LC ebook record available at <https://lcn.loc.gov/2020031723>

ISBN: 978-0-367-34576-1 (hbk)

ISBN: 978-0-429-32666-0 (ebk)

Typeset in Times New Roman  
by Taylor & Francis Books

# Contents

<i>List of illustrations</i>	viii
<i>Acknowledgements</i>	ix
Introduction: Making lifelines from frontlines	1
<i>Renewed relevance</i>	4
<i>The Rhine as part of a post-Napoleonic security system</i>	7
<i>Rowing back along the paper trail</i>	10
1 Securing freedom of navigation: A revolutionary fight against a barbaric past (1789–1813)	16
<i>Introduction</i>	16
<i>The imperial Roman army of rivers</i>	17
<i>Disintegrating river regimes in the Middle Ages</i>	19
<i>Revolutionary France versus deadlocked international rivers</i>	21
<i>A British perspective on France’s grand river policies</i>	24
<i>Economic weight within the European balance of power</i>	27
<i>The failed attempt of a ‘liberal’ Rhine regime under Napoleon</i>	28
2 The balance of power and the system of commerce before and after Vienna (1814–1815)	35
<i>Introduction</i>	35
<i>A pushy appeal</i>	35
<i>Freedom of navigation as a European principle</i>	38
<i>Allied cooperation and Dutch ambivalence to opening up the European rivers</i>	42
<i>Humboldt and Eichhoff at the River Congress Committee in Vienna</i>	46

vi *Contents*

- A 'Central' Commission for the Rhine, not a 'European' one* 50  
*Conclusion* 53
- 3 On behalf of the common good: Dutch-Prussian rivalry in and outside the CCNR (1816–1831) 58
- Introduction* 58  
*From Vienna to Mainz* 58  
*A road map to international cooperation: Eichhoff's 'Instruction Interimaire'* 61  
*The bone of contention: Dutch sea rights and Prussian forced transshipment rights* 66  
*The end of the CCNR? Prussian withdrawal and European interference* 74  
*Secret Dutch-Prussian negotiations* 77  
*Conclusion* 80
- 4 A river, a legislator: The origins of a riverine knowledge system in the 1830s 87
- Introduction* 87  
*What did they know?* 87  
*The administrative machine* 94  
*Mapping the Rhine* 97  
*Safety of navigation* 101  
*Conclusion* 106
- 5 Between radicals and experts: Consolidating a Rhine expert regime in the 1840s to 1860s 111
- Introduction* 111  
*Sailors vs steamers* 111  
*The first Rhine survey* 120  
*Extending the tasks of the Technical Commission: the Rheingau and the Cologne Railway Bridge* 125  
*Conclusion* 131
- 6 Running an international organisation in the context of increasing national power politics (1860–1900) 137
- Introduction* 137  
*'Ruhig und unpolitisch'* 137  
*Reducing Rhine tolls* 139

<i>A new Chief Inspector in troubled times</i>	141
<i>Abolition of the Rhine tolls after all</i>	146
<i>The protection of Rhenish salmon</i>	147
<i>Continuing Rhine surveys</i>	151
<i>Principles, norms, and institutions</i>	158
<i>Conclusion</i>	160
Conclusion: Composing a heritage and projecting the future of the CCNR (1900–1918)	164
<i>W.J.M. van Eysinga</i>	164
<i>The CCNR as part of the European security culture in the nineteenth century</i>	165
<i>Europe and beyond</i>	168
<i>What remained</i>	169
<i>Appendix 1: Members of the Central Commission for the Navigation of the Rhine 1816–1914</i>	173
<i>Appendix 2: Administration of the Octroi/Central Commission for the Navigation of the Rhine 1815–1914</i>	176
<i>Archival sources</i>	177
<i>Selected bibliography</i>	179
<i>Index</i>	190

# Illustrations

## Figures

0.1 The Rhine after Napoleon	x
1.1 Habsburg and French forces fight for the control of the Rhine crossing between Kehl and Strasbourg during the Rhine Campaign of 1796	24
2.1 Portrait of Johann Joseph Eichhoff	38
3.1 Map of the city of Mainz 1825, made by captain Hock, who also produced the first (but lost) integral map of the entire Rhine (see Chapter 4)	61
4.1 Cartographic illustration of the Rhine valley, or Rheinpanorama by Elisabeth Susanna Maria Rebecca von Adlerflycht (1811)	90
4.2 Map of the Rhine between Switzerland and Holland 1640 by the Dutch cartographer Willem Jansz. Blaeu	98
4.3 View of the Loreley	101
5.1 Metternich, symbol of the conservative power in Europe, flees to his castle Johannisberg on the Rhine after the democratic revolution in Austria in March 1848. (Caption in the original: ‘The devil has finally got the spirit-killer of Europe afloat, and is carrying him to his castle on the Rhine to pay his 33-year overdue taxes.’)	121
5.2 Lithograph of the standing bridge near Cologne	131
6.1 The Niederwalddenkmal close to Rudesheim was inaugurated in 1883. It commemorates the German unification and the founding of the empire in 1871. The lyrics of ‘Die Wach am Rhein’ and its location represent the symbolic significance of the river for the German unification	155

# Acknowledgements

For this work, I owe a big thank you to our ERC Secure team Beatrice de Graaf, Constantin Ardeleanu, Ozan Ozavci, Erik de Lange, Wouter Klem, and Susanne Keesman. The section of International Relations in Historical Perspective at Utrecht University continues to be a very stimulating environment to work in. Furthermore, I wish to thank (in alphabetical order) Ralf Banken, Marten Boon, Eckart Conze, Laurien Crump, Liesbeth van de Grift, Joost Dankers, Ido de Haan, Annelotte Janse, Paul Kardoulakis, Hein Kleemann, Samuel Kruizinga, Rob Langham, Melle Lyklema, Wim van Meurs, Max Novick, Trineke Palm, Jocelyn Perradin, Werner Plumpe, Remco Raben, Elisabeth Sears, Carla Spiegel, Jorrit Steehouder, Jossie van Til, and Ben Wubs.

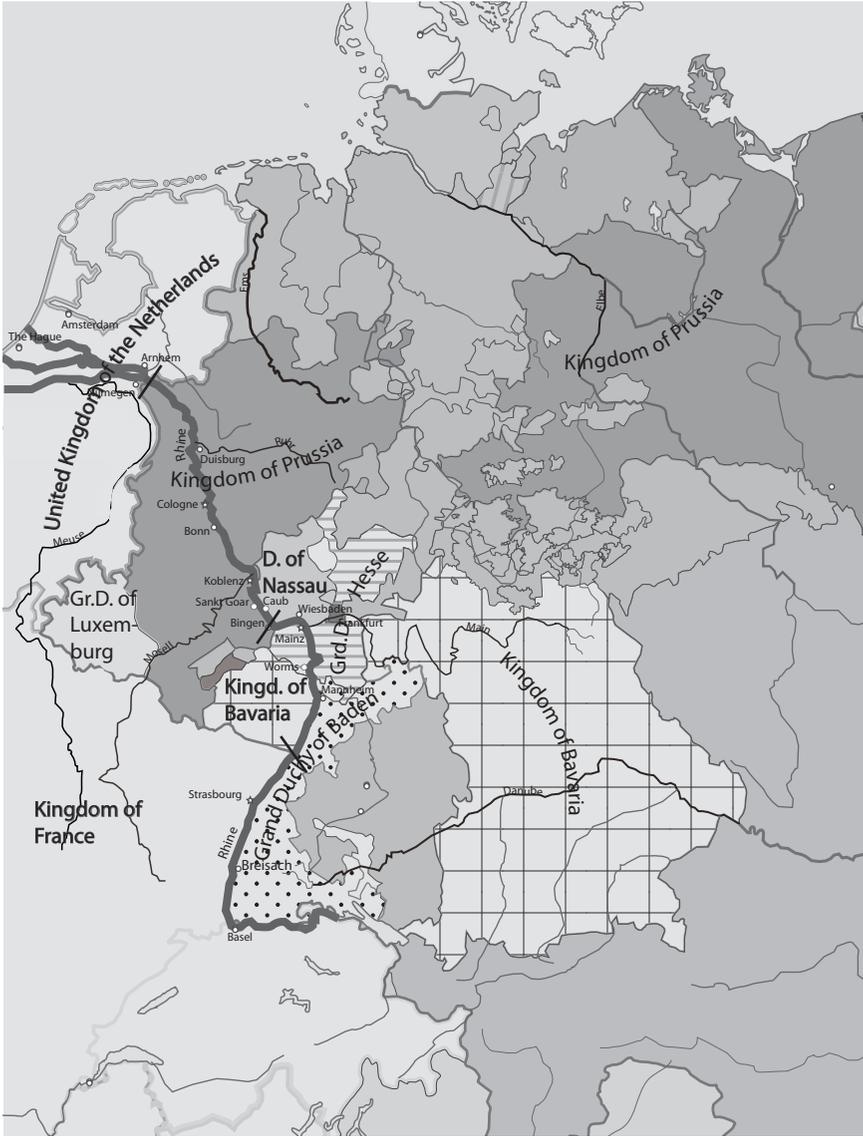


Figure 0.1 The Rhine after Napoleon

Source: [https://commons.wikimedia.org/wiki/File:Deutscher\\_Bund.png](https://commons.wikimedia.org/wiki/File:Deutscher_Bund.png) CC BY-SA-3.0,  
Source of Information: Putzger – Historischer Weltatlas, 89. Auflage, 1965. The author adapted the work.

# Introduction

## Making lifelines from frontlines<sup>1</sup>

After the horrors of the Napoleonic wars, France was never to touch the Rhine again. At least that is how German contemporaries felt. ‘One only needs to consider the European freedom of commerce to understand that France’s borders cannot be extended until the Rhine; because the Rhine allows it to gain supremacy, a preponderance, which would eternalise the French yoke and the slavery of other peoples,’<sup>2</sup> reads an 1814 pamphlet, written by the German professor of political economy, agriculture, and forestry, Johann Jakob Trunk (1745–1816).<sup>3</sup>

Trunk drew from real-life experience. In 1800 he retired to the Rhine near Worms, where he, as it turned out, would spend the final 16 years of his life. After the First Napoleonic War, Worms lost its independence and was, like all the formerly German cities on the left bank of the Rhine, seized by the French. In comparison to roads, waterways guaranteed a more secure, easier, and cheaper way of transport. Yet in those years Trunk observed how the Rhine became a commercial frontier, where navigation and trade were obstructed on a daily basis by a ‘hateful Customs army ... as often as it occurs to the variable, astute and treacherous French.’<sup>4</sup> In a private travelogue of 1811, the Dutch legal expert and diplomat, Anton Reinhard Falck (1777–1843), also pointed to the problem of the French treatment of the Rhine as a strict commercial border. Since the Continental Blockade in 1806, the Rhine had been shut off to British commerce and had fallen victim to the repressive forces of the Napoleonic customs regime.<sup>5</sup> ‘who liberates us from the Customs officers? That wonderful product of modern-day government, much more damaging to industry and honesty than medieval monasticism to true virtue and enlightenment, shows itself to the Rhine in full glory.’<sup>6</sup>

After 1798, when France’s tariff barrier was extended to the Rhine, Napoleon established three *directions des douanes* in Mainz, Bonn, and Cleves. From here, 3,200 ‘paramilitary brigades,’ as Michael Rowe calls them, guarded the river closely.<sup>7</sup> The French surveillance system was aimed against smuggling, thereby ensuring the exclusion of British commerce and protecting the tax revenues which were to finance the ongoing war. However, the strict customs quickly managed to suffocate the once vigorous international Rhine

## 2 Introduction: Making lifelines from frontlines

trade too. Falck noted that days passed by without observing a Rhine ship carrying cargo. ‘Miserable system! Miserable fate of a stream which the beneficent nature had intended for a means of communion and of reciprocal civilization, for the multiplication of the enjoyment of twenty peoples.’<sup>8</sup> Clearly, contemporaries found the causes of the unnavigability of the Rhine in human activity, rather than in natural phenomena. By turning the Rhine into a strict commercial border, the regional economic interests along the river had fallen victim to the empire’s foreign policies of waging an expensive expansionist war on the Continent and a commercial war against Britain.

When these wars had finally finished, disengaging France from the Rhine was in the commercial interest of the lands along the river, Trunk concluded. In addition, it was nothing less than a matter of cultural survival for Germany as a whole, as the writer and nationalist Ernst Moritz Arndt (1769–1860) warned in his 1814 pamphlet *The Rhine, Germany’s River, but not Germany’s Border*. In his far more radical, but widely distributed pamphlet, Arndt passionately opposed the French idea of the Rhine being a ‘natural frontier.’ According to him, the only natural frontier between people and countries was language. To protect the honour and freedom of the German people, the entire German-speaking left-bank territories were to be reconquered from the French:

Napoleon can die, all his marshals and counsellors may be buried; a very different dynasty may give orders from the Tuileries palace – if the Rhine remains French, then Germany will be freely accessible to France, then Germany will be dependent on France.

Ultimately, these circumstances would have severe implications for Germany. So-called ‘silent dangers’ lay waiting. Arndt warned that, as part of a profane and despotic cosmopolitanism, the French language and customs would spread, even in times of peace: ‘[these] dangers are nothing else but the gradual extinction and extermination of the German nature and peculiarity.’<sup>9</sup>

Besides local commercial interests and German cultural survival, the political strategic interest of Europe as a whole would benefit from France’s withdrawal from the Rhine, Arndt added. If France kept the Rhine and its lands, then it not only retained its ‘all balance-of-power revoking preponderance’ over Germany, but also over the rest of Europe. France already had significant influence in Switzerland and northern Italy, as it controlled the mountain ranges through which important supply routes crossed. A German Rhine would counterbalance French dominance, whereas a French counterweight would in turn offset too much German pressure.<sup>10</sup> Clearly Arndt, the founding father of German nationalism and intimate friend of the Prussian reformer Heinrich Friedrich Karl vom und zum Stein (1757–1831), emphasised the cultural argument and the German interest with regard to the Rhine, yet he undergirded his plea with these geo-political arguments which touched on the political viability of Europe as a whole. Just as the German professor

in political economy had done the year before, Arndt wanted the Allied Powers to separate France from the Rhine.

Trunk simply did not believe that the restoration of a European balance of power, as advocated by Britain and Austria, would secure peace over the longer term. While it was difficult to weigh all those forces and faculties which constitute a state's power against those of other states, it was just impossible to foresee any possible changes in these variables in the future. Besides, as Napoleon had shown, sometimes it might take only one person, one leader of genius, to overturn an existing political balance completely. Therefore, the European powers should constitute a preponderance of 'the good ones against the evil neighbour, the right ones against the wrong.'<sup>11</sup> It was time to restore Europe's most important commercial route to the European alliance, free it from despotic oppressors, and employ it as an economic counterweight. How? By safely embedding the river in the territories surrounding the entire north-eastern flanks of the country. In this way, the Rhine and its basin would be transformed from a frontline into an economic bulwark against France.

These statements reveal how by 1814 the intelligentsia regarded rivers and river politics as vital to the commercial wellbeing and the future security of a continent blown to pieces. In pamphlets such as these, the Rhine, but also other transboundary rivers such as the Danube and its tributaries, was rarely absent, as rivers touched on commercial, military, cultural, and political affairs, which together constituted not only the essence and viability of states, but also the essence and viability of Europe.

European rivers also remained a matter of concern in the correspondence of Europe's main statesmen. In a confidential letter in October 1814 to the Prussian Chancellor Karl August von Hardenberg (1750–1822), for example, the Austrian diplomat and chairman of the Congress of Vienna, Klemens von Metternich (1773–1859), stated that his emperor would never give up the only important city that could counter a speedy attack of an enemy army on the Lower Danube. Likewise, the emperor demanded his armies be permanently stationed in Mainz on the Rhine, as he could not 'give up the only direct commercial outlet left to him towards the northern seas.'<sup>12</sup> Other European statesmen shared military and economic concerns for the protection of navigable routes. Yet it has often been overlooked in historiography that the Rhine was, and indeed remained, one of the central concerns of the post-Napoleonic system of collective security, although not in the sense proposed by Trunk and Arndt, that is, by withdrawing France from its banks altogether.

By proclaiming the principle of 'freedom of navigation' for the major international rivers in the Paris Peace Treaty in 1814, the allies reset the configuration of Europe's main communication lines. In principle this meant that rivers, which in their navigable course separated or crossed different states, should be free to navigate and should not be prohibited to anyone with respect to commerce. The four Great Powers of Austria, Britain, Russia, and

#### 4 *Introduction: Making lifelines from frontlines*

Prussia were determined to turn European rivers into the Continent's main corridors of transnational commerce and communication, thereby rendering the European nations 'less strangers to each other' as the same Peace Treaty of Paris promised.

Thus, instead of excluding states from rivers and employing river basins as bulwarks against European powers, the four Great Powers strictly adhered to the principle of including France in a new Rhine regime based on the modern principle of freedom of navigation on international rivers. In practice, however, the four Great Powers were sailing in uncharted waters. It was far from clear how the ideas and theories of freedom of navigation would actually work in practice, let alone on the Rhine. No less than seven countries stretched along its navigable course. However, by proclaiming the principle as one of the few articles in the Paris Peace Treaty *not* dealing with territorial issues, and by putting the Rhine on the agenda of the upcoming peace congress in Vienna, the allies demonstrated their resolution to end once and for all the imperial and fragmentary scenarios which had beset the Continent's rivers with difficulties for far too long. The four Great Powers invited the Rhine states to embark on a European adventure to transform the river from a source of conflict into a source of prosperity: making lifelines from frontlines.

#### **Renewed relevance**

In Vienna the Powers established the first international organisation in modern history: the Central Commission for the Navigation of the Rhine (CCNR). This was a semi-permanent diplomatic platform consisting of one representative from each of the seven riparian states. From its seat in Mainz, the Commission was to secure the principle of freedom of navigation and to resolve all disagreements or conflicts among the riparian states concerning Rhine navigation. By the end of the nineteenth century, efficient administrative cooperation on the Rhine had resulted in an almost fully channelised river, freely navigable for everyone. Secured freedom of navigation had turned the river into *the* commercial highway for north-western Europe. Its cheapness and safety were vital for the development of the German manufacturing industry and the Dutch port economy at large.<sup>13</sup> Moreover, the principle of freedom of navigation had spread all over the world, while the Rhine administration itself had served as a prime example for international (river) regimes globally.

The CCNR in the nineteenth century has been studied before, but the historiography mainly focused on the outcomes of this organisation in terms of international norms, standards, and laws. The CCNR was one of the first international organisations which also functioned as an international court of appeal. Therefore, many studies from the end of the nineteenth century focused specifically on this novelty of jurisdictional practice in matters of Rhine navigation. Ex-Commission members with a juridical background wrote most of these studies, which they intended for an expert public of

international jurists.<sup>14</sup> It was only after the First World War that the CCNR as such became the focal point of new historical research that acknowledged the vital importance of the coordinated regulation and administration of international rivers and went beyond the juridical aspects. The two most important studies here are W.J.M. van Eysinga's *Die Zentralkommission für die Rheinschiffahrt*<sup>15</sup> and Joseph Chamberlain's *The Regime of the International Rivers*. The authors (one Dutch, the other American) were both professors of law with a special interest in international law, particularly in matters of peace and international governance.

Willem Jan Mari van Eysinga (1878–1961) held the first chair in international law in the Netherlands. In 1907 he was part of the Dutch delegation during the Second Peace Conference in The Hague and in 1919 he became the delegate to the General Assembly of the League of Nations. Furthermore, from 1910 he was the Dutch delegate to the Central Commission for the Navigation of the Rhine.<sup>16</sup> His urge to record the history of the institute had previously been satisfied in another form. During the First World War, with nothing to do at the office, he had taken the initiative to make all legally valuable documentation of the CCNR accessible for posterity in two dense volumes.<sup>17</sup> Later, after he left the Commission in 1930, Van Eysinga wrote, with the Commission's full consent and support, the first monograph on the history of the CCNR. The study was based on the Commission's archives. The general conclusion was that the Central Commission as supervisor, legal authority, and legislator played a major role as a defender of international navigation on the Rhine after the issuing of the Rhine Navigation Act in 1831. He pictured the Commission, especially in the second half of the nineteenth century, as a power of its own with respect to national governments, since it had built up expertise which provided its authority. Remarkably, Van Eysinga claimed that the Commission had been able to function so well because it was not affected by political influence and simply paused its activities in events of great international political turmoil, such as war. It is questionable, however, whether the Commission was truly immune to political influence, or if this conclusion might partly be considered the result of a biased observation.<sup>18</sup>

Immediately after the First World War the American legal scholar Joseph Perkins Chamberlain (1873–1951) became part of one of the research teams at the United States Department of State. Such teams were established with the objective of gathering and critically reflecting on all possible information which might be of help to American diplomats in settling the many ongoing international disputes during the Versailles Peace Negotiations. Crucial to international society, Chamberlain observed, was the erection of institutions which were able to reconcile the national interest of territorial sovereignty with the common interest of international commerce and communication.<sup>19</sup> In his eyes the CCNR and the European Commission of the Danube were rich historical examples of regimes that were worth studying 'as a likely avenue of future international progress.'<sup>20</sup> Despite his honest plea for such international regimes, he did not turn a blind eye to their limitations.

## 6 *Introduction: Making lifelines from frontlines*

In contrast to Van Eysinga, Chamberlain attributed much influence to political developments and power relations on the functioning of the Commission. After all, no riparian state had ever considered the Rhine issue in a broader perspective than that of its own national interests. This principle was also reflected in the institutional set-up of the Commission. In 1815 it was decided that the Commission would be a gathering of representatives rather than a governing body. Chamberlain's study shows that although the Central Commission had a technical committee and an international court that checked compliance with the rules, it was consistently sidelined in important matters such as toll collection, transit taxes, and the physical improvement of the river for navigation. In these instances it was the riparian countries which would reach agreements on the basis of bilateral negotiations, not the Commission members.<sup>21</sup>

Moreover, Chamberlain observed that the political power of these members was not equally divided. With the economic integration of the country into the German Customs Union, and the political integration in 1871, the power of Prussia, or Germany, increased vis à vis the Netherlands.<sup>22</sup> Chamberlain noted that the existence of a Central Commission may have evoked the feeling of an international river community and was unique and important in international justice, but

It was the individual interest of particular states as that interest was developed by the change in means of navigation and in the character of commerce as well as by political ends, which was the motive factor in the abolition of man-made obstacles to the free use of the great artery of commerce.<sup>23</sup>

Inasmuch as these two contributions paved the way for a first institutional oversight of the workings of the CCNR, their focus on the legal outcomes made them blind to the more political historical developments that pushed the CCNR on its course to further cooperation. They also did not pay much attention to the practicalities of the CCNR's workings on the ground, nor did they fully delineate the autonomy, the leeway, and the limits of the CCNR versus the powers of Europe. This study, therefore, offers the first analysis of the formation and dynamics of the CCNR as a security community that negotiated shared interests and imagined threats and shaped administrative and regulative practices for those that used or interacted with the Rhine as a transport resource.<sup>24</sup>

The debate about the political agency of the CCNR indeed raises a couple of questions that have not been answered extensively before. What was the intrinsic significance of the Commission as a political actor over the course of the nineteenth century?<sup>25</sup> And what explains and justifies its ongoing existence as an international organisation?<sup>26</sup> Most of all, did the Commission consider itself an agent to secure peace, prosperity, and security? Monographs on the CCNR are scarce, mostly outdated, and often commissioned by the

Commission itself. None of them are based on international multi-archival research. Despite the obvious relations that contemporaries observed (in 1815 as well as 1919) between the principle of freedom of navigation and the common interest, or between rivers and European security and prosperity as such, the CCNR has never been studied as part of the broader security system which the European powers jointly established after the end of the Napoleonic wars. Moreover, no study has ever focused on the Commission's own motives regarding, and its reflections on, security and prosperity during the nineteenth century.<sup>27</sup>

### **The Rhine as part of a post-Napoleonic security system**

After 1815 the Rhine became part of a new European-wide security system. Vienna brought about a new territorial composition of Europe and the construction of a 'bulwark system' to restrain possible French aggression. Additionally, the Congress resulted in the installation of an Allied Council, putting in place effective military, administrative, and financial control over France, the former aggressor.<sup>28</sup>

With a similar aim, but on a European level, the Powers institutionalised plurilateral conferences with follow-up conferences during which the major European powers decided on existing issues and imposed their decisions by force.<sup>29</sup> For the purpose of maintaining the balance of power and the new order they had jointly designed, the individual countries were to adhere to the outcomes of the conferences, sometimes at the expense of their direct national interests. This Congress System, which depended upon the multilateral regulation of potential conflicts, has been studied extensively by historians. It is understood as a form of security or peace management, since it helped create new forums for decision making and diplomatic negotiation in peacetime, which transcended the bilateral diplomacy of previous centuries.<sup>30</sup> What has largely been forgotten and not taken into account in the historiography of the post-Napoleonic European security regime is that rivers were an integral part of this project to bring back security to the Continent. All Allied Powers recognised the Rhine as a potential source of (in)security within the European balance of power.

First and foremost, the Rhine can be seen as part of the European security project after 1815 as the development of its commerce and navigation was regarded as an essential prerequisite for increasing prosperity on the Continent. The Rhine was the largest underused international trade route in Europe. Contemporaries travelling the Rhine, such as the Dutch diplomat Anton Falck in 1811, were astonished by the impoverished state of once flourishing cities like Cologne and Mainz, let alone the villages and agrarian communities between them. By making the Rhine work, not only in its individual pieces, but in its entirety, the European powers wanted to provide the European people with new perspectives on developing the river's resources to a degree that would enable them to gain wealth and secure a long-term

livelihood. In addition, increasing communication and commerce would have beneficial consequences for the respective state treasuries through taxing economic activities. And finally, a free Rhine, or any international European river, so the Allies argued, would ‘facilitate the communications between nations, and continually to render them less strangers to each other.’<sup>31</sup>

The principle of freedom of navigation was a concrete measure which benefited the common interest by creating wealth. Additionally, the measure allowed the European riparian states to take equal advantage of the river’s transport resources, enabling them to share the subsequent economic prosperity. Thus, besides wealth creation, the measure was to result in a redistribution of wealth, which was equally important in terms of creating European stability and security. This logic also explains the remarkable difference among the other European security measures in terms of international cooperation and inclusivity. The ‘bulwark system’ and the Allied Council were established among the Allies to contain and counter French aggression. The former foe could only accede to the Congress System in 1818, during the Congress of Aix-la-Chapelle. Things were different when it came to European rivers. In matters of river policy, there were provisions for the immediate participation of France. A secured long-term livelihood and steady state revenues for France were thought to be beneficial consequences for European stability and security. In fact, for the European people and for the European state system as a whole, there could be little security without some level of prosperity in each individual country.

This becomes even clearer when looking at the flip side of the security perspective of the measure. The introduction of the principle of freedom of navigation was not only to benefit vital common interests, but also to protect Europe from political threats. Throughout Roman times the source of contention with regard to international rivers stemmed from the situation in which a hegemon took control over them, thereby endangering a just distribution of the river’s resources. During the Middle Ages, the source of controversy lay in the fact that the many individual interests hampered the very development of the river’s resources (more on this follows in [Chapter 1](#)). By establishing the principle of freedom of navigation of international rivers in 1815, the European powers united both in their battle against hegemonic ambitions and the ‘terror’ of arbitrariness and unpredictability on international rivers.

An international policy which connects economic development with peace in general or the freedom of navigation with security in particular is mainly known from its twentieth-century examples. After the First World War, US President Woodrow Wilson considered wealth creation and distribution a prerequisite to peace and security.<sup>32</sup> Robert Schuman launched his plan for a European Coal and Steel Community out of a similar logic in 1950.<sup>33</sup> Just as after both world wars, in 1815 security in Europe was inseparable from prosperity.<sup>34</sup>

The relation between the two concepts, security and prosperity, is a complex one. We can distinguish a mutual causality, as security is needed to

generate prosperity, but prosperity is equally essential for creating security. It also goes the opposite way: insecurity results in hardship, while hardship generates insecurity in turn. Furthermore, political scientists regard both concepts as essentially contested and normative, with an intrinsic orientation towards the future.<sup>35</sup> This conceptual vagueness makes both terms malleable and especially handy in political discourse.<sup>36</sup> This study goes along with this understanding of security and prosperity, and adds that their meanings are constituted by a process of interaction and negotiation – also in reference to each other. This linkage between security and prosperity I call the security-prosperity nexus: that is, the notion that modern security thinking and security practices cannot be understood without accounting for the prosperity considerations and prosperity policies of the concerned parties.

For a good understanding of the performative qualities of these constructed concepts, it is necessary to situate them in their historical contexts. This book uncovers how contemporaries used, and reflected on, the corresponding functional qualities of the concepts as well as on the mutual causal relationship between them. That causal relationship makes prosperity and security, as discursive notions, key components in the study of the European security culture after 1815. What makes it even more interesting is to understand how the relationship between the two concepts differed over time. This study, therefore, engages with the tradition of Werner Conze's and Reinhart Koselleck's *geschichtliche Grundbegriffe* and aims to trace the historical semantics of fundamental concepts in political-societal language. Within the *Grundbegriffe* series, Mohammed Rassem shows that the terms 'security' and 'prosperity' have historically been very close friends. In Roman imperial vocabulary, *salus* could mean three things: 'well,' 'welfare,' and 'security.' In addition, it could refer both to a private person or to the state as a whole. This was why 'prosperity' became increasingly equated with the concept of 'common good.'<sup>37</sup> Between the sixteenth and the eighteenth centuries, prosperity and security became the key objectives of states. After 1815, I argue, these objectives were adopted by various condominiums of European powers as well.

In order to historicise security, Beatrice de Graaf ingeniously suggests incorporating the subjective notion of security within its definition: 'the organised anticipation of being unharmed in the future.'<sup>38</sup> Correspondingly, I will historicise prosperity by defining it as 'the organised anticipation of maintaining livelihood in the future.' How the CCNR materialised the principle of freedom of navigation seems an overly simple question. However, most literature on this topic is concerned solely with the legal history and omits investigating the men on the ground, such as the commissioners, the extended administration of the CCNR, the experts, and the politicians involved.

Thus, *The Rhine and European Security in the Long Nineteenth Century: Making Lifelines from Frontlines* explores how the most fundamental change in the history of international river governance – that is, the proclamation of

the principle of freedom of navigation and the establishment of the CCNR – arose from European security concerns. In addition, this research shows how the CCNR created a Rhine regime that in turn produced, enabled, and influenced a collective security culture as an open, contested process of community formation on the basis of shared interests, threat perceptions, and ensuing practices.<sup>39</sup> It aims to do so by first looking at how the relationship between security and prosperity (the security-prosperity nexus) explicitly emerges in the discussions among the commissioners and between the commissioners and third parties that were involved, such as governments, experts, and local stakeholders, and how by these exchanges the agenda was set and practices, norms, and standards serving the freedom of navigation of the Rhine in the long nineteenth century took shape. Second, it demonstrates how the CCNR can be understood as a forum for communication able to reconcile or depoliticise conflicting interests between the riparian states, thereby preventing the escalation of conflicts, creating common ground, and providing a soft compliance mechanism able also to restrain the more powerful riparian states within the Commission. Third, it shows how the CCNR secured its own position in the course of the nineteenth century by adapting its organisation, working method, and scope in a timely fashion. This research focuses on the long nineteenth century, ending in 1919, when the Versailles Peace Treaty enforced a major institutional modification of the CCNR. This modification also ensued from a European security concern, but it implied a very different approach to making Europe safe again: by securing Great Power involvement in what until then had been exclusively riparian affairs.<sup>40</sup>

### **Rowing back along the paper trail**

For this study, I was fortunate to be able to use the recently unlocked archives of the CCNR in the *Archiv Départemental du Bas-Rhin*.<sup>41</sup> The archive is extremely rich as it contains all protocols from the Commission since its very first meeting in 1816. For the early period, the archive also contains helpful alphabetically arranged indices, drafted by the Chief Inspector of the Commission, in order to navigate quickly and efficiently through the thousands and thousands of pages of protocols. In addition, the saved agendas of the sessions between 1832 and 1916 provided me with a concise overview of the issues discussed. What needs to be taken into account here is that the protocols merely reflect the diplomatically approved minutes of the official sessions, which means that they do not give insight into what took place at a less official level. Correspondence and negotiations outside the Commission's offices are not on file in these archives. It also means that the protocols sometimes reflect the decisions taken, rather than the process of how the decisions were reached. Finally, it means that the files are rather self-effacing, gracious, and polite, rather than open, passionate, and revealing, although, very occasionally, the protocols culminated in bitter tirades when decisions could not be reached for years.

In this study, I counter this problem by complementing the official CCNR files with materials from various national archives. All delegates in the CCNR had a rather active correspondence with their respective governments and relevant ministries. These files are not necessarily (and sometimes even far from) diplomatic. They are very revealing in setting out how decisions were reached and what different interests were at play. Unfortunately, the CCNR archives lack any records concerning the permanent authority of Rhine navigation inspectors. However, the protocols do integrally incorporate the most important letters from the Chief Inspector. Therefore, the study of these protocols, complemented with the files from the national archives, not only gives us an excellent insight into the first international organisation as such, but also explains how security-prosperity considerations were a driving force in history.

To facilitate this exploration the book is organised into six chapters. [Chapter 1](#) shows how in the early 1800s the principle of freedom of navigation of international rivers emerged as a moral appeal and an international legal practice under French hegemony. Contemporaries understood the principle as a political answer to the age-old problem of anarchic river exploitation and as a measure to protect the political economy of France's ever-expanding empire. Thus, by organising the removal of the threat of arbitrary taxations and regulations to navigation and commerce on the Rhine, France instantly produced a new threat, namely that of shaking up the European balance of power, especially by excluding Britain from the benefits of a prosperous Rhine.

[Chapter 2](#) explains that before and during the Congress of Vienna in 1815 the Great Powers emphasised the significance of freely navigable rivers for European prosperity and lasting peace. However, the majority of the Rhine states were wary of impairing their recently regained sovereignty by the establishment of a powerful international executive body governing the navigable Rhine. These conflicting perspectives were clearly reflected in the ultimate result of the Congress: the proclamation of the freedom of navigation as a *European* principle and the establishment of the Central Commission for the Navigation of the Rhine, which consisted merely of the respective riparian states.

[Chapter 3](#) turns to the initial phase of the CCNR in Mainz. It develops the argument that the riparian representatives established a semi-diplomatic forum that was intended to protect the 'common good.' However, the concept of 'common good' was understood and defended in such conflicting ways that it almost heralded the end of this unprecedented experiment of international cooperation. Despite the enormous challenge, the riparian condominium eventually found common ground in its aversion to the threatening interference of the Great Powers that clung to the CCNR as a European prosperity project.

[Chapter 4](#) then shows that after the rules and regulations for the Rhine regime had been established, the Commission was confronted with the problem that keeping the river safe for navigation required a continuous flow of reliable, standardised, and up-to-date information on the geophysical

character and the navigable conditions of the Rhine. In the 1830s, the politicised reports from the respective national authorities and the observational data from its administrative machine were therefore supplemented with the input from external technical experts. The discussion of what safety of navigation actually entailed led to the formation of a new range of norms such as transparency, reciprocity, predictability, and an increasing confidence in the human ability to govern a river in accordance with technological laws.

Chapter 5 shows how the end of the 1840s turned out to be a decisive period for the (mal)functioning of the CCNR. With an international crisis concerning the Rhine and a democratic and technological revolution of steam shipping unfolding in its basin, it became uncertain whether the new Rhine regime would actually bring prosperity and security to all the inhabitants of its banks. The failed experiment of the CCNR to resolve a violent dispute between radical sailors and steam shipping companies redetermined the protection of the freedom of navigation, rather than the security of livelihood, as the main mandate of the CCNR. It also reconstituted the CCNR as an elite organisation that tried to depoliticise inter-riparian conflicts on the navigability of the Rhine by establishing an ad hoc Technical Commission consisting of hydraulic engineers.

Chapter 6 argues that in the context of Prussia's power play and the growing competition of the interregional railway network after 1860, the full institutionalisation of the Technical Commission and the abolition of the figure of the Chief Inspector proved essential moves in successfully mitigating the political tensions within the Commission, and in keeping the Rhine safe. The Technical Commission generated a coherent set of norms and became responsible for a wider range of assessment activities. Thereby it increased its potential to steer the convergence of riparian politics regarding the freedom of navigation of the Rhine. By the turn of the century the protection of the freedom of navigation on the Rhine had been completely depoliticised, and the river had turned into the most prosperous waterway in Europe.

## Notes

- 1 The research leading to this book has received funding from the European Research Council under the European Union's Seventh Framework Programme (FP/2007–2013)/ERC Grant Agreement n.615313.
- 2 Johann Jakob Trunk, *Des französischen Ministers, Kardinals Fleury, Apostel an sämtliche Mächte und souveräne Staten in Europa; oder untrügliches Mittel, alle Kriege und Volksunruhen, ohne stehende grose Heere und kostspielige Vestungswerke, in Zukunft leicht zu verhüten: folglich auch die seufzenden Völker, mit Aushebung der Rekruten, so, wie mit der bißher ungeheuern Last von Steuern und andern drückenden Abgaben zu verschonen* (Mainz: Johann Wirth, 1814), 27.
- 3 Richard Heß, 'Trunk, Johann Jakob,' in *Allgemeine Deutsche Biographie* 38 (Leipzig: Thienemann-Tunicius, 1894), 689–690, accessed 28 March 2018, [www.deutsche-biographie.de/pnd115368469.html#adbcontent](http://www.deutsche-biographie.de/pnd115368469.html#adbcontent).
- 4 Trunk, *Des französischen Ministers*, 26–27.
- 5 Robert Mark Spaulding, 'Rhine River Commerce and the Continental System,' in *Revisiting Napoleon's Continental System. Local, Regional and European*

- Experiences*, eds. Katherine B. Aaslestad and Johan Joor (Palgrave Macmillan: London, 2015), 114–132.
- 6 Nationaal Archief Den Haag (NL-HaNA), 2.21.006.48, nr. 58, ‘Notes taken during a voyage along the Rhine and relating to that voyage, August–October 1811.’
  - 7 Michael Rowe, *From Reich to State. The Rhineland in the Revolutionary Age, 1780–1930* (Cambridge and New York: Cambridge University Press, 2003), 104. Also Michael Rowe, ‘Economic Warfare, Organized Crime and the Collapse of Napoleon’s Empire,’ in *Revisiting Napoleon’s Continental System. Local, Regional and European Experiences*, eds. Katherine B. Aaslestad and Johan Joor (Palgrave Macmillan: London, 2015), 187–203.
  - 8 NL-HaNA, 2.21.006.48, nr. 58, ‘Notes taken during a voyage along the Rhine, 1811.’
  - 9 E.M. Arndt, *Der Rhein. Deutschlands Fluss, aber nicht Deutschlands Gränze* (Leipzig: Wilhelm Rein, 1813), 66–67, 76–77, 80.
  - 10 *Ibid.*, 41–45.
  - 11 Trunk, *Des französischen Ministers*, 67.
  - 12 Hessisches Staatsarchiv Darmstadt (HStAd), E 1 J 10, copy of a letter from Metternich to Hardenberg, 22 October 1814.
  - 13 Hein A.M. Klemann and Joep Schenk, ‘The Rhine in the Long 19th Century. Creating the Lower Rhine Region,’ in *Transnational Regions in Historical Perspective*, eds. Ben Wubs, Hein A.M. Klemann, and Marten Boon (London and New York: Routledge, 2020).
  - 14 J.B.E. von Traut, *Die Zentral-Kommission für die Rheinschiffahrt und ihre Rechtsprechung von 1832–1911* (Strasbourg: W. Heinrich, 1912). Otto von Völderndorff, *Die richterliche Thätigkeit der Centralcommission für die Rheinschiffahrt von 1832 bis 1894* (Frankfurt am Main: Druck von Krebs-Schmitt Nachf. Aug. Weisbrod, 1894). For a more recent contribution in this line: Marc de Decker, *Europees internationaal rivierenrecht* (Antwerp and Apeldoorn: Maklu, 2015).
  - 15 W.J.M. van Eysinga, *Die Zentralkommission für die Rheinschiffahrt; Geschichtliche Darstellung. Verfasst auf Veranlassung der Zentralkommission für die Rheinschiffahrt* (Leiden: A.W. Sijthoff, 1936).
  - 16 C.G. Roelofsen, ‘Eysinga, jhr. Willem Jan Mari van (1878–1961),’ *Biografisch Woordenboek van Nederland*, accessed 28 February 2019, <http://resources.huygens.knaw.nl/bwn1880-2000/lemmata/bwn3/eysinga>.
  - 17 Zentral-Kommission für die Rheinschiffahrt, Rheinurkunden. Sammlung zwischenstaatlicher Vereinbarungen, landesrechtlicher Ausführungsverordnungen und sonstiger wichtiger Urkunden über die Rheinschiffahrt seit 1803 I (1803–1860) (The Hague: Nijhoff and München and Leipzig: Duncker & Humblot, 1918), Nrn. 1–300. Zentral-Kommission für die Rheinschiffahrt, Rheinurkunden. Sammlung zwischenstaatlicher Vereinbarungen, landesrechtlicher Ausführungsverordnungen und sonstiger wichtiger Urkunden über die Rheinschiffahrt seit 1803 II (1860–1918) (The Hague: Nijhoff and München and Leipzig: Duncker & Humblot, 1918), Nrn. 301–670.
  - 18 Van Eysinga, *Die Zentralkommission für die Rheinschiffahrt*, 43, 49–50, 68–70, 78, 84, 101–103.
  - 19 J.P. Chamberlain, *The Danube. In Five Parts* (Washington, 1918). *Ibid.*, *The Regime of the International Rivers: Danube and Rhine, Studies in History, Economics, and Public Law*, vol. CV, no. 1 (New York: Columbia University Press, 1923), 5–7. Constantin Ardeleanu, *The European Commission of the Danube: ‘An Experiment in International Administration’* (Leiden: Brill, forthcoming), introduction.
  - 20 Chamberlain, *The Regime of the International Rivers*, 7.
  - 21 The most recent monograph on the Commission, a CCNR-commissioned anniversary book edited by a dozen European historians, does not provide more clarity

- in this regard about the status of the Commission as an autonomous international body. Instead it focuses on the historical development of Rhine navigation since 1815. *The Central Commission for the Navigation of the Rhine (CCNR), 1815–2015. 200 Years of History* (Strasbourg: CCR, 2015); in Dutch, *Centrale Commissie voor de Rijnvaart, 1815–2015. 200 Jaar geschiedenis* (Straatsburg: CCR, 2015). In a separate publication by one of the authors of the jubilee book it appears, however, that up to the First World War, the Central Commission was largely the plaything of the most powerful riparian state. Prussia used the Central Commission as ‘a tool that made international politics more efficient.’ Hein A.M. Klemann, *The Central Commission for the Navigation on the Rhine, 1815–1914. Nineteenth Century European Integration*. ECHR working paper: ECHR-2013–1 (Rotterdam, 2013), 28–31.
- 22 Chamberlain, *The Regime of the International Rivers*, 175–185, 195–198, 204, 209–211, 220–230.
- 23 *Ibid.*, 230. The Dutch historian Nusteling even goes so far as to say that the Central Commission had no influence on the most important measures to relieve Rhine navigation after 1831, because all the relevant decisions had been taken by the Prussian and the Dutch governments outside the Commission. H.P.H. Nusteling, *De Rijnvaart in het tijdperk van stoom en steenkool 1831–1914: een studie van het goederenvervoer en de verkeerspolitiek in de Rijndelta en het achterland, mede in verband met de opkomst van de spoorwegen en de concurrentie van vreemde zeehavens* (Amsterdam: Holland Universiteits Pers, 1974), 74–76.
- 24 <https://securing-europe.wp.hum.uu.nl/about/>.
- 25 Robert Mark Spaulding, ‘Anarchy, Hegemony, Cooperation. International Control of the Rhine River, 1789–1848’ [2007], 2. [www.ccr-ikzr.org](http://www.ccr-ikzr.org). Robert Mark Spaulding, ‘Revolutionary France and the Transformation of the Rhine,’ *Central European History* 44, no. 2 (2011): 203–226. Guido Thiemeyer and Isabel Tölle, ‘Supranationalität im 19. Jahrhundert? Die Beispiele der Zentralkommission fuer die Rheinschiffahrt und des Octroivertrages 1804–1851,’ *Journal of European Integration History* 17 (2011): 177–196. Yuan (Joanne) Yao, *Constructing the Ideal River: The 19th Century Origins of the First International Organizations* (unpubl. diss., London, 2016). Or for the Danubian regime, Luminita Gatejel, ‘Imperial Cooperation at the Margins of Europe: The European Commission of the Danube, 1856–65,’ *European Review of History: Revue européenne d’histoire* 24, no. 5 (2017): 781–800.
- 26 F.S.L. Lyons, *Internationalism in Europe. 1815–1914* (Leiden: A.W. Sijthoff, 1963), 12–13, 18, 53–59, 366–367. Norbert Götz, ‘Epilogue: The Alpine system,’ in *Regional Cooperation and International Organizations: The Nordic Model in Transnational Alignment*, eds. Norbert Götz and Heidi Haggren (London and New York: Routledge, 2009), 252. Bob Reinalda, ‘Nederland en de Centrale Commissie voor de Rijnvaart 1815–1868. Een moeizaam intergouvernementeel leerproces,’ in *Jaarboek Parlementaire Geschiedenis 2012. De Verenigde Staten van Europa* (Amsterdam: Boom, 2012), 25–34.
- 27 The most important exception here is Ardeleanu, ‘*An Experiment in International Administration*,’ which, however, focuses on the European Commission of the Danube and not on the earlier Central Commission for the Navigation of the Rhine.
- 28 Beatrice de Graaf, *The Balancers. Fighting Terror after Napoleon* (Cambridge: Cambridge University Press, forthcoming).
- 29 Lyons, *Internationalism in Europe*, 12. Bob Reinalda, *Routledge History of International Organizations: From 1815 to the Present Day* (London and New York: Routledge, 2009), 3–34. See also A. Iriye, *Global Community: The Role of International Organizations in the Making of the Contemporary World* (Berkeley: University of California Press, 2002), 10–11. M. Herren, M. Rüesch, and C. Sibille,

- Transcultural History: Theories, Methods, Sources* (Berlin and New York: Springer, 2012), 73. De Graaf, *The Balancers*, introduction.
- 30 Beatrice de Graaf, 'Nederland en de collectieve veiligheid,' in *De wereld volgens Nederland. Nederlandse buitenlandse politiek in historisch perspectief*, eds. Jacco Pekelder, Remco Raben, and Mathieu Segers (Amsterdam: Boom, 2015), 43. M. Jarrett, 'The "Congress System": The World's First "International Security Regime",' unpublished paper (2015). In addition, Vienna codified diplomatic customs and the institution of permanent neutrality. A. Kaczorowska, *Public International Law*, 4th ed. (London and New York: Routledge, 2010), 20. M. Schulz, *Normen und Praxis: das Europäische Konzert der Grossmächte als Sicherheitsrat, 1815–1860* (München: R. Oldenbourg, 2009), 2–13.
  - 31 Edward Baines, *History of the Wars of the French Revolution, From the Breaking Out of the War, in 1792, to the Restoration of a General Peace, in 1815. Comprehending the Civil History of Great Britain and France During that Period*, II (London: Longman etc., 1817), 344.
  - 32 President Woodrow Wilson, 'Peace Without Victory' speech, 22 January 1917. 64th Cong., 23 Sess. Senate Document No. 685: 'A League for Peace,' accessed 29 January 2020, <http://web.mit.edu/21h.102/www/Wilson%20>.
  - 33 Hans Merket, *The EU and the Security-Development Nexus: Bridging the Legal Divide* (Leiden: Brill, 2016), 27.
  - 34 J. Peter Burgess and Taylor Owen, eds. 'Special Section: What Is "Human Security"?' *Security Dialogue* 35, no. 3 (2004): 345–387.
  - 35 Stéphane Leyens, 'Towards a Transcultural Definition of Prosperity. Insights from the Capability Approach,' in *Redefining Prosperity*, ed. Isabelle Cassiers (London and New York: Routledge, 2015), 41–56. Wilfried Schmitz, 'Wohlstand,' in *Bonner Enzyklopädie der Globalität*, eds. L. Kühnhardt and T. Mayer (Wiesbaden: Springer VS, 2017), 795–809. W.B. Gallie, *Essentially Contested Concepts*, Proceedings of the Aristotelian Society, n.s., 56 (1956): 167–198. Barry Buzan, *People, States & Fear. The National Security Problem in International Relations* (Brighton: Harvester Books, 1983).
  - 36 Juhani Koponen, 'The Security-Development Nexus, State Fragility and State Building. A Beginner's Guide to Discussion and some Suggestions for Orientation,' in *Exploring the Security-Development Nexus. Perspectives from Nepal, Northern Uganda and 'Sugango'*, ed. Henni Alava (Ministry for Foreign Affairs Finland, 2010), 23–42. See also 2010, *Security Dialogue* 41, no. 1: 5–120, special issue on security-development nexus revisited.
  - 37 Mohammed Rassem, 'Wohlfahrt, Wohltat, Wohltätigkeit, Caritas,' in *Geschichtliche Grundbegriffe. Historisches Lexikon zur politisch-sozialen Sprache in Deutschland* 7, eds. Otto Brunner, Werner Conze, and Reinhart Koselleck (Stuttgart: Verw.-Z., 1992), 595–636.
  - 38 Beatrice de Graaf and Cornel Zwierlein, 'Historicizing Security. Entering the Conspiracy Dispositive,' *Historical Social Research* 38, no. 1 (2013): 52.
  - 39 Beatrice de Graaf, *Teugen de terreur. Hoe Europa veilig werd na Napoleon* (Amsterdam: Prometheus, 2019), 24. Beatrice de Graaf, 'Bringing Sense and Sensibility to the Continent. Vienna 1815 Revisited,' *Journal of Modern European History* 13, no. 4 (2015): 447–457.
  - 40 Guido Thiemeyer, 'Die Zentralkommission für die Rheinschiffahrt und der Vertrag von Versailles,' Vortrag Historical colloquy 'Central Commission for the Navigation of the Rhine 200 Years of History,' Strasbourg, 18 June 2015.
  - 41 Archiv Départemental du Bas-Rhin (AdBR) Strasbourg, inventory number 212J.

# 1 Securing freedom of navigation

## A revolutionary fight against a barbaric past (1789–1813)

### Introduction

‘This is not solely about ... the rivalry of some towns on the Rhine,’ a Koblenz merchant protested in 1800, criticising poisoned relations between commerce and politics in the old merchant towns of Cologne and Mainz.

It is about several nations, crying out against two cities; it is about the nineteenth century, a civilised century, crying out against the barbarism of the thirteenth century; it is about a principle acknowledged today by all the civilised nations, crying out in favour of commerce and industry, and against an odious privilege, which gives rise to the ignorance of nations, and which will infuse the abuse of power.<sup>1</sup>

The poisoned relations between commerce and politics on the Rhine had their origin in the Middle Ages. Lords and towns like Mainz and Cologne received privileges such as staple rights, benefiting their treasuries, but affecting trade and traffic. This chapter immerses itself in the troubled waters of sharing international rivers and distinguishes two archetypical scenarios of rivalry, i.e. an ‘imperial’ and a ‘fragmentary’ scenario, both of which have harmed the allocation of rivers’ resources for hundreds of years. The chapter then shows how, after 1789, Revolutionary France attempted to solve this age-old problem of river rivalry by imposing the principle of freedom of navigation on the international rivers that crossed its territory, and justified the imposition of the principle by presenting it as a measure against the barbaric, feudalist past. However, other European powers regarded French river policies as a measure to protect the political economy of its ever-expanding empire, thereby harming the European balance of power. Indeed, before the imperial scenario in revolutionary disguise could be fully realised on the Rhine, Napoleon was losing terrain. Nevertheless, the institution of an international Rhine authority, and the principle of the freedom of navigation would survive the emperor’s downfall. This chapter shows how in the early 1800s the principle of freedom of navigation of international rivers emerged as a moral appeal and an international legal practice in revolutionary Europe.

## The imperial Roman army of rivers

For centuries the Rhine, and international rivers in general, had been as much a source of prosperity as a source of rivalry. Rivers are a source of life; in fact, they were the settling places of the first civilisations, providing water for irrigation for agriculture, for drinking and sanitation, and for generating energy from water mills. Moreover, navigable rivers connect people with markets in other villages, other cities, or other states. Rivers are part of an infrastructure that determines the economic viability of states. This makes controlling rivers and navigation a policy of existential importance and sharing international rivers a tricky business as a state depends on the reciprocal willingness of another state or authority it does not control. In fact, the very word ‘rival’ originates from the Latin *rīvālis* and means ‘one who uses the same stream.’<sup>2</sup>

The urge to control the river’s resources when states have similar interests can lead to two ‘rivalry’ scenarios, with two very different outcomes for the river’s allocation. One scenario I call the ‘fragmentary’ scenario. In this situation rival authorities manage to claim and maintain control over part of the river’s resources. This leads to a fragmentation of the river’s resource regime and ultimately to an underdevelopment of the river’s resources, such as navigation. In the second scenario, one of the riparian authorities manages to incorporate the entire river within its borders. This ‘hegemonic’ scenario can result in full development, but simultaneously will lead to an unequal distribution of the river’s resources. A brief review of 2,000 years of history demonstrates that both the fragmentary and the hegemonic scenarios had wide-ranging consequences for the development of navigation on European rivers and for threatening power disparities.

The way the Roman Empire dealt with navigable rivers can be best described, not surprisingly, as the imperial scenario. Incorporating and controlling rivers was an important part of the expansionist policies of the empire. It is a truism to state that Romans found the rivers in their empire important. This was either because they constituted a natural border that could protect the empire from foreign invasions, or because waterways were used as roads or ‘bridges,’ that fostered interaction and stimulated trade and traffic along their course.<sup>3</sup> As the words of the Roman historian Tacitus seem to indicate, possibly both qualities of water systems, i.e. demarcating the borders of, and fostering interaction within, the empire were an integral part of the operational strategy of securing the *Pax Romana*: ‘the empire was fenced in by the ocean and rivers far remote, the legions, the provinces, the navy, and all things were systematically connected,’ he wrote somewhere around 110 AD.<sup>4</sup>

Indeed, the Danube, the Rhine, but also the Euphrates constituted the most important militarised frontier zones of the Roman Empire. From the first to the second century extensive river fleets were built, such as the *Classis Germanica* for the Rhine. Initially these fleets executed offensive movements, but it is doubtful whether these were successful in the long run. Rather, the fleets

became important in a defensive way, most of all by securing the freedom of navigation within the empire. This was necessary to supply the frontier garrisons, and move animals, building materials, and troops, but also to patrol the river course and deter hostile or illegal river crossings.<sup>5</sup> One shouldn't forget the importance of logistics when it comes to supplying a Roman legion. In early imperial times, economically poorly developed frontier zones could not supply the troops sufficiently. To carry the 225 tons of grain and 13.5 tons of fodder that was needed each month to supply a legion of 5,000 men, the Romans depended on the navigable waters of the Rhône, the Saône, and the Moselle, leading towards the Rhine frontier.<sup>6</sup> Up to the third century AD legions constituted the backbone of the Roman army and practically all important legionary bases in continental Europe were located by a river, primarily the Rhine and the Danube.<sup>7</sup>

The use of rivers as defence lines and transport roads was enhanced artificially by manipulating the natural aquatic environments. For example, Tacitus mentions the construction of significant waterworks under the command of general Drusus on the Rhine in 12 BC. The waterworks of Drusus, if they really existed, consisted of a dam and some canals that were meant to redistribute the water from a southern to a more northern river in the Rhine-Meuse delta, thereby creating a better natural line of defence against the Germanic tribes and improving the navigability of the north-south route for transports of commodities and troops.<sup>8</sup> The Romans could not solve all problems of navigability. The few existing rivers in the Mediterranean zone suffered from droughts in the summer and turbulence and floods in the winter, and remained therefore far less navigable. Nevertheless, one can state that, overall, rivers were essential to the Roman imperial peace, or, as a renowned author on the topic likes to put it, the Roman army was an army of rivers.<sup>9</sup>

The central importance of rivers in the Roman Empire for peace and security not only resulted in the physical adaptation of the rivers themselves, but also in institutional innovations. To work as efficient channels of communication it was mandatory to keep tariffs low and secure safe navigation. By law, Romans could freely navigate the rivers provided that they were a member of a boatmen's association and paid tolls in certain places. River navigation was a highly organised trade, and boatmen's associations were very influential in the empire, yet freely accessible to all qualified skippers. The tolls were kept low and were merely intended to finance the maintenance of the waterways and to construct towpaths along the rivers, so as to facilitate upstream traffic. The right of freedom of navigation also meant that no one could be banned from the river or could be forced to load or unload his goods. Constructing artificial obstacles for navigation was prohibited along the entire watercourse, and official managers were installed to supervise the condition of the stream and its shores and to enforce the principle of freedom of navigation.<sup>10</sup> Alternatively, Rome could issue or withdraw a right of free navigation at will to the non-Roman peoples living on the opposite shore such as the Germanic tribes, making the river far less of a secure commercial road for them.

Controlling entire watercourses was functional for the internal prosperity and external security of the empire, but also demonstrated Roman superiority to foreign peoples. Tacitus wrote that Julius Caesar's decision in 55 BC to cross the river was highly motivated by his desire to demonstrate to his adversaries that the Romans 'had the power and the will to cross the Rhine.' Such symbolism also emerges in Roman artefacts. On coins the Rhine is often depicted as a figure with a long beard and hair, horns, or crab claws, demonstrating two main themes: the Rhine as the source of opulence and as a waterway under Roman control.<sup>11</sup>

During Roman hegemony rivers were enhanced to work as internal roads of transportation. After the disintegration of the Western Empire in the fourth century AD, the Rhine was untouched by grand politics for centuries and could develop into the largest international trade route in north-west Europe, harbouring many important trading centres along its banks. Long-distance trade over land remained insignificant as the poor state of the roads made them inefficient and dangerous.<sup>12</sup> By the fourteenth century, most of the important European trade centres were located by a river. Along the Rhine, merchants organised in the Hanseatic League and were active in overseas trade with the Baltic states, England, and Scandinavia.<sup>13</sup> Yet, it was during this Dark Age that the Rhine's function as a highway came to a standstill.

### **Disintegrating river regimes in the Middle Ages**

With the disappearance of the Roman Empire, Europe became politically fragmented. Moreover, the feudal constellation of authority had resulted in a total diffusion of property, including land and the water streams and rivers that flowed through it. Henceforth, it was an emperor, a king, a local lord, or a free city that possessed a water stream, and as such held the associated rights for that specific stretch of the river. Such rights included tolling, stapling, fishing, or ferrying and sometimes comprised the right to incorporate emerging islands or land extensions into one's dominion. Still another privilege of local authorities that was applied to water streams was the right to issue letters of safe conduct.<sup>14</sup> In the eleventh and twelfth centuries landlords perceived it as their task, even by entering into agreements with each other, to provide merchants, pilgrims, and other travellers, in exchange for a small payment, with the guarantee of safe passage through their respective territories.<sup>15</sup> Soon, however, the merchants discovered that safe navigation came at a much higher price.

Initially tolls and taxes were levied on the basis of reasonableness, but this changed during the late Middle Ages. Lords or monarchs increasingly gave river-related rights in loan, in return for the vassals' loyalty or ready money. Soon these vassals introduced additional taxes for unsolicited services such as accompanying guards, making the already existing taxes more of a burden than a payment for an actual service.<sup>16</sup> Along the Rhine, a prime trading route in Europe, this was no different. As a major source of revenue, the Holy

Roman Empire depended on the customs and tolls levied on this river. The right of tolling was farmed out to the archbishops of Mainz, Cologne, and Koblenz. In addition, Mainz and Cologne received the ‘rights of staple,’ which compelled all passing merchants to unload their commodities and offer them for sale for several days, to the benefit of the local market.

The Holy Roman Empire had an interest in increasing navigation and executing the correct administration of the tolling. However, from the twelfth century onwards the already disintegrating empire lost authority and could no longer guarantee its control over the Rhine. The archbishops and lower-ranking nobility grabbed the opportunity to increase their tolls or installed their own ‘tolling booths’ and started randomly charging illegal tolls at sky-high rates. Rates of between 53 and 67 per cent of the cargo’s value were not uncommon,<sup>17</sup> and even stealing cargos or entire ships was not unheard of. Contemporaries observed the destructive force of these practices for trade and traffic and baptised the newcomers in the tolling business ‘robber barons.’

Foreign contemporaries condemned the Rhine tolls, calling them the ‘raving lunacy of the Germans.’ In 1254, after a coalition of cities, princely members, and knightly members called the Rhenish League proclaimed peace among each other and war against the robber barons, unjust tolls were suppressed, and robber castles were destroyed. Security on the Rhine returned.<sup>18</sup> However, the problem was not permanently solved as long as the political fragmentation of the Rhine facilitated conflicts of interest. Indeed, the cooperative behaviour for the good of all shown by the German authorities was more of an exception. The Rhenish League resisted for only three years. Moreover, in order to fund the fight against the robber castles, the league introduced so-called peace-tolls on the Rhine, thus unfortunately substituting some of the illegal tolls with legal ones. Between the twelfth and the fourteenth centuries the number of tolling stations exploded again from 12 to 62.<sup>19</sup> In the context of a decaying empire, illegal tolls could not be extirpated and violent robber barons continued endangering the lives and property of the skippers. Emperors tried to regain control over the rivers and did not hesitate to use force against illegal toll leviers.<sup>20</sup> Yet, due to the further disintegration of the empire, these interludes of a free Rhine never lasted long. This became especially clear in Cologne.

Once it had been among the most prominent commercial towns in Europe, but Cologne was weakened by the Thirty Years’ War of the seventeenth century. During this war the German electors had multiplied the toll charges, two, three, or even four times. Wine and wheat trebled in price when sent over the Rhine from Mannheim to the Dutch border. ‘The devastating effect of the tolls on river trade,’ the Swedish political economist Eli Heckscher (1879–1952) wrote in his classic work *Mercantilism* in the early 1930s, ‘may, perhaps best be inferred from the fact that traffic was driven away from the best trade routes in Europe and forced on to the unsatisfactory land routes.’ Rhine shipping declined, while on some stretches it even disappeared completely.<sup>21</sup>

It was exactly this collapse of Rhine traffic during the Thirty Years’ War that produced strong public agitation against the ongoing particularistic and

self-enriching behaviour of petty despots along its course. In order to stimulate trade and prosperity, the Peace of Westphalia abandoned all tolls and other obstacles to free navigation on the Rhine in 1648. However, the peace treaty was, in this regard, nothing but a dead letter. Like later treaties, such as Ryswick (1697), Rastatt, and Baden (both 1714), although containing stipulations of the most liberal kind,<sup>22</sup> it was an acknowledgement of public opinion, but it completely failed to firmly secure the freedom of navigation of the Rhine or international rivers in general.

### **Revolutionary France versus deadlocked international rivers**

Local privileges rooted in the ‘barbarism of the thirteenth century,’ as the Koblenz merchant noted in 1800, continued hampering commerce and industry far into the age of revolutions. Merchants were probably the first to protest when taxes, local privileges, or other political measures threatened to hamper free trade and traffic. Nevertheless, the consequences of a politically fragmented Rhine were also a cause for concern to other, less interested parties, such as travellers. During a journey on the river a few years earlier in 1791, the English medic and philosopher Thomas Cogan (1736–1818) was appalled by the state of the commercial towns along the Rhine. When he entered the city of Cologne, desolation and beggars featured almost in every alley. Streets and squares had turned into vineyards and kitchen gardens. Two-thirds of the city had fallen into ruin. And even though the forced transshipment of merchandise, due to the staple rights, gave an appearance of entrepreneurial activity, it was of no great advantage to the city. It merely hampered trade and traffic to a great extent, causing foreign merchants to shift supply routes away from the Rhine. Besides, none of the transshipped articles, nor the ships themselves, were produced within Cologne. Only a few vessel owners, who were usually also the merchants of the goods, were doing all the shipping and they were not even residents of the free city. With the Rhine in chains, Cologne, like Babylon, Cogan wrote, had fallen.<sup>23</sup>

Continuing his trip up the Rhine through the vitiferous riches between Bonn and Mainz, Cogan again noticed poverty behind the veil of entrepreneurial splendour. Overall, despite the picturesque scenes, viticulture was by no means a blessing to the country. This was not the result of recurring crop failures, but mostly because ‘Bacchus ... had not the benevolence of Ceres.’ In other words, where fields were occupied with grapes, grain could not grow. Locals depended for the real necessities of life on the more expensive import of grain and clothing: ‘poverty,’ Cogan observed ‘is most prevalent where the vine is most cultivated.’<sup>24</sup>

The limited commerce in Mainz, although favourably positioned at the intersection of the Rhine and the Main, was certainly the result of the oppressive tolls which, as Cogan was informed, accounted for 600,000 florins of a total annual revenue in the Electorate of 1.8 million florins.<sup>25</sup> High tolls benefited the state coffers, but together with the staple rights they also

resulted in unpredictable navigation that did not stimulate commerce. However, Cogan noted, things were changing: ‘a spirit of commerce begins to be more diffused through Germany, and there are many cities where *Ein Kauffmann* possessing property begins to be respected almost as much as a Prince who has none.’<sup>26</sup> This increased commercial spirit resulted in growing discontent with the impositions on the Rhine.<sup>27</sup> Yet, Cogan doubted whether the protests against the tolls would ultimately make a difference:

That they are exorbitant is universally acknowledged; that they are very injurious to commerce is the general complaint: but as they are so kneaded with, and moulded into the system of finance; as potentates will not be disposed to relinquish the present schemes of their wealth, without some substitute; and as no substitute can be devised that would not be unpopular, by oppressing the subject in order to relieve strangers, this is an abuse which we are not to expect will be speedily removed.<sup>28</sup>

Cogan was right that the removal of the anarchic system on the Rhine implied a removal of the feudal system at large. But he was wrong that this would not happen any day soon. In fact, French revolutionaries had already started contemplating the future regime of European rivers ‘based on the just and liberal principles that the French government professed,’ and the public call for change became increasingly louder.<sup>29</sup> Only months after Cogan had returned from his trip on the Rhine, Revolutionary France dismantled with great fanfare the blockade of the Scheldt. Ironically, it was this revolutionary manifestation of the principle of freedom of navigation that brought Britain, Cogan’s motherland, to the brink of war with France.

Supported by ideological motives, but certainly driven by economic and strategic concerns, Revolutionary France vigorously addressed the issue of deadlocked international rivers at an early stage. Protests such as those by the Antwerp elite in 1787 against the arbitrary limitations of navigation on the Scheldt by the Dutch were embraced to pursue revolutionary goals.<sup>30</sup> On the basis of natural law, the French publicly rejected the national appropriation of shared rivers such as the Scheldt, the Meuse, and the Rhine. Rivers, the revolutionaries stated, were the collective property of all riparian states. Therefore, the authority of international agreements and sovereign rights should be subordinated to the natural right of free international navigation for all who were in need of free passage. The revolutionaries reiterated the Dutch legal theorist Hugo Grotius (1583–1645) who advocated that such a free passage on rivers was legitimate in cases of migration and commerce, or even to wage just wars.<sup>31</sup> First and foremost, excessive toll systems, forced staple markets, shipping monopolies, and other privileges were a vestige of the feudalistic past that did not fit with the revolutionary principles of freedom, equality, and fraternity.

In 1792, after the Revolutionary army had occupied the Austrian Netherlands, the French used the principle of freedom of navigation as the moral

and legal justification for the opening of the Scheldt. For more than a century the Netherlands had isolated Antwerp, their most dangerous rival port, from global commerce by closing off the Scheldt. Several international agreements recognised this lock-off as a Dutch privilege. Yet, on 16 November the French unilaterally declared the so-called Scheldt Decree and introduced the principle of freedom of navigation. This decree laid the foundations for the application of international river law.<sup>32</sup> The decree forbade ‘the right of occupying the channel of a river, to the exclusion of others’ and promised the Belgians every measure necessary to re-establish the freedom of navigation on both the Meuse and the Scheldt. With the arrival of two French gunships on the Scheldt a couple of weeks later, freedom of navigation on the Scheldt was actually enforced.<sup>33</sup>

Apart from an ideological motivation, the opening of the Scheldt was also politically inspired. The French aimed at winning the hearts of the Belgian people for the Revolutionary cause. In fact, in the years of French domination no issue was emphasised more often in official communication to the Belgian public than the opening of the Scheldt. It was the symbolic end of despotism and a return to the natural state of freedom in which the Belgian people could prosper.<sup>34</sup> With the Edict of Fraternity of 19 November 1792, the government of the French Revolution once more underlined its determination to restore the laws of nature by assisting all peoples who wished to recover their liberty.

With its armies on the march, France would not limit its river politics to the Scheldt and the Meuse alone. Already in 1791 the Army of the Rhine was established to bring the revolution to the German states along the Rhine.<sup>35</sup> In September 1792, a year after Cogan had returned from his trip, the first German town on the left bank was captured. One month later the important city of Mainz followed, while Frankfurt, on the Rhine’s tributary the Main, was occupied too. By 1795 the United Netherlands capitulated and turned into the French vassal state of the Batavian Republic. The principle of freedom of navigation was officially promulgated for the first time in the Treaty of The Hague.<sup>36</sup> It postulated that navigation on the Rhine, the Meuse, and the Scheldt up to the sea would be free. Shortly thereafter, the Treaty of Campo-Formio ended the War of the First Coalition in 1797 and a similar regime was imposed on the rivers and canals between Austria and the new French client state of the Cisalpine Republic.<sup>37</sup>

In the Congress of Rastatt that followed, France demanded a far-reaching reform of the commercial regime on the Rhine, such as the abolition of tolls, staple rights, and boatmen’s guilds. Moreover, it called for free navigation of all German rivers, including the Danube. However, in March 1799 Russia and Austria resumed war against France and the Congress was interrupted, leaving the river issues undecided.<sup>38</sup> After the French had defeated the Austrian army again, the Treaty of Lunéville confirmed the agreements of Campo-Formio and consolidated peace between France and Austria in 1801. With the Treaty of Amiens one year later, France also came to terms with Britain and for the first time in ten years Europe entered a brief period of general peace.



*Figure 1.1* Habsburg and French forces fight for the control of the Rhine crossing between Kehl and Strasbourg during the Rhine Campaign of 1796  
 Source: J. Gottfried Gerhardt. Bibliothèque nationale et universitaire de Strasbourg. Reference number NIM01558 ([www.numistral.fr/ark:/12148/btv1b10201277b](http://www.numistral.fr/ark:/12148/btv1b10201277b)). Public Domain.

### **A British perspective on France’s grand river policies**

The French imposition of the principle of freedom of navigation on the rivers it controlled was a serious problem for the British. The very opening of the Scheldt in 1792 brought the country to the brink of war with France, while the stipulations of the Treaty of Amiens ten years later were highly controversial; as a contemporary wrote ‘there can be little security in [this] peace either for the commerce of Great Britain, or for the tranquillity of the Continental powers.’<sup>39</sup> What could the problem of the implementation of the liberal principle be for a country that highly depended on international commerce?

The occupation of the Austrian Netherlands, the opening of the Scheldt, and the annexation of Savoy had put Britain, pledged to neutrality and partnering with France in the commercial treaty of 1786, in a difficult position. The opening of the Scheldt was a grave violation of the law of nations. It was contrary to the treaties Britain had concluded with its ally Holland, and which it had guaranteed. ‘France can have no right to annul the stipulations relative to the Scheldt, unless she have also the right to set aside all the other treaties between all the powers of Europe,’ Prime Minister William Pitt (1759–1806) warned France in a statement on 31 December 1792; ‘England will never consent, that France should arrogate the power of annulling at her pleasure, and under the pretence of a natural right, of which she makes herself the only judge, the political system of Europe.’ Whereas the sudden

application of a 'natural right' was in principle a violation of the law of nations, it was how the opening of the Scheldt facilitated the establishment of a French arsenal so close to Britain that really frightened the British.<sup>40</sup>

In January 1793 the French Foreign Minister Pierre Henri Lebrun (1754–1793) explained to the British Foreign Secretary Lord Grenville (1759–1834) that the opening of the Scheldt was France's duty to assist the general will of a people: 'It is to restore to the Belgians the enjoyment of so precious a right, and not to offend anyone, that France declared herself ready to support them in the exercise of so legitimate a right.'<sup>41</sup> Yet the British remained suspicious and the execution of King Louis XVI by means of the guillotine the same month further aroused public opinion in Britain against the French revolution. On 28 January the king announced the augmentation of his forces:

for maintaining the security and rights of his own dominions, for supporting his allies, and for opposing views of aggrandisement and ambition on the part of France, which would be at all times dangerous to the general interest of Europe, but are particularly so, when connected with the propagation of principles which lead to the violation of the most sacred duties, and are utterly subversive of the peace and order of all civil society.

It was after France declared war against Britain and Holland in February 1793 that Britain engaged in a military campaign against the revolutionaries.<sup>42</sup> Thus the opening of the Scheldt, which in itself was technically a *casus belli*, was not followed by a British declaration of war. Yet imposing such principles on conquered land was explained as a threat to the 'sacredness' of international treaties, while the French territorial expansion could not otherwise be seen as a threat to the general balance of power in Europe.

It was this final point that was critical to the conservative elite when France and Britain made peace in 1802. Again rivers, or at least their control, played a central role in the perceived threat. Britain's new prime minister, Henry Addington (1757–1844), took less of a hard line against Napoleon than his predecessor. This meant, however, that he had to endure harsh criticism from the anti-Jacobin faction inside and outside the House of Commons. In territorial terms, Amiens paid off well for France, both in the colonies and on the Continent. In an open letter in the *Political Register*, a popular conservative Whig-supported magazine, the controversial political writer and pamphleteer William Cobbett (1763–1835) attacked his prime minister on these peace terms. Cobbett was himself disillusioned with the French Revolution after he experienced the most horrible atrocities during his stay in France in the 1790s. After his return to Britain, he rarely lost an opportunity to spread a message of anti-Jacobinism and anti-peace. His attack on the peace terms was one of many warnings against France.<sup>43</sup>

According to Cobbett the effect of the peace would be a total breakdown of British commerce that would ruin the country. After all, 90 per cent of state

revenue arose directly or indirectly from commerce: 'we have no choice. Our wants are created; and they must be satisfied, or we cease to exist as an independent nation.'<sup>44</sup> Cobbett, who would become one of the most influential anti-Jacobins in the country, argued that Napoleon's possessions in Europe allowed him to abridge British commerce 'by every means that the ingenuity of a rival can invent, and that the malice of an enemy can employ.' Most threatening in this respect, he argued, was France's control over the Continental rivers and the ports of Flanders, Holland, and Germany: 'By your recognition Sir, of the right of France to hold the keys of these countries, to retain the command of the Rhine, the Meuse and the Scheldt, you have banished for ever from the heart of Europe, the commerce *and the influence* of England.'<sup>45</sup>

Cobbett relied heavily on the writings of navy purser John McArthur (1755–1840).<sup>46</sup> One year before the peace, McArthur had warned against France's ambition to secure the freedom of navigation on the Meuse, the Rhine, and the Scheldt. Controlling these rivers, in combination with the 300 existing navigable rivers and canals in France, would improve the internal communication of the country to such an extent that it would be able to exclude British trade and manufactures. Furthermore, it was to be expected, McArthur continued, that on the return of peace France would start the construction of new canals all over the empire. 'It will give many years of employment to at least 50,000 disbanded soldiers.'

In fact, rumour had it that the construction of a canal between the Rhine and the Danube was already being contemplated. Napoleon was about to accomplish what Charlemagne had attempted in vain: bringing the Rhine, the Danube, and the whole of the central European riverine basins between the North Sea and the Black Sea under his hegemonic control. Such an extended inland waterway network would enable the French in times of war to transport, without interruption, ammunition and provisions from one place to another. It would connect the hinterland with their ports, allowing them to supply their docks with the necessary goods and materials to build a navy.<sup>47</sup> 'In short,' McArthur warned:

France would acquire such a gigantic preponderance in the scale of nations, that she might, on a future day, become more formidable to the liberties of all Europe than she was when in the zenith of her glory and prosperity, in the reign of Louis the Fourteenth, or than tyrannical Rome in her best times. Indeed the strength of France would become too great for any power to resist.<sup>48</sup>

William Cobbett agreed and remarked that investors' confidence in the Scheldt becoming the rival of the Thames had increased noticeably, as houses in Antwerp had doubled their value since the peace was signed.<sup>49</sup>

The explicit reference of McArthur in 1801 to the Roman Empire is telling. British conservatives like him regarded the French incorporation of rivers into

the Republic as not unlike the practices of the Roman Empire some 1,500 years before. River systems functioned as natural frontiers that served the military defence system. Moreover, the implementation of the principle of freedom of navigation for citizens of the riparian states improved internal transport and trade conditions. This would stimulate prosperity, but it also consolidated French military power by opening internal supply routes to naval bases. British conservatives regarded this a security threat, in so far as the French would possibly be enabled to develop a navy force. For European powers, this development of French self-aggrandisement was a looming threat and an imminent economic disaster.

### **Economic weight within the European balance of power**

The claim that French river policies were primarily motivated by international economic strategic considerations was a British conservative concern that was not totally unfounded, given the example of Roman imperial history and, more importantly, a 1794 report of the National Convention on fixing the Republic's borders at the Rhine. Theoretically, the project had far-reaching strategic and commercial implications.<sup>50</sup> With France annexing the entire left bank, Austria would be left with the less fertile and geographically less advantageous right bank of the river. This would greatly injure Austria's military capacity in the event of a future attack.<sup>51</sup> But apart from this strategic consideration, the report paid much more attention to the economic benefits and implications of fixing the border at the Rhine.

Controlling the Rhine provided France with a potentially efficient transport road that would benefit commerce. Consequently, increased commercial relations with the northern countries would consolidate the Republic's economy. To be sure, the report reads, these relations were:

founded on the circumstance of the free navigation of the Rhine, the slightest restriction on which would make the parts of this river which are secured to us, of no effect, while the liberty of its entire course renders incalculable the profits of its navigation.<sup>52</sup>

The Rhine was 'the most interesting of rivers, the most proper for communication.' It flowed through large, fertile, and industrious countries, 'touching with one extremity the soil of liberty,' i.e. France, 'and with its principal mouth the Ocean.'<sup>53</sup> Yet local economic benefit was not to be the sole motivation for France to incorporate the Rhine. The report explicitly pointed out that increased commercial relations consolidated the Republic's commercial and political balance within Europe: 'one of the grand causes which ought to induce us to take the Rhine for our frontiers, is, that we should thereby appropriate to ourselves the branches of commerce, which are now possessed by England.' France's main enemy, so the report argued, excited a spirit of hatred and rivalry among the electors and princes along the Rhine, in order

to maintain and multiply the existing export duties. As long as these duties prevailed, mutual exchange and production could not increase. By uniting the duchies to France and abolishing the export duties, this problem could finally be solved: ‘the Republic will directly enjoy this branch of commerce, to the exclusion of her enemies.’

Therefore, France’s first objective, according to the 1794 report, should be to consolidate the Republic: ‘The happiness and prosperity of France are connected with this government. What nations will dare to make an attempt upon our safety, or our territory, while we possess such powerful means of resistance?’<sup>54</sup> The report connected the idea of liberating river navigation with increasing internal prosperity. Moreover, since this liberty would be limited to citizens of the riparian states only, the rivers would de facto be closed to non-riparian states, that is, Britain. Incorporating the entire river within the French customs zone would be at the expense of British economic dominance.

When looking closely at the Treaty of The Hague of 1795 it is important to note that the principle of freedom of navigation deviated in one essential point from Grotius’s understanding of natural law. While Grotius stated that freedom of navigation should apply to all people, including those from non-riparian states, the Treaty stipulated that it would apply to France and the Batavian Republic only. In following treaties, such as Campo-Formio, France stuck consistently to this adapted version of natural law. This pragmatic adaptation reveals that not moral, nor political motives, but economic-strategic concerns were at the core of French river politics as it excluded commercial nations such as Britain to the benefit of the local traders in the riparian states. Around the turn of the century, the revolutionary fight against the barbaric past had become as much a strategic imperative to improve France’s economic weight within the European balance of power.

### **The failed attempt of a ‘liberal’ Rhine regime under Napoleon**

Just after the turn of the century the French Revolutionary principles, though recognised on paper, had not yet been brought into practice and merchant complaints about the limitations of Rhine navigation increased. The traditional staple rights of Cologne and Mainz came under severe attack. On both banks of the river pamphlets appeared that insisted on a thorough reform of the regulations of commerce and navigation.<sup>55</sup> Part of the problem was that now that the French border ran parallel to the Rhine’s, the customs border had shifted accordingly. In practice this meant that skippers paid customs on the left, French, bank of the river, whereas they did not on the right bank. Furthermore, on the right bank new towpaths were under construction. Consequently, the right bank towns had an advantage that the left bank towns on French territory did not. Poverty, inactivity, and mendicancy were already everyday business, but if nothing changed, one of the pamphleteers urged, the larger cities of Koblenz, Mainz, and Cologne would also lose their industries and their prosperity.<sup>56</sup>

A toll administrator in Trier on the Moselle acknowledged that the toll system along the Rhine needed to be reformed.<sup>57</sup> He observed that tolls were levied to provide lords along the Rhine with an income, instead of enabling the improvement of shipping by maintaining the towpaths and the channel in good condition. In addition, tolls should be moderate and levied in a simple way that prevented chicanery and arbitrariness.<sup>58</sup> The large number of tolls and the inefficient mode of levying them hampered business. The commercial committee of Strasbourg complained about the lack of uniformity: 'it is on the number, or weight, or species, or quantity, that toll collection is based, and often on all four at once. The political opinion, known or presumed, of the boatman, determines in certain respects the determination of the right.'<sup>59</sup> If nothing changed, the new French departments would not only lose more than 1.5 million francs of tax income annually, but it would mean the loss of the means of existence for many families, the pamphleteer warned. Rhine commerce was the only means of survival for boatmen, caulkers, ropers, loaders, wheelwrights, marshals, and innkeepers, to name just a few. The French Republic, 'mistress and absolute sovereign of the left bank of the Rhine,' could never allow such a sacrifice.<sup>60</sup>

The return of peace in 1801–1802 enabled the pamphleteers to take up the pen, but they wanted to make themselves heard mostly in view of a new French-German trade agreement that was to follow upon the mediatisation and secularisation of a large number of imperial domains along the Rhine. The pamphleteers clearly shared an interest in, and underlined in similar ways, the urgency of liberating Rhine navigation. With the objective of putting the issue on the political agenda, they all referred to the system not merely as not belonging to the current enlightened and civilised times, but also as an anarchic organisation, based on arbitrariness and abuse of power. If the two countries would not pick up the fight against this medieval barbarity, Rhine commerce would almost certainly be destroyed and it would bring cities, societies, and countries down with it into the abyss.

This frightful image was a neat reproduction of how the Revolutionaries pictured their fight, as a struggle against the feudalistic past. As a result, the demands were not only listened to, but also given due attention. After the enforced territorial and political restructuring of the Holy Roman Empire in 1803, France and the Empire finally came to a definite reorganisation of the Rhine administration. The Rhine Octroi Convention of 1804 imposed a complete reorganisation of the toll system on the Rhine from the Swiss to the Dutch border, the part of the river that came to be called the 'conventional Rhine.'<sup>61</sup> It entailed a far-reaching simplification of the toll system. The number of toll stations was reduced from 30 to 12, and tariffs were fixed. In addition, it eliminated the historical 'rights of staple' of Mainz and Cologne. Furthermore, the German and the French riparian states were obligated to keep the towpaths on their territories in good conditions and an independent police force supervised the navigation. Two juridical bodies, an annually convening court of appeal, and a permanent commission consisting of a

General Director and two inspectors settled disputes regarding levies and police regulations. Finally, in a most revolutionary act, the French government and the archchancellor established an independent and neutral Central Octroi Administration, with its seat in Mainz, that supervised toll collection and the navigability of the river and issued regulations that were legally binding for all.<sup>62</sup> Never before had the organisation of a river running between several sovereign countries been based on such a high level of cooperation. And never before had such an organisation culminated with the creation of a supranational institution that had the means to impose the principle of freedom of navigation by force. Quickly the advantages of freedom of navigation became clear as traffic rose by up to 400 per cent of the pre-Revolutionary norm.<sup>63</sup>

Yet Napoleon quickly substituted the moral determination to settle the accounts with the feudal 'barbaric' past on the Rhine with a pragmatic inclination to secure the political destiny of his empire within Europe. In 1805 Napoleon suffered an embarrassing naval defeat at the Battle of Trafalgar. After 15 years of war he concluded that the conflict could not be ended on the battlefield. Napoleon took the radical decision to sacrifice the interests of trade and to conquer the British by means of an economic war. Therefore, he returned in 1806 to the core of the 1794 project of the National Convention: that is, capturing commerce to the disadvantage of Britain. Yet this time the objective was not to implement French control over the rivers alone. This time Napoleon would bring into effect a large-scale embargo by shutting off all the Continental seaports he controlled to British trade. He targeted the heart of the British Empire: the resource that paid for the troops, the navy, and the subsidies for its allies. By hitting the foundation of Britain's power, its commercial prosperity, Napoleon attacked Britain's position within Europe's balance of power.

Consequently, the Continental System played havoc with international trade, and Rhine trade collapsed. With regard to France's strategy of (economic) warfare, inland waterways still functioned as roads that could ease internal trade and traffic. Yet with all the Continental seaports blocked, not much trade was going on. Moreover, there was no money for improving the inland waterways, and the construction of canals was discontinued. By 1807 river policy was pushed to the background and river governance was put on the back burner. In 1810, after the annexation of the Netherlands and the transfer of the German Octroi rights to Napoleon, the emperor officially proclaimed the Rhine a domestic river. For several years its entire course was subject to one national administration, albeit it in a dormant condition.

After Napoleon's defeat at Leipzig in 1813 rivers became increasingly subjected to military as well as economic warfare. That year the Franco-German part of the river was placed under German authority and the Rhine Octroi was restored. From the same year the Dutch part of the Rhine fell under the authority of the new sovereign ruler of the Netherlands, Willem I. One of his first political acts was to reintroduce the old Rhine tolls. Local taxes also

returned in several German regions, as did the staple rights in Mainz and Cologne. By 1814 France was losing the war. Even before the start of the peace talks, the Rhine regime was on the brink of falling back into the anarchic constellation of pre-Revolutionary Europe.<sup>64</sup>

Once again European statesmen faced the negative consequences of an abusive river regime. Yet this time they had the internationally acknowledged legal principle of freedom of navigation to fall back on. What is more, the Octroi Administration functioned as a valuable example of how to establish an international organisation that was able to operationalise such a legal principle. More than anything, European statesmen were determined to end once and for all the cycle of fragmentary and hegemonic scenarios that had generated conflict and poverty along their international rivers for too long.

## Notes

- 1 P.F. Paravey, *De la libre navigation du Rhin, ou réclamation des villes de la rive gauche contre le droit d'étape de Cologne et de Mayence* (Koblenz: La Nouvelle Libr., 1800), 1–2.
- 2 Marc de Decker, *Europees internationaal rivierenrecht* (Antwerp and Apeldoorn: Maklu, 2015), 31–35.
- 3 There is an entire field of Roman frontier studies that examines the role of rivers as natural boundaries. Hotly debated is the question of the extent to which rivers were actual impenetrable military barriers, or also bridges connecting the societies on both banks. See M.W. Graham, *News and Frontier Consciousness in the Late Roman Empire* (Ann Arbor: University of Michigan Press, 2006), 51–67. J.B. Campbell, *Rivers and the Power of Ancient Rome* (Chapel Hill: University of North Carolina Press, 2012), 56, 156. A. Goldsworthy, *Pax Romana. War, Peace and Conquest in the Roman World* (London: Weidenfeld & Nicolson, 2016).
- 4 Tacitus, *The Works of Tacitus. The Oxford Translation, Revised, with Notes*, I, *The Annals* (London: H.G. Bohn, 1854), 9–10. Campbell, *Rivers and the Power of Ancient Rome*, 386.
- 5 Campbell, *Rivers and the Power of Ancient Rome*, 181–186.
- 6 Peter Heather, *Fall of the Roman Empire. A New History of Rome and the Barbarians* (Oxford: Oxford University Press, 2007), 55–56. De Decker, *Europees internationaal rivierenrecht*, 56.
- 7 <http://legionaryfortresses.info/map.htm>, accessed 18 July 2017. That is, within a distance of 5 kilometres from a major navigable river, or its tributary. The few bases in Spain were not necessarily located near a major river. Note that bases in Britain were often located close to a river or a seaport as well.
- 8 Campbell, *Rivers and the Power of Ancient Rome*, 24–6, 55. P.H. Nienhuis, *Environmental History of the Rhine-Meuse Delta: An Ecological Story on Evolving Human-Environmental Relations Coping with Climate Change and Sea-Level Rise* (Dordrecht and London: Springer, 2008), 34–35.
- 9 Campbell, *Rivers and the Power of Ancient Rome*, 177.
- 10 L.A. Teclaff, *The River Basin in History and Law* (The Hague: Martinus Nijhoff, 1967), 47–49. De Decker, *Europees internationaal rivierenrecht*, 57–59.
- 11 Campbell, *Rivers and the Power of Ancient Rome*, 56, 156.
- 12 Teclaff, *The River Basin in History and Law*, 53.
- 13 Nienhuis, *Environmental History of the Rhine-Meuse Delta*, 66.

32 *Securing freedom of navigation*

- 14 It was around this time that authorities started to protect places, streets, and markets and called this protection *securitas*. In fact, it was in letters of safe conduct that *secure* as a term settled in.
- 15 Werner Conze, 'Sicherheit, Schutz,' in *Geschichtliche Grundbegriffe: historisches Lexikon zur politisch-sozialen Sprache in Deutschland*, part 5, eds. Otto Brunner, Werner Conze, and Reinhart Koselleck (Stuttgart: Klett-Cotta, 1984), 836.
- 16 E.F. Heckscher, *Mercantilism I* (London, New York: Routledge, 2007), 61–62.
- 17 De Decker, *Europees internationaal rivierenrecht*, 71.
- 18 F. Pfeiffer, *Rheinische Transitzölle im Mittelalter* (Berlin: De Gruyter, 1997), 389–399.
- 19 For examples of increased tolling on other rivers in this era, De Decker, *Europees internationaal rivierenrecht*, 69–71.
- 20 In 1189 Frederick Barbarossa burned down the village of Mauthausen on the Danube because its inhabitants had levied a toll on the crusaders. Frederick I, *The Crusade of Frederick Barbarossa: The History of the Expedition of the Emperor Frederick and Related Texts* (Farnham and Burlington: Ashgate, 2013), 47. Around 1300 Albert I compelled the princes on the Rhine by armed force to renounce tolling. Hugh Chisholm, ed., 'Albert I,' *Encyclopaedia Britannica* 1, 11th ed. (Cambridge: Cambridge University Press, 1911), 496. Also: De Decker, *Europees internationaal rivierenrecht*, 86–87.
- 21 Heckscher, *Mercantilism*, 59.
- 22 De Decker, *Europees internationaal rivierenrecht*, 95–97.
- 23 Thomas Cogan, *The Rhine: or, a Journey from Utrecht [sic] to Francfort; chiefly by the borders of the Rhine, and the Passage Down the River from Mentz to Bonn: Described in a Series of Letters Written from Holland, to a Friend in England, in the Years 1791 and 1792. Embellished with Twenty-four Views in Aqua Tinta and a Map of the Rhine from Mentz to Bonn*, vol. I (London: J. Woodfall, 1794), 301–303, 305–329.
- 24 Cogan, *The Rhine*, vol. II, 343–347.
- 25 *Ibid.*, 104.
- 26 *Ibid.*, 343–347.
- 27 Clemens Von Looz-Corswarem and Georg Mölich, eds., *Der Rhein als Verkehrsweg: Politik, Recht und Wirtschaft seit dem 18. Jahrhundert* (Bottrop: Pomp, 2007), 13.
- 28 Cogan, *The Rhine*, vol. II, 343–347.
- 29 *De la Navigation du Rhin. Memoire imprimé par ordre du Comité consultatif du commerce de Strasbourg* (Strasbourg: Levraut, 1802), 15.
- 30 Such as on the Scheldt: P.A. van den Berghe et al., 'Messeigneurs. Open Letter by the Chiefs of the Antwerp Bourgeoisie,' 29 November 1787.
- 31 Hugo de Groot, *De iure belli ac pacis*, lib. II, cap. II, Par. V and XII (Paris: Nicholas Buon, 1625). De Decker, *Europees internationaal rivierenrecht*, 373–375. De Decker also mentions that Thomas Jefferson appealed to natural law in his instructions of 1792 that established the freedom of navigation on the Mississippi. In the case of international navigation, Von Pufendorf and De Vattel, on the other hand, favoured the property rights of the individual riparian states over natural law.
- 32 De Decker, *Europees internationaal rivierenrecht*, 111–129.
- 33 *Lloyd's Evening Post*, 30 November 1792, 8.
- 34 B. Deseure, 'Sa splendeur et sa décadence sont également célèbres' – Het Scheldeverhaal als politiek instrument tijdens de Franse periode,' *Tijdschrift voor Geschiedenis* 123, no. 4 (2010): 534–553. Deseure points out that the discourse of the liberation of the Scheldt was easily adjusted seven years later. When Napoleon came to power, he also became the official liberator of the Scheldt. Patricia Chastain Howe, *Foreign Policy and the French Revolution: Charles-Francois Dumouriez,*

- Pierre LeBrun and the Belgian Plan, 1789–1793* (New York: Palgrave Macmillan, 2008), 114.
- 35 The revolutionaries established other river armies: the army of the Mosell (1791–1795) and the army of Sambre and Meuse (1794–1797).
- 36 De Decker, *Europees internationaal rivierenrecht*, 116–118.
- 37 Henry Hajnal, *The Danube: Its Historical, Political and Economic Importance* (The Hague: Martinus Nijhoff, 1920), 27.
- 38 *Ibid.*, 27–29. Robert Mark Spaulding, ‘Revolutionary France and the Transformation of the Rhine,’ *Central European History* 44, no. 2 (2011): 213–214.
- 39 John McArthur, *Financial and Political Facts of the Eighteenth and Present Century: With Comparative Estimates of the Revenue, Expenditure, Debts, Manufactures, and Commerce of Great Britain* (London: W. Miller, 1803), 205–206.
- 40 R. Bacon, ‘British Policy and the Regulation of European Rivers of International Concern,’ *British Yearbook of International Law* 10 (1929): 161.
- 41 Howe, *Foreign Policy*, 141.
- 42 J. Franck Bright, *English History. For The Use of Public Schools. Period 3 (1689–1837)* (London: Rivingtons, 1877), 1164–1167. Also A.W. Ward, *The Cambridge History of British Foreign Policy, 1783–1919* (Cambridge: Cambridge University Press, 2011), 225–227.
- 43 David A. Wilson, *Paine and Cobbett: The Transatlantic Connection* (Kingston and Montreal: McGill-Queen’s University Press, 1988). A.J. Sambrook, ‘Cobbett and the French Revolution,’ in *The French Revolution in English Literature and Art*, ed. J.R. Watson (The Yearbook of English Studies 19) (Modern Humanities Research Association, 1989), 231–242. G.D.H. Cole, *The Life of William Cobbett* (Abingdon, New York: Routledge, 2011).
- 44 Extract from Mr. Cobbett’s letters to Mr. Addington on the effects of the Peace, particularly with respect to our colonies and commerce, William Cobbett, *Cobbett’s Political Register*, vol. 1. *From January to June 1802* (London: Cox and Bayliss, 1802), 834–836.
- 45 Italics mine.
- 46 John Knox Laughton, ‘McArthur, John,’ *Dictionary of National Biography, 1885–1900*, vol. 34 (London: Smith, Elder & Co, 1893), 402–404.
- 47 McArthur, *Financial and Political Facts*, 216–234.
- 48 *Ibid.*, 234.
- 49 Rhetorically and rather cynically Cobbett added: ‘Where the capital is to be found to awaken, from its long sleep, the commerce of that city ... is a question, to which you may easily find an answer in the Royal Exchange of London.’ Cobbett, *Cobbett’s Political Register*, vol. I, 840.
- 50 C. Roberjot, *Rapport fait à la Convention nationale, par Roberjot, représentant du peuple, sur sa mission dans les pays conquis par les armées du Nord et de Sambre-et-Meuse* (Paris: Imp. Nationale, An III, 1794–5).
- 51 Roberjot, *Rapport fait à la Convention nationale*, 24–25.
- 52 As quoted in English in W. Cobbett, *Cobbett’s Political Register*, vol. I, 817–818.
- 53 *Ibid.*, 822.
- 54 *Ibid.*, 826.
- 55 K. Freiherrn von Proff, *Kurze Bemerkungen über das Recht der Schiffahrt auf dem Rheine. Für die Bürger des deutschen Reichs und der französischen Republik* (Düsseldorf: Schreiner, 1801). J.J. Eichhoff, *Mémoire sur les quatre départements réunis de la rive gauche du Rhin, sur le commerce et les douane de ce fleuve* (n.p., 1801). J. B.M. Jolivet, *Ueber den Thalweg des Rheins, in Hinsicht auf Grenze zwischen Frankreich und Deutschland, über die auf beiden Rheinufern angelegten Zölle, Mauthen und die den zwei Städten Mainz und Kölln zustehende Stapelgerechtigkeit* (Mainz: Crass, 1801). *Betrachtungen über den Thalweg des Rheins, als Grenzscheide zwischen Deutschland und Frankreich: ein Wort zu seiner Zeit an Deutschlands*

34 *Securing freedom of navigation*

- Regierungen, deren Gebieth an diesen Thalweg grenzt* (n.p., 1802). P.F. Paravey, *De la libre navigation du Rhin, ou de la réclamation des villes de la rive gauche contre le droit d'étape de Cologne et de Mayence* (Koblenz: la Nouvelle Libr., 1801). *De la Navigation du Rhin. Mémoire imprimé par ordre du Comité consultatif du commerce de Strasbourg* (Strasbourg: Levrault, 1802).
- 56 Eichhoff, *Mémoire sur les quatre départements*, 29–31.
- 57 *Neue Allgemeine deutsche Bibliothek* 68 (Berlin, 1801), 204.
- 58 *Betrachtungen über den Thalweg des Rheins*, 3–7.
- 59 Paravey, *De la libre navigation du Rhin*, 1–15.
- 60 *Ibid.*, 35–45.
- 61 Robert Mark Spaulding, 'Changing Patterns of Rhine Commerce in the Era of French Hegemony, 1793–1813,' *VSWG/ Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 100, no. 4 (2013): 414. Spaulding, 'Anarchy, Hegemony, Cooperation. International Control of the Rhine River, 1789–1848' [2007], 457–464, [www.ccr-ikzr.org](http://www.ccr-ikzr.org). For the original treaty text: Zentral-Kommission für die Rheinschiffahrt, *Rheinurkunden. Sammlung zwischenstaatlicher Vereinbarungen, landesrechtlicher Ausführungsverordnungen und sonstiger wichtiger Urkunden über die Rheinschiffahrt seit 1803 I (1803–1860)* (The Hague: Nijhoff and München and Leipzig: Duncker & Humblot, 1918).
- 62 Spaulding, 'Anarchy, Hegemony, Cooperation,' 4–7. Centrale Commissie voor de Rijnvaart, *200 jaar geschiedenis 1815–2015*, 27–35. C. Von Looz-Corswarem, 'Der Rhein als Verkehrsweg im 18. Jahrhundert', in *Der Rhein als Verkehrsweg*, eds. Clemens Von Looz-Corswaren and Georg Mölich (Bottrop: Pomp, 2007), 50–55. De Decker, *Europees internationaal rivierenrecht*, 122–128.
- 63 Robert Mark Spaulding, 'Rhine River Commerce and the Continental System', in *Revisiting Napoleon's Continental System. Local, Regional and European Experiences*, eds. Katherine B. Aaslestad and Johan Joor (Palgrave Macmillan: London, 2015), 114–132. Spaulding, 'Changing Patterns,' 420–421, 426.
- 64 Hein A.M. Klemann, *The Central Commission for the Navigation on the Rhine, 1815–1914. Nineteenth Century European Integration*. ECHR working paper: ECHR-2013–1 (Rotterdam, 2013), 1–4. J.L. Wolterbeek, *Proeve eener geschiedenis van de scheepvaartwetgeving op den Rijn* (Amsterdam: Frederik Muller, 1854), 39–58.

## 2 The balance of power and the system of commerce before and after Vienna (1814–1815)<sup>1</sup>

### Introduction

The strategic role that rivers and the principle of freedom of navigation had played in the French expansionist policies did not result in an unambiguous rejection of the principle after the Napoleonic wars had ended; quite the contrary, the victorious nations embraced it – albeit under totally different conditions. Freedom of navigation on international rivers became part of a broader Allied plan for peace and security in post-Napoleonic Europe. This plan found its practical origins in a resolute rejection of the imperial rivalry scenario that had frustrated the efficient allocation of Europe's largest river's resources. By looking at the (non-revolutionary) philosophical origins of, and the contribution of non-state actors to, the new European river policy, this chapter shows how, despite the very different national interests among the Great Powers and the riparian states, the negotiations during the Congress of Vienna in 1815 resulted in a revolutionary form of multilateral cooperation and the formal establishment of the Central Commission for the Navigation of the Rhine.

### A pushy appeal

It must have felt as if he were back in the game. When, in early January 1814, Johann Joseph Eichhoff (1762–1827) heard that allied forces under Prussian leadership had crossed the Rhine, he did not hesitate to have his son in Cologne reach out to the new rulers and offer his services. Eichhoff himself was still in Paris, where he had retained the title of General Director of the Octroi Administration. Although he had not been able to execute his duties over the past years for a number of reasons, he hoped the arrival of the allied forces might get him back in the saddle.

Eichhoff was an intriguing and talented man. In the 1780s, while holding the position of chef for the prince-elector Max Friedrich in Bonn, he managed to study law and economics, and learned to speak French fluently when he was sent multiple times to Paris to get acquainted with French cuisine. In addition, he appreciated the fine arts. Ludwig van Beethoven was one of his

closest friends, and it is probably through him and his mentor in the fine arts, Eulogius Schneider, professor of literature at the University of Bonn, that he became familiar with Enlightenment ideas and the cause of the French Revolution. But it was only after a violent dispute in 1789 that the French discovered his talents. Reportedly, Eichhoff had stabbed one of his colleagues with a kitchen knife, and escaped to Strasbourg and Paris, where he eventually was appointed supervisor of the administration of the Electorate of Cologne on the left side of the Rhine. At the turn of the century his career in the administration of the Rhineland under French rule accelerated. He first became municipal councillor, then mayor, and in 1802 even vice prefect of the arrondissement of Bonn. In 1804, however, he was suddenly discharged from this position because Napoleon himself had received a poor impression of him while visiting the city that year, disliking the way Eichhoff put on airs, given he had been merely a simple chef. That he fell off his horse during a joint ride certainly did not increase Napoleon's esteem for the man. In 1805 the French appointed him inspector on the left side of the Rhine of the newly established Rhine Octroi Administration. That was a position challenging enough for his talents to flourish, while humble enough to keep his pretentious behaviour in check, at least for the time being.<sup>2</sup>

In the final years of Bonaparte's reign Eichhoff held the highest position of General Director of the Octroi, controlling the entire navigable Rhine, yet he witnessed his big plans for the Rhine river go up in smoke. Napoleon had turned the river into an exclusively French asset. Rhine toll revenues went straight to the treasury and little was allocated to keeping the conditions for navigation sufficient. Towpaths on the non-French side were simply left to decay. Imperial customs hampered the free movement of goods among the riparian states, while contraband only slightly made up for this loss of transit.<sup>3</sup> On top of that, the Continental System was slowly but effectively suffocating international commerce and navigation. The Rhine was a mere shadow of what it once was, while Eichhoff sat in Paris and could not do anything.

In addition to the miserable maritime conditions of the Rhine, Eichhoff himself faced charges of self-enrichment and mismanagement that seriously complicated his work. Once again, his authoritarian and arrogant behaviour had led to strong animosity, this time from the merchant class along the Rhine. Instead of promoting the interests of commerce and navigation, the mayors and chambers of commerce of Mainz and Cologne argued that Eichhoff merely advanced his own interests by introducing regulations that enabled him to rule in an absolutist way over the Rhine skippers.<sup>4</sup> The reports of irregularities were serious enough for the French government to intervene and it twice sent an investigating commissioner to Mainz and other Rhine cities. In 1812, Eichhoff was even suspended from his position, but with the Russian campaign in full swing the investigations against him were temporarily suspended. The crossing of the Rhine by the allied forces at the end of 1813 thus not merely ushered in the downfall of the French Empire, but also nullified all investigations and allegations made against Eichhoff in the previous years.<sup>5</sup>

His first approach via his son to the Prussians in January 1814 failed. The Prussian and allied authorities had other, more urgent, matters on their minds and probably did not even reply to Eichhoff's call. Still, that did not discourage him from presenting himself once again three months later. Only days after Paris had fallen, none other than the Prussian reformer Baron vom Stein himself, head of the temporary allied administration of the liberated areas, and Chancellor Karl August Hardenberg received extensive letters.<sup>6</sup> In these letters Eichhoff emerged as a true advocate of a liberal Rhine regime. He explained that local authorities were starting to take advantage of the current circumstances. They erected new tolling stations or abused in other ways their sovereign powers to generate extra income. Eichhoff drew a threatening picture of the Rhine deteriorating to its medieval regime, describing a patchwork of local regulations, privileges, and toll collection systems: 'In short, what was called the Rhine supervision was really only a bizarre and disgraceful assemblage of the old feudal anarchy.' Eichhoff warned Hardenberg that shutting down the central Rhine authority of the Octroi, as it had existed under his leadership between 1809 and 1813, would be fatal both to Rhine commerce and to the treasuries of the future 'princes who own the Rhine.' Finally, he requested the installation of a commission, consisting of representatives of the riparian states, to have a new regime designed on the basis of the existing Octroi, and to be submitted for approval to the high contracting parties.<sup>7</sup>

Targeting the Prussians was a tactical move. In view of its war efforts and its current military positions along the river, Eichhoff expected that Prussia could count on becoming an important Rhine state after the future peace settlement.<sup>8</sup> Furthermore, Stein and Hardenberg had been the illustrious minds behind the liberal reform of the Prussian economy after Prussia's defeat against Napoleon in 1806. If Eichhoff could persuade these two men to support his plans, there might be a chance that a new liberal wind would empower the administration of this mighty river. Not unimportantly, Eichhoff was truly ambitious for the prestigious and undoubtedly well-paid position of General Director of a future Rhine administration. Perhaps Eichhoff had one other reason to contact Stein. He was not a real Prussian. In fact, he was born and raised in an old family of Imperial Knights along the Rhine and the appendicular Lahn. Whether it was Stein's special connection with the river or not, it was him, and not Hardenberg, who wrote back to Eichhoff, albeit in a concise and resolute manner. On 20 May he replied that the nature of the future administration of the Rhine was still to be determined. For the time being it was placed under the authority of Count Friedrich Christian Solms-Laubach (1769–1822), and therefore Eichhoff's services were not required.<sup>9</sup>

Only ten days later, on 30 May 1814, the Allies ended the Sixth Coalition War against Napoleon with the Paris Peace Treaty. Most articles of the treaty dealt with territorial issues, but remarkably article V postulated that 'The navigation of the Rhine, from the point where it becomes navigable unto the sea, and vice versa, shall be free, so that it can be interdicted to no one.'<sup>10</sup> What is more, it stipulated that at the upcoming Congress in Vienna, the



*Figure 2.1* Portrait of Johann Joseph Eichhoff  
Source: [www.rheinisches-bildarchiv.de](http://www.rheinisches-bildarchiv.de)

European powers were to decide on everything regarding the navigation of the Rhine and ideally would also figure out how to introduce the principle of freedom of navigation on all other European rivers that crossed borders. At this point Eichhoff left Paris and withdrew to his cottage. There he entertained a certain optimism regarding the upcoming Peace Congress and turned to writing a memorandum on the navigation of the Rhine that was not merely addressed to the Great Powers, but to the people of Europe as a whole.<sup>11</sup>

### **Freedom of navigation as a European principle**

In the run-up to Vienna, two distinguished views of the political economy of Europe existed. One perspective is what David Hume called, back in 1758, ‘jealousy of trade.’<sup>12</sup> It is a view in which the economic progress of neighbouring states is considered in suspicious terms, especially because it is believed that their development comes at the expense of one’s own. In addition, commercial competition could also be a stepping-stone to war, as the Dutch-English wars in the seventeenth and eighteenth centuries had clearly

shown. The ‘jealousy of trade’ view was developed as an argument against British global dominance that depended on its maritime commerce between the colonies, and between the colonies and Europe.

The ‘jealousy of trade’ perspective relates to theories of international market competition in which the success of a state in international trade becomes a matter of its military and political survival.<sup>13</sup> The conviction that international commerce was the fundament of the nation’s power was widespread, and when France seemed to extend its control over the most important European rivers around the turn of the century or when it implemented the Continental System in 1807, British pamphleteers considered this a real threat to the nation *and* to Europe; as McArthur wrote on the Peace of Amiens: ‘there can be little security in peace for the commerce of Great Britain, or for the tranquillity of the continental powers.’

In opposition to this view, a more optimistic understanding of trade within the European political economy developed in the years around the turn of the century. A type of economic liberalism became increasingly mainstream, especially among those who benefited from the industrialisation process that ensued in Britain. Back in 1776 the Scottish economist and philosopher Adam Smith insisted, in what would become his most famous work *The Wealth of Nations*, on the abolition of monopolies and other restraints on the transportation of goods.<sup>14</sup> Rather than being a threat, Smith believed that growing commerce contributed to the improvement of the country. Wherever it could prosper:

commerce and manufactures gradually introduced order and good government, and with them the liberty and security of individuals, among the inhabitants of the country, who had before lived almost in a continual state of war with their neighbours and of servile dependency upon their superiors.<sup>15</sup>

Rivers, Smith explicitly noted, played a not unimportant part in providing societies with prosperity, also historically speaking. After all, ‘inland navigation was probably one of the principal causes of the early improvement of Egypt.’ The Nile had provided ancient Egypt with an infrastructure that connected large towns with villages and farmhouses in the country, ‘nearly in the same manner as the Rhine and the Maese do in Holland at present.’<sup>16</sup>

Yet Smith also believed that order and tranquillity were essential requirements for commerce to prosper: ‘In all countries where there is tolerable security, every man of common understanding will endeavour to employ whatever stock he can command in procuring either present enjoyment or future profit.’<sup>17</sup> In other words, Smith used the term ‘security’ both to indicate the environment in which commerce can develop and to signify the societal consequence of well-developed commerce. Even though Smith’s reasoning is not clear when it comes to cause and effect, it is evident that he equated security, or the sense of security, with personal freedom, and believed that personal freedom depended on order and good government.<sup>18</sup>

It is doubtful whether Smith actually saw increasing economic connections between peoples as a pacifying force within the international realm, such as the French philosophers Montesquieu and Jean-Francois Melon had argued earlier in the eighteenth century.<sup>19</sup> Whereas theoretically this might be the case, in practice Smith saw that economic interests could not fully restrain the passions of men, nor of nations. Within nation-states the social institution of the market and supporting public institutions might guide men's passions towards virtue. However, considering the mercantilist spirit of his times, Smith was pessimistic about the establishment of institutions in the international realm: 'Commerce, which ought naturally to be, among nations, as among individuals, a bond of union and friendship, has become the most fertile source of discord and animosity.'<sup>20</sup> In his mind, international affairs would always be driven by 'the skill of that insidious and crafty animal, vulgarly called a statesman or politician, whose councils are directed by the momentary fluctuations of affairs.'<sup>21</sup>

In fact, when Smith mentioned the contemporary situation along the Rhine in the above quote, he consciously referred to the associated benefits for Holland and Holland alone, as he could clearly observe that the intended advantages were not transmitted to the riparian states higher up the Rhine. Smith did not fail to observe that international river transportation depended on the whims of rulers:

The commerce besides which any nation can carry on by means of a river ... which runs into another territory before it reaches the sea, can never be very considerable; because it is always in the power of the nations who possess that other territory to obstruct the communication between the upper country and the sea.<sup>22</sup>

In the course of the French Revolution other thinkers came to a more optimistic conclusion when it came to the pacifying qualities of free international commerce. Immanuel Kant (1724–1804) concluded in *Project for a Perpetual Peace* that 'It is the spirit of commerce that sooner or later takes hold of every nation, and is incompatible with war.'<sup>23</sup> Expanding trade relations, so Kant believed, increased interdependence among nations, as it created a basis for the 'interest in the security of peaceful relations through mutual gain.'<sup>24</sup> Likewise, in 1791 the British-American philosopher and revolutionary Thomas Paine (1737–1809) noted in his book *The Rights of Man* in a chapter called 'Ways and Means of Improving the Condition of Europe' that free international commerce would simply 'extirpate the system of war'<sup>25</sup> and could 'unite mankind by rendering nations, as well as individuals, useful to each other.'<sup>26</sup>

According to these thinkers, international trade was not to be understood as a zero-sum game. It provided prosperity for all trading nations, as there was no cheaper way (not even by waging war) to procure for oneself the required materials for manufacturing and commerce. On the one hand, Paine

observed that peace enabled commerce to take its natural course and prosper, but on the other hand, he also believed that prospering commerce reinforced peace among nations. Quite explicitly he seems to have believed that free trade would automatically result in a rightful distribution of wealth among the nations, as he wrote: 'The great support of commerce consists in the balance being a level of benefits among all nations.'<sup>27</sup>

A position strikingly similar to those of Paine and Kant in this specific regard, albeit from a strict anti-revolutionary point of view, was the one taken by Friedrich Gentz in 1800. Gentz had been a student of Kant and would become an important Prussian diplomat, secretary to Metternich, and 'virtually the spiritus rector' of the Vienna Congress.<sup>28</sup> In *On the State of Europe* Gentz pictured the British as an example to the rest of Europe. It was not British maritime power but the revolution that had brought the European state system into danger. It was true that commerce was more beneficial to some states than to others. Britain, Holland, and France profited particularly, while Germany, Russia, and Poland had done much less so. Ultimately, commerce would not lead to an absolute equality among nations, Gentz stated. Such inequalities also affected the general balance, as other social improvements would have done. Yet it was not the case that commerce had remained the exclusive property of one or a few states. Neither was it the case, therefore, that it had brought only to these privileged states a higher degree of civilisation and wealth, which allowed them to rule in a despotic way over the left-over countries that were eventually thrown back into barbarism, poverty, and relative weakness. Instead, every nation had participated in commerce. Again, Gentz noted, not every state had benefited from it in the same degree, but 'it is not possible that this system should have been a cause of the general decay, or total dissolution of the federative constitution.'<sup>29</sup>

This was, according to Gentz, also true for France: 'We have ... often seen her rise quickly from the severest blows received from England, and reclaim with successful energy what she had for a moment been deprived of.' Free trade, therefore, could be a means to establish peaceful interstate relations. Commerce, Gentz claimed implicitly, contributed to some sort of automatic counterbalancing effect, as there were always several countries endowed with good government, a native industry, and a 'good and civil character' that were in the running for dominance. This competition ensured variety and activity in trade relations and guaranteed the other nations the absence of one abusive power. The system of commerce, Gentz wrote, added a distinct balance of maritime and commercial states within the general balance of Europe.<sup>30</sup> Pamphleteers differed in their opinion as to whether the system of commerce was a threat to Europe (or to individual states) or a blessing, but they agreed that trade had become part of a power struggle, part of what set 'the great machine of government' in motion.<sup>31</sup>

In the Treaty of Paris in 1814 the European powers decreed that the navigation of the Rhine should be free, and could be interdicted to no one. This meant that the ancient staple rights and the shipping monopolies would be

abolished. It also stipulated that the future Congress in Vienna was to regulate the dues to be levied by the riparian states ‘in the mode the most impartial, and the most favourable to the commerce of all nations.’<sup>32</sup> Finally, the future Congress in Vienna should also examine and determine how the principle of free navigation could be extended to other European rivers with a view to ‘facilitate the communications between nations, and continually to render them less strangers to each other.’<sup>33</sup> Clearly, the contracting parties aimed at establishing the norm of equal treatment for the trade of all nations. The latter clause appears to indicate that the European powers understood the facilitation of increasing economic connections between peoples as a further pacifying force in the international realm. The last phrase even seems to evoke Kant’s and Paine’s free-trade theories on peace. It resonated with Paine’s belief in the soothing force of intensified international communication during which countries lost ‘the awkwardness of strangers, and the moroseness of suspicion,’ and learned ‘to know and understand each other.’<sup>34</sup>

The future Congress in Vienna was to result in ‘a system of a real and sustainable equilibrium in Europe.’<sup>35</sup> And, in the spirit of Thomas Paine, a natural distribution of wealth and a dense international network of interdependencies established by new norms and regulations that secure equal treatment might, like the territorial rearrangements, contribute to this European equilibrium. The articles on the freedom of Rhine navigation and the freedom of navigation on international rivers as such were already fully completed in one of the earlier drafts of the Paris Peace Treaty. This indicates that the European powers needed little time to finalise these stipulations.<sup>36</sup> Yet it would be too straightforward to conclude that such a swift Great Power agreement on the measures that were to be taken on the Rhine reflected a consensus on the projected goals, let alone the interests at play of the individual Powers.

### **Allied cooperation and Dutch ambivalence to opening up the European rivers**

Most surprising perhaps was the British stance with respect to free navigation on international rivers such as the Scheldt in 1814. According to the British Foreign Secretary Castlereagh (1769–1822), the opening of the Scheldt was a matter of course as ‘[u]pon no rational principle ought such a noble river as the Scheldt to be shut to the blessings of commerce.’<sup>37</sup> The British statesman justified this liberal objective with an appeal to reason and common law as structuring principles of the new European order. This was strikingly different from the position taken by his predecessors who always had been ‘on the side of an unjust commercial restriction, viewing the question entirely from a political, not an economic, point of view,’ as a legal scholar observed more than 100 years later.<sup>38</sup> At the same time, the position was remarkably similar to the justifications of the French revolutionaries for breaking open the Scheldt 22 years earlier, justifications that had technically constituted a *casus*

*belli* for Britain. What had happened? Had Britain's opinion changed so radically?

In 1792 the opening of the Scheldt had been advertised as a violation of the 'sacredness of international treaties.' It is true that the British regarded and continued to regard international treaties as the foundation of the political system of Europe. Their neglect resulted in unpredictability and thus insecurity. Yet by 1814 the effects of the Industrial Revolution became manifest and the British increasingly advocated for the liberalisation of international navigation.<sup>39</sup> It is also true that the issue of the Scheldt had always been a rather ambiguous threat to Britain. The problem back in 1792 was not the introduction of the principle of freedom of navigation as such, but the fact that the French applied it to the riparian states only. This was an attempt to gain exclusive navigation rights on the rivers within the empire, to the commercial exclusion of Britain. Moreover, French control of the river was ultimately a military move enabling Antwerp to become a naval base in close proximity to Britain. It is in this light that Britain backed free navigation of international rivers and had the words 'for all nations' explicitly included in the first clause of article V of the Treaty of Paris. Free Rhine navigation should contribute to increasing commerce, including British commerce. To stipulate the principle in this sense could prevent British exclusion on Continental rivers for good and safeguard their commerce and influence in the heart of Europe.<sup>40</sup>

In addition, the French were much involved when it came to the stipulations on freedom of navigation. In fact, it had been the French minister Talleyrand who had insisted on their insertion in the Paris Peace Treaty. His initial proposal had in part been even more far-reaching, reflecting Hugo Grotius's understanding, as 'the above provisions [free navigation on transboundary waterways] can be extended to *all* navigable streams and rivers in all the countries of Christendom in Europe.'<sup>41</sup> For the other contracting parties this stipulation was a bridge too far, as it opened their internal rivers to foreign vessels and demanded equal treatment of foreign goods as well, thereby reducing the sovereign powers of a nation over its internal navigable waterways. Nevertheless, France could live with the final formulation of the article. In fact, when King Louis XVIII wrote to his representatives in Vienna a few months later the instructions were clear:

As to the rights of navigation on the Rhine and the Scheldt, as they ought to be the same for all, France has nothing to desire, except that they should be very moderate. By the free navigation of the Rhine and the Scheldt, France will acquire the advantages that it also enjoyed when it possessed the countries through which these rivers flowed, and to which she has renounced, and will not have the burdens of possession. She will therefore no longer reasonably regret it.<sup>42</sup>

In April 1814 the Prussian Chancellor Hardenberg envisioned in his ambitious memorandum 'Plan for the future arrangements of Europe,' among

other things, the annexation of both Westphalia and the Rhineland to Prussia. To breathe new life into these territories along the Rhine, it was essential to connect them with distant markets by establishing liberal regulations for Rhine navigation. Prussia, therefore, was greatly interested in the introduction of a moderate toll system as well, and it was more than happy to sacrifice the ancient privileges of the city of Cologne for increased commerce and navigation.<sup>43</sup> Yet in March the Prussian statesman and administrator of the liberated territories, Stein, noted that, as gatekeeper of the Rhine, Dutch cooperation was essential to open up the river. Without their cooperation, a renewed regime on the conventional Rhine would bring little benefit to commerce. In fact, if the Netherlands continued levying tolls on their part of the Rhine, free navigation on the German parts would merely lead to major disadvantages for Germany. Stein therefore insisted on a quick arrangement with the Dutch sovereign 'to encourage him to adopt a corresponding toll system on the Lower Rhine.'<sup>44</sup>

However, the Netherlands was not an official participant in the negotiations in Paris. Its government had not ratified the peace treaty and was never asked about the principle of freedom of navigation on international rivers. At this point the Dutch sovereign was not at all enthusiastic about the enforcement of such all-embracing European measures. In a memo the Dutch government addressed the common-law argument of the Allies that justified the opening of the Scheldt rather sneeringly:<sup>45</sup> 'we hope that, in the spirit of justice that drives them, the Allies will be equally willing to allow to the Provinces of Holland to fully take advantage of their natural position which assures them of good commerce.' 'Today,' the memo goes on,

the Allies seem to think that it is something against reason and against common law to see a country profit in its own interest from the means that were provided by nature to impede the commerce of others ... But is that really the case? Isn't it the local situation in Denmark that allowed the kingdom to establish a right to toll in the Sond that is recognised by the foreign powers? Was the closure of the Black Sea by the Turks regarded as such a violation of the rights of nations that the entire Christian world believed it to be its duty to oppose it?<sup>46</sup>

Moreover, neither Austria nor the other countries on the Danube profited from free commerce. 'And did Prussia ever have, or even demanded, freedom of navigation on [the Dutch part of the Rhine] the Waal?' the memo asked. The Dutch called the Allied demand for free navigation as a matter of natural law into question and challenged the claim of its healing effects for Europe. Instead, they claimed that it was justified for any sovereign state to protect its national advantages, even if these did not align with a collective plan for the new European order. The new Dutch nation clearly hoped for some kind of compensation for the inevitable lifting of the blockade on the Scheldt, but it also wanted to make a point of its newly acquired sovereign power.

The instructions to the Dutch representative in Vienna reveal that the Netherlands was not against a reorganisation of the Rhine regime at all. 'Article 5 ... will undoubtedly elicit highly interesting discussions for Holland,' the Foreign Secretary Anne Willem Carel Van Nagell (1756–1851) wrote in August 1814. He welcomed the proposed standardisation of the duties on navigation and agreed that such a measure could be beneficial for the development of trade, not the least of all for the Netherlands. 'Everything that makes the Rhine more expensive, enhances the attractiveness of the Weser and the Elbe, and that might result in a significant reduction of the current expedition [in the Netherlands].' Therefore, Van Nagell argued, the riparian states should introduce a fairly low, uniform, and fixed rate that improved the competitiveness of Rhine navigation. In addition, the concentration of the tolling stations into a single office could yield significant timesaving. Yet the transit duties, Van Nagell warned, should be excluded from any agreement in Vienna. They should remain subject to the rule of the national sovereign exclusively, because any state should be able to intervene when, as a result of fluctuations in the dimension of expedition, revenues of the transit duties declined.<sup>47</sup>

The special position of the Netherlands as a bulwark and pivot within the new collective security system was clear to the Allied Powers. This also had consequences for their share in the deliberations on the future of the Rhine. In December 1814 the Allied Powers appointed in Vienna an ad hoc River Congress Committee that was charged with the implementation of article V of the Paris Peace Treaty. The representatives of Prussia, Britain, France, and Austria were asked to prepare the deliberations, but on the initiative of Russia, and with the approval of the rest, the other riparian states, including the Netherlands, were asked to join. In this period the Netherlands was considered one of the larger powers of the Continent. Apart from the so-called first-rank powers, Prussia, Russia, Austria, Britain, and potentially France, the Netherlands would rank as the largest of the secondary powers.<sup>48</sup> Consequently, the Prussian delegates in Vienna regarded the Netherlands as a far more important business partner than France, especially when it came to the Rhine. In a confidential note the Prussian representatives documented that if a central authority to secure the freedom of navigation on the Rhine was to be installed after the Congress, it was more important to include the Netherlands in such a body than France, a country that controlled only a tiny stretch of the navigable Rhine.<sup>49</sup>

The Dutch representative accepted the invitation to join the ad hoc River Congress Committee, in line with the instructions to get involved in the reorganisation plans.<sup>50</sup> Yet his superiors in The Hague expected him to act cautiously. Free navigation on the Rhine sounded like a great idea, Van Nagell wrote in January 1815, but no one knew whether these 'theories' would actually work out well; they were, after all, without precedent. Be that as it may, the Dutch reticence might well be explained by the political situation of the time. In Vienna there was still no certainty about the territories the Netherlands

would gain.<sup>51</sup> Either the Dutch sovereign still hoped to gain the lands along the Rhine up to Mainz as he had demanded, and thought of an international Rhine regime based on cooperation as a second-best option, or the Dutch preferred to wait until territorial composition and political autonomy were assured, so as to face the most important Rhine partner, Prussia, as an equal.<sup>52</sup>

By February 1815 the last stumbling block for Dutch participation in the River Congress Committee that was about to start its deliberations had disappeared. The Congress had reached an agreement on the territorial composition and administrative structure of the Netherlands. The new country incorporated almost the entire Austrian Netherlands and the Prince-Bishopric Liege. The Dutch sovereign received the title of King of the Netherlands and Duke of Luxemburg.<sup>53</sup> Yet Dutch ambitions to incorporate a longer stretch of the Rhine into the kingdom failed. Instead the Prussians received large territories along the Rhine, becoming instantly a major Rhine state. This meant that the Dutch representative needed to enter into negotiations on the future Rhine regime with his peers, the representatives of Prussia, France, Baden, Bavaria, Nassau, and Hesse-Darmstadt.

### **Humboldt and Eichhoff at the River Congress Committee in Vienna**

The sometimes strongly opposing interests were not very promising conditions for the negotiations about the future Rhine regime in the spring of 1815. Moreover, the accompanying ignorance regarding the matter at hand made it even more difficult. The representatives lacked expert, sometimes even basic, knowledge and diplomatic back-up.

In the first session it immediately became clear that the Prussian and French representatives were much better prepared for the negotiations than the other participants. The French Minister Plenipotentiary, the Duke of Dalberg (1773–1833), and the Prussian representative, Wilhelm von Humboldt (1767–1835), presented very similar projects based on the liberal principles of the Napoleonic Octroi Administration.<sup>54</sup> In the second session the smaller riparian states, including the Netherlands, were invited to air their views. France and Prussia, it appeared, were proponents of a centralised administration guarding the freedom of Rhine navigation, but the smaller German riparian states rejected such a permanent central authority.<sup>55</sup> According to the Dutch delegate to the River Congress Committee, Gerrit Karel van Spaen de Voorstonden (1756–1841), almost everyone in the ad hoc committee felt that Prussia, represented by the supposedly liberal Von Humboldt, was not willing to conform to a centralised or permanent administration itself once it was established. The smaller riparian states were afraid of Prussian dominance within such a central authority, argued Van Spaen. ‘Nominally Prussia wants to commit itself to mutual obligations, but not in practice!’<sup>56</sup> Although most riparian states recognised the need of a new regime, the smaller states were wary of a central authority that could become a hegemonic tool of the most powerful riparian state.

Van Spaen, too, feared Prussian dominance and openly attacked Von Humboldt's plan to establish a strong executive body for governing the Rhine. Unless the Netherlands received a larger say in such a body, commensurate with its importance in controlling the Rhine delta, Van Spaen stated, he would reject any such proposals.<sup>57</sup> Von Humboldt, however, ignored the Dutch demand and stated that a central authority could only operate effectively if it had a strong directorate. Interestingly, the Dutch resistance coincided with scepticism from the other smaller riparian states. They understood the future administration not only as a tool to secure freedom of navigation on the Rhine,<sup>58</sup> but also as a possible threat to their national sovereignty. The most outspoken in this regard was the representative of Baden, Baron von Berckheim (1774–1849). After more than 20 years of French dominance he was tired of the 'fake authorities' that were in their executive power merely tools of powerful states taking advantage of the weaker ones.

It would be ... extremely useless, and even dangerous, to give such an administration more powers ... because a state, chastised by all other fellow states, that cannot fulfil one of the assumed duties, would neither allow, if it has bayonets, that domestic law is determined by a foreign authority.<sup>59</sup>

Due to the continuing opposition of the smaller German states and the Netherlands, no majority could be found for the constitution of a central and permanent authority with far-reaching powers. Instead, the smaller riparian states suggested that the Commission would primarily be a consultative body, which might also act as a court of appeal in matters of Rhine navigation. This would ensure that any new regulations regarding the liberalisation of Rhine navigation and the harmonisation of the tax system would only be implemented with the consent of all riparian states.<sup>60</sup> Humboldt, who was the driving force behind the River Congress Committee, took up the pen to redact a new version of the plan for the future Rhine regime that was also supported by the smaller Rhine states.

The River Congress Committee consisted of the representatives of the involved riparian states, plus Britain. However, external experts were used to push the Committee to consensus. Remarkably, the Committee members came to depend to a great extent on the assistance of Johann Joseph Eichhoff, the ex-General Director of the Octroi Administration, who had made sure he had been invited to Vienna as an external expert. That he would be introduced to the Special Committee was almost certain well before the sessions started in February 1815. Only a couple of months earlier he had published his magnum opus on the Rhine regime that he had been working on ever since his short-lived correspondence with Stein in May 1814. Despite his uncontested expertise on the matter, the Prussians had shown no interest in him. Both Stein and Solms-Laubach knew about the accusations that had been made against him since 1809. They had turned instead to Colonel Peter

Jacob Gergens (1764–1816), the inspector of the right side of the Rhine, who had always monitored Eichhoff closely, protecting ‘German interests’ against what he understood as ‘French injustice.’<sup>61</sup> In the course of 1814, Eichhoff therefore had turned to the Austrians. His talents, expertise, good command of the French language, propensity for intrigue, and, not unimportantly, his Catholic descent, convinced Metternich himself to formally invite him to attend the Congress. The Austrian government believed Eichhoff could be put to good use to protect Austria’s interest in opening the Rhine and secure ‘the only direct commercial outlet left to [the emperor] towards the northern seas.’<sup>62</sup>

During the formal sessions of the River Congress Committee Eichhoff indeed successfully pushed the delegates to an agreement. The issue of forced transshipment, for example, was one of the most important problems, also perceived as such within the public realm, of which these officials had no significant knowledge. The Imperial Recess of 1804 had already terminated the staple rights in Mainz and Cologne. However, the forced transshipment right was still in force and allowed both ports to have long-distance merchandise passing the city to be transferred to the boats of the local shipping associations. What is more, transshipment entailed the levying of crane, quay, weighing, and storage fees. These rights benefited local skippers and port activity, but hampered trade and augmented freight rates considerably. In the third session, the Congress Committee invited the deputies from Mainz and Frankfurt and Eichhoff to shine a light on the problem.

The deputies from Mainz and Frankfurt held strongly contrasting opinions. Eichhoff, by contrast, presented a well-informed and balanced view, in which he explained that, on the one hand, the right seemed very much in contradiction with the principle of the freedom of navigation. On the other hand, he underlined, unlimited freedom for skippers to load or unload would be destructive for commerce and navigation on the Rhine. The river, physically, could not handle the larger ships from the lower parts on the narrower and shallower segments of the Upper Rhine. Therefore, Eichhoff advocated for the preservation of forced transshipment in Mainz and Cologne, with the argument that new regulations would secure safe, speedy, and regular navigation and protect commerce by preventing excessive fees. The River Congress Committee decided to abolish the forced transshipments nonetheless. In the public sphere the issue had become a key example of the old unfair system, based on privileges, that was not aimed at the promotion of the common good, but merely of the local interest. Thus, even though the Committee members decided not to accept Eichhoff’s solution to the problem, his outline of the issue resulted in a unanimous decision.

Outside the Congress Committee Eichhoff continued lobbying by writing memos to the representatives about his projected Rhine regime. He actively gained the personal confidence of the Dutch representative Van Spaen. They stayed in close contact with each other, and during the entire Congress Van Spaen relied on Eichhoff’s expertise, while he continued endorsing the liberal

mind of the former General Octroi Director towards his government in The Hague.<sup>63</sup> The River Congress Committee much respected Eichhoff's judicious reflections during the sessions in the early spring of 1815, fostered as they were by a wealth of experience and unaffected by partisan concerns.<sup>64</sup> Eichhoff was the only external expert who actively appeared multiple times in the sessions of the River Congress Committee and who contributed in a considerable way to the establishment of common ground. It is remarkable to see how many aspects of his memoranda of 28 February on the design of the future Rhine Commission, as well as its more permanent administration, can be found in the final agreement among the riparian states.<sup>65</sup>

On 9 June the general stipulations were integrally incorporated into the Final Act and signed by the plenipotentiaries of the eight High Powers. An additional 32 river clauses were included in the annexes.<sup>66</sup> In this document the Powers declared that 'those whose states are separated or crossed by the same navigable river, engage to regulate, by common consent, all that regards its navigation.' Fundamental for these regulations was the principle of freedom of navigation. The agreement on Rhine navigation strongly reflected the interests of the smaller German states and the Netherlands. The riparian states agreed that they would henceforth regulate all matters related to Rhine navigation jointly and would grant free navigation to each other's citizens, provided that the skippers respected the safety regulations. Ship owners were exempted from all duties or levies besides a uniform and limited toll from the point from which the Rhine was navigable until the sea (*jusqu'à la mer*). The rights of staple were abolished; Rhine tolls were jointly fixed to a maximum and could not be increased anywhere without the consent of all commission members. Additionally, the number of toll stations was to be reduced. Rhine trade became 'free' for nationals of both the riparian and the non-riparian states.

Crucially, a new central authority, the Central Commission for the Navigation of the Rhine (CCNR), was established. The CCNR would become the only official platform of communication between the riparian states concerning all matters relating to Rhine navigation. Furthermore, it was entrusted with drafting and enforcing common regulations that would go beyond the general guidelines for Rhine shipping and commerce as set by the additional river stipulations in the Final Act of Vienna. Until this Commission issued the definitive arrangements, the Octroi Convention would remain in force. Finally, it operated as a court of appeal for skippers and traders in disputes concerning toll collection or policing.<sup>67</sup>

The Commission consisted of representatives of the seven riparian states and would function as a periodic diplomatic conference that convened once or twice a year. It would take decisions by majority, in which each vote counted equally.<sup>68</sup> Each delegate was considered an agent of a riparian state charged with the task of cooperating for the common interest. Furthermore, as a permanent authority, one Chief Inspector and three sub-inspectors were to be elected for life by the commissioners. These inspectors, constituting the

executive administration, were to be installed to monitor the enforcement of the regulations. They would also function as contact persons for merchants and skippers when the Commission was on leave. Finally, the Chief Inspector was to provide the Commission with all the necessary information and counsel to maintain or improve the navigability of the Rhine. For that reason, the Commission was to publish an annual report with detailed information on the state of Rhine navigation. Both the Commission and the Chief Inspector would reside in Mainz.<sup>69</sup>

Metternich was happy with this result and believed that Eichhoff had been an important asset in reaching the agreement that protected the Austrian interest considerably. To show his gratitude Metternich recruited Eichhoff's son Joseph to the Imperial Service and later appointed him secretary of the Commission for the Navigation of the Elbe in Dresden.<sup>70</sup> Despite Prussian hesitance towards him, the Committee's driving force, Humboldt, also recognised Eichhoff for his services by charging him with the preparatory works for the future Central Commission for the Navigation of the Rhine.<sup>71</sup> In May 1815 Eichhoff started the new endeavour within the framework of a special preparatory committee that was not coincidentally supplemented with the Prussian-minded Colonel Gergens and Carl Albrecht Wilhelm von Auer.

### **A 'Central' Commission for the Rhine, not a 'European' one**

Ever since the Peace of Westphalia, international cooperation with the objective of abandoning tolls and other obstacles to free navigation on the Rhine had lain dormant, despite massive public support.<sup>72</sup> Part of the reason that subsequent treaties remained merely an acknowledgement of public opinion can be found in the Treaty of Westphalia itself. In historiography the Treaty is regarded a watershed in how states relate to each other. The Westphalian System regards each state, large or small, as equal in the sense that they are all charged with the sovereignty over their respective territory in which no other power has a say. After the territorial states rose from the imperial ashes in 1648, it would prove to be extremely difficult to coordinate matters like the regulation of navigation on international rivers, such as the Rhine, regardless of its major commercial potential for north-west Europe. Indeed, such coordination would involve a dozen larger and smaller states and authorities, each with a very limited ability to exercise influence beyond its borders. Besides, it was in the common interest of the involved rulers to respect each other's sovereignty, as an attack on this principle could be interpreted 'as an attack on the very order which guaranteed their existence.' This recognition of each other's sovereignty kept the Rhine in a state of anarchy and Rhine commerce in a deadlock until the end of the eighteenth century.<sup>73</sup>

The European declaration of the principle of freedom of navigation in Paris, its re-establishment during Vienna, and the establishment of this Central Commission illustrate the Powers' desire not to restore the European status quo ante after Napoleon's downfall. Clearly, the Powers in Vienna had

taken the Rhine Octroi Convention and the Central Octroi Administration as points of departure. However, to make the new European river policy work, the European prosperity narrative, primarily brought in by the British, and the Prussian blueprint for a strong executive Rhine Administration, were outweighed by a riparian security interest. Indeed, the CCNR was particularly revolutionary in the sense that it constituted an organisational formula that enabled 'safe' international cooperation, as it guaranteed the members' sovereignty.

To protect the sovereignty of the individual Rhine states, the institutional set-up of the new Central Commission was weakened in comparison to the Octroi Administration. When it comes to the jurisdictional function of the Central Commission, for example, one sees a slight dismantling of the existing centralised authority. The international court on Rhine navigation was terminated. Instead, the CCNR would function as a court of appeal. Nonetheless, local courts were required to take an oath in which they accepted that the freedom and uniformity of navigation were the most important principles in the jurisdiction of Rhine navigation. Furthermore, the resulting jurisprudence was immediately applicable to the entire Rhine. Finally, as a court of appeal, the CCNR decided on the basis of majority. This means that verdicts were binding, even for states that theoretically might not agree with the decision.<sup>74</sup>

In addition, as an administrative body drafting and enforcing common regulations for Rhine commerce and navigation, the authority of the CCNR was decreased in comparison with the Octroi Administration. The CCNR was not responsible for the levying of tolls, nor had it a say in the maintenance of the riverbed. It did carry out governmental tasks in the sense that it was responsible for governing the Rhine and that it was charged, for example, with drafting uniform police regulations for the entire river. On top of that the Commission was authorised to decide by majority. Nevertheless, the decisions taken in the Commission would not be binding for those states whose commissioner had not agreed upon them. Consequently, decisions were not implemented in member states without the approval of national institutions, once again a principle that was to protect national sovereignty.

This also meant that the British representative Clancarty was not at all satisfied with the result of the River Congress Committee. Clancarty had insisted on the Treaty of Paris being the 'Parent of ... Freedom of Navigation.' It was, according to him, only just that the signatories of the Treaty of Paris 'should have the power of fostering and protecting its own offspring from being destroyed by the mistaken cupidity of others.'<sup>75</sup> Rather than a matter exclusively reserved for the riparian states, he thus understood the protection of the principle of freedom of navigation of the Rhine as a task for the four major European powers and, interestingly, also France.<sup>76</sup>

Vienna ultimately charged the riparian states with the responsibility of designing a new regime for the Rhine that enabled the development of commerce and navigation based on the principle of freedom of navigation.

Even though it was far from clear what this regime would eventually look like, the representatives of the riparian states formulated some principles of 'free navigation' that clearly followed from security and prosperity considerations (the security-prosperity nexus). The French delegate, the Duke of Dalberg, noted, for example, that limiting the number of toll stations, simplifying toll collection, and abolishing the former local privileges were indispensable for 'the safety of commerce and the promptness of the transports.'<sup>77</sup> 'A Central Commission,' the delegate also stated, 'is necessary to continually watch over the exact execution of the agreed stipulations for the safety and the liberty of Rhine navigation.'<sup>78</sup> In an internal report the Dutch minister of trade also emphasised the importance of enabling skippers and merchants to determine the arrival time of their cargo, for example by well-maintained towpaths: 'This security is of the utmost importance for commerce. It is only for this reason that one prefers the other, much more expensive, land route over water shipments.'<sup>79</sup> The representative of Baden saw it as the mission of a new Rhine Administration to provide skippers and merchants with all the necessary means to 'inspire their confidence.'<sup>80</sup> The word *safety*, or *security* (*sûreté*), used in relation to commerce and navigation, was at the time thus closely connected to the above-mentioned notions of liberty and order within a competitive environment.<sup>81</sup> Trade security along the river meant that merchants, skippers, and others involved acted within one framework of rules, regulations, norms, and standards. Rather than providing some actors along the Rhine with privileges, such a framework provided all involved with the ability to predict the commercial, fiscal, and navigational circumstances on the entire river, enabling them to anticipate being unharmed in the future.

Besides trade security, the River Congress Committee adopted reciprocity as a second principle that determined their common understanding of the freedom of navigation principle. This was a highly distinguishing principle that had major implications, as it determined who would be part of the new regime. The British representative Clancarty had always insisted on the opening of the Rhine for trade *and navigation for all nations*. The riparian states, however, clearly embraced the understanding of the Paris Peace Treaty as a means of 'clearing the navigation of all obstacles that could give rise to conflict between the riparian states' and that, in fact, it had been decided 'not to give the subjects of all non-riparian states a right of navigation that was equal to that of the subjects of the riparian states, and for which there would exist no reciprocity.'<sup>82</sup> From the Final Act it can be deduced that freedom of navigation was no longer considered a natural right, but an act of goodwill by each individual riparian state.<sup>83</sup> Goodwill implied that the principle of freedom of navigation was understood in a purely reciprocal sense. This meant that British or other non-riparian skippers were excluded from benefiting from the new regime. Presumably Clancarty was therefore not terribly proud of the result and had this specific Vienna episode erased from the record. It seems he did not even submit the protocols of the River Congress Committee to the Foreign Office.

Still, there were also successes for Britain and for Europe as a whole in terms of improved conditions for creating prosperity and maintaining security. Even though Rhine navigation was not opened to the British, the new regime secured the development of traffic, trade, and prosperity in the heart of Europe. In addition, the commercial exclusion of the British from the Continental rivers had been prevented and so their influence was safeguarded. Furthermore, by implementing a regime of shared use for this vital source of prosperity, the European powers prevented the advantages of river navigation from finding their way into the hands of a single imperialistic power. In fact, imperial interests had been removed from the river, while smaller potentates were less likely to come into conflict with each other on the fair use of river resources as the way to diplomatic talks through the CCNR was always open. Expert knowledge had entered the diplomatic forum through Eichhoff, with the appealing narrative of promoting the common good rather than the local interest through trade security, regularity, and speed.

## Conclusion

Vienna had finally established freedom of navigation as a European principle and it had created an inter-riparian organisation to implement this principle on the Rhine. The European powers hoped to have finally found a way to end once and for all the cycle of fragmentary and hegemonic scenarios that had generated conflict and poverty along their international rivers for too long. Yet, as we will see in [Chapter 3](#), the basic understanding of trade security, reciprocity, and the freedom of navigation remained contested among the riparian states, while the menace of European Great Power intervention continued to loom over this first experiment of transboundary river governance.

## Notes

- 1 Parts of this chapter appeared before in Joep Schenk, ‘The Central Commission for Navigation of the Rhine. A First Step Towards European Economic Security?’, in *Securing Europe After Napoleon. 1815 and the New Security Order*, eds. B. de Graaf, I. de Haan, and B. Vick (Cambridge: Cambridge University Press, 2019), and Joep Schenk, ‘National Interest versus Common Interest. The Netherlands and the Liberalization of Rhine Navigation at the Congress of Vienna, 1814–1815.’ in *Shaping the International Relations of the Netherlands, 1815–2000: A Small Country on the Global Scene*, eds. Ruud van Dijk, Samuël Kruizinga, and Vincent Kuitenbrouwer (New York, London: Routledge, 2018), 13–31.
- 2 Christian Schlöder, ‘Johann Joseph Eichhoff (1762–1827), Politiker und Verwaltungsbeamter.’ *Portal Rheinische Geschichte* (2013), accessed 25 February 2020, [www.rheinische-geschichte.lvr.de/Persoenlichkeiten/johann-joseph-eichhoff-/DE-2086/lido/57c69f159a1fa0.40276060](http://www.rheinische-geschichte.lvr.de/Persoenlichkeiten/johann-joseph-eichhoff-/DE-2086/lido/57c69f159a1fa0.40276060). Carl Ferdinand Friedrich ‘von’ Nagler, *Briefe des königl. Preuß. Staatsministers, General-Postmeisters und ehemaligen Bundestag-Gesandten Carl Ferdinand Friedrich von Nagler an einen Staatsbeamten: als ein Beitrag zur Geschichte des 19. Jh.*, Volume 1 (Brockhaus, 1869), 16ff and 125ff.
- 3 Eberhard Gothein, *Die Schifffahrt der deutschen Ströme: Untersuchungen über deren Abgabewesen, Regulierungskosten und Verkehrsverhältnisse, Volume 2:*

- Geschichtliche Entwicklung der Rheinschiffahrt im XIX. Jahrhundert* (Leipzig: Duncker & Humblot, 1903), 59.
- 4 Mathieu Schwann, *Geschichte der Kölner Handelskammer. Band 1* (Cologne: Neubner, 1906), 249–259, 271–275.
  - 5 Nagler, *Briefe des königl. Preuß. Staatsministers*, 16ff.
  - 6 AdBR, 212J, 129, protocols of 6 September 1816, attachment: Eichhoff to the Central Commission of the Navigation of the Rhine (n.p., n.d.). Geheime Staatsarchiv Preußischer Kulturbesitz (GStA), III. HA MdA, 1367, Eichhoff to Hardenberg, Paris, 18 April 1814.
  - 7 GStA, III. HA MdA, 1367, Eichhoff to Hardenberg, Paris, 18 April 1814; see his extensive memo: ‘Considérations sur l’Octroi de navigation du Rhin.’
  - 8 Eichhoff mentions this expectation in his letter to Hardenberg.
  - 9 AdBR, 212J, 129, protocols of 6 September 1816, attachment: Eichhoff to the Central Commission of the Navigation of the Rhine (n.p., n.d.).
  - 10 Edward Baines, *History of the Wars of the French Revolution, From the Breaking Out of the War, in 1792, to the Restoration of a General Peace, in 1815. Comprehending the Civil History of Great Britain and France During that Period*, II (London: Longman etc., 1817), 344.
  - 11 AdBR, 212J, 129, protocols of 6 September 1816, attachment: Eichhoff to the Central Commission of the Navigation of the Rhine (n.p., n.d.).
  - 12 David Hume, ‘Of the Jealousy of Trade,’ in *Essays and Treatises on Several Subjects. Essays, Moral, Political and Literary*. Part II, Essay VI (London: A. Miller, 1758).
  - 13 Istvan Hont, *Jealousy of Trade. International Competition and the Nation-State in Historical Perspective* (Cambridge, MA and London: The Belknap Press of Harvard University Press, 2010).
  - 14 R.H. Campbell and A.S. Skinner, eds., *An Inquiry into the Nature and Causes of the Wealth of Nations. The Glasgow Edition of the Works and Correspondence of Adam Smith*, vol II (Oxford: Clarendon Press, 1976), 637.
  - 15 Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (Amsterdam: Metalibri, 2007), 317–318.
  - 16 Smith, *Wealth of Nations*, 34–35.
  - 17 *Ibid.*, 284–285.
  - 18 *Ibid.*, 722.
  - 19 Also see A.O. Hirschman, ‘Rival Interpretations of Market Society: Civilizing, Destructive, or Feeble?’ *Journal of Economic Literature* 20, no. 4 (1982): 1463–1484. Especially: A. Walter, *Adam Smith and the Liberal Tradition in International Relations* (London: LSE Research Online, 1996), 2–34, accessed 4 August 2016, <http://eprints.lse.ac.uk/archive/00000748>. Other authors do think that Smith considered liberalisation of international trade as a factor for peace and development. See F. Coulomb, ‘Adam Smith: A Defence Economist,’ *Defence and Peace Economics* 9, no. 3 (1998): 313–314. Walter regards these thoughts as a projection of nineteenth-century ideas onto Smith’s works. Walter, *Adam Smith*, 30.
  - 20 Smith, *Wealth of Nations*, 496.
  - 21 *Ibid.*, 468.
  - 22 *Ibid.*, 36. Also Marc de Decker, *Europees internationaal rivierenrecht* (Antwerp and Apeldoorn: Maklu, 2015), 103.
  - 23 Immanuel Kant, *Project for a Perpetual Peace. A Philosophical Essay* (London: Vernor and Hood, 1796), 42. Immanuel Kant, *Zum ewigen Frieden. Ein philosophischer Entwurf* (Königsberg: Friedrich Niolovius, 1795), 64.
  - 24 As cited by J. Habermas, ‘Kant’s Idea of Perpetual Peace with the Benefit of 200 Years’ Hindsight,’ in *Perpetual Peace: Essays on Kant’s Cosmopolitan Idea*, eds. K. Baynes and M. Lutz-Bachmann (Cambridge, MA: Harvard University Press, 1997), 121.

- 25 P.S. Foner, *The Complete Writings of Thomas Paine* (New York: The Citadel Press, 1945), 400–404.
- 26 *Ibid.*, 400.
- 27 *Ibid.*, 402.
- 28 Beatrice de Graaf, *Tegen de terreur. Hoe Europa veilig werd na Napoleon* (Amsterdam: Prometheus, 2019), 23, 93–95.
- 29 Friedrich von Gentz, *On the State of Europe Before and After the French Revolution: Being an Answer to L'état de la France à la Fin de L'an VIII* (London: J. Hatchard, 1802), 46–50.
- 30 *Ibid.*, 48–60, 100, 168, 182.
- 31 Some historians therefore claim that it was not conflicting ideologies but this commercial struggle that was the dominant factor in European politics after 1800. Bo Stråth, *Europe's Utopias of Peace: 1815, 1919, 1951* (London: Bloomsbury, 2016).
- 32 Baines, *History of the Wars of the French Revolution*, 52–59.
- 33 *Ibid.* According to secret article 3, the freedom of the navigation on the Scheldt was to be established along the same lines as on the Rhine.
- 34 T. Paine, *A Letter Addressed to the Abbe Raynal: On the Affairs of North-America. In which the Mistakes in the Abbe's Account of the Revolution of America are Corrected and Cleared Up*, reprint (Philadelphia and London: C. Dilly, 1783), 42.
- 35 The National Archives (TNA), FO 92/4, draft of article 6 of the Paris Peace Treaty, n.d. (mid May 1814).
- 36 TNA, FO 92/4, drafts of articles Paris Peace Treaty, n.d. (mid May 1814). Article 11 considers the navigation of the Rhine and other international rivers.
- 37 TNA, FO 37/70, 16 May 1814, Castlereagh to Clancarty.
- 38 R. Bacon, 'British Policy and the Regulation of European Rivers of International Concern,' *British Yearbook of International Law* 10 (1929): 163.
- 39 *Ibid.*, 164.
- 40 The Paris Treaty satisfied the British as France was separated from the Scheldt because of the Dutch-Belgian unification, and because an extra clause stipulated that Antwerp should turn into a purely commercial port, whereas the arsenal had to be demolished.
- 41 As quoted by Béla Vitányi, *The Regime of Navigation on International Waterways. Part I: The Beneficiaries of the Right of Navigation* (n.p., 1974), 116. Italics mine.
- 42 The letter was written in September 1814. Comte d'Angeberg, *Le Congrès de Vienne et les traités de 1815 avec une introduction historique par M. Capefigue* I (Paris: Amyot, 1864), 236–237.
- 43 Hein A.M. Klemann and Joep Schenk, 'Competition in the Rhine Delta: Waterways, Railways and Ports, 1870–1913,' *Economic History Review* 66, no. 3 (2013): 828.
- 44 GStA, III. HA MdA, 1367, Stein to Hardenberg, Chaumont, 13 March 1814.
- 45 The document does not mention the author's name, or its provenance, but the very critical tone with regard to the conditions for the incorporation of Belgium reveals its Dutch origin.
- 46 TNA, FO 37/70, 25 May 1814, Memo on the incorporation of Belgium in the Netherlands.
- 47 NL-HaNA, 2.05.10.10, 49, Instructions Van Nagell (and Prince Sovereign) for the representatives (Von Gagern and Van Spaen), 10 August 1814.
- 48 De Graaf, *Tegen de terreur*, chapter 3.
- 49 GStA, III. HA MdA, 1372, Protokoll Von Humboldt, Solms-Laubach and Staegemann, 29 December 1814.
- 50 Representative Van Spaen, with regard to his ideas on the reorganisation of the Rhine regime, relied to quite an extent on the liberal views held by J.J. Eichhoff, a neutral expert in the field of Rhine shipping. See Schenk, 'National Interest versus Common Interest.'

56 *Power and commerce before and after Vienna*

- 51 Beatrice de Graaf, 'Second-tier Diplomacy. Hans von Gagern and William I in their Quest for an Alternative European Order, 1813–1818,' *Journal of Modern European History* 12, no. 4 (2014): 558–559.
- 52 NL-HaNA, 2.05.10.10, 50, Van Nagell to the Dutch representatives in Vienna, January 14 and 17, 1815.
- 53 NL-HaNA, 2.05.10.10, 18, Van Spaen to Van Nagell, 12 February 1815.
- 54 De Decker, *Europees internationaal rivierenrecht*, 133. W.J.M. van Eysinga, *Die Zentralkommission für die Rheinschiffahrt; Geschichtliche Darstellung. Verfasst auf Veranlassung der Zentralkommission für die Rheinschiffahrt* (Leiden: A.W. Sijthoff, 1936), 15–22.
- 55 *Centrale Commissie voor de Rijnvaart, 1815–2015. 200 Jaar geschiedenis*, 40.
- 56 NL-HaNA, 2.05.10.10, 18, 2nd letter Van Spaen to Van Nagell, 12 February 1815.
- 57 NL-HaNA, 2.05.10.10, 53, Van Spaen to Van Nagell, 14 March 1815.
- 58 Johann Ludwig Klüber, *Acten des Wiener Congresses in den Jahren 1814 und 1815. Dritter Band*, 9.–12. Heft (Erlangen: J.J. Palm und Ernst Ente, 1815), 41.
- 59 *Ibid.*, 96.
- 60 NL-HaNA, 2.05.10.10, 18, Van Spaen to Van Nagell, 12 and 25 February and 1 March 1815.
- 61 Nagler, *Briefe des königl. Preuß. Staatsministers*, 16ff.
- 62 Hessisches Staatsarchiv Darmstadt (HStAd), E 1 J 10, copy of letter from Metternich to Hardenberg, 22 October 1814.
- 63 Schenk, 'National Interest versus Common Interest,' 19–23.
- 64 Klüber, *Acten*, 59–62, protocol IV, 23 February 1815.
- 65 Klüber, *Acten*, 110–144, protocol VI, 28 February 1815, attachment 1a and b, Rapport de M. le directeur-général Eichhoff.
- 66 De Decker, *Europees internationaal rivierenrecht*, 132–135. For the Final Act, see T.C. Hansard, *The Parliamentary Debates from the Year 1803 to the Present Time XXXII* (London, 1816), 71–113.
- 67 De Decker, *Europees internationaal rivierenrecht*, 135–139. Robert Mark Spaulding, 'Anarchy, Hegemony, Cooperation. International Control of the Rhine River, 1789–1848' [2007], 11, [www.ccr-ikzr.org](http://www.ccr-ikzr.org).
- 68 These riparian states were Prussia, the Netherlands, France, Baden, Hesse-Darmstadt, Bavaria, and Nassau.
- 69 Annexe 16 B of the Final Act, in Zentral-Kommission für die Rheinschiffahrt, *Rheinurkunden. Sammlung zwischenstaatlicher Vereinbarungen, landesrechtlicher Ausführungsverordnungen und sonstiger wichtiger Urkunden über die Rheinschiffahrt seit 1803 I (1803–1860)* (The Hague: Nijhoff and München and Leipzig: Duncker & Humblot, 1918), 43–50.
- 70 Nagler, *Briefe des königl. Preuß. Staatsministers*, 125ff.
- 71 *Rheinurkunden* I, 160: Note Humboldt, 7 April 1815.
- 72 De Decker, *Europees internationaal rivierenrecht*, 95–97.
- 73 E.F. Heckscher, *Mercantilism*, part I (London: New York, 2007). Robert Mark Spaulding, 'Revolutionary France and the Transformation of the Rhine,' *Central European History* 44, no. 2 (2011): 209–213.
- 74 G. Thiemeyer and I. Tölle, 'Supranationalität im 19. Jahrhundert? Die Beispiele der Zentralkommission für die Rheinschiffahrt und des Octroivertrages 1804–1851,' *JEIH Journal of European Integration History* 17, no. 2 (2011): 185.
- 75 TNA, FO 139/11, n.d. (February 1815?) Observations (by Clancarty) on the project presented by H.E. the Duke de Dalberg.
- 76 Sweden and Portugal also signed the Treaty of Paris, but Clancarty wrote in the margin of the memo that these countries could be left out in decisions regarding the Rhine.
- 77 GStA, III. HA MdA, 1372, 'par M. Eichhoff' n.d. (draft Project for the arrangement of navigation on international rivers by Duke de Dalberg). In the final version the phrase '*sûreté du commerce*' dropped out. See Klüber, *Acten*, 17.

- 78 Klüber, *Acten*, 97. The delegate used the words ‘*sûreté et la liberté de la navigation du Rhin.*’
- 79 NL-HaNA, 2.05.01, 58: advies Goldberg, de Staats Raad Dep. Koophandel en Koloniën, The Hague, 20 May 1815.
- 80 Klüber, *Acten*, 93.
- 81 B. Buzan, O. Wæver, and J. de Wilde, *Security: A New Framework for Analysis* (Boulder and London: Lynne Rienner Pub., 1998), 95. *CCR, 1815–2015. 200 Jaar geschiedenis*, 41–45.
- 82 Klüber, *Acten*, 170–171.
- 83 De Decker, *Europees internationaal rivierenrecht*, 375–377.

# 3 On behalf of the common good

## Dutch-Prussian rivalry in and outside the CCNR (1816–1831)<sup>1</sup>

### Introduction

In August 1816 the members of the new Central Commission for the Navigation of the Rhine assembled in Mainz for the first time. The delegates were optimistic about the progression of their responsibilities and expected to reach an agreement on a provisory legislative regime on the trajectory of the Franco-German Rhine before the end of the year. After all, it was based on the previous Octroi regime, and was already largely accommodated within the framework of the Viennese principles by a preparatory committee led by Johann Eichhoff in 1815.

However, the delegates' optimism was mistaken, as in no time at all a furious disagreement emerged between the Prussian and the Dutch delegates on the interpretation of the Viennese articles. Within a couple of years, Prussia successfully portrayed the Netherlands as a repressive power that oppressed free Rhine trade and harmed the 'common good' of European trade and prosperity. Quickly, the Netherlands found itself in the dock against the European High Powers and needed to develop a counterstrategy. The quarrel not only compromised the Commission's tasks and would almost lead to its collapse in 1825, it also played havoc with Dutch-German relations in the first half of the nineteenth century and beyond. Nevertheless, in 1831, on the brink of European Great Power interference, Prussia and the Netherlands finally found common ground to reconfirm the riparian condominium and agree on the conditions of a definitive Rhine administration.

This chapter focuses on the question of how the CCNR commissioners managed to find common ground after all. It explains who these commissioners were, and how the Commission became a forum for discussion and dispute settlement.

### From Vienna to Mainz

On 5 August 1816 the CCNR convened for the very first time in the fortified city of Mainz. The choice of Mainz as the Commission's residence was not totally arbitrary as it had been the seat of the general Octroi Administration after 1805. Until the French annexation in 1799 Mainz had been the

residence of the Archbishop-Elector, the substitute of the pope north of the Alps and one of the most influential princes of the Holy Roman Empire. After 1815, the city became part of the Grand Duchy of Hesse-Darmstadt. Its fortress became the most important defence of the German confederation against France and was governed by Prussian and Austrian forces.<sup>2</sup> Although somewhat in decline after 1816, the city had the stature that an international organisation could expect for its seat. The offices at number 29 and 30 on the Grosse Bleiche were modest, and contained, as well as the archives, the residence of the director of the Administrative Commission, Johann Friedrich Ockhardt. Nonetheless, they were nicely located as the Grosse Bleiche, a long and wide lane in Mainz running from the upper part of town to the Rhine, was allegedly the most handsome street in town.<sup>3</sup>

The inaugural meeting was of a most formal quality. The letters of attorney were exchanged and ratified and articles X and XI of the Vienna Final Act were read aloud. Article XI contained formal practicalities such as how many times the Commission should convene and how the president was to be appointed. Article X depicted the *raison d'état* of the Commission: 'In order to establish a precise control over the monitoring of the common regulations, and to form an authority which deals with the official communications between the riparian States on everything relating to navigation, a Central Commission will be established.'<sup>4</sup> Finally, Count Solms-Laubach, the Prussian *Oberpräsident* of one of the Rhineland provinces and chief of the temporary Octroi Administration, was formally invited to hand over the Octroi Administration to the CCNR.<sup>5</sup> The constitutional meeting reached the front page of national newspapers: 'This is how one of the most liberal conceptions of the Vienna Congress will now be realised,' the *Baierische National-Zeitung* concluded.<sup>6</sup>

Its first main objectives were to take over the central administration of the Octroi and to return the toll levying to national authorities. Subsequently, the CCNR was entrusted with drafting and enforcing common regulations that would go beyond the general guidelines for Rhine shipping and commerce as set by the Final Act of Vienna. Until the Commission issued these definitive arrangements the Octroi Convention would remain in force on the Franco-German Rhine, although it needed to be adapted to the stipulations of the final treaty. The abolition of the right of transfer in Mainz and Cologne, thus eliminating the special privilege of both port towns to demand transshipment of long-distance merchandise into local boats, was the most prominent example of such adaptations.<sup>7</sup>

Among the Commission members a certain optimism prevailed, as their instructions were quite clear, and in the design of the new regime they could fall back on the existing one, that of the Octroi. In his letter to the minister of foreign affairs, the Dutch Commissioner Johan Bourcourd (1757–1842) wrote that he observed a 'pleasant atmosphere' during the first meeting.<sup>8</sup> Bourcourd had arrived as one of the first commissioners in Mainz back in the fall of 1815 and was eager to start the negotiations on a new Rhine administration.<sup>9</sup>

Before he was sent to Mainz, the 59-year-old had worked as a customs officer in the port of Amsterdam, then as governor at the Dutch West India Company, and thereafter as a councillor in matters of trade and the colonies in, respectively, the city of Amsterdam and the national government in The Hague. For his entire career Bourcourd had intersected the worlds of commerce and public administration, and therefore seemed a logical choice to represent the Dutch interests in Mainz, even though he had no knowledge of the Rhine or its former regime whatsoever.<sup>10</sup>

In fact, a lack of expertise on the existing Rhine regime was a quality shared by all Commission members. Possibly the youngest among them, the Commissioner for Nassau, Ludwig Christian von Rößler (1785–1835), was most informed, as he was the director of the department of road and riverbank construction within his government.<sup>11</sup> Bourcourd described the representative for Baden, Von Müßig, on the other hand, as ‘not an unfair person, but full of vanity and a clever-minded lawyer without mercantile knowledge.’ The Bavarian Commissioner Bernhard Sebastian von Nau (1766–1845), for his part, was a versatile man, being a cameralist, a professor in natural history, a businessman, and active as a diplomat and statesman for the grand Duchy of Frankfurt, the Austrian empire, and the kingdom of Bavaria. He had been chairman of the Bavarian-Russian liquidation commission and from 1815 he was a member of the Imperial-Royal Austrian and Royal Bavarian Joint Land Administration Commission that governed Worms.<sup>12</sup> Bourcourd described him as a ‘nastily smart gentleman.’<sup>13</sup> The French Commissioner Yves Louis Joseph Hirsinger (1757–1824), legal expert and professional diplomat, was born into a prestigious family from the Alsace. Previously he was chargé d’affaires at the French legation in Brussels and ambassador in Switzerland, Constantinople, London, and Frankfurt.<sup>14</sup> According to Bourcourd he was a decent and sociable man, who was very attached to enjoying the good things in life.<sup>15</sup> The Hessian delegate was the most senior among the Commission members. Johann Balthasar Pietsch (1747–1826) was a legal expert and had made quite a career under the French administration as prefectural counsel in Mainz.<sup>16</sup> Finally, the Prussian delegate, Johann Friedrich Jacobi (1765–1831), was a businessman and administrator. In administrative experience, although not in age, he might be considered the most senior member in the Commission. He had been employed by the French government since 1794. After becoming president of the municipality of Aachen, he was appointed as prefectural counsel for the administrative department of the Ruhr in 1800. In this role he was also observed by a friend of his father, the philosopher and theologian Gottfried Herder, as a ‘worthy, brave and sensible’ man. The French rewarded him for his service by decorating him with the Knighthood of the Legion of Honour, the highest French order of merit. In 1810 he was appointed member of the *Corps législative* and moved to Paris. After Napoleon’s downfall, he returned to Aachen, where he entered the service of the Prussian administration to design a new tariff system for the new Prussian territories on the Rhine. Not much later, in May 1816, Jacobi’s

old friend Wilhelm von Humboldt, had him appointed as Commissioner in the CCNR.<sup>17</sup>

All in all, the group of commissioners could be said to represent the ‘*fine fleur*’ of post-war French, Dutch, and German administrators. Most of them had a legal or fiscal background. Only two had mercantile experience, while only one commissioner had particular knowledge about the Rhine in terms of its geophysical character. Their governments had elected them for their skill in representing their respective interests. Yet most of them entertained liberal, Smithsonian-cameralist views and were dedicated to applying their state-centric expertise on an international level and to making the new regime and liberal stipulations of the Vienna Treaty operational.

### A road map to international cooperation: Eichhoff’s ‘*Instruction Interimaire*’

All Commission members had, often as legal experts, ample experience in state administration, diplomacy, and trade. Yet, none of them knew a lot about the existing Rhine regime. Therefore, in the first three years of its existence, the Commission relied in part on the expertise of third parties: the

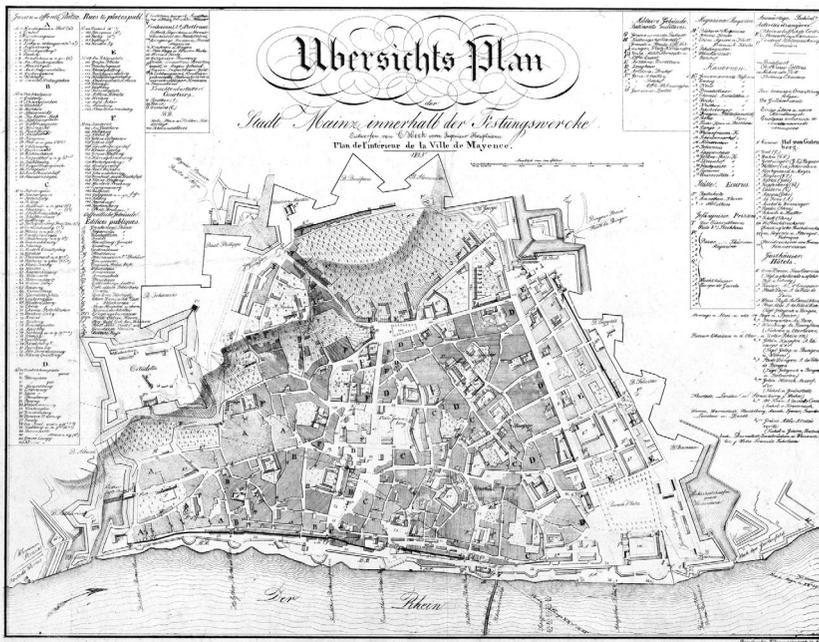


Figure 3.1 Map of the city of Mainz 1825, made by captain Hock, who also produced the first (but lost) integral map of the entire Rhine (see Chapter 4)

Source: Hessisches Staatsarchiv Darmstadt (HStAD) P 1, 1126. <https://arcinsys.hessen.de/arcinsys/llist?nodeid=g100351&page=1&reload=true&sorting=41>

inspectors and administrator of the Octroi. Already by the second meeting of the CCNR, in August 1816, the diplomatic forum opened the floor to the former General Director of the Octroi, Johann Joseph Eichhoff, who had prepared a plan for the interim administration.

Eichhoff was a vain man. He systematically called himself *L'ancien Directeur général de l'Octroi de navigation, chargé par le Comité du Congrès de travaux préparatoires pour le Règlement du Rhin*.<sup>18</sup> It was true. As we saw in [Chapter 2](#) the chairman of the Congress Committee, Wilhelm von Humboldt, charged Eichhoff with the task of preparing an interim plan for the Commission. Initially he led a three-person committee, appointed by the chief of the temporary Octroi Administration, Count Solms-Laubach.<sup>19</sup> However, he quickly found that his two colleagues, Colonel Peter Jacob Gergens and Carl Albrecht Wilhelm von Auer, had very different opinions about the interpretation and execution of the Viennese principles 'in order to be able to hope for satisfactory results of our meetings, such as the Central Commission was entitled to expect.'<sup>20</sup> Therefore, he took the liberty of continuing the preparatory works alone.

What is more, in his writings Eichhoff consistently referred to the Commission as *La Commission Centrale de l'Octroi de navigation du Rhin à Mayence*.<sup>21</sup> Clearly he regarded the Commission as the next and final step in accomplishing a liberal Rhine regime, a process that had started with the Octroi Convention back in 1804.<sup>22</sup> The CCNR was to finalise his legacy by including the Netherlands in the convention,<sup>23</sup> and preferably by appointing him as the General Director of the new Rhine regime.

By his own account, Eichhoff had made all the necessary amendments to the existing Octroi articles in the spirit of Vienna, 'in order to not leave any uncertainty, neither to the skippers, nor to the agents of the Octroi, about the obligations that one is to follow during this time lapse until the execution of the definitive regulations.' In his mind, the project settled the matter and cleared the road for involving the Netherlands in the negotiations on the definitive Rhine regulations.<sup>24</sup> If it was up to Eichhoff, the Commission would skip the interim regime, and have his elaborated project implemented directly by all the riparian states, including the Netherlands – thereby substantially expanding the remits of the Vienna stipulation and enlarging the scope of the project he was charged with.<sup>25</sup> Taking a closer look at Eichhoff's project, which over the months came in several but similar versions, we see an elaborate road map with a particularly liberal character, delineated most notably by securing equal treatment in a competitive environment.

In short, Eichhoff's project was an attempt to create a regime based on uniformity, equality, and continuity. The regime promoted uniformity in the sense that it substituted the unfortunate diversity of regimes on the Rhine that had been damaging commerce and navigation for such a long time. 'This act,' so Eichhoff introduced the piece, 'is to be considered as *the charter* with regard to everything that needs to be regulated for the Rhine, from the point where it becomes navigable, until its mouth in the sea.' Eichhoff warned that

it was not going to be easy to reconcile the often conflicting interests among the riparian states, who still clung to their specific privileges, norms, and regulations. Yet he detected a ‘moral union’ that was strongly inclined to pursue the ‘common good’ even if that meant that one was to make some sacrifices. The regime therefore also guaranteed equality, in the sense that it refrained from promoting the local to the disadvantage of the general interest. The regime fostered continuity in the liberal streamlining of regulations and the removal of obstacles to uninterrupted trade, such as the Octroi had attempted before.

With its 127 articles, it was not only similar in size to the 132 articles comprising Octroi, but Eichhoff’s project would pursue exactly what had made the Octroi so unique; not only rearranging the tolling system, or ensuring fiscal interests, but also issuing measures to protect commerce and navigation on the Rhine – both commercial security and physical safety were therefore part of this highly modern river regime.<sup>26</sup> In his presentation to the Commission, Eichhoff emphasised that the core of the ‘soft and liberal’ (*doux et libéral*) regime boiled down to four things: speed and security for the expedition of merchandise up and down the river, and order and affordability in transports.<sup>27</sup> In fact, the bulk of the proposed measures and dispositions were intended to secure speed, security, order, and affordability. They did so in three main fields: tolling, riverbed and towpath surveillance, and the abolition of the forced transshipment in Mainz and Cologne.

A consistent reorganisation of the tolling stations and procedures was essential to increase the navigability of the Rhine. First, the number of tolling stations was to be limited to 12 and they were to be relocated at proportional distances: proportional, not in the sense of spatial distance, but in the sense of navigable distance. Some parts of the Rhine, especially the upper parts, were more difficult and more time-consuming to navigate, therefore the freight rates were higher. With the relocation of tolling stations on the basis of navigability, the Commission increased the navigability of the Rhine for the transportation of some, mainly agricultural, products, thereby preventing local inhabitants ‘from losing ... an easy and valuable outlet for the production of the soil.’ This way of tolling meant that the riparian states on the Lower Rhine would lose some of their revenues. However, relocating the tolling stations according to spatial distance would paralyse navigation on large parts of the river, and that would not do any good to the Rhine commerce in general. Furthermore, tariffs should be fixed and were to be levied in ratio with the distance of the voyage. In support of industry and agriculture, some goods, such as bone scraps, chalk, or fertilisers, were to be charged special low tariffs. Likewise, the height of the recognition right, that is, the sum to be paid for a ship, loaded or not, to pass a tolling station was to be rescaled according to the size of the ship. This would set the smaller ships on a more equal footing fiscally with the larger ones.

For the sake of speed, the number of personnel at the tolling stations would be maintained at least on the level of the Octroi. They were to work swiftly

according to strict and standardised procedures and measures. Gauging was considered a reliable, easy, and quick verification method of the amount of cargo shipped that did not delay the transports too much. In addition, the tolling and the measuring of timber rafts were standardised according to geometric principles. Skippers, in turn, were to use a standardised cargo document, a so-called manifest, to declare the quality and quantity of their merchandise. For the merchant, these manifests ensured that the wares he had entrusted to the skipper were registered. For the Rhine administration, these documents were of the greatest importance in levying tolls in the right amount, in safeguarding the general accounting of the tolling stations, and in serving as a source for compiling reliable statistics on Rhine navigation.

In addition, fining, in the case of fraud or wrongful declaration, was regulated. Eichhoff suggested a fine of no less than ten times the ordinary toll in cases of fraud. This was much higher than the Octroi prescribed; however, the former General Director wrote: '[such a fine] is necessary to come to the aid of the administration as a kind of salutary terror, in order to prevent fraud, or at least to render it infrequent.'<sup>28</sup> By calling the fine a 'salutary terror,' Eichhoff clearly expressed the Smithsonian-cameralist view from the turn of the nineteenth century that no longer believed that individual self-aggrandisement necessarily leads to the common good and therefore favoured moderate state intervention in the economy.<sup>29</sup> Eichhoff regarded it a tax of injustice as much as a punishment. After all, the new regime procured order and good government that secured the freedom of the skipper. Committing fraud and abusing such a regime was simply unjust, and frustrating the rights of a riparian sovereign deserved to be punished.

Besides tolling, the new regime was to improve the conditions of the riverbed and the towpaths. In the past few years, the French had neglected the Rhine entirely. Moreover, no inspections had been taking place, which meant that not only was it unclear how bad the situation really was but also that one was in the dark regarding what works had to be done to improve navigation. As decided in Vienna, the actual works were to be executed by the respective authorities of the riparian states, but the Commission had a special role in inspecting and monitoring the execution of these works. Every spring the Commission's permanent inspectors, accompanied by geometric experts, were to examine the existing conditions of the riverbed and the tow paths. Governments who would not be willing to immediately execute the necessary repairs would be declared in default.

Finally, Eichhoff's project dealt with the abolition of forced transshipments in Mainz and Cologne. This right allowed both ports to have all long-distance merchandise passing the city to be transferred to the boats of the local shipping associations. Such a privilege not only hampered speed, but it also favoured local boatmen at the expense of others. The abolition was plainly articulated in article XIX of the Vienna convention. However, Eichhoff found it necessary to establish additional police regulations. He feared that without these regulations, the freedom of loading and unloading would degenerate

into a ‘source of a multitude of abuses, equally fatal for the skippers and the merchants of good faith.’ Security of goods and safety of the skippers were at stake here. The regulation that was to be uniformly applied in all Rhine ports prescribed that immediately after arrival the skipper needed to show his manifest to the controller. The controller inscribed the name of the skipper in the crane and scale register and provided him with an unloading permit. The use of the appropriate transshipment installations demanded the payment of a tax, yet these revenues were not to be considered a profit for the specific town. They were to ensure an exact regularity in the transshipments under the surveillance of the police and a committee consisting of controllers, port inspectors, and local merchants. After unloading, the skipper presented himself to this committee and showed his qualifications; he then received the right to load his ship for a destination port of his choice. Meanwhile, the cargo was weighed, the controller compared the result of the gauging with the manifest, and had the skipper pay the necessary surcharge. Ultimately, the skipper had his ship loaded and was authorised to leave the port. Eichhoff emphasised that foreign and indigenous merchants would more easily entrust their merchandise to the shippers as they found considerable reassuring guarantees in the proposed regulations. Furthermore, as loading and unloading was not restricted, the skippers could and would receive return freights everywhere, which strongly benefited the freight rates.

Thus, uniformity in regulations, continuity of trade and transport, and equal treatment within a competitive environment would assure speed and security in trade, and order and affordability in transport. Consequently, merchants gained a reasonable opportunity to predict the costs and timing of transport,<sup>30</sup> while states received a reasonable opportunity to predict the fiscal revenues from the Rhine. These measures were thus preconditions for increasing prosperity. Again, in line with Smithsonian-cameralist beliefs at the turn of the century, Eichhoff considered it the task of the government (in this case an intergovernmental regime) not to provide prosperity to the people, but to procure order, predictability, and thus a secure environment for the people, in which they could prosper:

this task must seem very difficult, and indeed it would be, if the members of the Commission could lose sight of the fact that by wisely caring for the common good of the Rhine, they will increase the particular advantages of each of its co-owners, and that by acting in a contrary way, they would inevitably destroy this prosperity, of which this river is susceptible, and which they are called upon to establish.<sup>31</sup>

Eichhoff was right. It proved extremely difficult within the Commission to balance local interests against the common interest. Even though his road map was a consistent and viable elaboration of Viennese principles, and regardless of the fact that all riparian states favoured the promotion of commerce and navigation, Eichhoff's project would end up in the bin. Tragically,

he himself would eventually be sacrificed, figuratively speaking, for the promotion of inner cohesion in the Commission.

### **The bone of contention: Dutch sea rights and Prussian forced transshipment rights**

In the very first years after the end of the Napoleonic wars, cross-border Rhine trade saw quite a spectacular revival. The continent was restocked. However, the very inefficient sailing ships, the high taxation, and especially the uncertain conditions for navigation on the Rhine, due to unclear regulations and degenerated tow paths and riverbeds, made long-distance commerce fall to insignificant amounts.<sup>32</sup> Officially, the Dutch Rhine, and thus the Netherlands, did not take part in the interim system that the CCNR was preparing to combat these problems. Nevertheless, the Dutch minister of foreign affairs, Van Nagell, instructed Bourcourd to take an active part in drafting the interim regulations as much as he could, since it was to be expected, Van Nagell wrote, that a very similar regime would eventually also be applied on the Dutch Rhine.<sup>33</sup> Overall, the Dutch had a pronounced liberal approach in Rhine matters and it was because of this that the Dutch Commissioner Bourcourd was not at all dissatisfied with Eichhoff's performance.

Like Van Spaen, the Dutch representative at the Congress of Vienna, Bourcourd saw Eichhoff as a useful partner with an unparalleled expertise who merely acted on behalf of the common interest.<sup>34</sup> Moreover, Eichhoff had good relations with almost all relevant courts.<sup>35</sup> He regarded him the creator of 'the liberal System of the Congress of Vienna' that would finally result in the removal of all obstacles to navigation. Bourcourd hoped he would have the same effect on the deliberations in Mainz and would 'facilitate the elimination of all the partial views that the other states may raise.'<sup>36</sup> In private, Eichhoff had shown his support for the Dutch cause and, not unimportantly, he had a son who after his service in the French army had recently been accepted into the Dutch navy.<sup>37</sup> This gave the Dutch government, Bourcourd argued, an opportunity to appease or influence Eichhoff in the personal sphere.<sup>38</sup>

However, not all commissioners appreciated Eichhoff's road map as much as the Dutch Commissioner did. In September 1816, it was the representative from Nassau, Ludwig von Rößler, who first came with a new version of Eichhoff's project and made the indefinite dissolution of the forced transshipment rights in Cologne and Mainz conditional on the opening up of the entire Rhine from where it became navigable *into* the sea.<sup>39</sup> Prussia instantly and eagerly agreed to proclaim both measures at the same time.<sup>40</sup> For the Netherlands this was an impossible request. This was, first, because the interim regime was not to be applied in the Netherlands, only the definitive regime and, second, because the Netherlands would never allow a foreign power or organisation to interfere with its sovereign rights, such as its sea rights, the right to govern its seas and inlets.<sup>41</sup> In fact, Bourcourd stated in the

Commission that the Netherlands could not be excluded from the favours of the abolition of the forced transshipment, not by law, but neither by the principle of reciprocity. After all, the Netherlands had always shared in the advantages and the burdens of the Octroi. Moreover, forced transshipment in the Netherlands did not exist, because it had only a few toll stations and had not increased the shipping rights since the end of the Congress in 1815.<sup>42</sup>

In 1816 no major powers doubted that the Dutch interpretation of the Viennese articles was correct. Even Prussia, after having its former representative in the Vienna River Congress Committee, Wilhelm von Humboldt, consult his British colleague, the Earl of Clancarty, believed that the Vienna Convention did not touch upon the navigation from and to the sea, as it strictly regarded river navigation only.<sup>43</sup> The Prussian Commissioner Jacobi therefore did not act on his own behalf. He was instructed by his Prussian superiors. These superiors, specifically the Prussian Chancellor Karl August von Hardenberg, had kept their ear to the ground at the Cologne Chamber of Commerce and tried to capitalise on the Prussian Great Power status in order to dominate post-war European projects. In this instance, the Netherlands became the object of Prussia's imperious and imperial behaviour. However, it was quite capable of finding ways and means to circumvent or even subvert the dominance of the Great Powers. Most importantly, it did so by establishing a liberal coalition of the willing among the smaller Rhine states in the CCNR against the increasingly dominant and potentially imperious Prussia.

It is remarkable how, despite its weak legal argument, the Cologne Chamber of Commerce successfully changed the mind of the highest Prussian authorities and provided them with an attractive rhetorical argument. The Chamber pictured the Netherlands as a dangerous Rhine power that was likely to put chains on the Rhine for its own benefit. After all, back in the day, when it had been liberated from Spanish domination, it had done the same, bringing commerce in all major German Rhine cities on the brink of ruin.<sup>44</sup> The Chamber wrote:

Will the future German historians write about our times as they wrote about the sixteenth century, saying that the German princes, after they had so nobly destroyed the yoke of foreign rule and with it the shackles of the disgraceful continental system, had no energy or no patriotism enough to remedy the oppressions that Holland allowed itself against the Rhine trade, that all the efforts of a politically greater power to save the prosperity of the Rhinelands failed because of the diplomatic skills of a much smaller state?

The Chamber was prepared to abolish the privilege of the forced transshipment in its Rhine port. Yet, in return for this sacrifice, Cologne needed free access to the sea.

The Prussian Commissioner Jacobi did not believe the Netherlands would ever approve free access to the sea: 'The Dutch Government would rather

start a war, than to let the commodities flow freely up and down the Rhine.’ The country depended for the larger part of its commerce on transit trade. Absolute freedom of the estuary ‘would mean as much as the total ruin of Holland, something that can never have been the purpose of the Vienna Convention,’ he wrote to the Cologne Chamber. Nevertheless, the Chamber’s demand for reciprocity pushed the right button for Jacobi’s boss, Chancellor Hardenberg, and it was under his direction that the Prussian delegate shifted his position within the Central Commission.

Jacobi was supported in his tirade against the Netherlands by Peter Jacob Gergens. This was the same Gergens that back in 1809 had provided the French investigating Commission with incriminating documentation against Eichhoff. He had also been the main source of information on Rhine-related matters to Stein and Solms-Laubach, even after Eichhoff had excluded him from the preparatory works in 1815.<sup>45</sup> Gergens therefore might have had Prussian interests at heart, but at the same time he was one of the few people with state-of-the-art knowledge of the actual navigable conditions on the Rhine. Therefore, the Commission invited him to shine light on the issue. According to Gergens, the abolition of transshipment rights in Mainz and Cologne would not suffice to realise freedom of navigation as long as the Netherlands continued obstructing it.<sup>46</sup>

In Gergens’ view, the Netherlands obstructed the freedom of navigation in three distinctive ways: first, it levied an entrance fee on all the merchandise flowing into the country down the river; second, the Netherlands levied a transit right in its main seaports, Amsterdam, Rotterdam, and Dordrecht, on all merchandise coming from the sea and destined for the German hinterland; and third, the Netherlands did not allow freedom of navigation up and down the Waal and the Merwede from and to the Rhine. If one wanted to abolish the transshipment rights in the German cities, one had to consider that:

then the navigation of the Rhine would be free for the Dutch, but not for the Germans and the French ... [since] the Dutch would be enabled to bring all their colonial wares and other products or goods manufactured abroad to the Germans and the French, and could even charge German or French goods on their return, without paying, in Germany or in France, any other right than the Octroi. On the other hand, the Germans and the French would enjoy the freedom of navigation only as far as the frontier of the Netherlands. Arriving at this border at Schenkenschanz they would be obliged to pay the licence fee, the Octroi rights to the Dutch toll offices and then they would be forced to unload at a Dutch port because they are forbidden to enter the sea.

Jacobi added: ‘Holland wants to see the Interim Conditions as an acquired right, while it was provided to the country during Vienna as a privilege.’<sup>47</sup>

Bourcourd reported to The Hague that Prussia tried to win over the smaller Rhine states to its cause by providing favourable prospects of pecuniary

arrangements regarding the settlement of the toll revenues. Simultaneously, Prussia continually instilled mistrust against Holland by pointing to the restrictions on the salt trade and the transit tax of 3 per cent that the Netherlands imposed in October 1816. Prussia, Bourcourd wrote, ‘collects stones and searches for other means against us, as much as it can,’ and ‘It truly seems, as if we are the most devious government that ever existed, while by God’s blessing we certainly are as sincere as the most sincere.’<sup>48</sup>

Luckily, Bourcourd was right in counting the expert Eichhoff among his friends. Eichhoff openly criticised the interim project that Nassau presented. It was not in the Central Commission’s power to exclude any tributary that had signed the Vienna Convention from any benefit arising from the provisions of this same Convention.<sup>49</sup> It was also clear to Eichhoff that the Vienna convention concerned the fluvial navigation of the Rhine only. The ports of Rotterdam and Amsterdam would be the logical geographical limits of the Rhine regime.<sup>50</sup>

For the Netherlands two things were now of major importance. First, Eichhoff needed to be embedded in the new Rhine regime, possibly as President of the General Administration. Second, Bourcourd wrote to the Foreign Office, it would be in the Dutch interest to appear as a reasonable country that was informed by mild and liberal principles. The interim regime should be amended in that sense. Then the smaller countries would follow, as such a regime would be beneficial for their commerce. Prussia, Bourcourd predicted, would not then dare to maintain its opposition.<sup>51</sup>

Regardless of Prussia’s obvious exaggerations of the Dutch threat – ‘a terrifying phantom of supremacy in navigation’<sup>52</sup> – the other Rhine states were sensitive to the reciprocity argument and became increasingly reserved towards the Netherlands at the end of 1817.<sup>53</sup> The Commission concluded, therefore, that the Netherlands was to comply with four additional conditions to come to enjoy the full benefits of the resulting freedoms of the interim regime. The first was that the shipping rights on the Dutch Rhine, both the Waal and the Lek, should return to their Vienna level. The second condition was the abolition of custom visits on the Rhine that, ever since the introduction of the new toll law, practically resulted in forced transshipment. The third was that all new Dutch ships were to be gauged and would receive a manifest equal to the one used by the skippers on the conventional Rhine. The final condition was that skippers from the conventional Rhine could freely take return cargo in the Netherlands.<sup>54</sup> On the recommendation of Prussia, Eichhoff and two members of the provisional Rhine administration were asked to once again compile a new version of the Interim Instruction in which these demands were integrally included.<sup>55</sup> Strikingly, the Commission thus did not regard freedom of navigation *into* the sea as a reasonable request.

In February 1818 the newest version of the *Instruction Interimaire* that Eichhoff presented could count on the support of a large majority. France, Bavaria, Baden, Hesse-Darmstadt, and Nassau unconditionally accepted it. After some hesitation the Netherlands asked in a note for some minor

adaptations.<sup>56</sup> To all the Commissioners' surprise, it was Prussia's Commissioner Jacobi who declared at this point that the Dutch request 'once again annihilated the hope of finally reaching a general agreement on an Interim Instruction.'<sup>57</sup> After Jacobi returned from a personal meeting with Chancellor Hardenberg, the Prussian Commissioner proposed to have the forced transshipment abolished only with the establishment of a definitive regulation that included significant additional demands for the Netherlands, i.e. introducing a fixed custom duty in its sea ports and abolishing the transit ban on certain products.

The Commission was unpleasantly surprised by this sudden hiccup and reminded Prussia that it had already announced it would accept the new Instructions and thus would allow the abolition of the forced transshipments immediately. Moreover, the Netherlands, the Commission stated, had given a satisfying and sound assurance that it would comply with the four conditions. Even Hesse-Darmstadt, Prussia's lap-dog, stated it was willing to abolish the forced transshipment in Mainz.<sup>58</sup> In March 1818 the Commission, apart from the commissioners of Hesse-Darmstadt and Prussia, acknowledged that the Netherlands fully adhered to the conditions. Now it was Prussia's and Hesse-Darmstadt's turn to abolish the forced transshipment. Prussia reacted in a panicked manner and stated that the riparian states should either have recourse to the High Powers (its friends) or should skip the Interim Instruction altogether and start designing the definitive regulations with Prussia. Prussia's chicanery was very disappointing to the other members. The protocols read: 'The Central Commission was and is of the opinion that the abolition of the forced transshipment of ships in the ports of Cologne and Mainz as irrevocably pronounced in Vienna must be realised by the interim instruction already.'<sup>59</sup> After one and a half years of discussions on the Interim Instruction, the Commission had hoped to finally reach an agreement, start monitoring the common regulations, and extend it to the Dutch Rhine as well, thereby becoming a true authority which would deal with the official communications between all riparian states.

Interestingly enough, Prussia had overplayed its hand, and by September 1818 the cards had totally changed. The commissioner of the small state of Nassau concluded sharply that Prussia apparently preferred the private interests of the city of Cologne. The commissioner of Baden added that it was not precisely the collapse of the health of the German Confederation that worried him, but that public opinion about the value of international treaties such as Vienna would be damaged if the forced transshipment continued to exist.<sup>60</sup> All in all, the smaller German Rhine states worried that Prussia's project to bolster its new possessions on the Rhine, by benefiting the city of Cologne, would harm the larger interest of the development of Rhine navigation. The Dutch strategy to appear as a liberal and mild-minded authority, and have Eichhoff vouch for its position, increasingly convinced the smaller Rhine states of Dutch benevolence towards the riparian condominium as a whole.

In December Bourcoud reported extensively on the Prussian chicanery, underlining the contradictory positions Jacobi had taken in the past two

years. The Dutch Commissioner reported that the Netherlands, in contrast, had given more than it legally needed to do. During Vienna it had agreed to maintain the shipping rights at their existing level in return for taking advantage of the abolition of the forced transshipment. However, for the benefit of the negotiations, the Netherlands had granted the four additional conditions as well. Consequently, Bourcourd asked his Prussian colleague to finally 'cede to the legal force of the arguments of his colleagues, by not opposing any longer to [the act of Vienna].'<sup>61</sup> Four months later, in March 1819, the majority of the Commission adhered to this request and demanded that the forced transshipment would be abolished within two months.<sup>62</sup> Jacobi was instructed by his government not to respond to the request at all.<sup>63</sup> This was a tactical move that Prussia, being one of the Great Powers, could permit itself. It also knew that the other Great Powers, especially Britain, would favour the final goal, to increase freedom of movement on the European continent by opening the Rhine to seaborne vessels.

At this point there was only so much the Commission could do. Appealing to the Great Powers, as Prussia had provocatively suggested, was not an attractive option because it would undermine the legitimacy of the Commission, being a riparian affair. But not doing anything was risky too. After three years of fruitless deliberations on the interim regime, the forced transshipments were still in force. This not only endangered the objective of free navigation on the Rhine, it also jeopardised the entire experiment of an international commission as such and the credibility of the rule of international law. Understandably, the larger public was losing faith in the value of international treaties such as Vienna. It was not used to these kinds of international administrations and could not be expected to understand why the decision-making process took so long. Of course, outsiders did not take into account that the commissioners often needed to obtain time-consuming instructions from their respective governments. Besides, because the negotiations were taking place behind closed doors, the larger public could not be aware of the progress the Commission also achieved. Instead of reaching out to the Great Powers, individuals in and close to the Commission decided to approach the general public instead, with the aim of rescuing the Commission from dying a silent death.

In 1819 the Bavarian Commissioner, Sebastian von Nau, published the first of a series of 500-page volumes with a wide selection of session protocols and other official documentation that were to inform the public about the progress of the CCNR.<sup>64</sup> The same year, the inspector of the provisional administration of the Rhine, Joseph Franz Ockhart (1756–1828), published a 400-page volume about the continuing unsatisfactory conditions for navigation on the Rhine and the structure and operating procedures of the new regime that were to resolve all this.<sup>65</sup> It was a third publication, unanticipated by the Commission itself, that was possibly the most revealing one.

Only months after Von Nau's and Ockhart's orchestrated publications, it was the former General Director of the Octroi Administration, Johann Joseph

Eichhoff, who surprised the world and the Commission with another book on the current deadlock of the Commission's negotiations. Remarkably, Eichhoff presented the publication 'in deepest devotion' to the 'high governments of the Riparian Rhine States' in the quality of 'an official report.'<sup>66</sup> Eichhoff also presented his publication in a letter to the Commission, in which he emphasised once more that he had always worked for the common interest on the basis of the Vienna Convention. 'But,' Eichhoff continued, 'my views were not always shared by all the Commission members, and among themselves they could not agree on the projects that they designed.' So, he argued, there was only one way out of this dreadful situation, which was to call for the intervention of the governments of the riparian states, or even the interference of the guarantor Powers, Great Britain, Russia, Austria, and Prussia. After all, 'it was about major interests which have been entrusted to the care of the Central Commission, the prosperity of the trade of the most important river of Europe depends on the realization of a system of free navigation.' Eichhoff's appeal to the governments of the riparian states, or even to the Great Powers, by means of this publication was a public affront to the Commission. In the protocols the Commission unanimously concluded bitterly that 'the author was not competent to assess the Commission's negotiations, and therefore the publication cannot be recognised as official.'<sup>67</sup>

Despite this public pillorying, Eichhoff's unexpected affront provided the Commission with a new narrative that could be employed to regain internal cohesion. In August 1819, the new Baden commissioner and chairman, Theodor Hartleben, took the third anniversary of the Commission as an opportunity to once more underline its importance: 'Increasing the movement of people is one of the most important objects of the European national interest, and the freedom of navigation is one of its first fundamentals.' He wisely stayed far from blaming his co-commissioners for the Commission's delay. Instead, he explicitly blamed Eichhoff. Being the former General Director and the only participant of the Congress in Vienna at the Commission's table, Eichhoff had been a man of stature, a man to listen to. However, his idea to regulate the transshipments in Mainz and Cologne rather than to abolish them gave the commissioners an unforeseen stick with which to hit each other.<sup>68</sup> By his self-righteous yet ambivalent understanding of the status of the forced transshipments during the interim regime he had created discord among the committed and benevolent commissioners ever since his first appearance in August 1816, Hartleben concluded.

In other words, the Commission's malfunctioning was not the result of the inexperience, or an intrinsic incompatibility of commissioners in an inter-governmental organisation, Hartleben stated. The reason that the Commission members had not agreed on the interim regime yet was simply because they had listened too much to an outsider, an outsider who even called into question the legitimacy of the Commission by appealing to the higher Powers. Tellingly, Hartleben finished his passionate plea for the Commission with a quote from the song *Ballade der Lästerzunge* (Ballad of Vicious Tongues) by

the German poet Gottfried August Bürger: ‘*Die schlechtesten Früchte sind es nicht, woran die Wespen nagen*’ (‘It ain’t the worst fruits the wasps gnaw’). In other words, the fact that the Commission received so much criticism indicated its importance and its relevance, rather than its incompetence. The Commission’s president made sure this message also found its way to the larger public. In several episodes over the course of an entire month, he published his 26-page speech on the front page of the *Allgemeine Justiz-, Cameral- und Polizei-Fama*, a magazine he edited.<sup>69</sup>

This was a definitive and public excommunication of the man who dearly wanted to become the General Director of the new Rhine administration. It was also a loss for the Netherlands, as Eichhoff had been a useful companion in Bourcourd’s efforts to promote the Dutch interests. Still, the Netherlands was supported by all commissioners, except for Prussia. In addition, Hartleben confirmed once again in his speech that the forced transshipments were to be abolished during the interim regime, and that the freedom of navigation could not be extended *into* the sea. Personally, Hartleben was not against the extra-fluvial extension of the principle, but the Commission was simply not charged with that mission. ‘Those who believe that the boldest wish has been satisfied when one may sail the Rhine freely to the sea, have not understood the demands of the spirit of the times in the nineteenth century.’

After Hartleben’s speech Prussia continued holding off any further negotiation, with the argument that it had not received instructions from its government. In session after session the dimensions of the Commission’s protocols dwindled visibly, its contents reduced to the utmost formalities. This irritated the Commission to such an extent that it decided to take the ultimate step. In a letter to the Prussian Chancellor Hardenberg, it explicitly held the Prussian government accountable for not bringing the Vienna Convention into practice. The lifting of the forced transshipments had become increasingly pressing:

It is all the more urgent as the complaints about the stagnation of the trade are multiplying, and because the navigation of the Rhine, instead of being alleviated, has to fight against new obstacles and the fluctuations between the former and the new order of things.

In an attempt to deliver the message in a more charming way, the letter said:

May it please His Excellency to add to the crown of his brilliant merits for the good of the nations the new merit, of having accomplished by his high intervention the free navigation of the Rhine, for which since a long time all the voices have united.<sup>70</sup>

The letter had no demonstrable effect, but it showed that Prussia’s efforts to portray the Netherlands as ‘a terrifying phantom of supremacy’ had failed to meet their objective, at least *within* the Commission.

### **The end of the CCNR? Prussian withdrawal and European interference**

Addressing a head of state was a move to which the Central Commission had never resorted before. This shows the seriousness of the perceived problems and the extent to which the Dutch view on things was supported by the full majority of the Commission. But it also illustrates the institutional development of a new kind of organisation that took itself seriously. By directly addressing a head of state of one of the Commission members, it really transcended one of the formal qualities of the Commission as formulated in Vienna, which was ‘to form an authority which deals with the official communications *between* the riparian States on everything relating to navigation.’ No longer did the Commission regard itself merely as a conduit of official communications, but as a source of coordinated communications towards individual governments. Nevertheless, how the Commission regarded itself is one thing; what the impact was of such coordinated communications another.

When in September 1821 the Prussian commissioner finally presented a new project, it still contained the demand to extend the freedom of navigation into the sea. This was a deliberate, and successful, attempt to shatter the negotiations on the interim regime indefinitely. For Prussia, it was no longer desirable to keep the negotiations exclusively to the Commission. In December 1817, Hardenberg mentioned to Jacobi that only the Great Powers would be able to decide on the matter of Rhine navigation.<sup>71</sup> In addition, earlier in 1821 the Minister of Commerce, Hans Graf Von Bülow (1774–1825), had written to the Minister of Foreign Affairs, Christian Günther von Bernstorff (1769–1835), that the situation reminded him of the 40 years’ negotiation over the closing of the Scheldt, thereby suggesting that the main decisions should not be made in Mainz, but elsewhere.<sup>72</sup> In 1822 a perfect opportunity to raise the issue to the highest level presented itself, when the Great Powers held a new European Congress in the Italian city of Verona.

From the sources it seems that the initiative of ‘European interference’ was not taken by Prussia, but by the leader of the Great Powers, Great Britain. In 1822 the Netherlands was about to issue a new tariff law that allowed the government to prohibit the transit of certain foreign goods up the Rhine. Great Britain was highly doubtful that the Netherlands had the right to establish a prohibition without consulting other states; in principle this frustrated the freedom of navigation on the Rhine, and thus disregarded the Vienna Congress Treaty to which the Netherlands had also acceded. Arthur Wellesley, 1st Duke of Wellington (1769–1852), the main representative of Great Britain at the Congress of Verona, consulted over the matter with France and Prussia and decided to address a note to the attending partners at the Congress on 27 November saying, ‘notwithstanding this Treaty, to which every Power in Europe is a Party, the Government of the Netherlands have thought proper to close the mouth of the river

against the commerce of the world.’ As this was a matter of general interest, he further demanded that

an effort might be made by the Ministers of the Five Powers at the Court of Brussels, to induce the King of the Netherlands to adopt measures in relation to the navigation of the Rhine, in concert with other Powers bordering on that river, which may have the effect of bringing into execution the Treaty of Vienna on this subject.

The proceedings of the Congress further noted that the difficulties in settling the new Rhine regime were mainly the result of Dutch obstructions.<sup>73</sup> This was highly offensive to the Dutch, as they perceived Prussian negligence, not alleged Dutch obstructions, as the reason for the delay. It was even more painful, as Niek van Sas pointed out, since Great Britain and the Netherlands had been partners in a ‘special relationship’ ever since the Dutch renaissance in 1813.<sup>74</sup> Moreover, the Duke of Wellington was Prince of Waterloo, a title especially created by the Dutch king to honour the British field marshal as victor of the battle that defeated Napoleon.<sup>75</sup> These circumstances demanded a deliberate approach. In the months following Verona, the Dutch government received notes from the Austrian, British, Prussian, and Russian ministers urging the repeal of the transit prohibitions. Russia hoped the Netherlands would finally implement ‘several of the essential clauses of the fundamental pact of Europe, which are in opposition to the commercial measures which it persists to maintain.’ Clancarty, the British representative in the River Congress Committee in Vienna, now minister in Brussels wrote:

If it shall be permitted to the Maritime Power, having the Control over the Mouth of a Traversing River to prohibit the entry of it in Transit to certain Articles selected at its pleasure, the freedom of Commerce upon that River no longer exists – the River may be completely shut in its Navigation to all Articles whatever either going to or coming from parts beyond Sea, at the sole will of a single Power, and the whole Treaty in this respect become completely nullified.<sup>76</sup>

In response to these remonstrances the Netherlands first tried to request the intervention of the Five Powers in order to bring into effect article XIX of the Vienna Convention, i.e. the abolishment of forced transshipment in Mainz and Cologne. This was declined. Moreover, in a special note the Netherlands tried to seduce London into concluding a bilateral agreement on the basis of favourable transit tariffs. This attempt to separate Great Britain from the other Great Powers and bring it into the Dutch camp swiftly failed as well. In the years following the Congress of Verona, the Netherlands was in dock. The British rejected the proposal to transfer the negotiations upon the subject to London and continued, in accordance with the other Powers, to urge the Dutch government to settle the matter according the Vienna stipulations.<sup>77</sup>

It shows that the Great Powers considered themselves guarantors of the river stipulations of the Vienna Treaty, protecting the European interests rather than the riparian interests, let alone those of the Dutch.<sup>78</sup>

Meanwhile, in Mainz, the balance was shifting. After Jacobi's project had been set aside by the other commissioners, Prussia sent a new representative, Daniel Heinrich Delius (1773–1832), a former minister in Brussels and governor of Trier. Delius was a man with 'serene superiority' and, most importantly, could be regarded by the other German states as a Prussian with an eye for the larger German interest.<sup>79</sup> Deliberations continued, but Delius started openly questioning the efficiency of the CCNR. In the summer of 1824, in a confidential note to the representatives of the smaller German states, the Prussian commissioner suggested terminating the Commission altogether and starting negotiations on the future Rhine administration on a bilateral basis.<sup>80</sup> In a note to the British government, Prussia announced that the minor states had responded positively to this demand, and – although this was in reality not the case – he claimed that they were willing to withdraw their commissioners from Mainz.<sup>81</sup> Prussia would do the same unless 'the Netherlands Government should, without further delay, accede to the principles of the Congress of Vienna, as interpreted by the Ministers of the Allied Powers at Verona.'<sup>82</sup> The Prussian attempt to get the most powerful Great Power putting pressure on the Netherlands failed. By June 1825 the threat had not led to any concerted action by the five Great Powers, nor by the minor riparian states.

Thus, to push the issue to the extreme, in the 364th protocol of the CCNR, the Prussian delegate simply adjourned the CCNR's sessions indefinitely. In a written note, Delius stated *in absentia* that his government believed that the costs, by now no less than 700,000 franks (or about 5 million euros today), outweighed the benefits of the Commission. After nine years of endless discussions, its ordinary tasks were totally bogged down. The Commission was not in a position to control compliance with the regulations, as the definitive regulations were still not fixed. Besides, mutual communications regarding the navigation of the Rhine did not require a permanent riparian assembly. As for its extraordinary tasks, one could safely say the Commission had failed, Delius wrote. The CCNR could not agree on the definitive regulations; therefore the replacement of a Rhine administration was unnecessary, as most tasks were directed to the individual riparian governments and did not require a permanent assembly.

That was the moment the Netherlands found a new ally on its side within the Commission. The French delegate reacted to Delius's note as if he had been kicked by a horse. It was inadmissible that Prussia demanded the dissolution of the Commission, while it was this very state that with the sole aim of promoting its own interest obstructed the establishment of a new Rhine regime by maintaining the forced transshipment. The French Commissioner, Baron St. Mars, concluded that this move must have been the personal initiative of the Prussian delegate as it did not correspond with the

commissioners' mandate to establish common regulations for the Rhine as determined by the Vienna Convention. In this unusual and painful situation, the Commission was to appeal to the integrity and righteousness of the Prussian king and demand Delius's replacement. After Verona, France was the only Great Power that had never reprimanded the Netherlands on the issue of Rhine navigation. It supported the Dutch understanding of the Vienna Convention because French trade over the Rhine was not much touched by it, whereas east–west trade routes through French canals could only profit from a closed Rhine mouth.

For very different reasons, the other riparian powers agreed with France. On 22 June 1825 the Commission's majority concluded that Delius was obstructing the realisation of the Vienna Convention. His argument about the costs was thwarted, as a non-permanent Commission would result in a mere 25 per cent cost reduction. More importantly, however, he was to blame for the fact that he had never shown real interest in the interpretation of the riparian governments of the *jusqu'à la mer* issue. Altogether, the Commission concluded that Delius's 'declaration is aimed at nothing less than an indefinite adjournment, during which no providence would have been made, and which would offer no guarantee (*Bürgschaft*) to the states of the Rhine, neither for the past nor for the future.'<sup>83</sup> In other words, in the eyes of the riparian states the Commission was the only body that could and should bring them security.

### **Secret Dutch-Prussian negotiations**

After 1825 the cards were reshuffled again, to the disadvantage of the Netherlands. The Commission's attempt to push the Prussian government to cooperate failed. Delius withdrew from Mainz, and left the Commission paralysed. Besides, in the current situation, most tolling stations were located on Prussian territory. Until 1825 the Central Bank of Cologne had always fairly redistributed these revenues among the riparian states. After the withdrawal of Delius, the bank stopped reimbursing these incomes, thereby also affecting the Commission itself, which depended on these earnings. Van Eysinga noted in 1936 that by controlling this bank, Prussia controlled the '*nervus rerum omnium*.' Thereby, the main Rhine state knew how to take advantage of its hegemonic position as '*beatus possidens*.'<sup>84</sup>

Moreover, Baden and Bavaria, especially, were shifting position and were looking for Prussian cooperation. Baden had started the largest canalisation project under the famous engineer Johann Gottfried Tulla (1770–1828), but experienced strong opposition from the Rhine states downstream which were frightened of an uncontrollable acceleration of the water stream once the works were finished. In exchange for Prussia's (silent) approval to continue their engineering projects, Baden would acknowledge Prussia's predominance, but it would think them magnanimous 'who gladly give advantages to little ones, because they are small states and need them.'<sup>85</sup> In Bavarian newspapers, the Dutch position was increasingly criticised. The liberal-minded Bavarian

*Allgemeine Zeitung* concluded that the Netherlands interpreted the treaties in a way that suited their own interests best, and that was useless for German commerce.<sup>86</sup>

A pamphlet, probably written by merchants of the larger German Rhine towns and addressed ‘to the enlightened part’ of the Dutch merchants, clearly made this point.<sup>87</sup> Whereas the German riparian states appealed to legitimate European or even universal principles, the Netherlands was driven by irrationality. Reciprocity was key to liberty and liberty was key to prosperity, while chasing after solitary economic advantages was not only an insult to European solidarity, but it could also invoke uncontrollable rivalries.<sup>88</sup> The writers underscored the Dutch interest in an open river, as competing French and German ports were already welcoming the diverted commerce. It warned:

what are the capabilities of an isolated state, that violently made an enemy out of its most powerful neighbour at the Rhine, depends on remote quasi-friends that only pursue their self-interest ... and above all comes out in opposition to the High Allied Powers [?]<sup>89</sup>

No one doubted that the Great Powers would intervene when the security of the Vienna principles were endangered. In a cold and evocative tone the pamphleteers noted that they did not need to fear an escalation and its consequences ‘since the Dutch government has been endowed with too much sense to take the highest risk.’ The message was clear: if the Netherlands continued to block the free navigation of the Rhine, it would lose what it said it was so vigorously protecting – its national sovereignty.<sup>90</sup>

The Bavarian comments and the German pamphlet were reactions to a surprising public provocation by the Austrian minister in the Netherlands, Count Félix Von Mier, in 1826. The provocation once more showed the interest the Great Powers had in the issue, including Austria, which until then had always been protecting its only direct commercial outlet towards the northern seas from the sidelines. In a memorandum that against all diplomatic standards he had published in a Frankfurt newspaper, the Austrian official insisted on the liberalisation of Rhine navigation into the sea. Von Mier not only referred to the principles and arrangements that had been agreed on in Vienna, but also mentioned that since the Allies had charged the Netherlands, and the House of Orange, with sovereignty over the Dutch territories, Holland was also to meet the Allied conditions.

The Austrian statement about the principle of free navigation infuriated the Dutch king. It did not recognise his absolute sovereignty and depicted him as some kind of secondary authority that was (publicly) kept on a leash by the Great Powers.<sup>91</sup> Presumably the minister, speaking for one of the major European powers, expected with his public memorandum to force a breakthrough in the lingering Rhine debate. In reality, the result was the complete opposite. The British ambassador in the Netherlands, Charles Bagot (1781–1843), reported to the Secretary of State of Foreign Affairs,

George Canning (1770–1827), that the Austrian insinuation had ‘*piqué au vif*’ the Dutch king:

Perhaps it is a pity that this chord was touched, for the King will never get off his high horse about it, and there is so much to be said on both sides that the real question may be deferred ad infinitum, or perhaps lost in the discussion of one that practically does not signify a pinch of snuff.<sup>92</sup>

While in 1822, after Verona, the Netherlands had reached out to the five Great Powers, Von Mier’s reaction had definitely shut that door. Yet the difficulties within the Commission and shifts among riparian states made the Dutch position vulnerable. It was because of these circumstances that on 10 September 1826 the Netherlands issued a decree that would install freedom of navigation on the river Lek as installed on the German-French parts of the Rhine from April 1827 onwards.<sup>93</sup> Straight away, the government started a charm offensive by informing all the Great Powers about this shift of policy. Simultaneously, the Dutch government offered the Prussian government the opportunity to start negotiations on their differences, prior to starting the discussions in Mainz anew.<sup>94</sup>

In the government’s instructions to the special delegate J.E.P.E. Gericke van Herwijnen (1785–1845), the Dutch strategy for the negotiations with the Prussians was clearly formulated. Bourcourd, the Dutch commissioner in the CCNR, had prepared the core of it, i.e. to create the impression that the Netherlands represented the rights of the riparian states as a whole and to look for consensus on the basis of strict reciprocity. The Netherlands naturally demanded the abolition of the forced transshipment on the German Rhine. In return it had already announced the introduction of the liberal regime on the Lek. Additionally, the Netherlands had one other trump card to play. It could consider expanding the liberal regime to the much more important river branch of the Rhine: the Waal. This extension would transcend the Vienna stipulations and was presumably an offer no one could refuse. The offer, however, was not without conditions. First, the river regime would reach *to the sea*, meaning that the Netherlands maintained maritime sovereignty and could continue to levy transit duties as it saw fit. Second, navigation on the Rhine would only be allowed to citizens of the respective riparian states.

Gericke was instructed to underline that these conditions were also in the German interest, as they protected the German Rhine from ‘an overdose of foreign goods’ and promoted the navigation of the Rhine under German flags, while a significant reduction of the transit duties made them completely insignificant and hardly perceptible.<sup>95</sup> This proved to be a clever strategy. Indeed, Prussia was wary of foreign boats and the excessive flow of British goods in its territory. This would harm Prussian and German infant industries along the Rhine. Until 1827 Prussia had threatened several times to call in the

Great Powers to protect the implementation of the Viennese articles. However, the Dutch-Prussian negotiations clarified that the interests, expectations, and principles of the Great Powers were not compatible with those of the riparian states. Indeed, Prussia's attachment to their deviant interpretation of the Viennese articles disappeared and direct interference by the Great Powers became undesirable when it turned out that Great Britain merely desired an open Rhine that was accessible for its own merchandise and transport.

By 1829 Prussia and the Netherlands finally agreed on the conditions of a new Rhine regime. The Rhine would have a uniform toll system and free navigation for residents of all riparian states. Boatmen associations and forced transshipment were abolished. The Waal would be made subject to the Rhine regime as well. Finally, the Netherlands limited its transit taxes to a fixed rate and renamed them. This meant that the Great Power understanding of the *jusqu'à la mer* clause was rejected. The agreement was submitted to the CCNR and finally ratified as the Mainz Convention in 1831. Great Power intervention on the Rhine had been prevented.

There are indications that Prussia never really intended to withdraw from the Commission, but used its absence as a means of leverage against the other riparian states. Possibly it was the unanticipated vigour with which the other European Great Powers publicly intervened that initially pushed the riparian powers apart. But as soon as the 'European' understanding of the Vienna Convention did not seem to correspond with either the Dutch, or the Prussian, or the larger German interests, the Dutch and Prussian governments chose to reconsider a bilateral approach. The Dutch-Prussian negotiations strengthened the notion of a common interest, or better, the notion of a common disinterest. The individual interests of Prussia and the Netherlands corresponded better with the interest of the riparian states than with the European interest at large.

## **Conclusion**

After 1816 the CCNR faced the difficult task of implementing a regime for navigation on the Rhine that balanced local interests against the common interest under the flag of freedom of navigation. Initially, Eichhoff helped a great deal to determine the three main characteristics of the freedom of navigation principle, namely uniformity, equality, and continuity. However, it was only after extensive discussions, and a quasi-implosion of the Commission itself, that the commissioners reached an agreement on two additional demarcations to the freedom of navigation. First, who was to enjoy speed, security, order, and cheapness on the Rhine? And second, where was the regime to be applied? In the course of the 1820s, the CCNR managed to answer these questions by redetermining the security-prosperity nexus.

The CCNR found the answer to the first question in the principle of reciprocity, more specifically inter-riparian reciprocity. Only those sharing the burden of cooperation should benefit from the Rhine regime. Moreover, the

regime's establishment was a sign of goodwill towards each other, rather than the formalisation of a European security instruction. The principle of reciprocity secured sovereignty towards each other and collectively towards the Great Powers, while simultaneously promoting prosperity within the riparian condominium. Eventually, the CCNR found the answer to the second question – where the regime was to be applied – in a fluvial understanding of the principle of navigation. Thus, Dutch sovereignty was maintained, and German infant industries were simultaneously protected from an excess of British merchandise. In an additional bilateral agreement, the Netherlands and Prussia mitigated the most detrimental consequences of the maintenance of the Dutch sea rights to (German) Rhine trade. In a strict sense the Mainz Convention of 1831 did not mirror the Vienna spirit, as the Netherlands remained the gatekeeper of the Rhine. Moreover, Great Britain was sidelined, and the European project of turning international rivers into the Continent's main transnational corridors of commerce and communication was deliberately redesigned into a project for the common good of primarily the riparian states.

It is true that in the immediate establishment of the Mainz Convention the CCNR played a minor role. Nevertheless, in the years of negotiations leading up to its adoption, the CCNR had clearly set the bandwidth of the negotiations between Prussia (Delius) and the Netherlands (Gericke, who was instructed by Bourcourd). Despite the highly contested topics the members discussed, the Commission had never fallen apart. It had shown itself able to actively intervene and sometimes discipline rather passionate disagreements. It removed off-topic issues from the table and had Prussia and the Netherlands clearly formulate their final demands. Moreover, it rationalised what could be rightly demanded from the Netherlands to enjoy free passage in Cologne and, when the Netherlands met these demands, it required that Prussia fulfil its duties in return. In the course of the 1820s the CCNR turned into a moral union that had never existed before, pursuing the common (that is riparian and inter-riparian) good.

Moreover, on the practical and public relations side, the CCNR started to reach out to a larger public by publishing a portion of its protocols since 1818, and more importantly, it published the provisional regulations. These were much-needed instructions and directions for merchants and skippers alike, who until then had no means of reasonably predicting the costs and timing of transport. In addition, the CCNR had slowly started to improve gauging. In other words, in matters of bureaucratisation and professionalisation, the CCNR had started a process of securing transport safety, commercial security, and toll revenues.

The continued existence of the CCNR after the Mainz Convention can be explained in two complementary ways. On the one hand, the CCNR constituted a legitimate claim of the riparian states to settle their own affairs, without Great Power interference. Thus by 1831 the European prosperity narrative had definitely succumbed to the riparian interest of trade security on the basis of inter-riparian reciprocity. On the other hand, the CCNR was a

rather efficient way for the riparian states to coordinate all practical matters related to Rhine navigation. However, the coordination and implementation of a new uniform Rhine regime was strongly hampered by a highly heterogeneous, fragmentary, and inaccurate collection of information on the geographical character and navigable conditions of the Rhine. Before the CCNR could establish the new regime, before it could turn to making navigation on the Rhine safe, it needed to find a way to collect, harmonise, exchange, and interpret the relevant information. For an organisation that was established as a semi-diplomatic forum, rather than a centre of riverine knowledge production, this proved to be an arduous task in the following decade.

## Notes

- 1 Parts of this chapter appeared before in Joep Schenk, ‘The Central Commission for Navigation of the Rhine. A First Step Towards European Economic Security?’, in *Securing Europe After Napoleon. 1815 and the New Security Order*, eds. B. de Graaf, I. de Haan, and B. Vick (Cambridge: Cambridge University Press, 2019), and Joep Schenk, ‘National Interest versus Common Interest. The Netherlands and the Liberalization of Rhine Navigation at the Congress of Vienna, 1814–1815,’ in *Shaping the International Relations of the Netherlands, 1815–2000: A Small Country on the Global Scene*, eds. Ruud van Dijk, Samuël Kruizinga, and Vincent Kuitenbrouwer (New York, London: Routledge, 2018), 13–31.
- 2 [www.festung-mainz.de/geschichte/bundesfestung.html](http://www.festung-mainz.de/geschichte/bundesfestung.html).
- 3 AdBR, 86, box 10, file 3: Locaux 1816–1914. 9 October 1816 rental agreement. Charles Edward Dodd, *An Autumn Near the Rhine; Or Sketches of Courts, Society, and Scenery in Germany: With a Tour in the Taunus Mountains in 1820*, 2nd ed. (London: J. Murray, 1821), 3.
- 4 The articles of the Vienna Act, concerning Rhine navigation. Included as attachment 16 B.
- 5 AdBR, 212J, 129, protocol 1, 5 August 1816.
- 6 *Baierische National-Zeitung*, 13 August 1816, 191 (München), 1. Also *Leeuwarder Courant* 99, 16 August 1816, 1.
- 7 W.J.M. van Eysinga, *Die Zentralkommission für die Rheinschiffahrt; Geschichtliche Darstellung. Verfasst auf Veranlassung der Zentralkommission für die Rheinschiffahrt* (Leiden: A.W. Sijthoff, 1936), 23.
- 8 NL-HaNA, 2.05.01, 3647, letter 1 Bourcourd to Goldberg, August 1816.
- 9 NL-HaNA, 2.21.006.51, 136, Aanstelling Bourcourd door de Koning 9 June 1815, met instructie van min Buza (Van Nagell) 14 September 1815.
- 10 *Nederland's Adelsboek* 10 (The Hague: W.P. van Stockum & Zoon, 1912), 376.
- 11 Rößler, Ludwig Christian ‘von’, in *Hessische Biografie*, accessed 2 July 2019, [www.lagis-hessen.de/pnd/1032215836](http://www.lagis-hessen.de/pnd/1032215836).
- 12 Bayerisches Hauptstaatsarchiv (BHSt), MF 58762, Königliches Ministerium des Innern to Königliche Staatsministerium der Finanzen, die fünfzigjährige Dienstzeit des geheimen Raths von Nau betreffend, 27 July 1838. Also Karl Theodor von Inama-Sternegg, ‘Nau, Bernhard Sebastian von,’ in *General German Biography*, 23 (1886), 294–295, available online, [https://de.wikisource.org/wiki/ADB:Nau,\\_Bernhard\\_Sebastian\\_von](https://de.wikisource.org/wiki/ADB:Nau,_Bernhard_Sebastian_von).
- 13 NA, 2.21.006.51, 135, Bourcourd aan Goldberg, 20 July 1817.
- 14 A. Lievyens, Jean Maurice Verdoot, and Pierre Bégat, *Fastes de la Légion-d’honneur: biographie de tous les décorés accompagnée de l’histoire législative et réglementaire de l’ordre*, Vol. 5 (Paris: Bureau de l’administration, 1847), 504.

- 15 NA, 2.21.006.51, 135, Bourcourd aan Goldberg, 20 July 1817.
- 16 Georg May, *Das Recht des Gottesdienstes in der Diözese Mainz zur Zeit von Bischof Joseph Ludwig Colmar (1802–1818)* (Amsterdam: B.R. Grüner, 1987), 265.
- 17 Andreas Becker, *Napoleonische Elitenpolitik im Rheinland: die protestantische Geistlichkeit im Roerdepartement 1802–1814* (Köln: Böhlau Verlag, 2011), 91–92. Jacobi was also the son of Friedrich Heinrich Jacobi, the famous Enlightenment philosopher. Jeffrey M. Diefendorf, *Businessmen and Politics in the Rhineland, 1789–1834* (Princeton, NJ: Princeton University Press, 1980), 104. On the appointment of Jacobi: *Nederlandsche staatscourant*, 24 May 1816.
- 18 AdBR, 212J, 132, attachment to the session of 12 September 1817, Rapport and Instruction Interimaire, J.J. Eichhoff, 31 August 1817.
- 19 Van Eysinga, *Die Zentralkommission für die Rheinschiffahrt*, 24. Also Zentral-Kommission für die Rheinschiffahrt, *Rheinurkunden. Sammlung zwischenstaatlicher Vereinbarungen, landesrechtlicher Ausführungsverordnungen und sonstiger wichtiger Urkunden über die Rheinschiffahrt seit 1803 I (1803–1860)* (The Hague: Nijhoff and München and Leipzig: Duncker & Humblot, 1918), 160.
- 20 AdBR, 212J, 129, attachment to the session of 16 August 1816, Rapport J.J. Eichhoff, 12 August 1816. For Gergens' opinions on the interpretation of 'freedom of navigation' see AdBR, 212J, 129, Gergens, 16 August 1816 and 17 September 1816. Also Van Eysinga, *Die Zentralkommission für die Rheinschiffahrt*, 24.
- 21 AdBR, 212J, 129, attachment to the session of 16 August 1816, Rapport J.J. Eichhoff, 12 August 1816.
- 22 AdBR, 212J, 130, J.J. Eichhoff, Rapport général présenté à la Commission centrale, 11 February 1817 and J.J. Eichhoff, *Projet du Règlement Définitif concernant la Navigation du Rhin, son Administration, sa Police, et les Droits à y percevoir. Précédé du Rapport Général développant les principes et les motifs qui ont servi de base à ce travail. Présenté à la Commission Centrale* (Mainz: Zabern, February 1817).
- 23 AdBR, 212J, 129, attachment to the session of 1 October 1816, J.J. Eichhoff, Observations sur le Projet du Règlement de Mr. Le Commissaire de Nassau adresser à la Commission Centrale le 30 September 1816.
- 24 AdBR, 212J, 129, attachment to the session of 16 August 1816, Rapport J.J. Eichhoff, 12 August 1816.
- 25 AdBR, 212J, 130, protocol 31 January 1817.
- 26 AdBR, 212J, 130, Eichhoff, *Projet du Règlement Définitif*, 3–44. The project also arranged the organisation of the authorities, such as the Commission itself, but also the executive committee and the tribunals, on issues regarding recruitment, payments, pensions, etc.
- 27 AdBR, 212J, 130, J.J. Eichhoff, Rapport général présenté à la Commission Centrale, 11 February 1817 and J.J. Eichhoff, *Projet du Règlement Définitif*, 3–44.
- 28 AdBR, 212J, 130, J.J. Eichhoff, *Projet du Règlement Définitif*, 34.
- 29 David F. Lindenfeld, *The Practical Imagination: German Science of State in the 19th Century* (Chicago: University of Chicago Press, 1997), 61.
- 30 J.J. Eichhoff, *Topographisch-statistische Darstellung des Rheines: mit vorzüglicher Rücksicht auf dessen Schifffahrt und Handlung bisherigen Zustand seiner polizeilichen Verfassung, deren möglichen Verbesserung und Ausdehnung auf die übrigen grossen Ströme, womit er theils schon in Verbindung steht, theils noch gebracht werden könnte* (Cologne: Rommerskirchen, 1814), 119.
- 31 AdBR, 212J, 130, J.J. Eichhoff, *Projet du Règlement Définitif*, 5.
- 32 Hein A.M. Klemann and Joep Schenk, 'The Rhine in the Long 19th Century. Creating the Lower Rhine Region,' in *Transnational Regions in Historical Perspective*, eds. Ben Wubs, Hein A.M. Klemann, and Marten Boon (London and New York: Routledge, 2020), 25–29.

84 *Dutch-Prussian rivalry (1816–1831)*

- 33 NL-HaNA, 2.21.006.51, 136, Appointment Bourcourd by the King, 9 June 1815 and instructions by the ministry of Foreign Affairs (Van Nagell) 14 September 1815.
- 34 NL-HaNA, 2.05.01, 64, Bourcourd to Van Nagell, 10 October 1815.
- 35 NL-HaNA, 2.21.006.51, 135, Bourcourd to Goldberg, 28 June 1817.
- 36 NL-HaNA, 2.21.006.51, 137, Bourcourd to Goldberg, 28 September 1815. Also 2.05.01, 64, Bourcourd to Van Nagell, 2 October 1815. NL-HaNA, 2.05.01, 64, Bourcourd to Van Nagell, 5 November 1815. Also NL-HaNA, 2.21.006.51, 137, Bourcourd to Goldberg, 18 October 1815. Also see the correspondence between Bourcourd and Goldberg: NL-HaNA 2.05.01, 3647.
- 37 Pierre/Peter Joseph Eich(h)off Lieutenant 2nd class (1814).
- 38 NL-HaNA, 2.21.006.51, 137, Bourcourd to Goldberg, 28 September 1815 and 135, Bourcourd to Goldberg, 20 July 1817.
- 39 AdBR, 212J, 129, protocols 20 September 1816.
- 40 AdBR, 212J, 129, protocols 27 September 1816.
- 41 Joep Schenk, 'National Interest versus Common Interest, 13–31.
- 42 AdBR, 212J, 129, protocols 17 September 1816.
- 43 Eberhard Gothein, *Die Schiffahrt der deutschen Ströme: Untersuchungen über deren Abgabewesen, Regulierungskosten und Verkehrsverhältnisse*, vol. 2: *Geschichtliche Entwicklung der Rheinschiffahrt im XIX. Jahrhundert* (Leipzig: Duncker & Humblot, 1903), 87–99. Also Van Eysinga, *Die Zentralkommission für die Rheinschiffahrt*, 26.
- 44 Gothein, *Die Schiffahrt der deutschen Ströme*, 89–91.
- 45 Karl Stein, *Briefe und amtliche Schriften: Band IV Preussens Erhebung. Stein als Chef der Zentralverwaltung. Napoleons Sturz (Januar 1813–Juni 1814)* (Stuttgart: W. Kohlhammer, 1957), 607, 633.
- 46 AdBR, 212J, 129, attachment to the protocols of the session of 17 September, Gergens, Rapport concernant les art.: 19, 20 et 21 de l'acte du Congrès de Vienne, exposée à la Commission Centrale dans la Séance du 17 Septembre 1816, Mainz 16 September 1816.
- 47 Gothein, *Die Schiffahrt der deutschen Ströme*, 96.
- 48 NL-HaNA, 2.21.006.51, 135, Bourcourd to Goldberg, 24 October 1816.
- 49 AdBR, 212J, 129, protocols 1 October 1816.
- 50 AdBR, 212J, 129, protocols 8 November 1816.
- 51 NL-HaNA, 2.21.006.51, 135, Bourcourd to Goldberg, 20 July 1817.
- 52 B.S. Von Nau, *Beitraege zur Kenntniss und Beförderung des Handels und der Schiff-fahrt I* (Mainz: F. Kupperberg, 1818), 64.
- 53 *Ibid.*, 99–10.
- 54 *Ibid.*, 95–99.
- 55 *Ibid.*, 102. Also the draft by Eichhoff, 103–133.
- 56 Eichhoff, *Topographisch-statistische Darstellung des Rheines*, 86.
- 57 *Ibid.*, 87, and Von Nau, *Beitraege zur Kenntniss*, 145.
- 58 Von Nau, *Beitraege zur Kenntniss*, 175–181.
- 59 *Ibid.*, 177.
- 60 *Ibid.*, 387–393.
- 61 B.S. Von Nau, *Beitraege zur Kenntniss und Beförderung des Handels und der Schiff-fahrt II:i* (Mainz: F. Kupperberg, 1819), 29.
- 62 B.S. Von Nau, *Beitraege zur Kenntniss und Beförderung des Handels und der Schiff-fahrt II:ii* (Mainz: F. Kupperberg, 1819), 10–12.
- 63 Van Eysinga, *Die Zentralkommission für die Rheinschiffahrt*, 29–31.
- 64 B.S. Von Nau, 'Verhandlungen der Central-Commission zu Mainz bei einer interimistischen Instruktion für die Rheinschiffahrt nach der Wiener Konvention vom 24. März 1815,' in *Beitraege zur Kenntniss und Beförderung des Handels und der Schiff-fahrt I* (Mainz, 1818).

- 65 J.F. Ockhart, *Geschichtliche Darstellung der frühern und spätern Gesetzgebung über Zölle und Handelsschiffahrt des Rheins, mit Rücksicht auf des wiener Kongresses für die künftige Verwaltung dieses Stroms und seiner Nebenflüsse* (Mainz, 1818). Also see Robert Mark Spaulding, 'The Central Commission for the Navigation of the Rhine and European Media, 1815–1848,' in *International Organizations and the Media in the Nineteenth and Twentieth Centuries. Exorbitant Expectations*, eds. Jonas Brendebach, Martin Herzer, and Heidi J.S. Tworek (London: Routledge, 2018), 17–37.
- 66 J.J. Eichhoff, *Pragmatisch-Geschichtliche Darstellung der Verhandlungen und Beschlüsse des Congress-Comitté für die Freiheit der Flüsse; so wie der Berathungen der, in Gefolge jener Beschlüsse in Mainz niedergesetzten Central-Commission. Gegenwärtige Lage dieser Berathungen* (Mainz, 1819).
- 67 AdBR, 212J, 138, protocol 2 April 1819, and attachment Eichhoff to the Commission, 30 March 1819.
- 68 AdBR, 212J, 139, pr. Hartleben to the Commission 6 August 1819.
- 69 *Allgemeine Justiz-, Cameral- und Polizei-Fama*, September 1819, nr 97–98, 393–398, and *ibid.*, 99–100, 401–405, and *ibid.*, 101–102, 409–413.
- 70 AdBR, 212J, 142, Commission to Hardenberg, 9 June (28 May), 1820.
- 71 Gothein, *Die Schiffahrt der deutschen Ströme*, 101.
- 72 N.W. Posthumus, *Documenten betreffende de buitenlandsche handelspolitiek van Nederland in de negentiende eeuw III* ('s-Gravenhage: Martinus Nijhoff, 1923), 48–49.
- 73 TNA, FO 881/262, Confidential Historical Memorandum of what has taken place, since the Peace of Paris, 1814, with respect to the navigation of the Rhine, Foreign Office, 27 November 1852. Also N.W. Posthumus, *Documenten betreffende de buitenlandsche handelspolitiek van Nederland in de negentiende eeuw I* ('s-Gravenhage: Martinus Nijhoff, 1919), 82ff.
- 74 N.C.F. van Sas, *Onze natuurlijkste bondgenoot: Nederland, Engeland en Europa, 1813–1831* (Groningen: Wolters-Noordhoff, 1985).
- 75 NL-HaNA, 2.05.01, 721, letter to the Minister of Foreign Affairs De Coninck, 26 July 1825.
- 76 NL-HaNA, 2.05.01, 721, Clancarty to the Dutch minister of Foreign Affairs W.F. van Reede, 23 February 1825.
- 77 TNA, FO 881/262, Confidential Historical Memorandum, 7.
- 78 De Decker, *Europees internationaal rivierenrecht*, 420.
- 79 Gothein, *Die Schiffahrt der deutschen Ströme*, 120.
- 80 AdBR, 212J, 161, protocols 22 June 1825, France (Baron St. Mars).
- 81 A Prussian minister remembered in his memoirs that the Netherlands was indeed increasingly supported by the representative of Baden, Buchler, who, as Nagler viewed it, also entertained a personal hatred for Prussia. Nagler, *Briefe des königl. Preuß. Staatsministers*, 16ff.
- 82 TNA, FO 881/262, Confidential Historical Memorandum, 9.
- 83 AdBR, 212J, 161, protocols 22 June 1825, statement praesidium.
- 84 Van Eysinga, *Die Zentralkommission für die Rheinschiffahrt*, 41–43.
- 85 Gothein, *Die Schiffahrt der deutschen Ströme*, 124.
- 86 *Allgemeine Zeitung München*, 12 November 1826.
- 87 *Over Rijn-vaart en Rijn-handel, voornamelijk met betrekking tot het Koninkrijk der Nederland* (Rotterdam: Contze et Overbroek, 1827). In a reaction to a Dutch pamphlet written by the Dutch lawyer: Johan op den Hooff, *Iets over de vaart op den Rijn* (Amsterdam: H. Gartman, 1826).
- 88 *Over Rijn-vaart*, 128.
- 89 *Ibid.*, 155.
- 90 *Ibid.*, 159, 192.
- 91 'De Rijnvaart,' *De Weegschaal* nr. 9 (1826), 383.

86 *Dutch-Prussian rivalry (1816–1831)*

92 As cited by Van Sas, *Onze natuurlijkste bondgenoot*, 251.

93 NL-HaNA, 2.05.01, 776, file 2, Royal Decree 10 September 1826.

94 GStA, HA. Rep. 81, nr 12. Gesandtschaft zu Haag 1827–1831, 24 November 1826  
Verstolk van Soelen to Schoultz d'Ascheraden.

95 NL-HaNA, 2.05.01, 722, Aantekeningen op 't Bericht van den minister voor de  
Nat. nijv. & kol. dato 7 February 1825 and Instructie voor den Staatsraad Gericke,  
Brussel, 16 January 1827 (geheim).

## 4 A river, a legislator

### The origins of a riverine knowledge system in the 1830s

#### Introduction

By 1831 the framework of the new Rhine regime had finally been established. However, without precise and compatible geophysical and hydraulic knowledge, the commissioners were faced with the impossible task of rendering the river more manageable in both maritime and financial terms. This became especially clear during the tedious process of mapping the Rhine and during a first crisis in assessing the navigability of the Rhine, or more specifically of the Waal in the Netherlands in those years. How could the CCNR promote speed, security, order, and affordability on the Rhine when it depended on politicised reports from the respective national authorities? This chapter shows how in the 1830s the CCNR started to build a riverine knowledge system of its own by employing its administrative force and external experts in standardised data collection. By 1840 the CCNR established this new form of knowledge production and distribution, which was, on the one hand, crucial to invigorate the principles of the new regime (uniformity, equality, continuity, reciprocity, and fluviality) and thus its legitimacy. On the other, the discussion of what safety of navigation actually entailed led to the formation of a new palette of norms ranging from transparency, predictability, and an increasing confidence in the human ability to govern a river in accordance with technocratic laws.

#### What did they know?

What could the members of the Central Commission know about the Rhine in 1831, in terms of its geophysical character and its navigable conditions? It is an overly simple question, but remains difficult to answer. As shown in [Chapter 3](#), none of the Commission members were experts on the Rhine, in so far as its economical and geographical coordinates were concerned. This was still true in the 1830s, the inception phase of the new-style CCNR. Even with new members substituting for the old diplomats from the first round of commissioners, they remained first and foremost diplomats, some with a fiscal background. The three main sources of knowledge and information on the physical, socio-economic, and functional character of the Rhine must have

been the growing collection of cultural expression such as poems, travelogues, and pictures of the ‘Romantic Rhine,’ the more official reporting and map collections of local and national water authorities, and, finally, the first reports written by officials related to the Commission in the period preceding the 1830s.

The starting phase of the Rhine Commission could draw on the products of the effervescent stage of Rhine romanticism, with its manifold outlets that spoke to the imagination, ranging from registered folk songs, to legends, fairy tales, and epic stories. The British poet Lord Byron (1788–1824) put the Rhine on the map, figuratively speaking, by writing in a melancholy manner about the part between Koblenz and Bingen, where natural beauty and ruined castles made it extraordinarily scenic. ‘The river nobly foams and flows/The charm of this enchanted ground,’ Lord Byron wrote in 1818,

And all its thousand turns disclose  
Some fresher beauty varying round:  
Through life to dwell delighted here;  
Nor could on earth a spot be found  
To nature and to me so dear,  
Could thy dear eyes in following mine  
Still sweeten more these banks of Rhine!

In the same period the British artist William Turner (1775–1851) also visualised the Rhine with his watercolour paintings. With *Die Lore-ley*, both the name of a steep rock in the same segment between Koblenz and Bingen and of the nymph singing there, the German poet Heinrich Heine (1797–1856) added some tragedy to Byron’s and Turner’s romanticism in 1824. ‘It seizes the boatman in his skiff/With wildly aching pain,’ Heine wrote about the effect of the nymph’s hymn:

He does not see the rocky reefs,  
He only looks up to the heights.  
I think at last the waves swallow  
The boatman and his boat;  
And that, with her singing,  
The Loreley has done.<sup>1</sup>

Thanks to these cultural expressions in the first decades of the nineteenth century, the Rhine became a prime destination for the emerging tourist industry, an industry that indeed started on and around that particular river in the heartland of Germany. This resulted in the first, and an increasing number of, commercially distributed travel reports and state-of-the-art popular imagery that depicted the Rhine in all its natural and historical splendour.<sup>2</sup> The first book that set in motion the famous travel guide empire from Koblenz, Baedeker, was in fact a tourist guide about a Rhine trip from Mainz to Cologne.<sup>3</sup>

For romanticist travellers, the Rhine's beauty and history provided an escape from the threatening side effects of the unnatural and rootless modernity of industrialisation. For the commissioners in the CCNR, these information sources provided a frame of imagination for what the Rhine represented. Depictions of natural and historical beauty might have increased the commissioners' commitment to the river, as a territory they could and would identify with, and as a lifeline with an increasing cultural dynamic of its own. The Dutch Commissioner Johan Bourcourd, for example, felt so much attracted to and part of the region, that he stayed on even after his retirement in 1832, and built himself an estate to which he retired in the Rhine city of Wiesbaden for the rest of his life, some 60 kilometres from Heine's Loreley.<sup>4</sup>

But besides such emotional commitment, the travel reports as sources of information also had a very practical result. They provided a first collection of maps of segments of the river that allowed the commissioners to picture the Rhine in its entirety and to appreciate its geophysical diversity and complexity. Cartographic Rhine illustration as a genre had started with the German painter Elisabeth von Adlerflycht (1775–1846). In the early 1810s, she drew the very first 'Rheinpanorama,' mostly out of aesthetic satisfaction. It was a parallel projection of the Rhine from the Nahe to the Mosel, highlighting locations of natural and historical interest. It is a composition we still recognise in some of today's greeting cards from the Rhine or other rivers. Indeed, with the romantic upswing of the Rhine in the early 1820s, these kinds of visual representations became highly popular and provided the commissioners with a bird's-eye view of the subject they administered.

Next to the somewhat fuzzy and intangible romantic interpretations of the Rhine, reports from local and national water authorities were already a much more concrete and therefore highly important source of information on the Rhine. In the wake of the French Revolution, progressive statesmen around Europe centralised the fragmented water management systems into national organisations. In the first half of the nineteenth century the increasing centralisation of water management in the respective riparian states was accompanied and driven by the production of a national knowledge system that concerned the behaviour of the Rhine and the conditions of the dikes and shores.<sup>5</sup> These mostly nationally aggregated knowledge reservoirs constituted an important source for the respective commissioners in the CCNR to grasp the geophysical character of the Rhine and its navigable conditions.

A typical example of a centralising national river management system was the Netherlands. At the end of the eighteenth century the country suffered from an increasing number of ever more damaging river flood catastrophes that could only be tackled by hydraulic expertise and a powerful institution. The birth of central water management in the Netherlands followed under French administrative rule in 1798. The hydraulic expert and former head of water management in the province of Holland, Christiaan Brunings (1736–1805), was appointed chief executive officer of the National Bureau of



Figure 4.1 Cartographic illustration of the Rhine valley, or Rheinpanorama by Elisabeth Susanna Maria Rebecca von Adlerflycht (1811)  
Source: Historisches Museum Frankfurt (HMF.C04577), Foto: Horst Ziegenfusz

Water Management.<sup>6</sup> This bureau was charged with developing a centralised river policy and with managing floods. By observing the rivers as a coherent system and utilising general principles of mostly Italian and German water engineers, experts appointed by the Bureau systematically gathered information on the rivers and tried to tackle the main problems they caused. Dangers occurred especially in wintertime, when huge ice floes pushed against the fragile dikes and blocked the water stream.

Only eight months after its establishment, the Bureau encountered its first test case, one that resulted in a first intensive flow of information. Floating ice and growing water caused an alarming situation on the Upper Rhine before Nijmegen in January 1799. The frozen ground made it impossible to anchor provisional water barriers, while the water instantly flushed away the manure used to raise the dikes. Inhabitants of the countryside took refuge in the surrounding cities. On 5 February the church bells rung, the dike breached, and within minutes the city of Zeevenaar was inundated. The priest had the poor take shelter in the school on somewhat higher ground, while the cattle took refuge in the church. Others could stay in their attics: ‘Many people had to spend the night in the attic in that fierce cold, and walk over it to avoid freezing,’ the priest wrote.<sup>7</sup> Agents of the National Bureau of Water Management inspected and reported to their superiors in a consistent manner on the rivers and the dikes and advised local authorities what emergency measures to take. Never before had the central government been so involved in local water management. Nevertheless, in Zeevenaar four inhabitants perished, so the priest noted, while all along the rivers the disaster sadly led to the death of dozens of people and enormous material damage.<sup>8</sup>

After this disaster, which hit a large part of the Netherlands, the Bureau sought to standardise ways of observing, reporting, and advising in order to increase its efficacy. Special regulations resulted in the first systematic compilation of river measuring data, such as water levels and dike conditions, which were instrumental in determining flood prevention policies.<sup>9</sup> As a second measure, the Bureau introduced the systematic inspection of channels, dikes, groynes, and sluices that fell under its jurisdiction by their engineers during fall and spring.

Despite this first systematisation of centralised river management and knowledge production, new floods occurred in the Netherlands. The January 1809 flood caused even more death and destruction than the previous inundation ten years earlier, with 100,000 victims, among which there were 275 fatalities.<sup>10</sup> In an attempt to raise material and moral relief, the Dutch poet Johannis Immerzeel (1776–1841) published a booklet in verse:

Cruel dangers! Floating ice and waves  
Tear and drag a hundred to death  
Livestock doesn't find any fodder  
The child does not find a mother  
The poor no water: rich no bread<sup>11</sup>

Louis Napoleon, King of Holland, visited the disaster areas and showed himself utterly committed to relieving the dire situation of the Dutch. More importantly, he put much effort into structurally enhancing the country's resilience with regard to the rivers' threat. Napoleon turned the Bureau of the Waterstaat into a separate ministry with its own research department. He improved communication between the existing local water authorities and their reservoir of empirical knowledge of river behaviour with the technological-scientific and river management experts of the Bureau on the national level. Research in the Bureau also entailed the collection and study of national and international literature on hydraulics and civil engineering.<sup>12</sup>

The body of experts on Waterstaat became responsible for the plans, projects, and execution of river engineering works for the conservation and improvement of the kingdom of Holland. It would be a difficult task, yet there was no doubt this enormous project was achievable, the king wrote: 'When the total security of an entire nation is so imminent and so totally threatened ... no effort is too great for such an undertaking.'<sup>13</sup> The Bureau was increasingly populated by professionally schooled hydraulic experts, who, in their studies, were strongly influenced by the impressive results of a battle against the water that was being fought on the Upper Rhine under the famous leadership of Baden engineer Johann Gottfried Tulla.

In the first quarter of the nineteenth century, after major floods had harmed the country more than once, the Baden government also followed the French example of centralising the water authorities within the *Großherzoglich Badischen Oberdirektion des Wasser- und Straßenbaus* and professionalised the schooling of hydraulic engineers in Karlsruhe. Within this framework, and as director of the *Oberdirektion*, Tulla projected his Rhine correction programme. The programme was preceded by large-scale measurement operations, generating data on water levels, discharge, and velocity. It was on the basis of these data that the works were determined and carried out.<sup>14</sup> Both in the Netherlands and in Baden, improving navigability came second to the protection of the land against unpredictable floods. Nonetheless, both reforms were important steps in the professionalisation of centralised water authorities. At its core, this centralised water management continued after the French defeat in 1814.

Protecting navigation from natural and man-made obstacles required not only the understanding of (sometimes conflicting) hydraulic theories on how rivers can or should behave, but also the collection and analysis of specific empirical data for every stretch of its course and of the adjacent towpaths, as well as on the character and quantity of the navigation and commerce taking place between Basel and the Dutch sea ports. In part, the CCNR commissioners could extract this kind of information from their respective ministries of Economic Affairs. Additional information was to be found in the archives of local port authorities, chambers of commerce, shipping insurance companies, and, of course, the former Octroi Administration and national customs authorities that assembled a wealth of substantial, but simultaneously quite

disconnected, data. As there had never been an international body governing the entire Rhine before, the information on the river was fragmentary, incomplete, often mistaken, and sometimes incompatible.

Besides romantic interpretations of the Rhine and reports from local and national water authorities, the Commission could rely on a third body of intelligence: that is, accounts by its own officials. Yet even these accounts had their limitations. Illustrative of how little even well-informed officials knew about the Rhine, despite its great importance for western European trade relations, is that in an outstanding publication of 1816, the author needed no less than 48 pages to come only to an estimation of the river's length, width, and depth.<sup>15</sup> The author of the book, which focused solely on the current geophysical and maritime conditions of the Rhine, was the inspector of the provisional administration of the Rhine, Joseph Franz Ockhart. He knew that in principle one could know the length of a river by measuring the length of the towpaths running along the water stream. By collecting and adding up all the possible data on the distance of these towpaths from town to town, Ockhart came to a final distance of 303.5 miles, which was about 15 per cent shorter than most educated guesses of well-known geographers of his time. However, it was still not certain what this possibly more precise distance exactly meant. A mile was a relative measure, as it equalled the distance walked in one hour. This made it unclear as to how many kilometres it corresponded to. In the German provinces on the left side of the Rhine, for example, one calculated 5 kilometres per hour, whereas a typical Swiss hour involved 5.555 kilometres, and a standard French hour, *bon vivants* that they were, a mere 4.444 kilometres. To keep it simple, Ockhart maintained the 5 kilometres scale, but he knew that his collection of the available data was not precise. For definite figures of the Rhine's length and size, one needed to await the measurement that the CCNR was to carry out.

In the introduction to his work, Ockhart underlined the fundamental importance of having available specific geophysical information on the Rhine in order to secure freedom of navigation. After all, the only guarantee that this freedom would be safely exercised was the issuing of police regulations. And, so Ockhart reasoned:

[all] that is to be regulated about the navigation of a river, must, as it were, emerge from the particular nature and quality of its bed, as well as from the other conditions, by which its navigability is determined: then in this respect, also the Rhine, as it were, must be asked first of all, what it allows for the safety of the transports to be accomplished on its waters.

One needed to know the geophysical and hydraulic particularities of the Rhine in detail in order to be able to design and apply the right regulations to it. In a philosophical vein, Ockhart observed that, in this sense, every river was its own legislator.<sup>16</sup>

After all the diplomatic negotiations and political bickering that had absorbed so much of the valuable time of the Commission in the 15 years following Ockhart's appeal, it was now time to create an administrative regime and police regulations on the basis of information that was aggregated from these three main sources and was now ready to be synthesised and processed by the Commission itself. The new constitution of the CCNR in 1831 empowered the Commission to do exactly that.

### **The administrative machine**

At 11 o'clock in the morning of Thursday 16 June 1831, in the usual offices of the CCNR on the Grosse Bleiche in Mainz, the representatives of the riparian states officially exchanged the ratified Convention. One month later it would enter into force. This day would therefore mark a formal turning point in the history of the Rhine, and of the Commission itself. A Dutch paper wrote:

[T]he shackles, in which the navigation of the Rhine had been caught for centuries, are removed ... the gates from this glorious river are opened for shipping and commerce into the great sea. ... Free competition will take the place of the old skippers' guilds, and for the future everything promises liveliness and prosperity to those associated with the navigation of the Rhine.<sup>17</sup>

From 1832 the CCNR subjected the Rhine to its new regime bit by bit.<sup>18</sup>

Compared to the formative phase that lasted from 1816 to 1831, many things would change for the CCNR, such as its meetings. Ever since its first session in August 1816, the Commission had convened on a permanent basis, initially two to three times a week, later one to three times a month. After 1831, the CCNR sessions were concentrated in time to a great extent. Between 1832 and 1836, the CCNR would convene twice a year. The summer session took about 14 days scattered over July and August. The winter session took about the same number of days spread over November and December. After 1836 the meetings were reduced even further to one annual summer session that, until the 1860s, would take about ten days dispersed over August and September. This limited gathering time made it redundant for the commissioners to actually establish themselves in Mainz; only the French commissioner did so, since he was also the French consul in Mainz. The fact that it was sufficient to travel once or twice a year to the fortified city for such a limited amount of time allowed the position of CCNR commissioner to be a side-job. After the Mainz Convention, the average duration of the position was roughly a decade, while the turnover of Rhine commissioners was between 20 and almost 50 per cent higher when compared to the 1816–1831 period.<sup>19</sup> Did this looser organisation of the CCNR make it less decisive, authoritative, or effective? In fact, it didn't.

The Mainz Convention was clear in the powers and duties it attributed to the Commission.<sup>20</sup> With its constitutive labour finished, its work focused on five main responsibilities. First, it was to monitor the compliance of the regulations as stipulated in the Convention of Mainz. Second, it was to propose new regulations to the respective governments of the riparian states in so far as necessary or deemed useful for the development of navigation. The Commission decided on new regulations by majority, but it could not enforce these regulations without the approval of the concerned state. Third, it was to insist on the involved authorities speeding up the engineering works that were necessary in and along the river course to protect the banks, the riverbed, and the towpaths, or works that could in any other way be beneficial for navigation. Fourth, as was already postulated by the Vienna Convention, the Commission was to report annually on the conditions of navigation, in terms of progress or decline, and any changes that may have occurred in the preceding year. Ultimately, the Commission functioned as a court of appeal in disputes regarding Rhine navigation.<sup>21</sup>

In the Mainz Convention of 1831, one of the prime functions of the Commission stipulated by article X of the Treaty of Vienna in 1815 did not return. It was no longer made explicit that the Commission was ‘to form an authority which deals with the official communications between the riparian States on everything relating to navigation.’ Instead, in practice the Commission would become a node, collecting, distributing, and producing information on a much more inclusive scale, and thereby not only aiming to solve justified complaints of riparian authorities about the conditions of Rhine navigation, but also those of merchants, ship owners, and leading figures in Rhine navigation. In order to carry out its advising, coordinating, and monitoring functions well, the Commission would depend more and more on a growing auxiliary network of knowledge-based experts. The main coordinating figure of these information flows coming into and leaving the CCNR was head of the larger administrative machine: Chief Inspector of the Navigation of the Rhine. On 17 December 1831 the Prussian local government official Ferdinand Wilhelm August von Auer (1786–1877) was installed Chief Inspector for life.<sup>22</sup>

Von Auer was not totally unknown with regard to Rhine administrative matters. His father, Carl Albrecht Wilhelm von Auer (1748–1830), was director of the tolling station in Emmerich in the first decade of the nineteenth century, and in 1814 Stein appointed both men, and Colonel Gergens, in the temporary directorate of the Octroi under Solms-Laubach.<sup>23</sup> In 1816, after this brief Rhine experience, Ferdinand von Auer became governing counsel in Cologne until his appointment in Mainz, where he resided at Schlossplatz 1. As the landlord of the CCNR offices at the Grosse Bleiche did not want to continue the rental contract after 1831, the Chief Inspector rented out his private home for the annual sessions, while the CCNR archives were also relocated to his residence.<sup>24</sup>

The Chief Inspector of the Navigation of the Rhine headed the administrative machine of the CCNR. His main task was to assess whether

complaints about the conditions of navigation on the Rhine were justified or not. In the case of reported disorder or fraud in the ports, natural or man-made obstacles in the riverbed, neglect of the towpaths, or in the case of toll collectors or customs officials acting contrary to the present order, the Chief Inspector was charged to solve these problems as quickly as possible by applying for assistance to the local authorities. Should these not respond to his demand, the Chief Inspector was to bring the issue to the CCNR. Moreover, he collected all information that was considered useful for the annual meetings in order to facilitate the work of the CCNR. This intelligence was to inform the CCNR about the state of navigation on the Rhine and its shortcomings, and the Chief Inspector's recommendations were included as well.<sup>25</sup> Therefore the Chief Inspector functioned as a channel of information between the merchants and ship-owners on the one hand and the CCNR on the other. The Chief Inspector was elected, appointed, and paid by the CCNR. He took an oath in front of the CCNR commissioners, and had no other loyalties than towards this institution.

The Chief Inspector was assisted by four sub-inspectors, each of whom was exclusively active in one of the four districts. The first district ranged from Basel to the discharge of the Lauter, that is, the Bavarian-French border, and was shared by Baden and France. The second district, from the French border to the discharge of the Nahe, or the city of Bingen, was a stretch shared by Bavaria, Hesse-Darmstadt, and Nassau. The third district, from Bingen to the Dutch border, was exclusively Prussian, while the fourth district included the two branches of the Rhine from the Dutch border to the sea. The respective national government or governments appointed the sub-inspector. These officials were to carry out two surveys a year assessing the navigability of the river and the conditions of the towpaths. They were to inform their governments of any detected deficiencies and possible solutions to them and were to report their efforts to the Chief Inspector.<sup>26</sup>

Finally, the toll collectors and customs officials completed the administrative machine of the Rhine regime. Although, like the sub-inspectors, they too fell under the jurisdiction of the respective national governments, they had to abide by the Mainz Convention. By working closely together they could establish something of an *esprit de corps*, thereby developing a dynamic flow of knowledge and inside information on their own, which, theoretically, gave them some leverage over their national governments in turn.

In all this Von Auer was an especially key figure, as it was he who entered into circulation and predigested the flow of information on which the Commission's machine revolved. He collected information from the inspectors, who were themselves low-threshold points of reference for local stakeholders of Rhine navigation. Furthermore, with his right to request information from local authorities, he could not only control whether the Mainz Convention was implemented, but also assess whether the complaints were legitimate.<sup>27</sup> What is more, the Chief Inspector's systematic documentation of the Rhine in terms of navigability gave the CCNR reliable information with which to

inform the general public about the conditions of the Rhine and the adjacent towpaths. As the focal point of these information flows, the Chief Inspector also functioned as an agenda setter for the annual sessions of the CCNR. The very first session of the new-style CCNR organised its deliberations into sub-commissions. Each of these sub-commissions tackled an issue that had been put forward by the Chief Inspector, such as ‘reducing shipping taxes’ or ‘Rhine measuring, boat gauging, inspection, toll tribunals and administrative execution of the regulations.’<sup>28</sup> Finally, besides agenda setting, the Chief Inspector was the only agent consistently asked to advise the Commission in all important matters. This gave the Chief Inspector an important role in shaping the measures that the CCNR was to propose to the governments of the riparian states to secure freedom of navigation.

Starting in the 1830s, the administrative machine of the CCNR was, compared to its earlier form, designed to be both more robust and more flexible at the same time. It was flexible in the sense that the riparian representatives were physically not bound to the city of Mainz and could focus on other matters during a large part of the year. The administrative machine of the CCNR, however, was more robust in the sense that the tasks and responsibilities were more clearly determined and its functions of advising, coordinating, and monitoring all came together in one person, who was permanently active in this aim. However, as we will see in [Chapter 5](#), the concentration of these responsibilities in one person also made the CCNR vulnerable at times to increasing riparian tensions such as in the 1840s.

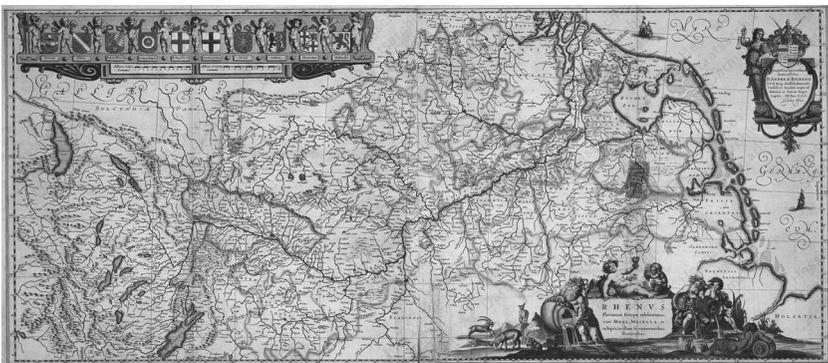
## **Mapping the Rhine**

One of the first tasks of the CCNR was to get a precise idea of the topography of the river it was governing. This was of paramount importance in rendering it more manageable, both in hydraulic and in financial terms. With regard to hydraulics, Ockhart had already proclaimed in 1816 that specific geophysical information on the Rhine was necessary to secure freedom of navigation, as it was from this information the Commission could derive police regulations. It was with this aim in mind that Johann Joseph Eichhoff, who had been in charge of the preparatory works for the Commission, came up with a gigantic map of the entire Rhine and an accompanying bill of 1,500 florins (almost 6,500€ today) the following year. Eichhoff had his ‘Hock-map’ assembled especially for his first version of the ‘definitive Regulations’ he had composed for the CCNR. The map was named after its creator, who was a captain in the corps of engineers of the allied army. It was certainly the first detailed map of the entire Rhine, and at 3 metres by 6 metres, it was possibly also the largest Rhine map ever made. Hock had assembled it on the basis of the available materials. The Prussian Commissioner Jacobi called the map ‘awesome,’ but showed no interest in reimbursing Eichhoff and Hock for this service, as the measurements of the river banks seemed incoherent to him, making the map an aesthetic curiosity, but useless for the Commission’s

purposes.<sup>29</sup> Jacobi thought about this venture not so much in terms of the hydraulic manageability of the river and its navigation, but in terms of financial interests.

The Commission needed to construct a map of the entire Rhine as that was the only way to render the river financially manageable. At the Mainz Convention the location of the toll stations had been determined, as well as the level of the toll tariff. Yet this had been estimated in relation to the navigable distances as appeared from the old, inconsistent maps. With a precise and complete map, the CCNR could, first and foremost, substitute the temporary tariff with a definite one and distribute the Rhine toll revenues among the riparian states fairly, relative to the exact distance of their respective riparian possessions.<sup>30</sup> It goes without saying that compiling a map of the entire navigable Rhine was a highly symbolic endeavour too: a visual integration of a shared river. It would substitute the haziness about the Rhine's length and size with definite clarity that everyone agreed on. This would be helpful in determining police regulations. But what made mapping the exact topography of the river such a sensitive issue was that the measurement determined the distribution of the toll income among the riparian states. This sensitivity caused a major stumbling block for the commissioners in reaching an agreement on the terms on which a map of the entire navigable Rhine was to be compiled in the 1830s. This episode shows that even with regard to apparently neutral and rational acts such as measuring a river, the Commission needed external expertise to help determine what method was appropriate.

The main question here was, should the map be entirely drawn up anew, or could the Commission partly rely on existing material? As mentioned before, maps of the Rhine existed. The oldest detailed Dutch maps of the Rhine date from the late sixteenth century. More recently, after Napoleon annexed the territories west of the Rhine, the French immediately started a



*Figure 4.2* Map of the Rhine between Switzerland and Holland 1640 by the Dutch cartographer Willem Jansz. Blaeu

Source: Hessisches Staatsarchiv Darmstadt, P 1, 11892217 <https://arcinsys.hessen.de/arcinsys/detailAction.action?detailid=v4958741>

topographical survey under the leadership of the famous cartographer Jean Joseph Tranchot in order to include the new territories on the existing map of France, the so-called Cassini map that had been completed in 1793. This operation was carried out between 1804 and 1813, but was only finalised under the Prussian general Karl von Müffling in 1828, who, together with the Dutch engineer Cornelis Rudolphus Theodorus Krayenhoff (1758–1840), perfected the instrument of trigonometry, and who, after having worked on the fortresses of the Wellington barrier and Mainz, spent time together discussing hydrology and land surveying.<sup>31</sup> When south-west Germany was still a theatre of war, the various belligerent parties also initiated topographical surveys that included the Rhine. Knowing how the Rhine flowed, what its character was at certain points, where it could be crossed and where its shores were hard to defend could benefit the army's strategic powers.<sup>32</sup> However, taking these surveys together, they hardly added up to a consistent map of the Rhine. After all, they were not meant for navigational guidance, but for land registry, tax payment purposes, or for military strategic considerations in an upcoming campaign.<sup>33</sup> Despite the local and regional importance of all these maps, they did not constitute a coherent visual representation of the Rhine. First of all, they did not cover the entire river from where it became navigable into the sea. Second, the maps were different in kind and composed with distinctive techniques for diverse ends.

At the turn of 1832, the Prussian delegate, anticipating the difficulties that the compilation of an entirely new hydraulic map would evoke, convinced the CCNR not to commission a large hydraulic Rhine map, but a more modest survey to measure primarily the river's length. The CCNR assigned the Prussian hydraulic and bridge engineering inspector Roesler<sup>34</sup> to carry out the survey.<sup>35</sup> Clearly, the Commission felt a bit uncomfortable charging an external (Prussian) expert with this sensitive task. Therefore, Roesler was to take an oath in front of the Commission, promising to act in the common interest alone. Moreover, in the first July session in 1832, the Prussian commissioner, Jacobi, stated once more that Roesler was to get as free a hand as possible, but 'He will not allow himself to be misled into any kind of arbitrariness and be prepared to give satisfactory information to his management at any time.'<sup>36</sup> To constrain the risk of arbitrariness even further, the Commission issued strict instructions that determined what was to be measured – the towpaths, or in case these were absent, the banks at mean water level – and in which unit of measurement the result was to be presented – the French metre. The instructions also said that existing maps were only to be used when their exactness was verified and would not exceed a 1 per cent margin of error.<sup>37</sup>

However, very quickly a debate emerged concerning the method of measuring the length of the river. In August 1832 the Dutch delegate, P.A. Ruhr, informed the Commission that measuring the towpaths would not work on the Dutch part of the Rhine. Being a delta, there were too many tributary flows interrupting the towpath. Therefore it would be better, the Dutch Commissioner noted, to measure the navigable channel of the Rhine

instead.<sup>38</sup> In May 1833, after the measuring commissioner returned from his first survey of the Rhine from Basel to Bingen, he too raised objections to the initial measuring instructions. A more exact way of measuring the river's length was, he wrote, by calculating the main current line (*Stromstrich*) that was usually followed by boats and was longer than the towpaths. On stretches where the river was curvy or enriched with isles, the difference in length was especially significant, Roesler stated.<sup>39</sup>

This led the Prussian commissioner, von Schutz, to call in the help of another authority, the Royal Prussian State Construction Commission (*Ober-Bau-Deputation*) in Berlin that came up with yet another conclusion. Taking costs and speed of the measuring survey as the highest consideration, the length of the Rhine, the Construction Commission advised, should be measured merely by means of determining the medial axis of the river flow. Contrary to this medial axis, measuring towpaths was problematic, because, as the Dutch delegate had noted correctly, these paths were not present everywhere or were interrupted in too many places. Measuring the main current line as opposed to the medial axis would become a very expensive and time-consuming operation as well. In order to determine the location of this current line one needed to measure both the depth of the stream and its velocity. In addition, currents are very versatile and yet another problem would arise when more than one main current line appeared in the river. The Prussian Construction Commission, therefore, guaranteed that instead of measuring the towpaths or the main current line, measuring the medial axis, on the basis of existing maps, would be precise enough for the purpose of the measurement and would be by far the cheapest option to determine the river's length.<sup>40</sup> This also meant that in this age of measuring the world, measuring the Rhine's length became a desk job.<sup>41</sup>

In 1834 the Commission adopted the Royal Prussian State Construction Commission's opinion and amended its instructions for Roesler. Much against his own desire, the *Vermessungs-Commissar* was to determine the medial axis on the basis of the available maps. He was allowed to carry out excursions to the river bank only in case of grave doubt about their accuracy.<sup>42</sup> The CCNR asked the national authorities to provide Roesler with all the necessary maps, or to create new ones if material was lacking. Over the next couple of years Roesler was condemned to work from the office after all, and the map he made was only a cheap by-product of his real task: measuring the length of the river. In 1839 the measurement of the Rhine was finished and Roesler presented a general map of the Rhine that consisted of 14 sheets and 4 tables. It turned out that the total length of the Rhine did not deviate much from what was already known, but the length of the individual parts did deviate quite a bit. Particularly on the Franco-Baden part of the Rhine, the river was shorter than initially believed, possibly affecting the future toll revenues of Baden considerably. Nevertheless, the Commission, including the Baden representative, approved the new measurements in 1841. At this point, the Chief Inspector could finally start determining the definitive toll tariff.<sup>43</sup>

In 1842 the Commission adopted an additional article to the Mainz Convention that substituted the new tariff for the old one. On 1 July 1843 these new tariffs were finally introduced.<sup>44</sup>

Mapping the Rhine – as a function of rendering the river more manageable in both hydraulic and financial terms – turned out to be an enormous operation that took ten years to complete. It was the first exercise in standardising knowledge and knowledge collection about the river, in order to turn it into a controllable unit. It was also the way to overcome bickering between the riparian states. Bringing in experts and producing knowledge helped to secure the Rhine once more and deflect polarising energies in another direction.

### **Safety of navigation**

Measuring the Rhine and determining the toll tariff was first and foremost on the Commission's agenda, but securing the freedom of navigation by removing physical obstacles came directly second. Again, a kind of Gordian knot had to be unwound since, in fact, it was not in the powers of the CCNR to remove these obstacles itself. It was merely to monitor and to report the conditions for navigation, and to advise about, and to urge for, its improvement.



*Figure 4.3* View of the Loreley

Source: J.L. Bleuler, *Voyage pittoresque des bords du Rhin* (Laufen, ca. 1840): Badische Landesbibliothek Karlsruhe (CC BY-SA 4.0)

Improvement of the navigability of the Rhine was no superfluity. Heine's 'Loreley,' the poem about the river nymph drawing the skippers to the rocks, spoke greatly to the imagination of contemporaries, precisely because the stretch at Sankt Goar, where the Loreley was located, was indeed dangerous to navigate. Due to its underwater rocks and heavy currents, boats were shipwrecked. These poor conditions were common all along the 'romantic' Rhine. The riverbed between Sankt Goar and Bingen was covered with rocks, each of them able to cut through the keel of a boat, even those that had not that deep a draft. Further upstream, between Bingen and Mainz the situation was not much better. Here the river was crowded with isles, sharp bends, sandbanks, and irregular shipping channels. On the junction between these two sections of the Rhine lay the Binger Loch, perhaps the most notorious example of a risky fairway.

In 1827 the invisible threat of submerged rocks at the Binger Loch caused an accident that made it into the local, national, and international newspapers. On 11 September, one of the first steamboats on the Rhine that had started a regular service between Cologne and Mainz only in May that year, the *Concordia*, crashed. It carried 200 passengers and a large amount of commercial cargo from the Frankfurter Trade Fair. The cargo was for the most part lost. In addition, the crash caused numerous personal injuries: 'Madame Hoffman, among others, lost several teeth; an English lady sustained a crushed mandible, etc.,' a Dutch newspaper reported. Nevertheless, the strong construction of the steamboat had prevented a worse outcome. 'Any other Upper Rhine vessel would have been irrevocably completely lost in such circumstances,' the same article noted.<sup>45</sup> Contemporaries had high expectations of the employment of steam-powered boats on the Rhine. Yet the accident demonstrated that even the latest transport technology was not equipped to safely navigate the Rhine.

The safety of navigation depended on the conditions of the navigable channel and the towpaths on the one hand, and uniform regulations on the other. Through the Chief Inspector and the sub-inspectors the Commission had an active role in assessing the conditions of the water and the towpaths. These were also the points of contact for local stakeholders and interest groups, who referred their complaints to them. At the first July session after the rebirth of the Commission in 1832, it was indeed the Chief Inspector who informed the CCNR of shortcomings of the Rhine in the Duchy of Nassau. This time, not the channel, but the towpath along one of the best German wineries, Rüdeshcim in the Rheingau, was blocked. '[Terrace] rises above terrace to secure the soil from falling. The entire hill is covered with walls and arches, the careful preservation of which conveys an idea of the value of the vines,' the Baedeker travel guide tells us.<sup>46</sup> Apparently, in 1832 some of these walls crumbled, and the rocks had fallen from the steep slopes on the river banks, burying the towpaths that were essential to guide the boats safely through the Binger Loch. The Commissioner from Nassau was asked to eliminate this danger through his government straight away.<sup>47</sup>

But the CCNR did not exclusively receive information on the navigability of the Rhine through the Chief Inspector. The CCNR commissioners themselves could also submit issues to the table. This could turn into a rather politicised debate on the Rhine's navigability. In 1832, while Nassau did not seem to have its own house in order, the Prussian delegate was not too modest to inform the Commission that his government by contrast had carried out multiple and very expensive detonation operations in the Binger Loch in the past three years. Here, as far as Sankt Goar, the riverbed was scattered with visible and underwater rocks and reefs. The Binger Loch was one of the most dangerous parts of the river; it was the place where 'the idyllic [part of the Rhine] stops, and everything unites in a wildly romantic picture,' the Chief Engineer responsible for the blasting operation wrote in his memoirs.<sup>48</sup> The navigable channel was the demarcation line between Prussian and Nassau territory. The removal of the rocks that were mostly situated on Prussian soil, the Chief Engineer remembered, was initiated and executed by the Prussian authorities alone, 'whose charitable work is so well-known for raising trade and traffic.'<sup>49</sup> The detonation had been successful. It removed one of the most dangerous obstacles in the Rhine, thereby doing the navigation an essential favour, the Prussian Commissioner underlined.<sup>50</sup> The CCNR thus was not involved in the actual detonation of rocks, but served as a platform from which individual commissioners could brag about their government's efforts in order to build leverage against future demands from their peers or force – gently or less so – reluctant governments to increase their efforts too. It also served as an assembly that functioned in a diplomatic or not so diplomatic name-and-shame style, with the aim of igniting a course of action that would eventually pursue the improvement of the Rhine's fairway.

In 1836 Prussia made a show of virtue again, but this time in contrast to the Netherlands. Prussian authorities had been alarmed by the claims of the Cologne Chamber of Commerce that accused the Dutch government of neglecting its towpaths along the Waal. Thereby, the Chamber warned, it acted against article 67 of the Convention of Mainz that stated that the towpaths should be maintained in good condition at the expense of the national government. In his well-prepared response, the Dutch commissioner, P.A. Ruhr, adopted a position of righteous indignation. The Waal, he noted, was simply not suitable for towpaths. The river was capricious and the regular floods had washed away part of the towpath already well before 1831. It was this discussion on the navigability of the Waal that would ignite the first major diplomatic crisis of the CCNR in the 1830s.

In the Netherlands and beyond, it was common knowledge that not only the domestic but, above all, the upstream trade suffered from the lack of towpaths on the stretch from Gorinchem downwards. When there was no wind or an easterly wind, ships in Dordrecht could simply not depart for Cologne. Those skippers who were lucky enough to reach Gorinchem, or the upper arm of the Rhine, the Lek, could utilise the towpaths all the way to Cologne and return to Dordrecht while those at anchor were still waiting for

a favourable wind. In an environment of uncontrollable weather conditions, well-maintained towpaths were the only guarantee of speedy, but more importantly, calculable arrival of the delivery.<sup>51</sup> There was no reason for the Dutch government to neglect the navigation, and thereby the interest of its very own people in such a way, if it had been possible to maintain the towpaths, the Dutch commissioner stated.<sup>52</sup>

The Netherlands could not be held legally accountable, Ruhr reasoned. Besides the practical impossibility of maintaining towpaths on some parts of the Dutch rivers, the Mainz Convention only obliged the Netherlands to maintain existing towpaths along the Waal, not to reconstruct ones that had already disappeared well before 1831. Nevertheless, the Dutch commissioner made a conciliatory proposal of a solution to the problem. The Dutch government would install a steam-powered tug service that would, unaffected by high waters or lack of wind, and operating on fixed departure and arrival times, contribute to speed, regularity, and moderate freight rates, 'wishing only the advancement of the general interests of commerce and navigation,' the Dutch commissioner ended his response.<sup>53</sup>

The commissioners were not altogether pleased with this Dutch initiative. The former French laws also demanded the maintenance of the towpaths before 1831, they claimed. And the oldest skippers still remembered that there once were towpaths that were accessible with an eastern wind, but unusable with northern and southern winds. In the course of the past years the Netherlands, they said, had neglected to maintain these paths. The other commissioners emphasised that the installation of a tug service could only be approved in concert with the other riparian powers, on a voluntary basis and on the basis of the equality of flags and on condition that there would never be delays, that the costs were comparable with those of horses, and that in case of malfunctioning the right to use the towpaths would be continued.<sup>54</sup>

The Dutch commissioner hoped to win the other commissioners to his case when he pictured the conditions of the river as unalterable and the disappearance of the towpaths as irreversible. The navigation would find no remedy in the enormous costs involved in restoring towpaths as it would not change the capricious character of the river itself: 'shipping on the Rhine ... would continue to be in the same deficient, unsafe, and for the present general commercial interest unsatisfactory state,' whereas now 'fortunately a well-organised tug-institution by means of steamboats has ascended from it.' The Dutch authorities installed this state-of-the-art tug service, it was true, without consulting the other riparian states, but at least it bore all additional costs and risks. Furthermore, the Dutch commissioner confirmed that by rule all flags would be treated equally, that all skippers were free to sail instead of being tugged, and that there would always be an adequate number of tugboats available to secure the continuity of the service. Concerning the costs of the tug service, the Dutch commissioner remarked that these would not exceed the costs of horses, resulting in a considerable annual investment from the Dutch government, and proving once again that it only favoured the

general interests of navigation and commerce. In fact, the Dutch commissioner stated, 'by means of this tug-service, the Dutch government better complies to the true spirit of the agreement [the Convention of Mainz], than when it would have continued to maintain the interrupted towpaths.' Finally, Ruhr stated that if the tug service did not function properly, the right to use the towpaths was guaranteed, as long as it concerned the towpaths that still existed in 1831.<sup>55</sup>

The Dutch commissioner presented the tug service as a modern solution to an age-old problem. It goes without saying that the riparian states could not have thought of this solution during Mainz, as steam shipping was something utterly new, and its various possible applications unknown. The tug service was truly an innovation, but at the same time the solution fitted right into the Dutch water management policy of the first half of the nineteenth century. During this era river development policy was very limited, almost non-existent. The Dutch King Willem I considered improving the rivers for navigability a very risky, costly, and presumably ill-fated venture. Until 1830 the king preferred to build new canals connecting the seaports with their direct hinterland rather than invest in the rivers that would also benefit foreign boatmen. After 1830, when Belgium had separated itself from the Netherlands, there was neither the political urgency nor the money to improve the Rhine.<sup>56</sup>

The Germans regarded the wilful neglect of the towpaths and the riverbed as a protectionist policy of the Netherlands. This view was also understandable because the tug service did not function properly. Three years later, in 1839, Rhenish merchants still complained about the Dutch tug service. They had experienced difficulties as not always enough tugboats had been available, resulting in considerable delays. Moreover, the service was not found to be cheaper than horses at all. Only when one bought a subscription was it equally, or a little less, expensive. However, there were several problems with this subscription system. Smaller skippers could not afford it. But, more fundamentally, the subscription had a levelled discount system, giving the *Beurtvaart*, the line shipping system for inland navigation, a 50 per cent discount, whereas non-*Beurtvaart* ships were offered a mere 35 per cent discount on the rates. With this subsidy the Dutch government unequally benefitted the *Beurtvaart* system in which the Dutch were over-represented. All in all, the system was not entirely a failure, certainly not in terms of innovation and application of new steam-engined technologies, but among the Rhenish merchants it provoked strong feelings of dependency, an emotion they recognised from the time that the Netherlands had 'cast the Rhine in chains' back in the 1820s. For Prussia, Hesse-Darmstadt, Baden, and Bavaria, the non-functioning tug service was reason enough to demand once again that the Netherlands maintain and improve the towpaths along the Waal.<sup>57</sup>

Besides the discursive trick of dressing up the Dutch tug service as a sign of modernity and progress, and thus as an innovation that was in the interest of all riparian states, the discussion also resulted in the first cautious steps

towards increasing inter-riparian policy transparency. In 1842 the Dutch commissioner once more tried to convince the German member states of Dutch benevolence by presenting some numbers. In the previous year, the commissioner stated, 613 ships were being tugged, with a total of almost 70,000 tons of cargo. The service expanded to 14 tugboats, totalling 1,500 horsepower. It received 96,000 guilders in wages and 257,500 guilders in subsidies from the Dutch state. Rhine toll officers guaranteed that the service was carried out according to the existing rules and regulations.<sup>58</sup> Besides, the growing number of private steam tugboat companies on the German Rhine, where towpaths were fine, essentially proved the fact that this new service was preferred to towpaths as it provided regularity, speed, and affordability.<sup>59</sup> Be that as it may, the Netherlands started providing the other riparian states with information that previously would have been considered confidential.

The German states, save Nassau, remained very sceptical. They were not convinced that a private company, the *Nederlandse Stoomvaart Maatschappij*, to whom the Dutch had given the licence to carry out the tug service, would pursue the interests of navigation in general. Besides, despite the Dutch claims, reliable and knowledgeable travellers continued to complain about the condition of both the service and the towpaths.<sup>60</sup> A Duisburg skipper reported, for example, that it had taken him 14 days to reach Lobith from Gorinchem due to multiple waiting days and stopovers. Moreover, tugging had been more expensive for him than the use of horses. In one example, the German states calculated that tugging was up to three times more expensive.<sup>61</sup>

The Dutch commissioner ignored these concerns, which he waved away as private issues. His government did more than was required to facilitate the navigation on the Dutch rivers, as it even had a service on the part from Rotterdam to Gorinchem, where nobody denied that towpaths on this stretch could not exist and that the Netherlands had no legal obligations to maintain them whatsoever. In a more aggressive strategy, the Dutch commissioner directed the other commissioners' attention to the bad conditions of the towpaths on the Upper Rhine instead. Baden and France reacted in surprise to these accusations, and redirected the Dutch trick of striking with transparency by answering that the French authorities had invested no less than 999,690.63 francs to their improvement in 1843 alone.<sup>62</sup> In the following years the Dutch tug service continued, but the issues concerning the navigability of the Waal remained far from solved.

## **Conclusion**

During the 1830s the CCNR strongly developed its organisation as a node of information sharing with the aim of securing the freedom of navigation on the Rhine. This new riverine knowledge system included information sources from the commissioners, from local stakeholders through the Chief Inspector, and from external experts and expert organisations. This format established the CCNR as a forum, on the one hand, of increasing self-gratification and

naming-and-shaming dynamics among the commissioners, while on the other, the Commission's discussions were increasingly informed by technocratic laws and transparency. Sometimes this mix resulted in continuing suspicion among the Commission members. As the case of the safety of navigation on the Dutch Waal showed, German merchants and skippers favoured linear, old-fashioned horse- or man-power, which they could hold in their own hands, rather than use an unpredictable, novel tug service wholly managed by a Dutch company as that would never allow them to predict the maintenance of their livelihood in the future. Within the CCNR, these feelings of dependence and unpredictability continued to inform the German commissioners' understanding of the security-prosperity nexus. For the Dutch, by contrast, the tug service became a lifebuoy of its own, as it secured the freedom of navigation to an acceptable level, while rendering unnecessary the physical improvement of tens of kilometres of hard-to-repair river banks, protecting the country from bankruptcy. Sometimes, however, the mixed riverine knowledge system also resulted in the depoliticisation of tricky issues, such as in the case of the measurement of the Rhine. Once the Commission had adopted the measurement method, all Commission members assented to the final results, even Baden whose interests were harmed. Having technical, uniform standards helped the Commission to avoid any hint of national interest or power play, while it allowed the Baden commissioner to justify at home these measures to create a uniform toll system.

Whereas the difficulties in mapping the Rhine had been overcome with the help of external expertise from the Royal Prussian State Construction Commission, the first Waal crisis shows that in the early 1840s the CCNR largely remained a platform that was as much informed by the observational data of the Chief Inspector as by politicised reports coming from national authorities. It was in the course of this new decade that the CCNR's riverine knowledge system became predominantly informed by technocrats. However, that was only after the technological revolution of steam shipping threatened to eradicate the sailing business on the Rhine in its entirety and the CCNR barely managed to defend its *raison d'être*, namely the principle of the freedom of navigation, against a radical and violent attack by the sailing industry in 1848.

## Notes

- 1 Ian Bostridge and Richard Stokes, *The Book of Lieder. The Original Texts of Over 1000 Songs* (Faber & Faber, 2005). Also [www.oxfordlieder.co.uk/song/652](http://www.oxfordlieder.co.uk/song/652).
- 2 Em. Zschokke, *Voyage pittoresque des bords du Rhin/dessiné par Louis Bleuler et Federly, gravé par Hurliman, Hemely, Salaté et Weber. Et accompagné d'un texte explicative*, trans. C.F. Girard (Strasbourg: G. Silbermann, 1845).
- 3 Elias Weirauch, *Die Karten in Baedeker-Reiseführern zwischen 1827 und 1945. Eine Kulturgeschichte des Reisens und der Reiseführer* (Saarbrücken: AV Akademikerverlag, 2014). Benedikt Bock, *Baedeker & Cook: Tourismus am Mittelrhein 1756 bis ca. 1914* (Frankfurt: Peter Lang, 2010).

- 4 W.J.M. van Eysinga, *Die Zentralkommission für die Rheinschiffahrt; Geschichtliche Darstellung. Verfasst auf Veranlassung der Zentralkommission für die Rheinschiffahrt* (Leiden: A.W. Sijthoff, 1936), 23–24.
- 5 John Lonquest et al. eds., *Two Centuries of Experience in Water Resources Management. A Dutch-U.S. Retrospective* (Alexandria: Institute for Water Resources, US Army Corps of Engineers and Rijkswaterstaat, Ministry of Infrastructure and the Environment, 2014), 31.
- 6 *Ibid.*, 13.
- 7 <https://isgiedenis.nl/nieuws/watersnood-in-zevenaar-in-1799> (accessed 20 February 2020). Also NL-HaNA, 2.21.085, 55.
- 8 Alex Van Heezik, *Strijd om de rivieren: 200 jaar rivierenbeleid in Nederland of de opkomst en ondergang van het streven naar de normale rivier* (Den Haag, Haarlem: HNT Historische producties, 2007), 58.
- 9 R. Glaser and H. Stangl, 'Historical Floods in the Dutch Rhine Delta,' *Natural Hazards and Earth Sciences* 3 (2003): 606.
- 10 Van Heezik, *Strijd om de rivieren*, 53–61.
- 11 Johannes Immerzeel (Jr), *Hollands watersnood van den jare 1809*, 2nd ed. (Den Haag: Immerzeel, 1809).
- 12 Lonquest et al., *Water Resources Management*, 30–34. From 1829, this research resulted, for example, in the compilation of a river atlas, containing all the relevant information on the condition of river dikes.
- 13 C.R. Th. Krayenhoff, *Proeve van een ontwerp tot sluiting van de rivier den Neder-Rhijn en Leck en het storten van derzelver water op den IJssel* (Nijmegen: J.C. Vieweg en Zoon, 1821), attachment 1, 9.
- 14 Christoph Bernhardt, *Im Spiegel des Wassers. Eine transnationale Umweltgeschichte des Oberrheins (1800–2000)* (Cologne: Böhlau Verlag, 2016), 67–71, 79, 87–90. Also see David Blackburn, *The Conquest of Nature: Water, Landscape, and the Making of Modern Germany* (London: Random House, 2011). And for an 'eco-biography' of the Rhine, Mark Ciok, *The Rhine. An Eco-biography 1815–2000* (Seattle and London: University of Washington Press, 2002).
- 15 J.F. Ockhart, *Der Rhein, nach der Länge seines Laufs und der Beschaffenheit seines Strombettes, mit Beziehung auf dessen Schiffahrtsverhältnisse betrachtet. Ein Beitrag zur nähern Kunde der deutschen Flussschiffahrt* (Mainz: Florian Kupferberg, 1816).
- 16 *Ibid.*, v–vi.
- 17 *Algemeen Handelsblad*, 25 June 1831.
- 18 *Algemeen Handelsblad*, 14 July 1831. *Leydse Courant*, 1 August 1831.
- 19 Calculated on the basis of the complete list of CCNR commissioners between 1816 and 1911; see Appendix 1.
- 20 See Rheinschiffahrtsakte zwischen Baden, Bayern, Frankreich, Hessen, Nassau, Niederland und Preussen. Auswechslung der Ratifikationsurkunden 16 June 1831, Articles 89 to 108, in Zentral-Kommission für die Rheinschiffahrt, Rheinurkunden. Sammlung zwischenstaatlicher Vereinbarungen, landesrechtlicher Ausführungsverordnungen und sonstiger wichtiger Urkunden über die Rheinschiffahrt seit 1803 I (1803–1860) (The Hague: Nijhoff and München and Leipzig: Duncker & Humblot, 1918), 261–269.
- 21 *Ibid.*, Rheinschiffahrtsakte articles 93 and 98.
- 22 Van Eysinga, *Die Zentralkommission für die Rheinschiffahrt*, 68–72. On the installation of the Chief Inspector, briefly: *Bredase Courant*, 15 April 1832.
- 23 Karl Stein, *Briefe und amtliche Schriften: Band IV Preussens Erhebung. Stein als Chef der Zentralverwaltung. Napoleons Sturz (Januar 1813–Juni 1814)* (Stuttgart: W. Kohlhammer, 1957), 607, 633.
- 24 Van Eysinga, *Die Zentralkommission für die Rheinschiffahrt*, 48. AdBR, 86J, box 10, folder 3, Locaux, protocol 550 and attachment, 17 December 1831.

- 25 Rheinschiffahrtsakte, article 98.
- 26 Rheinschiffahrtsakte, articles 101 and 102.
- 27 AdBR, 212J, 176, protocols 18 July 1834 and protocols 25 July 1834.
- 28 AdBR, 212J, 257, protocols 7 July 1832.
- 29 AdBR, 86J, 53, file 'Karten,' protocol 15 October 1817. It appears that Hock was paid after all, if only in the form of a job as gauging commissioner in Mainz, starting in 1818. The map, however, seemed to have disappeared, and to date it remains unclear where it ended up. AdBR, 212J, 133, protocols 16 January 1818. Also Nils Bennemann, 'Von der Synthese zur Standardisierung: Kartographisches Wissen in der Zentralkommission ca. 1817–1880,' Kolloquium 'La Commission Centrale pour la Navigation du Rhin: 200 ans d'Histoire,' Straßbourg, 18 and 19 June 2015. Also *Bremer Zeitung*, nr. 128, 8 May 1818.
- 30 Isabelle Tölle, *Integration von Infrastrukturen in Europa im historischen Vergleich* (Baden-Baden: Nomos, 2016), 73–74.
- 31 Beatrice de Graaf, *Tegen de terreur. Hoe Europa veilig werd na Napoleon* (Amsterdam: Prometheus, 2019), 368–371.
- 32 Martin Klöffler, 'Mapping the Theatre of War in Southwestern Germany by k.k. Generalquartiermesiter Heinrich v. Schmitt 1796–98,' presentation at INS-Congress, Vienna, 12 July 2018.
- 33 H.P. Wolfert, *Geomorphological Change and River Rehabilitation* (Wageningen: Alterra Greenworld Research, 2001), 130.
- 34 Also spelled: Rößler or Rössler.
- 35 AdBR, protocols 544, 3 November 1831; 553, 30 December 1831; and 560, 20 January 1832.
- 36 AdBR, 257, protocols 7 July 1832.
- 37 AdBR, 257, Beglaubigte Abschrift, Anlage A zum IV Protokolle vom 11 Juli 1832, Entwurf einer Instruktion für den Wasserbauinspektor Roesler, über das bei der Längenvermessung des Rheinstromes zu beobachtenden Verfahren.
- 38 AdBR, 257, protocols 10 August 1832, xxxvi, Netherlands.
- 39 AdBR, 175, protocols 19 July 1833, xxii, attachment, Von Schutz, 13 July 1833.
- 40 AdBR, 175, protocols 19 July 1833, xxii, attachment, 25 March 1833, the Royal Prussian State Construction Commission. Also protocols 31 July 1834, xxvii, Herr Geheimer, Oberbau-Rath Bauer 9 June 1833.
- 41 Auke van der Woud, *Een nieuwe wereld. Het ontstaan van het moderne Nederland* (Amsterdam, Bert Bakker, 2006). On the topic of measuring the world, see the novel by Daniel Kehlmann, *Die Vermessung der Welt* (Reinbek bei Hamburg: Rowohlt Taschenbuch Verlag, 2018).
- 42 AdBR, 177, protocols 31 July 1835, xxx, attachment: Instructions to the Chief Vermessungs-Commissar. AdBR, 259, protocols, 23 November 1836, attachment final instructions to the Chief Vermessungs-Commissar.
- 43 AdBR, 259, protocols xvii, 23 July 1839.
- 44 AdBR, 260, protocols ii, 3 September 1842.
- 45 *Utrechtse Courant*, nr. 115, 24 September 1827.
- 46 K. Baedeker, *The Rhine and Northern Germany. Handbook for Travellers*, 4th ed. (Koblenz and London, 1870), 79.
- 47 AdBR, 212J, box 257, protocols 18 July 1832.
- 48 F. van den Bergh, *Die Felsen-Sprengungen im Rhein bei Bingen zur Erweiterung des Thalweges im Binger-Loche* (Koblenz: Karl Baedeker, 1834), 5.
- 49 *Ibid.*, 16.
- 50 *Ibid.* AdBr, 212J, box 257, protocols 10 August 1832.
- 51 Jan Blanken (Jzn), *Memorie betreffelijk den staat der rivieren in opzigt harer bedijkingen, der dijkbreuken en der overstromingen van vroegere tijden tot die der laatste in het jaar 1821, benevens de daarin opgeslotene aanmerkingen op het Proefontwerp tot sluiting van den Neder-Rijn en de Lek en het storten van derzelven water*

110 *The origins of riverine knowledge in the 1830s*

- op den Yssel van C. R. T. Krayenhoff*, vol. 1 (Utrecht: O.J. van Paddenburg en O.J. van Dijk, 1823), 170.
- 52 AdBR, 212J, 259, protocols xxiv, 30 July 1836.
- 53 AdBR, 212J, 259, protocols xxiv, 30 July 1836.
- 54 AdBR, 212J, 259, protocols xxiv, 30 July 1836, attachment, response Baden, Bavaria, Hessen, and Prussia.
- 55 AdBR, 212J, 259, protocols xii, 30 November 1836.
- 56 Van Heezik, *Strijd om de rivieren*, 59–60, 73–74. Lonquest et al., *Two Centuries*, 25.
- 57 AdBR, 212J, 259, protocol xxi, 26 July 1839, and attachment.
- 58 AdBR, 212J, 260, protocols xiii, 13 September 1842.
- 59 AdBR, 212J, 260, protocols xiv, 5 September 1843.
- 60 AdBR, 212J, 259, protocol, 5 September 1840.
- 61 AdBR, 212J, 260, protocols xiv, 5 September 1843, also attachment.
- 62 AdBR, 212J, 260, protocols xvii, 10 September 1844.

# 5 Between radicals and experts

## Consolidating a Rhine expert regime in the 1840s to 1860s

### Introduction

In the previous decades the CCNR had managed to turn a European principle into practice, while expanding a riverine knowledge system. However, [Chapter 5](#) shows that in the 1840s, with an international political crisis about the Rhine and a democratic and technological revolution unfolding in its basin, it became uncertain whether the new Rhine regime would actually bring prosperity and security to all the inhabitants of its banks, as the CCNR had imagined. The question arose whether the sailors' industry needed protection against the unlimited freedom of navigation of the growing number of steamships on the Rhine. Remarkably, it was only after the experiment of the CCNR to resolve the violent dispute between radical sailors and steam shipping companies failed that the Commission redetermined the protection of the freedom of navigation, rather than the security of livelihood, as the main mandate of the CCNR. The failed experiment also reconstituted the CCNR as an elite organisation that tried to depoliticise inter-riparian conflicts on the navigability of the Rhine by employing external hydraulic engineers within the framework of an ad hoc Technical Commission. By the end of the 1860s, the CCNR gained increasing prominence and it was able to expand its activities as it professionalised its organisation and developed high-end expertise in international river management. This chapter thus shows how, in the highly politicised context of the 1840s, a failed experiment in dispute settlement contributed to the consolidation of a Rhine regime based on technocratic principles in the subsequent decades.

### Sailors vs steamers

Ever since the French July Revolution in 1830, the German riparian states were wary of French aggression.<sup>1</sup> But it was the Oriental Crisis in 1840 that brought the respective governments to full alert. France had suffered a diplomatic defeat against Great Britain, Russia, Prussia, and Austria. As a result, it could not expand its hegemony over the southern Mediterranean coast at the expense of the Ottoman Empire. At that point, the French government shifted its interest to its domestic territory and claimed the reinstatement of

the Rhine as France's natural eastern border a justified compensation, implying the annexation of Rhenish Prussia and the Bavarian region of the Rhenish Palatinate. In the summer of 1840 Prime Minister and Foreign Minister Adolphe Thiers mobilised almost half a million conscripts. Enthusiasm to restore the Rhine as France's natural border was widespread. The crisis, which came to be called the Rhine crisis and has been qualified as 'the most serious affair on the international scene from 1830 to 1848,' unleashed a general anti-French reaction in the German states.<sup>2</sup>

Such anti-French reactions were concentrated around cultural expressions in which the Rhine starred and became a symbol of national unity. Historians called Nikolaus Becker's nationalist Rhine song ('They shall not have it, the free German Rhine') a 'cultural sensation.'<sup>3</sup> Historians assume that such songs, among other similar cultural expressions, helped overcome the widespread particularism in the German territories. Yet, as Brophy shows, it is not likely that the Rhine crisis caused 'Germany's uncritical embrace of a martial nationalism.' Instead, Brophy identifies several contesting reactions against the new chauvinism that may have led as much to a strengthening of a national consciousness within Germany as a whole, as to a sharpened left-liberal sensibility towards citizenship.<sup>4</sup>

This argument is in line with Sperber's hypothesis that among the general public in the border regions the anti-French reaction was only short lived. Becker's depiction of the Rhine as the age-old bulwark against radical France was hijacked by the Prussian authorities and met with very little response in the Rhineland. As an inheritance of the Napoleonic era, left-wing radicalism was particularly strong in the Rhineland and the Palatinate. The local political elite clung to the existing French institutions, whereas Prussian authorities tried to impose their rule. In the second half of the 1840s crop failures and a commercial crisis unleashed increasing hardship among the lower classes and the farmers. When a revolution broke out in France demanding more liberal policies, civil liberties, and legal reforms, Prussian authorities sent extra troops to the Rhineland to prevent a French invasion and keep internal order. This military move resulted in clashes in Mainz and Aachen with the local lower and middle classes in March 1848.<sup>5</sup> After the Prussian government had tried to make of the Rhine a symbol of national unity against France, the river became the centre of a very different struggle: that is, a struggle of sailors against steamers. This had major implications for the Central Commission in Mainz.

Initially, the arrival of steamboats on the Rhine was very much welcomed, both by merchants and the general public. The first steam-powered boats appeared on French, Scottish, and American rivers around the 1780s. It would take until the 1820s, after the necessary tranquillity had returned to the war-ravaged Continent, before the invention was successfully launched on the Rhine. Merchants, states, and emerging heavy industry in the Ruhr regarded steamboats as a commercial blessing, as they greatly enhanced the speed of travel and regularity of navigation. Steamers were deemed a symbol of

progress. They appeared in ever-greater numbers on the Rhine from 1826 onwards, following a Dutch governmental decision to create a rather liberal concession system for steamship companies. Increasing transport activity was in the interest of trade, and thus in the interest of all.<sup>6</sup>

Until the 1840s, the CCNR commissioners spoke in similarly positive terms about steam shipping.<sup>7</sup> The only brief exception was the French representative, Baron St. Mars, who raised the question in 1826 as to whether the concessions should not contain additional conditions to protect the small skippers against too much competition from the steam-powered boats. Additionally, the large amount of capital needed to start a steam shipping company made the growing business inaccessible for the smaller entrepreneurs, St. Mars argued. The Dutch delegate, Johan Bourcourd, disagreed. An increase of transport speed was necessary to keep up with other trade arteries. Besides, Bourcourd argued, sail-powered barges still had their advantages. They were cheaper and could, if organised well, also compete on agility, making them highly useful in the carrying of non-perishable goods. In the end, the delegates agreed that competition between the two industries would have a benign effect on Rhine trade as a whole and concluded that steam should continue without restrictions.<sup>8</sup>

The CCNR's conclusion turned out to be premature. In 1842, after the first steam-powered tug associations in Cologne and Mainz were established and the iron barge was introduced, the Commission started receiving dozens of petitions from alarmed sailing skippers. '[T]oday, the battle is becoming increasingly threatening between the two kinds of transportation,' a sailor wrote to the French commissioner, 'and it is nothing less than the annihilation of an industry which will deprive many families of pilots, journeymen, apprentices and haulers of their means of existence.'<sup>9</sup> The labourers active in the sailing business argued that they were not against steamboats as such. They were smart enough to know that they could not turn this tide. However, it was the way shipping companies applied the new technology that threatened sailors with redundancy. In the Netherlands, but on other parts of the Rhine as well, steam-powered tugboats successfully replaced pullers and horses. This could be regarded advantageous also for sailors. However, the shipping companies also introduced large iron barges that they towed upstream swiftly and at an increasingly competitive price. Steamboat companies had thus penetrated in one blow the market of cargo transport that until then had been reserved for the sailing industry. While losing employment to the steamers was harsh, the prospect of a future Rhine industry dominated by steam tug companies that did not demand any of the sailor's skills was even harsher. Therefore, the sailors asked the Commission to limit steamboats to the transport of passengers and their personal belongings.

The French commissioner regretted the sailors' predicament, but commerce could not simply be sacrificed for the benefit of navigation as the sailors suggested, because 'one would mistake the spirit of this age and the two principles of freedom and equality, consisting in a free development of individual

inequalities.<sup>10</sup> Still, at this point the CCNR advised the respective governments to take an interest in the sailors' fate, not only because the future of thousands of families was at stake, but also because the continuation of competition between sailors, on one hand, and, on the other, the steam tug companies, would improve the transport market on the Rhine. However, the call to protect the sailors in light of the growing dominance of steam navigation on the Rhine remained unanswered. After 1842, entrepreneurs established an additional seven steam tug companies in the major cities along the German Rhine. The coal entrepreneurs Matthias Stinnes and Franz Haniel founded tug companies primarily to carry their own coal upstream, thereby circumventing the transport market altogether.<sup>11</sup> The sailors were increasingly backed into a corner until they found the momentum to break loose.

The Democratic Revolution of 1848 ignited the spirits of shipmen, pullers, and shore dwellers whose property suffered damage because of the large wave of steamboats. In March the Mainzer banker, politician, former president of the Chamber of Commerce, and enthusiastic democrat Heinrich Städel (1771–1857) appealed to his fellow citizens to demand, first, the prohibition of transit via the Hessian railways; second, a ban on the employment of steam tugs from Mainz upstream; and, third, the substitution of the Convention of Mainz with the old Octroi Treaty, thereby enabling the skippers to unite forces again in guilds or skippers' associations.<sup>12</sup> Among local boatmen and haulers, Städel found great support as they believed these measures would protect their employment.

In early April boatmen and pullers between Mainz and Bingen started to revolt. They stormed several steamboats on the Main, halted their departure, and forced the boat owners to employ them.<sup>13</sup> On 3 and 4 April, sailors sabotaged the Taunus railway between Mainz and Höchst and attacked the house of the contractor that built it. The same day, at Biebrich, sailors blocked the loading of steamboats and demanded that all heavy cargo be shipped by sailing vessels. Further downstream, at Weissenthurm, close to Koblenz, the situation got out of hand in an even more violent way, when people started firing on the steam tug boat *Niederrhein*.<sup>14</sup> Franz Haniel, one of the large shipping company owners, wrote about the incident: 'One of my iron tugboats took twenty-four shots, yet was not fully penetrated. The captain steering the ship, who was usually the main target, had to be covered and secured by iron sheets.'<sup>15</sup>

German and foreign newspapers reported on the revolts, and unanimously disapproved of the sailors' methods for jeopardising Rhine trade and traffic. A Dutch newspaper commented that such a murderous assault could never be justified.<sup>16</sup> 'We had a day of horror here yesterday,' a reporter in Mainz wrote:

The working people on the Rhine started the disturbances by obstructing the tug service and steam shipping ... As the police and armed forces did not show up and the civilian guards were weak, the troublemakers got encouraged ... With the help of the federal soldiers, peace was restored by midnight.<sup>17</sup>

In the following days 40 people were arrested in Mainz. Städel was on the run. Extra Prussian and Austrian forces were sent to the city and to avoid escalation steam tugboats were held in the dock.<sup>18</sup> The French commissioner within the CCNR, Pierre-Hubert Engelhardt, appreciated that the authorities had successfully stopped the dreaded anarchy. Yet he also had the poor conditions of the sailors in mind and thought that the reaction against the rebels was too harsh, as he wrote to a friend:

[T]he current calm is only a state of enforced truce, just as one is generally only at the beginning of the social question, which is very different and more difficult in Germany than the political question [of unification] ... In all this one seems more inspired by the fear which is the courage of the fearful, presently victorious people than by the moderation which befits the strong and truly courageous people.<sup>19</sup>

While workers continued their activism and steam tugs remained largely out of business, the significant societal problem of a dying sailing business remained unsolved. At the end of April 1848 an assembly of Rhenish sailors gathered in Cologne. They rejected physical violence. Verbally, however, they became rather aggressive in an attempt to catch the attention of the newly elected Frankfurt parliament for their case. '[Within] the struggle of the work-loving middle class against the money aristocracy of the nineteenth century,' the parliament was asked, 'to take sides for work against capital,' and against 'those merchants involved in shipping activities in the service of Mammon.' Their demands were very similar to those of Städel: they demanded the abolition of the Convention of Mainz and a reintroduction of a guild protecting all Rhine skippers. Moreover, the petitioners asked for the complete abandonment of joint-stock companies active in the steam-powered cargo transport on the Rhine.<sup>20</sup>

In May 1848 the large coal merchants reacted to the ongoing disturbances on the Rhine with another pamphlet. Despite sympathy for the fate of hundreds of pullers, horse riders, and innkeepers along the Rhine, the world's progress should not and could not be stopped, they wrote. The merchants called an abandonment of steam power a 'betrayal of the fatherland.' 'Yes,' they continued, 'it would essentially reduce Germany to a plaything of all other nations.'<sup>21</sup> The employment of steam provided hundreds of thousands of new jobs in the coal and iron industry all over the country. Besides, with the expanding railways in mind, steam-powered transport on the Rhine was the only way to maintain the competitiveness of Rhine traffic. For now, the coal merchants argued, it was a 'holy duty' to end the difficulties in steam-tugged coal shipping, as the coal industry was about to fall into a crisis and the number of breadless miners and boatmen became increasingly dangerous: 'the longer the current great calamities continue, the longer the existing lawlessness is being tolerated and life and property remain at risk.'<sup>22</sup>

Later that summer the Rhenish steam tug companies said that the formation of tug companies on the German Rhine had been merely an answer to

the establishment of a tug company in the Netherlands, and the introduction of the iron barges was simply the reply to a current demand in the transport market. Moreover, they waved away the picture of the situation being a fight between workers and capital. With an annual salary of 600 guilders, plus free accommodation, bed, light, and heating, their captains were paid decently, as the deck hands were. What is more, dividends paid to their shareholders were very moderate. Instead of the fight of labour against capital, the shipping companies pictured the struggle of the sailors as a fight against progress; a call for stagnation against an improved future. ‘It is the fight of the old castles with their men and swords against gun powder, the writer against the book printers, the artisans against the machines,’ they stated. ‘The defenders of the old always forecast the downfall of families, if the new will not be prohibited or restricted.’ However, the shipping companies concluded, ‘The new stayed upright, spread, and the families did not perish. Intelligence and freedom have promoted the well-being of humanity everywhere and at all times, whenever one allowed intelligence and freedom.’<sup>23</sup>

One month later, the Committee of Rhenish sailors answered with – in form – an almost identical publication of their own. It showed how much the fight against the introduction of the tugged barge had become a moral fight. The iron barge was in no significant sense superior to the wooden sailing vessel, they held. Nevertheless, the sailors asserted that by virtue of the Convention of Mainz and with the help of steam power, there was nothing to stop merchants and capitalists monopolising navigation on the Rhine. Despite their appeals to the common interest, commercial necessities, and a progressive zeitgeist, ‘the whole world knows,’ the pamphlet stated ‘that not one of these shareholders is interested in the general welfare, ... do not know anything about commercial necessities, and instead all pay homage to the spirit of egoism.’<sup>24</sup>

The destruction of the sailing industry would not be in the common interest, nor was it a sign of progress, the sailors wrote. When the sailing industry was finally brought to its knees, the competition between the tug companies would cease immediately, they speculated. The sailors were thus not fighting new technologies, they were combatting old despots in a new disguise: the moneyed aristocrats of the nineteenth century, ‘the modern representatives of the lords of the Middle Ages, to get back their share in the innovation of steam power that was forcibly taken away from them with the weapon of capital.’ The sailors were not against the new, they were against the misuse of the new: ‘It is the fight of the book printer against the reprinter. It is the fight of free labour against serfdom. ... It is the fight of labour against capital in the fullest sense of the word.’<sup>25</sup> They agreed that intelligence and freedom had always and everywhere promoted the general welfare of humanity, as long it did not fall into the hands of tyrants. The progress of the zeitgeist should not accrue to the highest bidder, but benefit the general welfare, the pamphlet concluded.

The tumultuous events of 1848 also touched the CCNR, although not directly. Certainly, the clash between capital and labour manifested itself

clearly on the Rhine and in Mainz – where the Commission held office. Also, the attacks on the steam tugs and steamboats could be considered an assault on the principle of freedom of navigation, as the newspapers generally did. However, an extensive report by the Chief Inspector on 14 July shows that the CCNR's interest in the matter went significantly further than that. The report asserted that attempts by the Frankfurter parliament and the national governments had not resulted in a solution to the problem and that it was now time to start the negotiations about a definitive regulation within the forum of the CCNR. It is significant that the Chief Inspector underlined first and foremost that due to the employment of steam tugs and iron barges the sailors were indeed threatened in their existence, that pullers and horse riders lost a great part of their income, and that the inhabitants of the banks justifiably complained about the damage to their property. By 1848, 9 steam tug companies were active on the Rhine, owning 18 steam tugboats and 80 iron barges with a maximum loading capacity of 400 tons. Of these nine companies only three were active in tugging boats they did not also own. This meant, so Chief Inspector Von Auer concluded, that these steam tug companies had sufficient capacity – if employed continuously – to carry out the main part of the shipping on the Rhine already.<sup>26</sup> Steam was causing a transport revolution the Rhine had never seen before, and which was about to sacrifice an entire industry.

Von Auer found himself in a difficult position. On the one hand, he remembered that the Commission had shown itself concerned about the fate of the sailors and their families before. Moreover, he reasoned that the maintenance of the sailors was important in light of securing competition in Rhine navigation. On the other hand, however, the Chief Inspector noted that no measure to help the sailing industry was to compromise the principle of freedom of navigation. Therefore, he wrote to the Commission, the only real solution was to abolish the institution of the shipping company on the Rhine, make the issuing of a shipping patent subject to the actual ownership of a ship, and install a representative body for the sailor class.

Until these definite solutions were realised, the riparian states were to put the acquisition of new steamboats and steam tugs on the Rhine on hold immediately and the issuing of patents should be put on hold until further notice. On 23 July 1848, the Chief Inspector sent an addendum to the CCNR, in which he proposed to halve the Rhine toll and the recognition rights exclusively for sailors.<sup>27</sup> For the pullers, Von Auer proposed compensation for the loss of employment, whereas the horse riders should merely be referred to other employment. Finally, the riparian states should compensate the shore dwellers for their damaged property, but more importantly, new police regulations for steamboats and the improvement of the shipping channels should prevent the manifestation of future damage.<sup>28</sup>

Von Auer's advice consisted of far-reaching, contested measures that would affect the entire maritime industry on the Rhine. Reducing the tolls was a very delicate issue for the riparian states, which depended on this income. It was a

measure the CCNR had never seriously considered until then. Nevertheless, little more than a week after the Chief Inspector's report, the CCNR officially requested the riparian governments to suspend the introduction of new steamboats and steam tugs on the Rhine from 1 August onwards, and to stop issuing patents and concessions for Rhine navigation.<sup>29</sup> Furthermore, in a somewhat more hesitant fashion, the respective governments were asked whether a to-be-determined reduction of the taxes for sailors might be an appropriate temporary measure.<sup>30</sup> Even with regard to the pullers' issue, which the Commission understood mainly as a matter for local governments, it was willing 'to be helpful to the states' governments in an unofficial way.<sup>31</sup> The CCNR thus almost completely adopted Von Auer's far-reaching proposals, which went directly against the principle of freedom of navigation, albeit only temporarily.

Whereas the CCNR as a body might have been in favour of Von Auer's three measures, ultimately it was the respective governments which had to decide on them. Not surprisingly, contesting national interests played havoc with the suggested unified approach to protect the sailing industry. In early August, the commissioners of France, Hesse-Darmstadt, and Nassau were able to give their full support to the first two measures. The Dutch commissioner, on the other hand, reported that his government fully rejected them. It was not convinced the measures would benefit the sailors. The representative of Baden reacted in a similar fashion, but was formally willing to accept the proposals if all other states would do so too, and on condition that they were temporary measures from which the government could withdraw after a determined period. In the absence of instructions from their governments, the Prussian and Bavarian commissioners abstained.<sup>32</sup> Apparently, the emerging steam shipping industry in Prussia, Baden, and the Netherlands made it difficult for these countries to support measures that confined their activities to such a great extent, even if they were temporary.

On the reduction of Rhine tolls the reactions were not altogether dismissive. The representatives of Baden, the Netherlands, France, and Prussia were allowed to give their governments' approval. The Nassau commissioner would do the same if it was established that the measure would help the sailing business to survive. The Hessian commissioner, on the other hand, could not yet give his government's approval and showed concern about the measure's consequences for the port of Mainz. Finally, the Bavarian commissioner was still without instructions.<sup>33</sup>

The CCNR was far from reaching an agreement, while the circumstances called for immediate action. In a rare outburst, the Commission's president and French delegate, Engelhardt, who had shown concern for the sailors' cause in his private correspondence, showed his frustration. Once again, he said on the final day of the summer session, the Commission had shown itself unable to resolve an urgent matter. He suggested that it might have been better not to have become involved in the issue at all, instead of limiting the reputational damage by covering up the Commission's default internal

organisation to the larger public.<sup>34</sup> He stated that there was no question anymore that steam shipping was the Rhine's destiny. Yet the actual disorder on the Rhine needed to be removed. Since all the commissioners were in solidarity committed to the removal of this disorder, a similar liability must be recognised in terms of the means to be used. However, the president continued bitterly:

[I]f the commissaries were not authorised to subordinate the views and interests of the individual to the views and interests of the great whole on the river ... if their powers are not as extraordinary as the circumstances that need to be resolved at all costs ... the Commission ... has nothing left but to gracefully close its protocols and its delegation with the sincere confession of its inability to decide, because it merely has the authority to make proposals, not to decide anything.<sup>35</sup>

No one should forget, Engelhardt stated, that it was far from the Commission's aim to issue measures that would restore the past at the expense of the future or to hamper the beneficial development of the Rhine. Instead the measures intended 'to make appear the transition from the past into the future less violent and ominous to the sailors who are still active.'<sup>36</sup> The Commission was to provide the necessary freedom for a more thorough examination, dissolution, and mediation of the existing conflicts during a future meeting with the stakeholders. With the negotiations within the CCNR deadlocked, the French commissioner opened up a truly novel way to resolve the issue in the foreseeable future.

From 25 to 28 September 1848 the Chief Inspector organised a meeting in Mainz with representatives of the sailing industry, the merchants, and the steamboat companies to discuss the measures that should be taken to promote trade and the sailing business. The meeting turned out to be truly complicated. The sailors' representatives distrusted the objectives of the merchants and the steam tug companies, and an open and calm discussion turned out to be difficult. Quickly, a fierce discussion emerged about the possible reduction of Rhine tolls. The representatives of the merchant class and the steam shipping companies immediately stressed that a fiscal benefit should advantage the entire maritime industry on the Rhine. After all, they argued, Rhine taxes had brought Rhine navigation as a whole to the abyss, and would eventually also destroy the tugging industry. Only after a general tax reduction, the representatives concluded, could one start thinking of an additional concession to the sailors.

Another point of discussion was the sailors' proposal to limit cargo transports to the sailors, and to install a regular tug service in each port to which skippers could be contracted. They rejected the acquisition and employment of iron barges by the steam tug companies. These, as sailor August Noll from Vallendar argued, pushed sailing business away from the Rhine, leaving a large number of families without a livelihood, and destroyed their only

capital: the boat. Some steam shipping companies were in favour of this proposal, but the representative of the large Cologne steam tug company argued that it was an unachievable plan that would merely raise hopes that could never be fulfilled: ‘The whole thing is useless!’<sup>37</sup> The few small bright spots on the horizon were that the steam tug companies seemed willing to lower their rates for sailboats, and that the Prussian state was willing to support sailors who wanted to establish associations that could acquire their own steam tugs.

In December 1848 the CCNR could only conclude that the meeting had been largely unproductive. No significant agreements between the industries were made, and it also cancelled out Von Auer’s third proposed measure, which was to exempt sailors from Rhine tolls. Whereas the Dutch and the French commissioners had been and still were very much in favour of a toll reduction exclusively for sailors, other commissioners concluded after this meeting that it would favour the sailors too much at the expense of steam shipping. The measure might lead to a bitter and damaging freight rate war, they feared. That left the question unanswered of how to help the endangered sailors by means of riparian state measures. The Commission was very much in favour of enabling sailors to take more advantage of steam power themselves by establishing their own steam tug companies. However, the ways in which this could be realised depended a great deal on local situations and therefore general trans-riparian stipulations were hardly appropriate. This was also true for the increased association of sailors in unions. The CCNR favoured such a development, but concluded it had no role in realising it.

Ultimately, the CCNR could agree on – and received the approval of the respective governments for – only one measure: to exempt sailors from bridge passage fees and halve the recognition rights.<sup>38</sup> This was a measure the individual states, but also the steam shipping industry, could live with. For the CCNR this measure was a poor outcome, but it limited the loss of face. In turn, the sailors continued their fight. In Karl Marx’s *Neue Rheinische Zeitung* they wrote that it was no surprise that no agreement was reached during the meeting as ‘in one party Mammon takes the place of the heart and the capital of arrogant selfishness leads the word.’<sup>39</sup> By January 1849 the sailors were forming local associations; they tried to establish a tug company themselves and contracted existing companies ‘so as to be able to fight their common enemy, the capital and the association, by the same weapons.’<sup>40</sup> Besides the tax reductions, this was an important development for the sailing business in terms of survival. Because of an ample supply of steam tugs and by means of association or shareholding, sailors forced steam tug companies to lower their tow rates, which were undercutting those of pullers. In the following years, their margins and transport activities increased.<sup>41</sup>

### **The first Rhine survey**

The transition to steam-powered traffic on the Rhine also brought new challenges for the CCNR in the field of keeping the river navigable. As shown in



Figure 5.1 Metternich, symbol of the conservative power in Europe, flees to his castle Johannisberg on the Rhine after the democratic revolution in Austria in March 1848. (Caption in the original: ‘The devil has finally got the spirit-killer of Europe afloat, and is carrying him to his castle on the Rhine to pay his 33-year overdue taxes.’)

Source: Stadtarchiv Mainz, ZGS/D10, 36 [https://faust.mainz.de/objekt\\_start.fau?prj=internet&dm=archiv&zeit=85006](https://faust.mainz.de/objekt_start.fau?prj=internet&dm=archiv&zeit=85006)

Chapter 4, the conditions of the Waal and the Rheingau were focal points in the discussion about the navigability of the Rhine. Over the course of the years the German commissioners urged the increased assessment of the navigability of the Rhine by means of collecting information from local stakeholders, while the Dutch commissioner rejected the value of such

information and called the complaints exaggerated and unreasonable.<sup>42</sup> In a genius move the Prussian Commissioner Johann Friedrich Von Pommer-Esche (1803–1870) succeeded in breaking this stalemate in August 1847. He proposed that the Commission carry out a survey of the navigability of the Rhine by an inter-riparian collective of experts.

Von Pommer-Esche suggested that all the riparian states call upon their experts to jointly sail the Rhine from Strasbourg to the sea in order to determine the state of the navigable waterway, the difficulties of navigation and obstacles that still existed, and, finally, the means that could be used to eliminate them.<sup>43</sup> Von Pommer-Esche's proposal also testified to the fact that the organisation of the Chief Inspector and the sub-inspectors was unable to cope with both the registration of the actual difficulties of navigation on the Rhine and their effective communication to the CCNR. Nobody could really disagree with the proposed inter-riparian expert survey. The Prussian initiative was adopted by the Commission and in early 1849 a nine-headed Technical Commission departed from Strasbourg, arriving in Rotterdam weeks later.

In theory the Technical Commission had a straightforward task to fulfil. It consisted of the (chief) engineers of the respective seven national Water Authorities, the Chief Inspector of the CCNR, and the sub-inspectors of the Rhine districts. In a joint report, the Technical Commission was to present an overview of the state of the river, in particular with regard to the shipping channel and the towpaths. Furthermore, it was to give suggestions for improvement works. And, finally, if possible, the report should give an overview of the costs to be incurred. This final report and the protocols of the survey would then be assessed by the Chief Inspector of the CCNR, after which the next steps to improve the waterway were to be determined.<sup>44</sup>

In practice the compilation of the report turned out to be an uphill battle and the final result was both highly ambiguous and contradictory. The individual engineers could not always agree on how to determine the conditions of the river. In order to assess the navigability of the various trajectories of the river, one needed to determine procedures and measurements that were solid and comparable. However, in a similar way to the difficulties that arose when measuring the length of the Rhine back in the 1830s, the technical commissioners could not agree on how to compare one of the most important criteria that determined the navigability of the waterway: that is, the river's depth. This ambiguity about depth measurement made unusable the most significant part of the local surveys, namely locating the navigable channel.<sup>45</sup>

Moreover, the engineers substantially disagreed about the chosen or the still-to-be-determined methods of improving the river stream. This dispute made it impossible to decide on the hydraulic works that were to be executed and to give an indication of their costs. The technical commissioners of Bavaria, Baden, and France were united in their opinion that the Rhine

should be submitted to a general flow improvement plan. A *General-correctionsplan* consisted, among other things, of the shortening of the riverbed by cutting the river's curves, and maintaining a 'normal width,' harnessing the river within one bed. This enormous operation was already nearly finished on the Franco-Baden and Baden-Bavarian stretches and proved successful, and it would not be too difficult to adapt this approach to the other parts of the Rhine, the commissioners held.<sup>46</sup>

The commissioners of Prussia, Hesse-Darmstadt, and Nassau on the other hand, wanted to report on the navigability of the Rhine on the basis of the empirical evidence they collected during the survey. In addition, they wanted to point out what works had been carried out or were approved to be carried out to improve the situation. But what they did not want, in contrast to the other technical commissioners, was to regard the existing stream improvement plan as a model for the entire Rhine and apply it accordingly on all segments. In particular, the Prussian Commissioner Gotthilf Hagen (1797–1884), the famous professor of hydraulic engineering and chief of the Prussian Construction Commission in Berlin, was very averse to any form of self-congratulating dogmatism. To his mind, it was a mistake to assume that the Rhine was to be dictated by a general plan. Even on parts of the Rhine that flowed through one state, such as the Prussian or Nassau part, a uniform treatment was out of the question:

Just as little as there is a universal medicine against all human illnesses, one may think of a remedy, which can be successfully applied for example on the Prussian Rhine, both in rock formations above St. Goar, as in the vicinity of the Dutch border.<sup>47</sup>

The common technical survey of the navigability of the Rhine in 1849 was a complicated and long-winded process, but a couple of important successes were achieved. First of all, convening a Technical Commission, bringing seven hydraulic engineers of an equal number of states together, was an achievement in itself, as this had never happened before. It allowed an immediate exchange of ideas about the treatment of the Rhine and created direct personal links between the highest relevant officials who ultimately needed to cooperate with each other to improve the navigability of the shared stretches of the Rhine. Furthermore, it did succeed in giving a fairly detailed picture of the conditions of navigability of the Rhine from Strasbourg to the sea. And it is in this assessment of the river's navigability that we can find one very remarkable consensus as well: the Dutch part of the Rhine received a devastating assessment. Taking into consideration how little consensus there was overall, the Prussian commissioner in Mainz delightedly underlined the significance of this criticism.

The *Begutachtungsprotocoll* wrote explicitly about the erratic state of the Waal and the Merwede. The rivers lacked sufficient depth, sandbanks were a common obstacle, and the navigable channels were changeable, while on most

stretches the towpaths were virtually non-existent. This meant, the six non-Dutch commissioners agreed, that

the Dutch stream is in a run-down condition which is unsuitable for safe navigation, and that this condition is essentially due to the fact that the Royal Netherlands Government has so far only exceptionally done something [to improve the stream].<sup>48</sup>

In response, the Dutch commissioner in the CCNR argued that the proposed technical solutions would result in new hydraulic problems that would jeopardise the lands along the river. Bringing up the water level in the Waal, for example, could turn the adjacent valuable agricultural lands into marshes. Moreover, bringing the water level up in the Waal meant bringing it down in the other Rhine branches, increasing the risk of dike bursts during winters because of dangerous ice-formation.<sup>49</sup>

Not surprisingly, the Prussian commissioner of the CCNR dwelled extensively on the harsh condemnation of the Dutch waters. The report proved that the Netherlands had not taken enough care of the Rhine and the Dutch commissioner's reaction to it seemed indeed to indicate that the Dutch government subordinated the interests of Rhine navigation to public and agricultural interests.<sup>50</sup> Whenever he got the chance to speak during the sessions in Mainz, the Prussian commissioner did not hesitate to underline that his government, on the other hand, had invested 2.5 million thalers to regulate the Rhine in the past 17 years. The Prussian commissioner could count on the support of the full majority of the Commission, resulting in an official decision to demand that the Netherlands take the criticism to heart, comply with article 67 of the Mainz Convention immediately, and thus take all necessary measures to improve the navigability of the Rhine.<sup>51</sup>

The technical survey had not only identified the general shortcomings of the Rhine, it had also resulted in a ranked list of deficiencies in terms of urgency. The Netherlands was at the top of that list. That was a concern even the new Dutch prime minister, Johan Rudolph Thorbecke, fully endorsed. In an address to parliament, he recognised that

people from our side have tried to somewhat distract those objections; they have tried to make the black colour a bit brighter, but one needs to recognise that they, even from the point of view of the Treaty of Mainz, had to do more than has happened for years.<sup>52</sup>

If nothing were done about the poor conditions of the Rhine and other waterways, the country would run the risk of 'actually no longer possessing any rivers,' Thorbecke stated, isolating itself from the significant markets of the German hinterland.<sup>53</sup>

A third success of the technical survey relates to this sense of urgency and to the specific compliance mechanism that resulted from it. As the CCNR

correctly noted during its summer session in 1850, it had no powers itself to engage the riparian states in accepting and implementing the proposals as put forward by the Technical Commission. It lacked both a full understanding of the proposed technical solutions and the means to be of any use within this discussion. Therefore, the Commission concluded that the technical dispute as it had emerged between the French, Baden, and Bavarian commissioners, on the one hand, and the Prussian, Hesse-Darmstadt, and Nassau commissioners, on the other, but also between the Netherlands and the rest of the Commission, were not to be perpetuated in the protocols of the CCNR. Instead, the Commission concluded:

it is of decisive importance that the Commission obtains certain knowledge of certain results of the technical survey, namely those arrangements which are based on the relevant technical suggestions, and have been carried out, after prior agreement between the riparian States, in their affluent river basins.<sup>54</sup>

This peremptory order resulted in the standard practice of the CCNR informing its members about the ongoing hydraulic works on an annual basis. Each state revealed how many kilometres of river had been regulated, what depth was reached, and to what extent this had resulted in increased navigation in terms of tons of cargo shipped, or speed. One of the most determining (and not technical) indicators of progress in this regard became the amount of pecuniary investment. The new obligation to inform the CCNR was an improvement on the existing information system with the Chief Inspector. It turned out to be a rather efficient way to create transparency and competition within a forum in which each other's efforts were assessed and weighed against one another.

### **Extending the tasks of the Technical Commission: the Rheingau and the Cologne Railway Bridge**

Bringing together the most relevant hydraulic engineers within an international Technical Commission, having them provide for the first time a detailed assessment of the river's navigability, and constructing a new information system that obliged the riparian states to provide recurring intelligence, were major steps in collectively improving the Rhine's navigability that can only be attributed to the CCNR. It corroborated its status as an institution that took its own initiatives and was listened to. It is unlikely that Prussian officials would have been able to launch an inter-riparian Technical Commission by themselves, as animosity between the Dutch and Prussian government at that time would have killed it, or because the initiative would have been slowed down by an impenetrable forest of bureaucratic and diplomatic obstacles.

The compliance mechanism of external expert input, internal intermeditation, and majority denouncement worked. This was also proven by the

signing of an agreement between all members of the CCNR in 1856 on the river flow improvement plan of the Rheingau. After years of disputes between Hesse-Darmstadt and Nassau about the malfunctioning river flow between Mainz and Bingen, the other commissioners demanded the intervention again of the same Technical Commission that had surveyed the entire Rhine. In November of the same year, the Technical Commission carried out a survey on the parts between Mainz and Nieder-Walluf and prepared a report with an extensive river flow improvement plan.

During an extraordinary session on 29 November 1856 the members of the CCNR reached an agreement. In the agreement Hesse-Darmstadt and Nassau committed themselves to simultaneously regulate the Rhine between Mainz and Nieder-Walluf within four years on the basis of the plan provided by the Technical Commission. They were to create regular shipping channels with a substantial depth and consistent width, and proper adjacent towpaths. Therefore, they had to close several estuaries, unite islands, construct, straighten, or reinforce the banks, and remove the sandbanks by means of mechanical dredging. The hydraulic engineers of both states were to communicate directly and continuously with each other. The choice of the exact building materials was still up to the respective governments, but for most other matters, such as the sequence of the works, the plans had been fixed by the Technical Commission.

The agreement determined that if Hesse-Darmstadt and Nassau faced new disagreements regarding these works, these were to be arbitrated by a court of arbitration on the basis of a majority of votes. The court would consist of Prussian (as requested by Hesse-Darmstadt), Baden (as requested by Nassau), and French (as requested by the other CCNR members) hydraulic engineers. They would consult with the Hesse-Darmstadt and Nassau engineers, and would carry out additional local surveys, if necessary. With this 1856 agreement, the Rheingau issue was not solved, as will become clear in [Chapter 6](#). However, with the signing of it, the CCNR, with the consent of the respective riparian governments, institutionalised a body of hydraulic engineers, not only as a corpus of expertise that could consult on river improvement, but one that was even charged with arbitral and binding decision powers. This meant that part of the riparian nations' sovereignty now was redirected to a body of expertise that was installed by the CCNR.<sup>55</sup>

Whereas the Rheingau survey reaffirmed and extended the weight of hydraulic experts in CCNR matters regarding the improvement of the river flow, the 1858 inspection of the first standing bridge crossing the Rhine scaled it up to unprecedented levels that also went beyond the scope of the common interest of free navigation. Up until the mid-nineteenth century, one could cross the Rhine in three ways. First, one could cross by means of a stone bridge. For this option one had to go all the way to Basel, where the only and oldest existing stone bridge site across the Rhine is located. Second, one could cross via a cable ferry that brought individuals and their belongings from one bank to the other. And third, one could cross via the movable pontoon

bridges, such as the ones at Arnhem, Cologne, Mainz, or Strasbourg. When one considers that in the 1850s in Cologne each day some 10,000 pedestrians and 300–400 carts crossed the Rhine, while for a large part of the day it also allowed the navigation to continue, one could argue that the pontoon system worked well. However, neither this, nor the other two methods met the demands of the expanding railways that needed fixed and secure bridges.

In the late 1840s, it was the Prussian authorities that first entertained the idea of linking Cologne with Deutz by means of a standing bridge.<sup>56</sup> Following the latest technological – mostly British – innovations, the Prussian government abandoned the initial idea of building a suspension iron chain bridge and decided to construct a stronger wrought iron lattice truss bridge. It measured more than 100 metres in length and almost 17 metres in width and was able to hold two railway decks and a road deck, thereby facilitating the integration of both road and rail traffic of both sides of the Rhine. The bridge was partly financed by the Koln-Mindener Railways. The plans were impressive in terms of technological innovation, scale, and scope. The Cathedral Bridge – named for Cologne Cathedral, which was directly in line with it – was to be the first immovable bridge between Basel and the North Sea since Roman times.<sup>57</sup> But the monumental construction also led to massive resistance because the Prussian government opted for a closed rather than an opening bridge. This made the design a matter for the CCNR, as the planned bridge might inhibit navigation on the Rhine. When the Prussian commissioner laid out the plans of his government for the first time in December 1850, the commissioners from Baden and Bavaria instantly spoke out against it.

Five years later, in 1855, when Prussia was about to start the construction of the main carrying pillars, the debate about the bridge in the Central Commission still centred around the problem of obstructing navigation.<sup>58</sup> Having a closed bridge was not necessarily cheaper or easier to construct, but came from the desire of the Prussian government to solve a fundamental problem. Each day the Cologne pontoon bridge opened 16 to 18 times to give way to navigation. Prioritising ships resulted in blocked road traffic for about seven and half hours a day, and, since during the night there was no traffic, this resulted in a non-functioning road connection of almost half a working day.<sup>59</sup> Continuity in rail and road traffic, not disrupted by open bridges, was essentially in the interest of Europe as a whole, the Prussian commissioner, Martin Friedrich Rudolph Delbrück (1817–1903), explained. After all, the direct rail connection was necessary to promote traffic between northern Germany, Belgium, France, and Great Britain, a significant part of western Europe. The Act of Mainz would be a *fleBILE beneficium* for the Rhenish merchant class, the Prussian commissioner stated, if it made this international connection impossible.<sup>60</sup>

The Prussian statement did not convince the other delegates at all. The Baden, Bavarian, and Hessian commissioners found it a flagrant infringement of the Act of Mainz, specifically of article 67 that stated that the signees ‘agree to take all necessary measures for their territory to ensure that no obstruction of navigation is ever caused by mills or other thrusters and wheels

on the river, or by weirs or other artificial devices of any kind.’ Even more importantly, the commissioners added, the construction of closed railway bridges would inevitably lead to an unfortunate decline in Rhine navigation, and even bore the seeds of its complete collapse. Railways were threatening to outcompete Rhine trade and traffic. Any additional disadvantages for boats, such as lowering the masts or chimneys in order to pass the bridge, let alone a bridge on the busiest segment of the Rhine, would certainly have negative effects on shipping, favouring the railways. Finally, the three German plus the French commissioners stated that all other – even the smallest – rivers and canals had open bridges, and Cologne should not be different.<sup>61</sup> The sceptical commissioners were supported in their tirade against a closed bridge by Rhenish merchants and shipping companies, which in 1855 published alarming pamphlets on its damaging consequences for navigation and trade. They regarded the bridge as a contemporary version of a Caudine yoke.<sup>62</sup> Tellingly, the narrative of pursuing progress, securing the common interest, and following commercial necessities that they applied so vigorously to the promotion of steam shipping at the end of the 1840s was for obvious reasons not employed a decade later.

Of course, the experienced negotiator Delbrück had anticipated these objections and he eloquently turned the argument against the other commissioners.<sup>63</sup> First of all, the Act of Mainz had not, and could not have, anticipated the scale and scope of bridge construction feasible in 1855. In fact, the Act did not even consider bridge building on the Rhine an issue, as it was not mentioned, not even in article 67. More importantly, a bridge had a very different legal status, Delbrück argued. Whereas mills or wheels always represented the private interests of the owners, bridges represented the public interest, not necessarily limited to the Prussian, or the national interest, but ostensibly extending to a large part of northern Europe. In other words, the Cologne bridge was not a private matter that should be subjected to the public interest of the principle of freedom of navigation. The Cologne bridge was just another public interest, that needed to be reconciled with Rhine navigation in a satisfying way.

Second, technology could help reconcile both interests, Delbrück added. The Prussians had conducted successful experiments with new methods of lowering masts. The conventional method was to detach the mast from the keel or the bottom of the vessel, lift it with the aid of a crane, and put it back on the bottom of the vessel on the other side of the bridge. For the new mast-lowering system, a crane was not even necessary. It consisted of a mast tabernacle reaching 3 to 4 metres above deck, with a pivot point near the top that allowed the mast to fold. In an upright condition the foot of the mast was firmly attached to the deck, but in the folded position the mast was fixed horizontally, elevated up to 4 metres from the deck, thereby leaving more than enough space for deck cargo. An experiment in Cologne had shown that with this mast-lowering system three men could lower and raise a 30-metre mast within 12 minutes, while the cargo capacities did not need to be

compromised. The new mast-lowering system, in combination with the sufficient height of the bridge deck in Cologne, made it possible to reconcile the interests of the two modes of international transportation, while allowing a closed bridge. Delbrück was fully convinced that the technical adaption of all Rhine ships was more efficient and, in his words, safer both for navigation and railway transport, than adapting such a large and heavy bridge with an opening system.<sup>64</sup>

How much the Prussians cared for a closed bridge and therefore for continuous rail transport became clear once again when Delbrück declared himself willing to offer all owners of existing vessels that were eligible for modification the necessary compensation. It was true, Delbrück said, that all this resulted in some inconveniences. However, it could not be categorised as ‘obstruction of navigation,’ as intended in the Act of Mainz. Furthermore, the new mast-lowering system had the great advantage of allowing skippers to pass the bridge at any desired time of the day, instead of waiting for those times when the bridge would be open. As a final measure, Prussia released steamboats and timber rafters from paying bridge passage fees, from which the sailing vessels had already been exempted after the year of rebellion in 1848.<sup>65</sup> Delbrück, who suffered with a strong fever during the September weeks he was in Mainz, could not convince the German commissioners of his cause. The only positive side of the session had been that the Dutch and the French commissioners had not expressed themselves entirely opposed to his ideas. On 3 October, having recovered after a two-week resting period in Wiesbaden, Delbrück attended, in the company of the King of Prussia, the ceremony of the laying of the foundation stone of the Cologne railway bridge.<sup>66</sup>

In the following years the Prussian commissioner continued to emphasise the urgent and common – European – interest of a closed bridge crossing the Rhine ‘which grants the same blessing of uninterrupted continuity to two coequal transport roads.’ Yet he rejected the Baden, Bavarian, French, and Hessian proposal to elevate the projected bridge height 1.5 metres to a little more than 16 metres in total, on the grounds that this would negatively affect road traffic, would be a very costly operation, and was essentially not in the interest of navigation, as the projected height would suffice, even during high water. Another important point of discussion remained the promised compensation for the skippers. The Prussian commissioner had ambiguously confirmed that ‘Prussia is prepared, out of considerations of equity and in pursuit of its vivid interest in the development of Rhine navigation, to pay such compensation by considering it as a collective sacrifice, which it must, however, first take over.’ In other words, in Prussia’s view the compensation was a social burden (*Societätslast*) that the Prussian government was willing to advance. This meant that if other riparian states started building bridges on their respective territories, they should return part of this compensation to Prussia. This proposal received major resistance. The commissioners pictured the plan as a threat to future bridge building, as the financial repercussions of

the ‘social burden’ might impede states from initiating bridge construction plans at all. During the extraordinary session in the spring of 1858, all the commissioners – except the Prussian one – successfully imposed the deployment of their respective technical commissioners for a visit to the building site in Cologne. Once again, hydraulic experts were crucial in the decisive phase of the process of reconciliation. The CCNR asked this Technical Commission to provide counsel on the questions as to whether an open bridge was still feasible and desirable, and what would be the necessary height of a closed bridge for unhampered navigation. Finally, the Technical Commission was also asked to express its opinion about the conditions for compensation of the individual skippers.<sup>67</sup>

The Technical Commission consisted of the major hydraulic engineers of all the riparian states – some of them had also participated in the Technical Commission for the Rhine survey of 1849, others would do so during the survey of 1862. Most importantly, however, the Prussian hydraulic engineer and designer of the Cologne Cathedral Bridge engineering plan, Hermann Lohse (1815–1893), would guide the Commission, but was officially not part of it, and would not contribute to the final report. After 1849 the opinion of the Technical Commission for the Rhine survey had determined the course of action of the CCNR. Thus, the Prussian absence in the Commission of 1858 indicates that the Prussian authorities were either convinced they were right from an engineering point of view, or they were willing to give in to the calculable demands of the Technical Commission, or both.

Only one week after the extraordinary spring session, the Technical Commission issued its report. In essence, it concluded that the construction of an open bridge was still possible, but hardly efficacious. The new and simple mast-lowering system allowed the bridge deck to be closed permanently. The Commission agreed with the Prussian CCNR commissioner that a bridge with an opening mechanism might even be dangerous and would inevitably lead to malfunctions, disadvantaging both Rhine and rail traffic. With regard to the required bridge height, the Technical Commission concluded that a height of little more than 16 metres was justified and technically feasible. Finally, the Commission adopted the Prussian proposal to grant compensation to the skippers on the basis of the loading capacity of their vessels rather than the height. This resulted, for example, for a vessel with a 50- to 150-ton loading capacity, in a restitution of 200 thalers. A vessel of 500+ tons, the largest of its kind at the time, received a restitution of 950 thalers, a sum comparable to the annual cost of living of a minor official.<sup>68</sup>

In April 1858, the Prussian CCNR commissioner reacted tentatively but positively to the report ‘whose personal impartiality and technical authority were useless to deny.’ He repeated his arguments for a somewhat lower bridge and for regarding the compensation money as a collective rather than a Prussian sacrifice, but he found no readiness whatsoever among his co-commissioners to comply with these wishes. In a final assertion, Prussia declared itself ready to respect the 16-metre minimum and to bear the full compensation costs, without

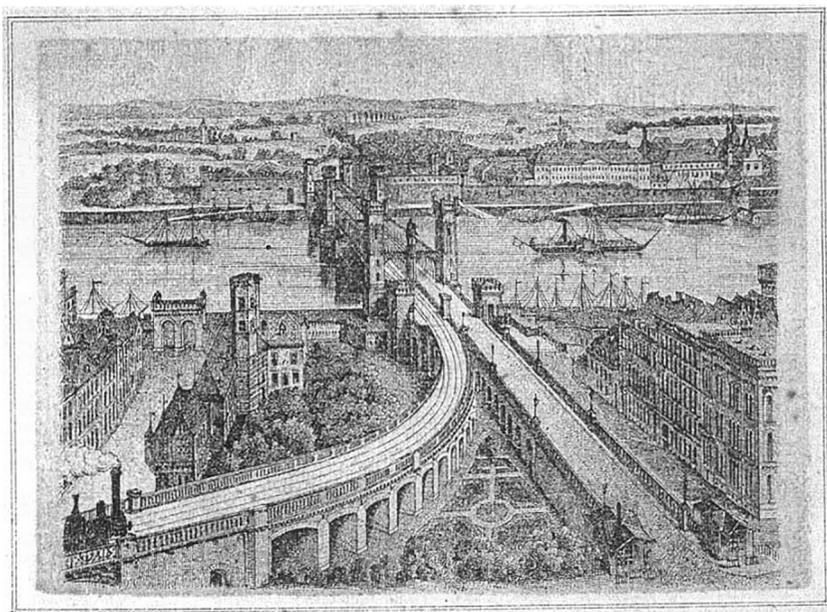


Figure 5.2 Lithograph of the standing bridge near Cologne

Source: Franz Wilhelm Klenner, *Notizen über die neue Rhein-Brücke bei Köln* (Köln: F.E. Eisen's Königl. Hof-Buch- und Kunsthandlung, 1859). Digitalisat des Seminars für Wirtschafts- und Sozialgeschichte der Univ. Köln, [www.digitalis.uni-koeln.de/Notizen/notizen\\_index.html](http://www.digitalis.uni-koeln.de/Notizen/notizen_index.html) (Public Domain)

reservation, on the sole condition that the other riparian states complied with the exact same terms in similar circumstances. The other commissioners assented to Prussia's proposal to jointly sign an agreement laying down the relevant provisions for the construction of the Cologne standing bridge, and on 7 May 1858 the representatives of the seven Rhine states signed the treaty.<sup>69</sup> This treaty would become the default for all future riparian bridge agreements, either in the form of a treaty or as adopted as decisions in the session protocols after 1875.<sup>70</sup>

## Conclusion

The CCNR's involvement in the struggle between sailors and steamers in the 1840s turned out to be a decisive episode for the (mal)functioning of the CCNR. We can see that the Chief Inspector, the individual commissioners, and the CCNR as a body adopted the threat perception of the sailors to a great extent. Ultimately, neither the sailors nor the CCNR were involved in a fight against the introduction of a new technology. The problem was that the traditional class had no access to the application of this technology, due to a lack of capital and organisation. The extinction of an entire industry and the consequent loss of livelihood for a large number of people along the Rhine

was a concern for the CCNR as it fuelled ‘disorder on the Rhine’ that impaired commerce and navigation. The challenging task for the CCNR was to reconcile a less ‘violent and ominous’ transition from wind- and man- or horse-powered transport into steam-powered transport with their guiding principle of freedom of navigation.

This challenge proved particularly difficult because the CCNR had no executive powers and needed also to harmonise the interests of the respective riparian states. When the harmonisation of the measures to be taken on a transnational level failed, the CCNR made a final attempt to reconcile the sailors’ interests with those of the steam-shipping companies. Even though the masterstroke turned out to be an almost complete failure, the CCNR managed to abolish some taxes for the sailors. Moreover, this episode was a crucial turning point in the CCNR’s deliberations as it started the discussion about the reduction or abolition of the Rhine tolls, an issue that would only be resolved in the 1860s. Finally, the meeting also proved to be a crucial experiment in the administrative learning process of the CCNR, as it would never again act as an external mediator between stakeholders and interest groups after 1848. In the much-politicised environment of the late 1840s, it looked for other ways to effectively reconcile trans- and subnational interests with the principle of freedom of navigation. The employment of external technological experts proved essential in the Commission’s reconciliatory task.

With the 1859 codification of standing Rhine bridge building the CCNR had created yet another instrument to reconcile competing interests along the river. While the first Rhine survey in 1849 had helped to standardise and harmonise the behaviour of the riparian states regarding the promotion of navigability, the 1859 treaty concerned the riparian control of resources that went beyond those of the river itself, while protecting the navigability and prosperity of the Rhine. Moreover, by once again employing the ‘impartiality and technical authority’ of a group of hydraulic experts, the CCNR affirmed and reconstituted the weight of the institution of the Technical Commission in the process of reconciliation.

And finally, this episode also shows the implications of the decision-making procedure for the larger powers within the Commission. The additional costs for Prussia of continuing the bridge construction should not be underestimated. Adapting its bridge design to the required height of 16 metres in a relatively late phase of the construction must have led to higher building costs. In addition, 330,000 thalers was paid as Prussian compensation to the individual skippers of 913 ships, which was substantial, considering the total building costs of about 2.93 million thalers.<sup>71</sup> Perhaps Prussia anticipated sharing these compensation costs with other states soon, as they were about to construct Rhine bridges themselves, and had to comply to the same conditions as Prussia. Nevertheless, a considerable part of the Rhine fleet had already undergone its transformation before the construction of the second standing railway bridge, the Südbrücke in Mainz, started in 1860. Be that as

it may, exactly four years after the laying of the foundation stone in 1855, the Cathedral Bridge was inaugurated. By 1886 no less than 168 trains passed this bridge each day, while navigation continued. The CCNR thus managed to have the most powerful state along the Rhine, Prussia, conform itself at least to some extent to the interests and desires of the other riparian states, without a single shot fired.

In terms of the security-prosperity nexus, towards the 1860s the CCNR had thus become less of a diplomatic forum and more consolidated as a centre of expertise that acted as a guarantor of the freedom of navigation on the Rhine. The level of implementation of the freedom of navigation principle was increasingly assessed and determined by technocratic criteria. This was also a strategy to remain relevant as an international organisation. Despite its executive limitations, the CCNR turned into an advisory and controlling body that increased inter-riparian transparency and competition in enhancing navigability and successfully used the combination of external expert input, internal intermediation, and majority pressure to build consensus and restrain Prussia. Gradually, the CCNR became a more technocratic platform, with an emphasis on prosperity-enhancing technical interventions for the Rhine, counterbalancing national political interests. The question remains whether the CCNR was able to continue on this footing in the context of further increasing national power politics in the following decades.

## Notes

- 1 Christopher Clark, *IJzeren koninkrijk. Opkomst en ondergang van Pruisen 1600–1947* (Amsterdam: Bezige Bij, 2016), 436–437.
- 2 Miroslav Šedivý, *Crisis Among the Great Powers. The Concert of Europe and the Eastern Question* (London and New York: I.B. Tauris, 2017), xii.
- 3 Lorie A. Vanchena, ‘The Rhine Crisis of 1840: Rheinlieder, German Nationalism, and the Masses,’ in *Searching for Common Ground: Diskurse zur deutschen Identität 1750–1871*, ed. Nicholas Vazsonyi (Weimar: Böhlau, 2000), 239–251.
- 4 J.M. Brophy, ‘The Rhine Crisis of 1840 and German Nationalism: Chauvinism, Skepticism, and Regional Reception,’ *Journal of Modern History* 85, no. 1 (2013): 1–35.
- 5 Jonathan Sperber, *Rhineland Radicals. The Democratic Movement and the Revolution of 1848–1849* (Princeton, NJ: Princeton University Press, 1992), 114–162. Clark, *IJzeren Koninkrijk*, 491, 511–528.
- 6 AdBR, 212J, box 163, protocol 385, 11 January 1826.
- 7 AdBR, 212J, box 161, protocol 363, 8 June 1825. Praeparatorische Maasregelen zur Beförderung der Dampfschiffahrt auf dem Oberrhein.
- 8 AdBR, 212J, box 163, protocol 385, 11 January 1826.
- 9 AdBR, 86J, box 51, file 5 *Bateaux à voiles contre les vapeurs: plaintes 1842–1848*, letter from two sailors to the French delegate Engelhardt, 1842.
- 10 AdBR, 212J, box 260, protocols xxiv, 1 October 1842.
- 11 AdBR, 212J, box 261, protocol viii, 22 July 1848, attachment Report by Chief Inspector Von Auer, *Die Störungen der Dampfschleppschiffahrt und die Klagen der Segelschiffer, Schiffsvoranzieher, Schiffshalfer und Uferanwohner betreffend*, Mainz, 14 July 1848.
- 12 *Nieuwe Rotterdamsche Courant*, 13 April 1848, nr 89, 1.

134 *Consolidating a Rhine expert regime, 1840s–1860s*

- 13 Florian Ferrebeuf, *Der Beginn der Revolution von 1848 in Mainz aus der Sicht eines ausländischen Diplomaten, des französischen Konsuls Engelhardt* (n.p., 2010), 12, accessed 21 February 2020, [www.demokratiegeschichte.eu/index.php?id=9](http://www.demokratiegeschichte.eu/index.php?id=9).
- 14 *Rotterdamsche Courant*, 6 April 1848.
- 15 C. Looz-Corswarem, 'Der Rhein als Verkehrsweg im 18. Jahrhundert,' in *Der Rhein als Verkehrsweg: Politik, Recht und Wirtschaft seit dem 18. Jahrhundert*, eds. Clemens Von Looz-Corswarem and Georg Mölich (Bottrop: Pomp, 2007), 93–116.
- 16 *Nieuwe Rotterdamsche Courant*, 10 April 1848, nr. 86, 1.
- 17 *De Tijd: godsdienstig-staatkundig dagblad*, 11 April 1848, 3.
- 18 *Rotterdamsche Courant*, 11 April 1848, 2. *Nieuwe Rotterdamsche Courant*, 13 April 1848, 1.
- 19 Ferrebeuf, *Der Beginn der Revolution*, 13.
- 20 Christian Eckert, *Rheinschiffahrt im 19. Jahrhundert* (Leipzig: Duncker & Humblot, 1900), 260.
- 21 AdBR, 86J, 51, 5, Die Kohlen-Kaufmannschaft, Gewerken und Schiffsbesitzer, *Die Dampfschleppschiffahrt des Rheines und insbesondere mit Beziehung auf den Kohlen-Bergbau* (Dusseldorf, 1848), 3.
- 22 *Ibid.*, 8.
- 23 Die Rheinischen Dampf-Schlepp-Schiffahrts-Unternehmungen, *Das wahre Verhältniss der Rheinischen Schlepp- Dampf- Schiffahrt und der Segelschiffer* (Frankfurt am Main: Krebs-Schmitt, 1848), 11–12, 19.
- 24 AdBR, 86J, 51, 5, Committee of the sailors, *Darstellung der wahren Verhältnisse der Segelschiffahrt, im Geiste des Fortschrittes, zu Jedermanns Aufklärung und zur Beurtheilung der von den Schleppschiffahrts-Unternehmungen im September 1848 versuchten Entstellung derselben* (Mainz, October 1848), 8.
- 25 *Ibid.*, 25–6.
- 26 By 1847 more than 40 per cent of all cargo on the German Rhine was carried by German steamboats or German steam tug companies. See AdBR, 212J, 261, protocol viii, 22 July 1848, attachment Von Auer, attachment to his report of 14 July: der mit Dampfkraft bei den Rheinzöllamtern Coblenz und Emmerich im Jahre 1847 beförderte Güter.
- 27 AdBR, 212J, 261, protocol xi, 11 August 1848, attachment Von Auer, 23 July 1848, Klagen der Segelschiffer betreffend.
- 28 AdBR, 212J, 261, protocols viii, 22 July 1848, attachment Report Von Auer 14 July 1848 'Die Störungen der Dampfschleppschiffahrt und die Klagen der Segelschiffer, Schiffsvoranzieher, Schiffshalfer und Uferanwohner betreffend.'
- 29 AdBR, 212J, 261, protocols viii, 22 July 1848.
- 30 AdBR, 212J, 261, protocols xi, 25 July 1848.
- 31 AdBR, 212J, 261, protocols xv, 3 August 1848.
- 32 AdBR, 212J, 261, protocol viii bis, 16 August 1848.
- 33 AdBR, 212J, 261, protocols xi bis, 14/16 August 1848.
- 34 AdBR, 212J, 261, protocol viii bis, 16 August 1848.
- 35 *Ibid.*
- 36 AdBR, 212J, 261, protocols xi bis, 14/16 August 1848.
- 37 AdBR, 86J, 51, Von Auer, 'Die beschwerden der Segelschiffer gegen die Dampfschiffahrt betrifft,' October 1848. Also Report of the meeting on 27 and 28 September 1848.
- 38 AdBR, 212J, 261, protocol xxix, 6 and 13 December 1848. See, for example, for the Netherlands, regarding the bridge at Arnhem, *Nederlandsche Staats-Courant*, 102, 2 May 1849.
- 39 *Neue Rheinische Zeitung*, 125, Cologne, 25 October 1848.
- 40 *Neue Rheinische Zeitung*, 207, Cologne, 28 January 1849. *Neue Rheinische Zeitung*, 212, Cologne, 3 February 1849, attachment Rheinschiffahrt.
- 41 Eckert, *Rheinschiffahrt*, 265–266.

- 42 AdBR, 212J, 259, protocol, 5 September 1840.
- 43 AdBR, 212J, 261, protocol xviii, 31 August 1847.
- 44 AdBR, 212J, 261, protocol v, 21 July 1848.
- 45 AdBR, 86J, 89, Gutachtliche Aeussereung von den betreffenden Commissarien von Hessen, Nassau und Preussen, September 1849.
- 46 AdBR, 212J, 261, protocol ix, 6 and 9 October 1849.
- 47 AdBR, 86J, 89, Gutachtliche Aeussereung von den betreffenden Commissarien von Hessen, Nassau und Preussen, September 1849, 9–10.
- 48 AdBR, 212J, 261, protocol ix, 6 and 9 October 1849.
- 49 AdBR, 212J, 261, protocol vi, 19 September 1850.
- 50 AdBR, 212J, 261, protocol vi, 19 September 1850.
- 51 AdBR, 212J, 261, protocol ix, 6 and 9 October 1849.
- 52 As cited in Alex Van Heezik, *Strijd om de rivieren: 200 jaar rivierenbeleid in Nederland of de opkomst en ondergang van het streven naar de normale rivier* (Den Haag, Haarlem: HNT Historische producties, 2007), 90.
- 53 *Ibid.*, chapter 5, n20.
- 54 AdBR, 212J, 261, protocol vi, 19 September 1850.
- 55 AdBR, 212J, 198, protocol xviii, 16 September 1856 and extraordinary session 29 November 1856, including Uebereinkunft wegen Regulirung der Rheinstrecke zwischen Mainz und Bingen. Signed, Mainz, 29 November 1856.
- 56 Isabelle Tölle, *Integration von Infrastrukturen in Europa im historischen Vergleich* (Baden-Baden: Nomos, 2016), 129–183.
- 57 AdBR, 212J, box 262, protocol xv, 10/12 September 1855, attachment, note by Prussian Commissioner Delbrück on the construction of the Cologne bridge. In 1911 the bridge was substituted by the Hohenzollern Bridge and is still one of the most used railway bridges in Germany.
- 58 *Notizen über die neue Rhein-Brücke bei Köln. Zusammengestellt aus den Geschäftsberichten der Direction der Köln-Mindener Eisenbahn-Gesellschaft und andern veröffentlichten Berichten* (Köln: F.C. Eisen's Königliche Hof-Buch- und Kunsthandlung, 1859), 3–13.
- 59 Taking into account that traffic at that time was limited to 16 hours a day.
- 60 AdBR, 212J, 262, protocol xv, 10/12 September 1855, attachment: Statement of the Prussian Commissioner regarding the construction of the bridge near Cologne.
- 61 AdBR, 212J, 262, protocol xv, 10/12 September 1855.
- 62 For example, Lauer, *Denkschrift betreffend die nothwendigkeit eines durchlasses für die Schifffahrt in der zwischen Koln un Deutz zu erbauenden Brücke* (Mannheim: H. Hogrefe, 1855).
- 63 Tölle explains convincingly that Delbrück used pamphlets such as the one written by Lauer, the chairman of the Chamber of Commerce of Mannheim, to prepare his statement.
- 64 Although it appears from Delbrück's memoirs that the railway interest was a more important argument than technical difficulties for constructing a closed bridge. See Tölle, *Integration von Infrastrukturen*, 146. Martin Friedrich Rudolph von Delbrück, *Lebenserinnerungen, 1817–1867: mit einem Nachtrag aus dem Jahre 1870*, Volume 2 (Leipzig: Verlag von Duncker & Humblot, 1905), 84–87.
- 65 AdBR, 212J, 262, protocol xv, 10/12 September 1855, attachment: Statement of the Prussian Commissioner regarding the construction of the bridge near Cologne.
- 66 Delbrück, *Lebenserinnerungen* II, 86.
- 67 AdBR, 212J, 200, protocol II, extraordinary session 18 March 1858, Mainz.
- 68 Faith M. Williams and Carle C. Zimmerman, *Studies of Family Living in the United States and other Countries: An Analysis of Material and Method*. United States Department of Agriculture. Miscellaneous Publications no. 223 (Washington, DC: US Department of Agriculture, 1935), 295.
- 69 AdBR, 212J, 200, protocol IV, 8/16 April 1858.

- 70 AdBR, 212J, 200, protocol V, 6/7 May 1858. Also see: Zentral-Kommission für die Rheinschiffahrt, *Rheinurkunden. Sammlung zwischenstaatlicher Vereinbarungen, landesrechtlicher Ausführungsverordnungen und sonstiger wichtiger Urkunden über die Rheinschiffahrt seit 1803 I (1803–1860)* (The Hague: Nijhoff and München and Leipzig: Duncker & Humblot, 1918), 553ff, 578ff and *Rheinurkunden II*, 9ff, 20ff, 53ff, 60ff, 73ff, 192ff, 195ff, 207ff, 214ff, 215ff.
- 71 Tölle, *Integration von Infrastrukturen*, 177–178.

## 6 Running an international organisation in the context of increasing national power politics (1860–1900)

### Introduction

This chapter lays out how between 1860 and 1900 the CCNR's work was heavily affected by Prussia's power play in the national and the international arena, and by the completion of an interregional railway network that threatened to outcompete Rhine navigation. Moreover, the CCNR found itself in an existential crisis as the general public saw too little progress in the main points of the Commission's agenda: the abolition of the Rhine tolls and the physical improvement of the navigable channel. Continuing the endless negotiations would result in the definite loss of the Commission's legitimacy, but transforming the CCNR into a fully-fledged supranational organisation on its own, a course pursued by its new Chief Inspector, was a no-go in the increasingly nationalist context of these years. Upgrading the contribution of a transnational expert network – established by the CCNR in 1849 as an ad hoc Technical Commission and fully institutionalised after 1860 – therefore proved essential both for successfully mitigating the political tensions regarding the Rhine correction programmes and for the very survival of the Commission's legitimacy. This regained legitimacy also allowed the CCNR to secure the highly liberal policy of toll abolition it had been preparing for decades. The revival of the CCNR would, however, come at the expense of the figure of the Chief Inspector. In the 1860–1900 period the Rhine became the subject of high politics once again, but even the Franco-Prussian war did not interfere with the depoliticisation of the freedom of its navigation or with the continuing existence and activities of the CCNR itself.

### *‘Ruhig und unpolitisch’*

In 1859 the Prussian commissioner, Delbrück, was not exactly grieving about leaving the CCNR after ten years of service, even though he had always enjoyed himself marvellously during the early-autumn sessions in Mainz. In his memoirs written after 1870, Delbrück remembers Mainz as a fascinating city, not only because of its picturesque ramparts and fortress towers, but mostly because of its highly international character. The city still accommodated the Austrian, Prussian, and Hessian garrisons and their accompanying

authorities pervaded the city with a vibrant atmosphere. Furthermore, from the city one could reach the attractive Rheingau in a heartbeat by means of a steamship. Moreover, not unimportantly, Mainz was only a stone's throw away from other cities, such as Frankfurt and Wiesbaden. 'How many times,' Delbrück recalled,

did I go to Wiesbaden after dinner, passing the Russian chapel, climbing the higher plane on forest paths, to enjoy in the small tavern with good wine the view of the Rhine Valley and Mainz over the dark ridge of the Donnersberg, until the evening fog rising from the river made the picture invisible.<sup>1</sup>

His position as Rhine commissioner in Mainz was mostly a side affair. In the Ministry of Commerce in Berlin, on the other hand, Delbrück was one of the key men. Together with the former Prussian Rhine commissioner – and one of his main confidants – Johann Friedrich von Pommer-Esche, he was in charge of the illustrious Prussian policy to pursue a customs union among the German states in the 1850s and 1860s. When in 1859 Delbrück received the highly distinguished position of Director of Commerce and Business at the Prussian Ministry of Commerce, he was not able to combine this task with the position of Rhine commissioner anymore – even if it was true, as we will see below, that in his new position he would still have an important hand in Rhine affairs.

Leaving aside this attractive new position, it was mostly because the CCNR was about to leave his beloved Mainz that his departure was made particularly easy. No longer would the Commission be running its affairs from 'golden Mainz,' as Delbrück called it, but from 'stone Mannheim.' In contrast to Mainz, Mannheim was a young city that had been rebuilt after its destruction at the end of the eighteenth century in a strict quadrangle form, making its streets straight with only regular corners, like a checkerboard. Quite possibly, in calling it a city of 'stone,' Delbrück was referring to the Danish poet Jens Baggesen (1764–1826), who wrote about Mannheim as a 'poem of stone.' The rectangular composition of Mannheim provided it with an almost tyrannical rationality that left no space for the imagination. In fact, Baggesen spoke about Mannheim in terms of a 'stiff, rectangular, cold, immobile, unkind and deadly city.'<sup>2</sup> With the transfer to the much more provincial and less scenic Mannheim, most of the charm that the autumn months on the Rhine possessed for Delbrück was lost.<sup>3</sup>

But why had the CCNR to move at all? In its protocols one can read that it was found 'in the interest of the navigation of the Rhine' that the Commission had its seat in an 'open Rhine city' such as Mannheim that had torn down the remaining ramparts with its rebuilding, instead of in a closed fortified city like Mainz.<sup>4</sup> In addition, it was a rather convenient misfortune that the popular Grand Duchess of Baden and foster daughter of Napoleon himself, Stéphanie Louise Adrienne de Beauharnais (1789–1860), died in January 1860, and left

three rooms of her castle in the city of Mannheim to the Commission, free of charge, the protocols noted.<sup>5</sup> Yet an availability of free office space can barely be regarded a motivation to move. Neither Mannheim's 'openness' nor Mainz's 'closeness' had changed in the past decades, which made that consideration an obscure pretext to move.

In his memoirs Delbrück shone some light on this affair as well. According to him, it was the increasing political tension in Europe that led to the move to Mannheim. In 1859 France and the kingdom of Sardinia provoked a war with Austria over the Lombard territories. This also brought Mainz, the largest fortified city of the German Confederation with Prussian, Hessian, and Austrian troops, to a state of the highest military preparedness. At that point, the German authorities started to regard the permanent presence of the French Rhine commissioner in Mainz as a problem. The French government, and especially Napoleon III, were notorious for their flirtation with the historical aspiration to 'restore' France's 'natural border' to the Rhine, extending its territory to the Rhineland, including Mainz. To have resident in the city an accredited French agent was untenable. Instead of starting difficult and painful procedures to expel the French commissioner from Mainz, the German commissioners suggested simply moving the CCNR to a less strategically sensitive Rhine city. In other words, the move to Mannheim was not in the interest of Rhine navigation at all, but was the solution to a political problem that had been raised in these years of high political tensions. The Dutch commissioner between 1909 and 1930, Van Eysinga, acknowledged the political cause of the move to Mannheim in the first substantial account of the Commission he authored in the 1930s. 'However, except for this event, the life of the Central Commission between 1832–1919 proceeded calm and apolitical (*ruhig und unpolitisch*),' he insisted.<sup>6</sup> Delbrück left the Commission at a time of increasing tensions between national and particularistic interests on the one hand, and the more common interest of a navigable Rhine on the other. In these final decades of the nineteenth century the CCNR faced major challenges in keeping the Rhine competitive with the railways. In this context it had to reinvent itself and find a way to mitigate conflicting interests, or it would lose its legitimacy and thus its *raison d'être* altogether.

### **Reducing Rhine tolls**

The year 1860 was a crucial one in terms of liberating the Rhine from the burden of taxation. Ever since the mid-1850s, when railways increasingly started to form a dense and far-reaching transport network connecting Cologne via Antwerp or Bremen with the sea, Rhine navigation lost its monopoly on maritime trade and was starting to be in real danger of being outcompeted.<sup>7</sup> One of the ways to maintain the Rhine's competitiveness was to reduce the fiscal burdens on navigation. In 1848 sailors had already been exempted from bridge passage fees, while the recognition rights were halved. By 1850, the French and the Dutch governments had reduced or even lifted

the tolls on their parts of the Rhine entirely and wanted to take advantage of toll reduction on the German parts. Besides the Netherlands and France, German states Bavaria and, after 1855 especially, Baden turned into fierce proponents of toll reduction. However, Baden was facing strong opposition from the smaller German riparian states. In the 1850s, the Nassauan and Hessian toll stations in Caub and Mainz combined levied almost 900,000 francs annually, which corresponds to more than 5 million euros in 2015,<sup>8</sup> and constituted at the time more than a third of the total amount of Rhine tolls collected. In contrast, the Baden and Bavarian toll stations of Mannheim, Altbreisach, and Neuburg collected barely 200,000 francs, making their abolition far less of a bloodletting.<sup>9</sup>

The Rhine toll question was intricately connected to the extension of the German customs union in those years.<sup>10</sup> As the driving force and organiser of a German customs union, Prussia could not disregard Hessian and Nassauan resistance to the reduction of what were for these smaller states major revenues. Besides, Prussian officials collected 1.5 million francs annually (or 8.5 million euros in 2015), almost 60 per cent of the entire Rhine toll collection. In 1857, Baden achieved a small victory when its proposal to reduce the toll categories of some specific goods found approval in the CCNR. ‘Declassification’ of overseas transit goods such as raw cotton would beef up Rhine traffic, Baden stated, and the reduction of tolls on raw materials such as pig iron would benefit domestic industry. Even Prussia could not deny that with such a measure ‘a doubly benevolent purpose is done.’<sup>11</sup>

In 1859, in an ultimate and desperate attempt to force Hesse-Darmstadt to cooperate, the Dutch commissioner wanted to make the Commission’s approval for the construction of the Rhine bridge near Mainz subject to Hesse-Darmstadt’s consent to the policy of toll reduction. This proposal would significantly delay the accomplishment of Hesse-Darmstadt’s most important infrastructural project at the time. However, this exceeded the jurisdiction of the CCNR; the plan could not count on Prussia’s support and therefore was abandoned.<sup>12</sup> Besides the competing interests, Prussia’s stance in regarding this toll issue as an internal German affair made the CCNR deliberations all the more ineffective. And when in 1860, ‘So close in view of the losses and dangers for the navigation on the Rhine by the concurring railroads,’<sup>13</sup> none of the items on the agenda of the extraordinary spring session seemed to correspond with the most urgent matter in Rhine navigation, the abolition of Rhine tolls, public agitation rose.<sup>14</sup>

The continued lack of riparian cooperation on the matter of toll reduction indeed resulted in a strong public counteroffensive. Individual stakeholders acted on their own behalf or in newly established interest groups, of which the most prominent was the international ‘committee of the united interested parties in Rhine navigation.’ They informed the public by means of pamphlets, lobbied their governments, and gathered in meetings that resulted in unanimously adopted resolutions that were in turn published in newspapers. A rising Dutch committee member, Amsterdam lawyer (and future

Nobel prize winner and CCNR commissioner) Tobias Michel Karel Asser (1838–1913), kept the pressure on and boldly asked in one of his pamphlets whether the time had come to call for the intervention of the Great Powers to solve the Rhine toll question quickly. After all, Asser argued, ‘The freedom of navigation on large European rivers has been considered a subject of general European governmental care for a long time,’ thereby elegantly referring to Wellington’s appeal to the European powers to demand a more liberal stand from the Dutch government after the European Congresses of Verona in 1822.<sup>15</sup>

These public calls for toll reduction did not fall on deaf ears. In 1860 even the Prussian government started to regard it as a necessary measure in itself. The opening of the William–Luxemburg railway at the end of the previous year was a cause for great concern. It connected the eastern French railways with the Belgian ones and thereby provided a direct route between the Belgian port all the way to Switzerland. It was the first time that the low charges of the railways threatened to diminish transport on the Rhine. After even the Hessian and Nassauan national assemblies urged their governments to prevent the degeneration of ‘the most beautiful German stream,’ the Baden government finally managed to assemble representatives of the German riparian states in its capital. The ensuing Karlsruhe Agreement resulted in a significant drop in Rhine tolls on the German Rhine, amounting to about 30 per cent of freight rates. As a consequence, Prussia lost more than 50 per cent of its revenue. Yet the Prussian commissioner in the CCNR thought the sacrifice was more than compensated for by keeping the Rhine from being entirely outcompeted by the railways. What is more, similar toll reductions were applied to the Rhine’s German tributaries and within a couple of years to all other German rivers as well.<sup>16</sup> This major toll reduction, a step that was prepared within, but eventually taken outside the CCNR under Baden leadership, could, as we will see below, not satisfy all within the Commission.

### **A new Chief Inspector in troubled times**

The year 1860 also marked the appearance of a new Chief Inspector. Like Delbrück, the current Chief Inspector of the CCNR was less than enthusiastic about his employer’s move to Mannheim. Von Auer had lived through the entire second phase of the Commission and had been appointed for life. But in 1860 at the age of 74, after 29 years of service, he decided it was enough. Von Auer was honourably dismissed and received a pension of no less than 8,000 francs a year.<sup>17</sup> This opened up the position to fresh blood, and at the end of the year the Prussian Karl Hermann Bitter (1813–1885) was installed.

Bitter was a man with quite a track record. He was trained in law and public administration – cameralism – and had been employed in Prussian public service for 20 years. He had been involved in the workings of the Weser Commission, but more importantly, he had been a member of the European Commission for the Danube, in which he had represented Prussia since its

inception in 1856.<sup>18</sup> Bitter had a leading role in the day-to-day affairs of this Commission, but had a hard time enjoying himself in the Ottoman port of Galați, where the ECD resided, as it isolated him from the European cultural life he loved so much.<sup>19</sup> On his request, Bitter had himself transferred to the CCNR in Mannheim in 1860.<sup>20</sup>

In Galați Bitter had been used to and had been credited with the implementation of an executive administrative body that was – as we will see in the Conclusion – far more powerful than the CCNR. The ECD was financially independent: it levied its own tolls, carried out all the construction works on the Danube, implemented and policed regulations, and constituted, as Constantin Ardeleanu calls it, a ‘quasi state.’<sup>21</sup> Only just beginning his tenure in Mannheim, Bitter proposed unprompted to charge the CCNR with executive and legislative powers along the lines of the ECD and to have the Mainz Convention adapted accordingly.<sup>22</sup> Bitter envisioned a strong executive Commission that was able to implement the principle of freedom of navigation by force. The Dutch believed his authoritarian and executive style was what was needed to finally push the most liberal Rhine regime through. Bitter’s proposal met with much resistance among the other members of the CCNR though, and with the upcoming Rhine survey in 1861, Bitter shifted for the time being his attention to the improvement of the navigable channel instead.

To put his stamp on the Rhine survey, Bitter had arranged the steam boat for the Technical Commission and had compiled no less than five extensive and less extensive memoranda in which he outlined the main hydraulic obstacles for navigation on the three Rhine districts from Basel to the Dutch border. He made sure that all the members of the Technical Commission received the memoranda before the start of the survey at the end of April 1861. On the first *Rhein-Bezirk*, that is from Basel to the Bavarian-French border, he was very concise and rather optimistic about the navigability. Here and there the inspector had reported floating tree trunks, gravel deposits, and some wild currents. However, within five or six years the famous Tulla engineering works on this part of the Rhine would be ready. Bitter expected that when the river was finally brought into its ‘completely normal condition’ the existing problems would disappear accordingly.<sup>23</sup>

In the second district, from the French border to Bingen, Bitter observed many more urgent problems for navigation. From Nieder-Walluf to Bingen the river was still in an unregulated condition, even after 1854 when the CCNR had already demanded the attention of the governments concerned with this part of the Rhine. Irregular sandbanks hampered traffic as there was not always sufficient depth for navigating. In addition, the large width of the river in these parts did not result in a current fast enough to remove them.<sup>24</sup> It was, according to Bitter, one of the worst and most difficult parts for navigation on the entire Rhine: ‘In this case, thoroughgoing corrections are indispensable in order to achieve sufficient safety and regularity for the larger shipping traffic.’ The Binger Loch continued to be a dangerous passage for ships. The restricted width of 23 metres did not allow multiple ships to pass each other. In order not

to be dependent on yet another round of detonation, and risking a lower water level, the Prussian government had recently approved a project to construct a second navigable channel crossing the Mäusethurm-Isle.

Bitter continued with the third Rhine district, the Middle Rhine, from Bingen to Bonn. In the 30-kilometre Rhine stretch downstream from Bingen he identified no less than five dangerous passages. The 1849 survey had already observed 44 rocks on this particular segment.<sup>25</sup> This resulted in an irregular navigable channel, and a clear, affordable plan of how to remove these rocks, or how to create a regular and deeper channel, had still not been determined for all these parts. The Prussian authorities had recently started to carry out an extensive regulating plan only for the passage of 'Wild Danger' (*Wilden Gefahr*) near Caub, while other parts needed urgent improvement as well, such as the Loreley at Sankt Goar, where strong currents had caused the wreck of several ships. From Sankt Goar to the Dutch border the problem was not so much the depth, as from Koblenz downwards the water was almost 1 metre deeper than at the Binger Loch. However, Bitter identified no fewer than 16 spots where the river did not have enough width to secure safe deviation for ships passing each other. 'In order to prevent the shipping industry from becoming inhibited in the future, it is urgently necessary to continue the regulation of the river that has begun downwards in corresponding proportions,' Bitter concluded.<sup>26</sup>

The Technical Commission gently but largely disregarded Bitter's memoranda. The experts, who consisted of the leading hydraulic engineers of the riparian states and who had arrived in Basel on schedule, unanimously appointed the authoritative Prussian engineer and director of the *Strombau-Verwaltung*, Eduard Aldolph Nobiling (1801–1882), chair of the Technical Commission. Moreover, the Technical Commission also turned down the use of Bitter's steamboat. Due to shallow and fast water between Basel and Strasbourg, the French technical commissioner residing in Strasbourg deemed it too dangerous and irresponsible to navigate the Prussian steamboat on this part of the Rhine. He refused to allow the boat to even leave the port upstream and offered the Commission the use of his sailing boat instead, an offer the Commission gratefully accepted. At eight o'clock in the morning of 30 April 1861, the Technical Commission left Basel for Breisach.<sup>27</sup>

Before the Commission even set sail on the very boat that had been used for the first technical survey in 1849, two things had become clear. First, even after more than ten years of regulating the river stream, large parts of the Rhine were in very bad condition, especially with regard to steam navigation. Second, besides the Chief Inspector and his sub-inspectors, an alternative source of knowledge about the Rhine had settled in permanently: the Technical Commission. The Technical Commission based its authority on technical expertise and scientific river engineering theories. In contrast, the Chief Inspector appealed to personal observations and local intelligence on the one hand, and his authoritarian and executive style on the other. Clearly, these two approaches increasingly clashed.

However, in the context of the early 1860s, in which the CCNR faced great difficulties in reducing the Rhine tolls, this clash did not prevent the Dutch Commissioner Emil Testa from considering Bitter's drive to push through an increasingly liberal Rhine regime – albeit in an autocratic way – appealing. In the spring session of 1862, the Dutch commissioner used a non-issue as a pretext for raising fundamental questions about the competences of the CCNR commissioners. It was the start of a campaign within the CCNR to consolidate the position of the Chief Inspector with the aim of bolstering the Commission's executive clout, at the expense of the individual commissioners themselves.

In February, prior to the spring session, the commissioners had corresponded and decided under the authority of the Father of the House – the oldest member of the Commission – to grant one of its office clerks special leave to visit the Great London Exposition in 1862. The Dutch government, so Testa argued in April, found this procedure unlawful, since the Commission could not decide on any matter regarding the CCNR or the principle of freedom of navigation on the Rhine, when it was officially on leave. In the time between the sessions, the Dutch commissioner continued, only the Chief Inspector had authority with regard to all matters concerning the Rhine. He, and thus not the commissioners, must take care of matters that could not be delayed in any way.<sup>28</sup>

The other Rhine commissioners were unanimously astonished by this statement, as it would mean that the CCNR would be ineffectual for 11 months a year. Consequently, it would mean that the sovereign rights that were being represented by the individual commissioners would be transferred to the Chief Inspector, 'and the Commission would become an instrument without will, in the hands of one of its employees.' It was exactly this quality of the CCNR – the continuing competences of the individual commissioners with regard to matters of Rhine navigation after the conclusion of the formal sessions – that distinguished it from other commissions, such as the Commission for Navigation of the Elbe. The Mainz Convention did not prevent the governments of the riparian states from employing their commissioners to deliberate on urgent matters during recess. In fact, the common practice of the past decades showed that these governments, including the Dutch government, had been very willing to communicate by means of written correspondence, for example in the case of the construction of the standing Rhine bridge in Koblenz in that very year. 'Indeed,' the commissioners stated:

it is difficult to find a real reason for determining precisely why the Dutch Government would forbid itself and other riparian governments a channel of communication which often leads more easily and quickly to a result than the deliberations during the session of the Commission, especially since this government is primarily interested in Rhine navigation, and, consequently, in a speedy expedition of affairs which concern it.

It is not likely that the Netherlands indeed wanted to impeach the figure of Father of the House. True, it was not formally prescribed by the Mainz Convention that the oldest member was to take the lead in correspondence during the intervals, yet it had become standard practice ever since 1831. Quite possibly, the Netherlands was instead trying to improve Bitter's executive position. The Netherlands hoped thereby to put the smaller German states under pressure and have the straining Rhine tolls finally abolished. However, Testa's action was as hopeless as his effort had been to pressurise Hesse-Darmstadt in 1859 by blocking the approval for the construction of the standing bridge near Mainz. And as 40 years earlier, when the Netherlands supported Eichhoff in his run for Chief Inspector, it backed the wrong horse. In August 1862 the CCNR put great pressure on the Dutch commissioner to vote 'in the interest of promoting Rhine navigation' in favour of the existing deliberative decision-making structure based on consensus at the expense of a more executive and hierarchical structure. Eventually, the Dutch commissioner abandoned his position with regard to the Father of the House and the Chief Inspector.<sup>29</sup>

During these years the German Rhine states, and not solely the smaller ones, did indeed lose confidence in Bitter. The commissioners of Hesse-Darmstadt, Nassau, Baden, and Bavaria jointly declared in a session in 1862 that: 'Shortly after Mr. Bitter took office, it became clear that the range of powers attributed to the Chief Inspector ... could not suffice to a man of the character of Mr. Bitter.' Although unwilling to go into detail in the official protocols, the four commissioners noted that between 1860 and 1862 Bitter increasingly exercised powers to which he was not entitled, bringing him several times into conflict with local authorities. Bitter's behaviour was about to cause serious harm to the operations of the Chief Inspector as a public servant belonging to seven states, they argued. Therefore, the four German commissioners asked the CCNR for something that had never been requested before: to remove the Chief Inspector from office.<sup>30</sup> The call was not sufficiently supported. However, this episode certainly did not improve his position, as we will see.

Within the CCNR, there had been issues before with the figure of the Chief Inspector, but Bitter's ambitions on the Rhine, combined with the Dutch support, really touched a sensitive nerve. It touched upon the very quality of the CCNR: its function as a clearing house, a place (or non-place when it was formally on leave) where the representatives of the riparian states could deliberate and work in a secure space towards a sensible solution to the existing problems on the Rhine. The balancing out of national interests with the common interest of a navigable Rhine indeed consumed a lot of time, and sometimes the work needed to be continued through correspondence. However, the agreement that sovereign rights remained with the individual commissioners was the very key to the sense of security that the CCNR required to slowly converge divergent interests. Bitter's insensitive approach had compromised this balance.

### **Abolition of the Rhine tolls after all**

In the following years, the CCNR members tried to regain the initiative to cut down the fiscal burden on the Rhine. In 1861, for example, Prussia and Bavaria demanded the abolition of compulsory pilotage. In 1862, Baden insisted on the elimination of beaconage in the Dutch ports, upon which the Dutch commissioner instantly requested the complete removal of the lowest toll category. In 1863, outside the Commission, the Prussian cabinet proposed halving the recognition dues for steamboats, something the Dutch commissioner had been suggesting since 1848, when the reduction was granted for sailors as we saw in [Chapter 4](#). Now, the Prussian government stated, the entire industry of navigation on the Rhine was in trouble, not just the sailors, and in order to save navigation on the Rhine from oblivion, and to support producers and consumers along it simultaneously, this measure was more than appropriate. The Dutch commissioner could only agree, as did the other major riparian states.

In May 1864, the CCNR specifically gathered to decide on this matter in Rotterdam. Unexpectedly, however, the Hessian and Nassauan commissioners raised objections. By rejecting the proposal, and by boldly stating that navigation on the Rhine was not at all in danger of being destroyed, the two small Rhine states ended up in isolation. The same year, Prussia put Hesse-Darmstadt and Nassau on the spot by making their renewed membership of the German Customs Union subject to their approval of the reduction of the recognition dues on the Rhine. Consequently, they approved the reduction in October. In 1866, all the proposed reductions and abolitions were implemented, and after Prussia won the Austro-Prussian war in the summer of the same year, it even made the total removal of Rhine tolls a subject of the peace treaty. What is more, the Prussian annexation of Nassau resulted in the removal of the Nassauan commissioner from the CCNR, who had always been very hesitant regarding the reduction of the fiscal burden on the Rhine.<sup>31</sup>

With such a mighty neighbour, the Dutch government had little leeway to discuss the Prussian demands to formally adapt the Mainz Convention to the new situation. With the signing of the Revised Rhine Navigation Act of 17 October 1868 in Mannheim, the CCNR commissioners – as representatives of the riparian powers – finally eliminated the levying of Rhine tolls.<sup>32</sup> The conclusion of the Mannheim Convention was the final step in a long ongoing process of increasing convergence in terms of free trade policies along the Rhine. After more than 150 years, the Mannheim Convention is still the basis of the navigational regime on the Rhine today.

The Mannheim Convention offered the Commission the opportunity to solve an additional pressing problem. Bitter was forced into early retirement and the post of Chief Inspector lapsed.<sup>33</sup> Officially the position had become superfluous, because without tolls, no resolver of disputes about tolls was needed. Even though this was indeed an important part of the Chief Inspector's responsibilities, it can be safely assumed that Bitter's disturbance of the

delicate balance within the Commission was the real reason for eliminating this post altogether. It was a small sacrifice that facilitated the return of a sense of security and a rapprochement between the commissioners.

In his memoirs, Delbrück described the reduction of Rhine tolls as the most important question in the CCNR at that time, yet concluded that the Commission was not able to play a significant role in the matter.<sup>34</sup> The Dutch legal expert and Rhine commissioner after the turn of the century, Van Eysinga, on the other hand, held that the CCNR paved the way for the final abolition of the Rhine tolls by drafting and adopting supplementary articles in the 1830s and 1840s that categorised certain goods in special low tariffs. Moreover, it collected and published the number of tolls collected along the Rhine in its protocols. Thereby it might have provided transparency and clarity to the respective governments about the costs and benefits of reducing or eliminating these tolls, or additionally might have given armour to critical interest groups in their struggle. Finally, Van Eysinga suggests that in the 1850s, even though the proposals within the Commission did not lead to the direct adoption of new supplementary articles, they accelerated the speed of the discussions and constituted a reservoir from which external authorities would draw their policies in the 1860s, ultimately resulting in a gradual reduction of the fiscal burden on the Rhine.<sup>35</sup> As this chapter and book shows, the CCNR was not the executive body of policy making, but it was the clearing house, the deliberative platform that prepared and disseminated the steps that needed taking, while simultaneously preventing one hegemon from taking control over the rest.

After 1868 the CCNR continued its work in an environment in which Rhine tolls did not exist anymore. This meant that the riparian states did not regard the disappearance of the very reason for its establishment as a good enough reason to terminate the CCNR. Indeed, the riparian states considered its assessment activities, such as the technical survey of the Rhine or the evaluation of projected constructions in the riverbed, as too important to get rid of.<sup>36</sup> Besides, the international organisation was also considered a promising forum in which conflicting interests on the national, the sub-, and transnational level along the Rhine could be reconciled, even in matters such as the salmon fisheries, a topic that did not touch upon navigation at all but might be solved by adopting the expert input model that by now was well established in the clearing-house operations of the CCNR.

### **The protection of Rhenish salmon**

Since its inception, the CCNR had always been presented as merely an organisation to protect the principle of freedom of navigation on the Rhine. However, as we saw in the case of the dispute between the sailors and the steam shipping industry in the 1840s, it sometimes took upon itself the task of reconciling interests that went beyond this arena. In 1869, we see once again the CCNR operating in a totally different field: fishing. Perhaps it goes a little

too far to suggest, as Nil Disco does, that the Central Commission served ‘as a platform for forcing the “side effects” of economic prosperity onto the international political agenda’; however, its operating structure certainly facilitated the coming about of international conventions even on topics with which it had no direct relation.<sup>37</sup>

Van Eysinga wrote no more than a short paragraph on the common regulation of salmon fisheries on the Rhine. He defends his disregard with the argument that the question had nothing to do with the CCNR, the topic of his study. The conference in 1869 took place in Mannheim, ‘but not under the authority of the Central Commission.’<sup>38</sup> Formally, that was true. However, the conference took place in the assembly room of the CCNR, it was attended by the same men who constituted the CCNR, and the original protocols were stored in the Commission’s archive. The only procedural difference was that an additional eight stakeholders – partly high officials of local authorities, partly experts on fish or fisheries, but not fishermen – attended the conference, and the Dutch representation was substituted by Hendrik van Beeck Vollenhoven (1811–1871), member of the senate and chairman of the Board of the Sea Fisheries.<sup>39</sup> So why did Van Eysinga disregard this episode? Possibly because the conference in 1869 would not result in the ratification of an agreement, and therefore can be considered a failure, something Van Eysinga would not have liked to attribute to the Commission.

In the wake of the formal signing of the Treaty of Mannheim in 1869, the Grand Duchy of Baden took the opportunity to resolve the alarming collapse of salmon stock that had been observed everywhere in the Rhine and its tributaries in recent years. Salmon was a much-loved fish. Not only was it a tasty and nutritious food, it was also considered the king of fish that lived both in sweet and salty water. After the 1850s, new industrial techniques in catching, processing, preserving, and transporting salmon helped to substantially expand the market. Between 1840 and 1868 the wholesale price of a kilogram of salmon had more than tripled, amounting to almost one guilder.<sup>40</sup> Several circumstances had caused the recent reduction of salmon stock in the Rhine. Factories and farms dumped cooling water or wastewater back into the river, thereby affecting the water quality considerably. Moreover, the almost completed canalisation of the Rhine had destroyed the aquatic ecosystem in Germany. Steam shipping also negatively affected the preservation and reproduction of salmon. However, according to a Prussian memorandum, it was mostly the ‘reckless way of fishing’ that ‘affects already in itself the future of Rhine fishery in such a detrimental way that the preservation of even the noblest fish is almost impossible.’ It was true, the memorandum said, that the interests of fisheries were secondary to the present agricultural and general economic needs. But it was also true that improved state supervision and care might protect salmon from extinction.<sup>41</sup> ‘It may be said to be the very best salmon river in Europe,’ the Irish Quaker and salmon breeder Thomas Ashworth wrote about the Rhine, ‘and is *the least* cared for or cultivated.’<sup>42</sup> In order to design common regulations to protect the salmon stock

in the Rhine, representatives of the seven riparian states assembled in Mannheim in the summer of 1869.

It was a widely shared opinion that those responsible for the reckless way of fishing were to be found in the estuaries of the Rhine. Salmon follow, as ichthyologists now call it, an anadromous migration pattern. They live in the sea for most of their life, but return at set times to the upper parts of the freshwater streams where they were born in order to spawn. There, the young fish go through their first stages of life, until they migrate to the sea and the cycle starts all over again. At the time, natural historians had only recently discovered this behavioural pattern. No one denied that most fish were to be found in the estuary when starting their journey to their native water, and it was there where Dutch fishermen introduced new fishing techniques and fished the river dry. Especially on the narrower branch of the Rhine, the Lek, nets could span almost the entire width of the river. Hence, hardly any salmon passed through.<sup>43</sup>

Public opinion in Germany roasted the Dutch fisheries on the spit. Salmon protection measures in the German riparian states could only be effective if ‘the [legally *jusqu’à la mer*] free Rhine could be liberated from the thievish [*rauberische*] Dutch salmon traps,’ a high official wrote in 1868.<sup>44</sup> Nil Disco convincingly argues that the wording here is particularly provocative, as it clearly referred to the perdurable dispute between Prussia and the Netherlands about the freedom of navigation in the 1820s. Simultaneously, it insinuated that the Dutch fisheries were comparable to the well-known robber barons of the Middle Ages: ‘just as the “robber barons” had threatened profitable shipping’ by illegally levying excessive tolls, the Dutch ‘were criminally undermining the viability of salmon populations (and fisheries) on the Rhine,’ Disco notes.<sup>45</sup> To end this ‘illegal blockade,’ the Prussian official suggested forcing an agreement with the Netherlands with a new trade agreement, or better, within the framework of the CCNR. After all, it made sense to address this salmon blockade within the structure of the only inter-riparian legal arrangement that existed, and indeed was about to be reconfirmed with the Treaty of Mannheim that year.<sup>46</sup>

In anticipation of the conference on a common regulation for fisheries on the Rhine in Mannheim, the Dutch government asked Francois P.L. Pollen (1842–1886), the young explorer and natural historian for the Royal Museum of Natural History in Leiden, to investigate the salmon fisheries in the Netherlands. In his work, published in 1870, Pollen concluded that common regulations on the Rhine for fisheries were essential to forestall ‘human destructiveness and short-sightedness’ and protect the salmon stock.<sup>47</sup> Two of the most important, but also contested, measures that were to be discussed in Mannheim were the introduction of seasonal fishing closures and the ban on catching very young or pregnant salmon.

He argued that the protection of salmon was a common interest, but consequently also the fruit of a common sacrifice. Salmon breeds in the very upper parts of the Rhine and its tributaries. ‘It pains the heart of any

dignified Dutch,' Pollen noted, 'that he must acknowledge that salmon ... is being born in Germany and Switzerland,' because he therefore cannot protect the breeding places and the young salmon in order to secure a rich future catch. In fact, there was a demand for young salmon as apparently Frenchmen loved to fry them and have them for breakfast. Simultaneously, the Germans were frustrated that they could not prevent the Dutch from catching the pregnant fish that were on the way to their country. Fishermen themselves would never be inclined to limit their catch, as they firmly believed that if not caught by them, the fish would be taken by a fisherman further up- or downstream. The only way to solve this problem was to introduce common regulations that favoured the upstream migration of salmon to the breeding places, protected fish, spawn, and brood during the breeding season, and secured the free retreat of young fish to the sea.<sup>48</sup>

Those interested in the Dutch fishing industry openly despised Pollen's scientific claims and regarded the proposed measures as detrimental for the Dutch and very favourable to the German fishermen. The Dutch fisherman Quakernaat van Spijk wrote:

The independence of the Netherlands and the interests of the nation are too dear to us than that we would not oppose with all our powers against measures that we think are very suspicious and become therefore an outrageous injustice to our industrious fishermen.

He feared a powerful influence from abroad, supported by 'theoretical reflections' on an assumed depletion of the salmon stock in the Rhine, that would ultimately lead to the obstruction of national prosperity. In a conspiratorial tone he continued by saying that it was the feeling 'that we have to give in to the influence of strangers and that our nationality is gently affected by heavy strokes' that made him grab the pencil.<sup>49</sup> In other words, salmon entrepreneurs like Quakernaat van Spijk tapped into their practical knowledge of fisheries and pointed to the possibility that 'scientific' arguments were mere tools for fishermen at other locations on the Rhine to pursue their particular interests, rather than a claimed common interest. Or, as Disco puts it: a 'self-interested ideology cloaked in the mantle of science.'<sup>50</sup>

Because of the strong resistance in the Netherlands, particularly among the larger salmon entrepreneurs, the Dutch representative Van Beeck Vollenhoven was not very accommodating during the conference in Mannheim. In fact, it can be fully laid at his door and that of his government that the convention could not be concluded in August when the representatives first met. The Dutch demanded proof that seasonal, daily, and weekly fishing closures would eventually result in beneficial circumstances for the fisheries. Although in Britain such fishing restrictions had resulted in a larger fish stock, whereas in the Netherlands the unlimited catch had caused a decrease in these noble animals, yet, Van Beeck Vollenhoven stated, 'these experiences and claims are not yet so convincing and undisputed that the Royal Dutch Government

could already engage in such extensive restrictions.’ He therefore suggested much shorter fishing closures.<sup>51</sup> None of the representatives believed that the Dutch proposals would be sufficient to protect the fish, and consequently the fisheries, against extinction. It was on this point that the Baden representative adjourned the conference.

On his return to the Netherlands, Pollen went straight to the most important fish auctions along the Rhine. For several months he consistently counted the number of pregnant fish and non-pregnant fish. With this data Pollen was able to identify the high season of pregnant salmon heading for the Upper Rhine from 1 September until 15 November. Hence, he suggested to Van Beeck Vollenhoven to limit the proposed fishing closure in the Netherlands, Prussia, and Hesse-Darmstadt to this period of time. On the Upper Rhine the closure should last from mid-October to 1 January. The method of fishing by spanning a net over the entire width of the river should, Pollen argued, be prohibited from September to January.<sup>52</sup>

Pollen hoped to gain the confidence of the Dutch by proposing closures with clear-cut limitations, in order not to disadvantage the fishermen more than necessary. In November the delegates met again, and Pollen’s solution to the highly sensitive problem of fishing closures was approved. This approval removed the biggest obstacle to unanimity, and the representatives of the riparian states finally concluded the agreement on 27 November. As in the clearing house operations of the CCNR concerning the protection of the freedom of navigation on the Rhine, the input of experts proved to be an effective ingredient in balancing out national interests against the more common interest of the protection of the salmon stock.

However, the Dutch parliament rejected the agreement by three votes, upon which the other riparian states discarded it as well. The Dutch implemented the regulations by means of a Royal Decree anyway, but a uniform international fishing regime would only be installed in 1885, in a less restrictive form. In 1886 the agreement between the German Empire and the Netherlands was ratified, but this was also the first year that the total salmon catch on the entire Rhine dropped. In the following decades this decrease continued. The riparian cooperation turned out to be too late, too little, and no equilibrium was found. By the 1930s the salmon industries on the Rhine had disappeared. The CCNR had been careful not to enter the policy field of fisheries formally, but it deliberately offered its diplomatic infrastructure to forge consensus among the riparian states. Nevertheless, its ambitions were greater than its final achievements.

### **Continuing Rhine surveys**

With the toll issue settled in 1868, the main focus of the CCNR in the final decades of the nineteenth century shifted to the physical improvement of the navigable channel. Again, the CCNR had no mandate to improve the channel itself, but it was to observe the navigable conditions, consult the respective

governments, and urge them to carry out the necessary hydraulic works swiftly and in consultation and accordance with the other riparian states.

The political context in which the CCNR operated changed rather radically in these decades. This also touched its very structure. After the French-German war in 1871, the French commissioner was substituted by a commissioner from the newly annexed imperial territories of Alsace-Lorraine. After 1871, the CCNR thus consisted merely of six representatives, one Dutch and five German. Also, the Commission operated in the context of increasing national power politics. The Technical Commission and the Rhine surveys proved, therefore, to be an indispensable CCNR tool to align and depoliticise the diverging interests of the riparian states in matters of stream ‘corrections’ in the long run, especially with regard to the two most disputed sections of the river, the Dutch Waal and the German Rheingau.

German-Dutch rivalries concerning the navigability of the Rhine returned time and again, especially after 1889, when a representative of the Prussian government had accused the Netherlands in the *Landtag* of not fulfilling its international commitments.<sup>53</sup> This verbal sabre-rattling also resulted in an emphasis on the problematic Dutch Rhine in historiography.<sup>54</sup> However, by studying contemporary pamphlets and the protocols of the Technical Commission of the various Rhine surveys, one must conclude that the navigable conditions on the German Rheingau were considered as bad or even worse in the period around the turn of the century. Again, it was time for the CCNR, and the CCNR only, to facilitate changes for the better.

The 1849 survey had encountered problems with regard to the appropriate measuring methods to be carried out and had led to disagreements about how to solve the countless navigational obstacles. Nevertheless, the survey was regarded as a success as it had resulted in the first general expert impression of the conditions for navigation all along the Rhine. Moreover, it had set an example of transnational expert cooperation that successfully allowed the CCNR to formulate at least three commonly accepted demands of the governments of the respective riparian states. The first was that the governments involved would turn themselves to all the shortcomings identified with the required energy corresponding to the importance and urgency of the matter. Furthermore, that wherever riparian states needed to agree on the coordination and financing of the required works, they would do so as soon as possible, given the obligation each of them had towards the whole. And finally, that the CCNR would receive all information about the progress of the works.<sup>55</sup>

The 1861 survey was the first opportunity to test the progress of the hydraulic works on an international scale. The Technical Commission of the Rhine Survey was not impressed. In particular, it observed many sandbanks on the Waal. Therefore, the Commission announced a new measure to determine a ‘normal depth’ for all sections of the Rhine on the basis of technical feasibility. As a matter of fact, for the Waal, the Technical Commission demanded a normal depth of 3 metres at average low-water level.

Under this and Prussian diplomatic pressure, the Netherlands became aware that the regulation of the Waal was not merely necessary in terms of maintaining the Rhine's capacity as a transport road, but also technically feasible. In the course of the 1860s the Dutch government significantly increased the budget for the river regulation works from 1 million to 3 million guilders a year.<sup>56</sup>

During the subsequent survey in 1874, the Technical Commission was more positive about the conditions on the Dutch Rhine. It detected significant improvements on the Neder-Rijn and Lek. The depth was still not fully satisfactory as it did not correspond to the 'normal depth' of 3 metres. However, the Dutch commissioner of the survey, H.S.J. Rose, argued that this branch of the Rhine was mainly used for rafting and the transport of people, something that did not require more than the actual depth. Moreover, a further increase of the depth implied a further narrowing down of the river, he argued, and this in turn would result in high-water conditions that created the greatest difficulties for landowners, and which were also not favourable for rafting.

With regard to the more important branch of the Rhine, the Waal, the Commission observed significant improvements. Due to the energetic regulating works that had been carried out since 1861, the overall depth increased by 30 centimetres, while on the regulated stretches the depth of the navigable channel reached 3.5 metres.<sup>57</sup> Shipping on the Waal was boosted significantly after the early 1870s, specifically due to increasing mass transport of raw materials from and to the German Ruhr industry.<sup>58</sup> Nevertheless, because the works were not carried out in conjunction with each other and over greater lengths, the river was still not regulated consistently. The Technical Commission concluded that, even though the Dutch government had finally shown its commitment to the improvement of the Waal, the full regulation of this important waterway still required extensive hydraulic works.<sup>59</sup>

Critiques of the conditions of the Dutch Waal had been harsh, but criticism of the German Rheingau was certainly not less severe. In addition, it found an audience that was much wider, while the plans to improve the waterway and expand the security ports met with much more resistance. In a pamphlet addressed to the CCNR and the Technical Commission some weeks before the 1874 survey, the representatives of all the German steam shipping companies on the Rhine sounded the alarm. They acknowledged much had happened to support navigation on the Rhine; however, to maintain prosperous navigation still more was needed. The '*Rheinschiffahrts-Interessenten*' observed sandbanks and unregulated conditions ('*verwilderte Zustand*') that either blocked navigation between the Niederrhein and the Oberrhein, or caused innumerable transshipments and consequently an enormous loss of time and increasing freight rates on this stretch of the Rhine. Recently, the pamphlet continued, the water was so shallow that one of the shipping companies had to distribute its 3,000 tons of cargo over 20 instead of the normal 10 vessels. Other ships had to return or were obliged to transship their cargo

to other ships. The shipping industry's loss, a damage that cannot even be calculated they argued, was the railway's gain. In their eyes, the Prussian-Hessian agreement after 1866 on the improvement works took the interests of the Rheingau dwellers too much into account. In its annual report the Cologne Chamber of Commerce also wrote 'that the general public interest of the necessary quick and sufficient improvement of the fairway in the Rheingau can no longer be inferior to the private interests and amenities of individual landowners.'<sup>60</sup>

In addition, on the Prussian part of the Rhine improvements were still to be made, especially at Sankt Goar, the notorious Loreley, where accidents continued to occur. Deepening the shipping channel could be a most expensive operation, the representatives of all the German steam shipping companies argued, but it was worth it in order to maintain a prosperous shipping industry that would be resistant to the expanding railways. These operations would prevent the enormous investments already made in the improvement of the Rhine stream from becoming totally worthless. Only after such 'corrections' of the stream had been achieved were the boatmen secured of a safe fairway and the river could become prosperous again, the pamphleteers concluded.

In a final appeal to the German commissioners specifically, the *Rheinschiffahrts Interessenten* underlined the strategic importance the Rhine had regained after 1871. Not only had the river proved its usefulness during the war against France, but *Deutschlands Strom* could also be a fundamental part of the nation's economic interests. These economic interests in turn constructed the strongest foundation for

the expansion of the new German Empire, their protection belongs to the most important goals that are set in the empire's legislation, in order to enhance the new empire's power and prestige to raise national prosperity and to secure the peace of the old world.<sup>61</sup>

The CCNR immediately submitted the pamphlet to the assessment of the Technical Commission, having the politically sensitive allegations checked by sound empirical evidence. This shows once again how at this point the Technical Commission was consistently used as a tool of depoliticisation. In reaction, this Commission concluded that the observations and demands expressed in the pamphlet were 'not unfounded.' In fact, the Technical Commission acknowledged that it had demanded an integrated approach to the regulation of the Rheingau multiple times itself.<sup>62</sup>

Even after 1877, when low water levels and the proliferation of sandbanks had caused a major shipping crisis on the Dutch Waal, the main concern among the German Rhine industrialists remained the German Rhine. This appears in yet another pamphlet written by the group of German Rhine steam-shipping companies that by then had turned into an official organisation, the Association for the Protection of Rhine Shipping Interests (*Vereins*



*Figure 6.1* The Niederwalddenkmal close to Rudesheim was inaugurated in 1883. It commemorates the German unification and the founding of the empire in 1871. The lyrics of ‘Die Wach am Rhein’ and its location represent the symbolic significance of the river for the German unification  
Source: Niederwalddenkmal (2009) Wikipedia, Traveler100. (CC BY-SA 3.0)

*zur Wahrung der Rheinschiffahrts-Interessen*).<sup>63</sup> The 1877 pamphlet concerning ‘the conditions for navigation on the Rhine’ was addressed to the Federal Chancellery in Berlin, the highest authority of the North German Confederation. Here, the old Prussian CCNR commissioner, Rudolph von Delbrück, had only recently been substituted as president by the Hessian politician Karl von Hofmann. Invoking article 4, paragraph 9 of the constitution that stipulated that the empire was to supervise ‘Rafting and navigation upon those waters which are common to several States, and the condition of such waters, as likewise river and other water dues,’ the Association urged the federal government to act quickly. After all, good working waterways were among the basic conditions for a prosperous economy.

The pamphlet identified several threats to the navigability of the Rhine. One of these was too *laissez-faire* an approach. More supervision of the authorities could help reduce the many accidents that had occurred on the Rhine in recent years. Furthermore, the Association advocated for stricter punishment of those who did not comply with the safety regulations, for example, by withdrawing their shipping licence. ‘[We consider] this punishment simply necessary, to prevent anarchy that we would otherwise surely encounter.’ In addition, a uniform signposting system would not only serve safe navigation, it would also be indispensable in settling liability disputes between ship-owners. Finally, the transport of flammable or toxic substances needed to be executed with special care and these products should never be in contact with consumable goods.

Apart from the unsatisfying way the Convention of Mannheim was applied, it was mostly the poor condition of the navigability of certain segments of the Rhine that was worrisome. In particular, the Rheingau, between Mainz and Bingen – to which the pamphlet devoted two full pages of its 14 sheets – urgently needed improvements. This need was recognised by everybody, but since the first Rhine survey, nothing fundamental had changed. Initially, it had been disagreements between the two riparian states involved, Hesse-Darmstadt and Nassau, that had delayed the works. Eventually, they agreed on a correction plan, but then the works were stopped during the 1870 war against France, and were not picked up by Prussia after the peace settlement, even though Prussia had always advocated for the improvement of the Rheingau, and from 1866 also had it in its possession. The explanation here, according to the pamphleteers, was that rather than the common interest of a well-functioning waterway, Prussia took the interests of the inhabitants of the Rheingau too much into account.

This allegation was spot on. In 1875 the banker and trader in weapons, but also an enthusiastic wine producer from Nassau, Heinrich Eduard von Lade (1817–1904), convinced the Prussian House of Representatives to act reluctantly with regard to the corrections in the Rheingau. The benefits that the full correction would yield for a couple of large steam tug companies would never outweigh the disadvantages for the local inhabitants. The alteration of the landscape made the region less attractive for tourism. Moreover, it would affect agriculture and viticulture, as it cut direct access to the river and thus to the vital supply of fertiliser and fodder. But more importantly, the reduction of the water surface reduced sunlight reflection and water evaporation, increasing the risk of freezing and drought in the vineyards. Finally, the corrections would expose the local population to the risk of floods and the dissemination of diseases from the newly formed marshes.

In an internal evaluation of the memorandum, the CCNR was critical of most of the concerns the Association had raised, but it fully endorsed the difficulties of the navigability of the Rheingau, as did the Technical Commission. Yet the CCNR could do very little as long as ‘The negotiations [between Hesse-Darmstadt and Prussia] are still pending on this matter.’<sup>64</sup> The CCNR continued its efforts to bring the diverging interests closer together. However, employing the Technical Commission did not result in the desired convergence of national policies regarding the regulation of the Rhine, at least not in the short run.

Simultaneously, while Prussia stood its ground, perspectives in the Netherlands shifted. The complete disruption of traffic on the Waal in 1876, with more than 700 ships grounded near Rossum, proved the seriousness of the situation. The resulting expressions of disapproval from the riparian states and the Technical Commission made the Dutch government decide to turn on the money tap for river regulations.<sup>65</sup> ‘[Only] the benefits that the Netherlands derives from its geographical location will have to ensure the resources for

the preservation and development of its prosperity for our people,' the government wrote in a clarification on a new law authorising the construction and improvement of the Dutch waterways.<sup>66</sup> It was H.S.J. Rose, the Dutch Chief Engineer who also had been part of the Technical Commission in 1874 and now was director of the new department of river management, who was to supervise the regulation program.<sup>67</sup>

In 1885 the Technical Commission observed that 14 per cent of the Waal did not reach a 3-metre depth. While the government was somewhat hesitant because of the ensuing costs, the Dutch seaports and shipping industry were very much in favour of digging out the Waal. Even the Dutch Rhine commissioner, W.F. Leemans – the first Dutch engineer in the CCNR and Chief Engineer of the Dutch Authority of Major Rivers – found the demands justified. The Prussians had successfully dug out the Rhine from Cologne to the Dutch border to a depth of 3 metres. The Dutch shipping industry would not fully benefit from these conditions if the channel in the Dutch Rhine was not as deep. In addition, he found that the Netherlands was morally required to comply.<sup>68</sup> In the final two decades of the century, the Netherlands, albeit with trial and error, heavily invested in clearing the navigable channel in the Waal. In 1896 the Commission observed considerable improvements, although at some parts the navigable channel still suffered from unsound or unfinished conditions, conditions that continued to be problematic after the survey of 1908.<sup>69</sup>

Progress was also made in Germany. In January 1884 Hesse-Darmstadt and Prussia concluded an agreement on the correction of the Rheingau. In the 1896–1897 Rhine survey the technical commissioners observed that the level of improvement was similar to that on the Waal. However, the Rheingau agreement also continued to take the local landowners' interests to heart, resulting in a correction that was not as rigorous as Rhine navigation might require. It was true that the removal of sandbanks with ad hoc steam dredgers prevented a total stagnation of shipping. However, the Technical Commission concluded, these temporary conditions thwarted the full allocation of the loading capacities of vessels on the entire Middle Rhine. With this circumstance in mind, the commissioners in the CCNR found it necessary to record in the final protocol that a further improvement of the Rheingau was desirable and, according to the Technical Commission, technically possible. The Prussian and Hessian commissioners gently but decidedly disagreed. During the 1908 Rhine survey, the commissioners repeated their judgement: if the correction plan was based on purely hydraulic principles, the improvement of the fairway would be more favourable and longer lasting.<sup>70</sup>

In the Netherlands the hydraulic works on the Waal were eventually completed in 1924. In Germany it was only in the 1960s and 1970s that the shipping canal both on the Upper and the Middle Rhine was deepened by an additional 40 centimetres and the Binger Loch was enlarged to 120 metres in width, which finally secured the continuity of large-scale shipping.

**Principles, norms, and institutions**

From the previous sections it becomes clear that the ‘correction’ of the Rhine was a complicated matter in a hydrotechnical sense. The character of the Rhine was different everywhere, making it impossible to design and carry out one master correction plan. In addition, it was immersed in a changing socio-economic environment. After 1849, in general terms, the principal goal of the hydraulic works on the Middle Rhine, Lower Rhine, and the Dutch segments of the Rhine was to secure the freedom of navigation and eliminate threats to individual ships, and the Rhine shipping industry as such, in the context of an increasingly competitive railway network. On the Upper Rhine, between Basel and Mannheim, the correction works focused on the navigability of the fairway rather than on traditional flood prevention, but only at the very end of the nineteenth century.<sup>71</sup> Looking in more detail, we also saw that the diverse and conflicting interests along and beyond the Rhine influenced the extent and character of the hydraulic works that were being carried out. Sometimes national economic interests stood in the way of transnational shipping and commercial interests. At other times, local interests conflicted with appeals to moral obligations, or even with the imperial duty of maintaining peace in the ‘Old World.’ Yet despite these complications and the diverse levels of Rhine regulation, we can conclude that the Technical Commission was a major organisational innovation that allowed an integral approach to Rhine regulation and was able to generate a coherent set of principles, norms, institutions, and practices.

The Technical Commission of the Rhine surveys constituted an organisational innovation because it facilitated communication between the main water engineers from the respective riparian states within one official body. This body informed the CCNR on the nautical conditions of the navigable Rhine and controlled whether the promised corrections were indeed carried out. In turn, this information enabled the CCNR to make well-informed demands from the riparian governments. Furthermore, technical commissioners such as the Prussian Nobiling, the Dutch Rose, and the Baden Honzell, were not only the most respected engineers of their time, they also stood at the head of centralised national bodies that dealt exclusively with the Rhine. This meant that they were not only in the best position to inform the CCNR about the conditions and the development of the works, they could also make sure to implement the approved correction plans effectively.

What is more, the Technical Commission offered solutions to the detected problems from an integrated perspective. That means that the solutions offered were compatible with the character of, or with the correction works on, other parts of the Rhine. It goes without saying that this was also a process of trial and error. Technological innovations that were successfully applied on one part of the Rhine might or might not be effective on other parts of the river. Engineers in the Netherlands, for example, were striking out blindly for a long time due to the complex hydromorphological conditions of

the estuary. Nevertheless, the Technical Commission was an effective body that collected and dispersed knowledge in this field of expertise. Contemporaries very much appreciated this quality of the Commission. In 1877 the Association for the Protection of Rhine Shipping Interests made a plea to carry out surveys much more regularly, thereby advancing some sort of an institutional memory, keeping ‘as long as possible the same hydraulic engineers ... entrusted with these investigations.’<sup>72</sup> Finally, the Technical Commission and the CCNR were instructive for the shipping industry, not only because they warned where the greatest risks were to be expected, but also because they spread the news about where the dangers had passed thanks to the hydraulic works that had been carried out.

As a result of knowledge building, the Technical Commission was eventually also able to set norms and standards regarding ‘normal depth,’ ‘normal width,’ the appropriate number and location of security ports, and signposting. As we have seen above, in 1861 the Technical Commission set the standard depth for all the segments of the Rhine. These standards, though, were never written in stone and could, as a result of moving technological insights, be adapted. This happened, for example, on the Upper Rhine, where in 1897 the technical commissioners concluded that the normal depth of 1.5 metres, as determined in 1861, was, due to all the new technological experiences on the Middle and Lower Rhine, to be regarded as obsolete. These standards were not part of an international agreement, and therefore could not be forced on the national governments. Nevertheless, the depth standards certainly functioned as a diplomatic stick that bore legitimacy as we have seen in the Waal and the Rheingau cases.

In both cases we saw that the interests of navigation were weighted against the interests of local landowners, and the interests of the state coffers. In the end, it was a combination of national and local interests and relative state power that determined what a country would and would not do within an international cooperative condominium. Yet the composition of the Technical Commission, with one leading engineer from each riparian state, yielded credibility and legitimacy to their verdicts, even when based on a majority. Van Eysinga claims that the regularity of the surveys resulted in timely adjustments of the respective national correction policies that may have ultimately prevented inter-riparian disputes. Indeed, CCNR norms could hardly be disregarded as targets beneficial for Rhine navigation and, as such, informed the range of national policies and generated a converging pace in the long run.

In the second half of the nineteenth century the Technical Commission became a fully institutionalised tool of the CCNR to harmonise, standardise, and optimise the Rhine for the benefit of its navigation. Initially, the Technical Commission was employed for the Rhine surveys only, but it was charged with an increasing range of tasks during these decades. It assessed plans for bridge building. It was asked to advise on the standardisation of the beacon system, on the reform of the ship investigation authorities, on the curriculum

of the skippers' school, and on the construction of a hydro-electric station on the navigable Rhine close to Hünigen in 1906.<sup>73</sup> More than the local Rhine inspectors, these men possessed the technological knowledge and executive powers to tackle these problems. As a body, the Technical Commission was called in exclusively by the CCNR. Thus, the agenda-setting capacity remained with the CCNR and provocative initiatives such as those from the Chief Inspector were avoided.

## Conclusion

Besides mitigating the political tensions within the CCNR, the Technical Commission increased the potential of the CCNR to steer the convergence of riparian politics regarding Rhine navigation. In fact, even the Franco-Prussian war did not interfere with the depoliticisation of the freedom of its navigation or with the continuing existence and activities of the CCNR itself. These activities were only seriously endangered after the turn of the century, specifically with the outbreak of the First World War. Indeed, it was at the point when the CCNR and the Rhine regime were at the brink of collapse that they received new political and academic attention.

## Notes

- 1 Martin Friedrich Rudolph von Delbrück, *Lebenserinnerungen, 1817–1867: mit einem Nachtrag aus dem Jahre 1870*, Volume 1 (Leipzig: Verlag von Duncker & Humblot, 1905), 230–231.
- 2 See R.M. Möller, 'Steps Towards the Sublime? Jens Baggesen's Account of Strasbourg Cathedral in Labyrinth and the Concept of the Sublime,' *Transfiguration, Nordic Journal of Christianity and the Arts* 6, no. 2 (2004): 80–81.
- 3 Delbrück, *Lebenserinnerungen* I, 230–231.
- 4 AdBR, 212J, 201, protocol XIII, 1 September 1859.
- 5 AdBR, 86J, protocol XVI, regular session 10 September 1860.
- 6 W.J.M. Van Eysinga, *Die Zentralkommission für die Rheinschiffahrt; Geschichtliche Darstellung. Verfasst auf Veranlassung der Zentralkommission für die Rheinschiffahrt* (Leiden: A.W. Sijthoff, 1936), 104–106.
- 7 Hein A.M Klemann and Joep Schenk, 'Competition in the Rhine Delta: Waterways, Railways and Ports, 1870–1913,' *Economic History Review* 66, no. 3 (2013): 829.
- 8 [www.historicalstatistics.org/Currencyconverter.html](http://www.historicalstatistics.org/Currencyconverter.html).
- 9 AdBR, 212J, 262, Uebersicht der Brutto-Einnahme bei den Rheinzollämtern während des Jahres 1851, attachment to protocol iv, August 1852.
- 10 Delbrück, *Lebenserinnerungen* I, 232–233. Van Eysinga, *Die Zentralkommission für die Rheinschiffahrt*, 94–95.
- 11 AdBR, 212J, 199, protocol xi, paragraph ii, 4/7 September 1857.
- 12 H.P.H. Nusteling, *De Rijnvaart in het tijdperk van stoom en steenkool 1831–1914: een studie van het goederenvervoer en de verkeerspolitiek in de Rijndelta en het achterland, mede in verband met de opkomst van de spoorwegen en de concurrentie van vreemde zeehavens* (Amsterdam: Holland Universiteits Pers, 1974), 49–55.
- 13 *Allgemeine Zeitung* 119 (Augsburg), 28 April 1860, 3.
- 14 The four topics on the agenda were appointing a president for the session; granting Chief Inspector Auer's retirement; approving each other's powers of attorney; and

- agreeing upon the formal documents regarding the conditions for constructing a new Rhine bridge near Mainz.
- 15 T.M.C. Asser, *Iets over de Rijntollen* (Amsterdam, 1860), 23. He uses, in Dutch, the term ‘Europese staatzorg.’
  - 16 Delbrück, *Lebenserinnerungen* II, 190–193. Nusteling, *De Rijnvaart*, 49–55. Also T.M.C. Asser, ‘De kluisters van Rhenus,’ *De Gids* 25 (1861): 317.
  - 17 *Allgemeine Zeitung Augsburg* nr. 119, 28 April 1860, 3. That is almost 40,000 euros in 2015. [www.historicalstatistics.org/Currencyconverter.html](http://www.historicalstatistics.org/Currencyconverter.html).
  - 18 Constantin Ardeleanu, *The European Commission of the Danube: ‘An Experiment in International Administration’* (Leiden: Brill, forthcoming), chapter 3.
  - 19 Carl Hermann Bitter, *Gesammelte Schriften* (Leipzig and Berlin: W. Frierich, 1885), 173ff.
  - 20 Robert Eitner, ‘Bitter, Karl Hermann’, in *Allgemeine Deutsche Biographie* 47 (1903), 2–3, [www.deutsche-biographie.de/pnd118511394.html#adbcontent](http://www.deutsche-biographie.de/pnd118511394.html#adbcontent).
  - 21 Ardeleanu, *The European Commission of the Danube*, introduction.
  - 22 Van Eysinga, *Die Zentralkommission für die Rheinschiffahrt*, 65.
  - 23 AdBR, 86J, 89, Bitter, Promemoria I, 10 April 1861.
  - 24 AdBR, 86J, 89, Promemoria IIa, Bitter, 10 April 1861.
  - 25 Heino Kalweit and Werner Buck, *Der Rhein unter der Einwirkung des Menschen: Ausbau, Schiffahrt, Wasserwirtschaft* (Lelystad: Secretariat CHR/KHR, 1994), 128.
  - 26 AdBR, 86J, 89, Promemoria IIIa, Bitter, 10 April 1861.
  - 27 AdBR, 86J, 89, protocol I of the Technical Commission for the Rhine Survey, Basel, 29 April 1861.
  - 28 AdBR, 212J, 256, secret protocols iv, 17 April 1862.
  - 29 AdBR, 212J, 204, protocol xiv, 30 August 1862.
  - 30 AdBR, 212J, 256, secret protocol xx, 13 September 1862.
  - 31 Nusteling, *De Rijnvaart*, 66–74.
  - 32 Hein A.M. Klemann and Joep Schenk. ‘The Rhine in the Long 19th Century. Creating the Lower Rhine Region,’ in *Transnational Regions in Historical Perspective*, ed. Ben Wubs, Hein A.M. Klemann, and Marten Boon (London and New York: Routledge, 2020), 35. Klemann and Schenk, ‘Competition in the Rhine Delta,’ 831.
  - 33 Van Eysinga, *Die Zentralkommission für die Rheinschiffahrt*, 64–66.
  - 34 Delbrück, *Lebenserinnerungen* I, 232. Nusteling, *De Rijnvaart*, 61, 74, n41, 82.
  - 35 Van Eysinga, *Die Zentralkommission für die Rheinschiffahrt*, 94.
  - 36 Zentral-Kommission für die Rheinschiffahrt, *Rheinurkunden, Sammlung zwischenstaatlicher Vereinbarungen, landesrechtlicher Ausführungsverordnungen und sonstiger wichtiger Urkunden über die Rheinschiffahrt seit 1803 II (1860–1918)* (The Hague: Nijhoff and München and Leipzig: Duncker & Humblot, 1918), 117.
  - 37 Nil Disco, ‘“One Touch of Nature Makes the Whole World Kin”: Ships, Fish, Phenol, and the Rhine, 1815–2000,’ in *Cosmopolitan Commons: Sharing Resources and Risks across Borders*, eds. Nil Disco and Eda Kranakis (Cambridge and London: MIT Press, 2013), 278.
  - 38 Van Eysinga, *Die Zentralkommission für die Rheinschiffahrt*, 59.
  - 39 AdBR, 86J, box 53, Protokoll der Verhandlungen, bezüglich einer Uebereinkunft über gemeinsame Bestimmungen für die Fischerei im Rheine, 16 August 1869.
  - 40 Disco, ‘Ships, Fish, Phenol, and the Rhine,’ 279–281.
  - 41 Haus der Abgeordneten, ‘Denkschrift betreffend die Uebereinkunft über gemeinsame Bestimmung für die Fischerei im Rheine etc.,’ in *Aktenstück nr. 231, Anlagen zu den Stenographische Berichte über die Verhandlungen des Preußischen Hauses der Abgeordneten: 1869/70*, 2 (Berlin, 1870), 1090.
  - 42 Thomas Ashworth, *Essay on the Practical Cultivation of a Salmon Fishery, Addressed to the President and Council of the International Congress, to Promote*

- the Cultivation of Fisheries, Held at Arcachon, 1866* (London: Judd and Glass, 1866), 28. Italics original.
- 43 Disco, 'Ships, Fish, Phenol, and the Rhine', 280–281.
- 44 As cited by *ibid.*, 282.
- 45 *Ibid.*, 282n29.
- 46 *Ibid.*, 282.
- 47 Francois P.L. Pollen, *Is de overeenkomst tusschen de Rijnsoeverstaten over gemeenschappelijke bepalingen op de visscherij in den Rijn in het belang van Nederland? Een vraag op natuurkundige gronden beantwoord en geschiedkundig toegelicht voor hen, die belang stellen in den bloei en de instandhouding der Nederlandsche zalmvisscherijen* (Leiden, 1870), 12.
- 48 *Ibid.*, 7, 19.
- 49 A. Quakernaat van Spijk, *Eenige opmerkingen naar aanleiding der brochure van den heer Francois P.L. Pollen over de Nederlandse zalmvisscherijen* (Zaltbommel, 1870), 7–8. Also A. Quakernaat van Spijk, *Eenige beschouwingen over onze zalmvisscherijen naar aanleiding der gesloten overeenkomst te Mannheim dd. 27 november 1869* (Zaltbommel, 1870).
- 50 Disco, 'Ships, Fish, Phenol, and the Rhine', 290–291.
- 51 AdBR, 86J, box 53, Protokoll der Verhandlungen, bezüglich einer Uebereinkunft über gemeinsame Bestimmungen für die Fischerei im Rheine, 16 August 1869, 4.
- 52 Pollen, *Nederlandsche zalmvisscherijen*, 19–20.
- 53 Nusteling, *De Rijnvaart*, 238–239. Also Staten-Generaal. Tweede Kamer. Zitting van dinsdag 1 October. Waalverbetering, *Algemeen Handelsblad*, 2 October 1889, 2.
- 54 Especially Eberhard Gothein, *Die Schiffahrt der deutschen Ströme: Untersuchungen über deren Abgabenwesen, Regulierungskosten und Verkehrsverhältnisse*, Volume 2: *Geschichtliche Entwicklung der Rheinschiffahrt im XIX. Jahrhundert* (Leipzig: Duncker & Humblot, 1903) and Christian Eckert, *Rheinschiffahrt im 19. Jahrhundert* (Leipzig: Duncker & Humblot, 1900).
- 55 AdBR, 86J, 89, protocol I, Bitter, 29 April 1861. Also AdBR, 212J, 261, protocol vi, 19 September 1850.
- 56 Alex Van Heezik, *Strijd om de rivieren: 200 jaar rivierenbeleid in Nederland of de opkomst en ondergang van het streven naar de normale rivier* (Den Haag, Haarlem: HNT Historische producties, 2007), 102–103.
- 57 AdBR, 86J, 89, Begutachtungsprotokoll no. v, Arnhem 5 October 1874.
- 58 Joep Schenk, 'Coal, Iron Ore and the Rise of the Rotterdam-Ruhr Relationship, 1850–1914,' in *Transnational Regions in Historical Perspective*, eds. Marten Boon, Hein A.M. Klemann, and Ben Wubs (London, New York: Routledge, 2020), 57–102.
- 59 AdBR, 86J, 89, Begutachtungsprotokoll no. v, Arnhem 5 October 1874.
- 60 AdBR 86J, 51, *Vereins zur Wahrung der Rheinschiffahrts-Interessen. Die Schiffahrtsverhältnisse auf dem Rhein betreffend*, 30 April 1877, Koblenz.
- 61 AdBR, 86J, 66, *Denkschrift der Hochverordneten Central-Commission für die Rheinschiffahrt und der Strombefahrungs-Commission überreicht von Rheinschiffahrts-Interessenten im Sommer 1874* (Mannheim, 1874), 15.
- 62 AdBR, 212J, 214, Protokoll der Strombefahrungs-Commission, Arnhem, 8 October 1874.
- 63 Brady even calls it a cartel, with strong unifying powers in the shipping sector all over Germany: Robert A. Brady, 'Industrial Policy,' *Journal of Economic History* 3 (1943): 111. [www.jstor.org/stable/2113064](http://www.jstor.org/stable/2113064).
- 64 AdBR 86J, 51, Extraordinary Session, protocol ii, Rotterdam, 30 June 1877.
- 65 Schenk, 'Coal, Iron Ore and the Rise of the Rotterdam-Ruhr Relationship,' 57–102.
- 66 Nusteling, *De Rijnvaart*, 234.
- 67 Heezik, *Strijd om de rivieren*, 105.

- 68 Nusteling, *De Rijnvaart*, 241. Van Heezik, *Strijd om de rivieren*, 103–104.
- 69 AdBR 86J, 89, Schluss-Protokoll, Mainz 13 May 1897, and Schluss-protokoll, Mannheim 11 September 1908.
- 70 AdBR, 86J, 89, Schluss-Protokoll, Mannheim 11 September 1908.
- 71 AdBR, 86J, 89, Gemeinschaftliche technische Rheinstrom-Befahrung 1896/97. Begutachtungs-Protokoll iii, Mannheim 5 May 1897.
- 72 AdBR 86J, 51, *Vereins zur Wahrung der Rheinschiffahrts-Interessen. Die Schiffahrtsverhältnisse auf dem Rhein betreffend*, 30 April 1877, Koblenz.
- 73 AdBR, 212J, 268, protocol i of the 2nd Extraordinary Session, 21 December 1906, and protocol xxix of the 2nd Extraordinary Session, 1 June 1907.

# Conclusion

## Composing a heritage and projecting the future of the CCNR (1900–1918)

### W.J.M. van Eysinga

March 1916. The war in Europe was in full swing, yet the Dutch member of the Rhine Commission and professor of law, Willem van Eysinga, could not disregard the fact that this year the Commission had its centenary. Van Eysinga realised that the situation did not lend itself particularly well to a party, but he did not wish to have the anniversary not celebrated at all. In a letter to his German colleagues he therefore proposed to compile a book with all international and national regulations concerning the navigation of the Rhine since 1803. He believed this would be a work of lasting value. Despite his positions as full professor both at Leiden University and the Netherlands School of Commerce in Rotterdam, van Eysinga fully embarked on the undervalued task of realising his book plan.

It was no surprise that the representatives of the German Rhine states showed reticence, but above all restraint. The Baden commissioner, Wiener, said he was pleased that his Dutch colleague was willing to take on this work on a voluntary basis, but added that 'it is probably not easy to find people in German government circles who are able to participate in such an assignment in these times.' Van Eysinga thought he observed at least some sympathy for the idea, and thus started trying to convince the other German commissioners by firmly declaring that the work was only a collection of existing formal documents, and did not have any critical, historical, or legal pretensions. That, and the fact that most of the work would be carried out free of charge by the Dutchman, made the Germans decide to eventually accept the idea. Together they decided which documents were to be included, what the title of the work would be, and what the content of the introduction would look like. The publication costs of 5,000 guilders and 200 free copies of the work would be shared evenly among the six member states. A year later, in September 1918, Van Eysinga presented to his fellow commissioners Volume I of the *Rheinurkunden* containing the first 300 documents, spanning the 1803–1860 period.<sup>1</sup> Not surprisingly, the preface was straightforward: it justified the selection of documents and pointed at earlier works that collected or explained the Rhine's legal documentation. 'A work like this was missing so

far for the river, which legal system has become the basis for all other international rivers,' the preface notes.<sup>2</sup>

Van Eysinga's zeal to complete this task needs, of course, to be regarded in the context of world events. The war ravaged most continents and fuelled nationalism, interstate rivalry, and the erection of political boundaries. His books were not mere documentation of the legal regime of the Rhine, but concerned the heritage of the Commission's efforts. At this point, there was no need for a critical, legal, or historical study of the Rhine regime. In this book, Van Eysinga pointed to the CCNR as a glimmering beacon in dark times. By showing its legal achievements, the CCNR demonstrated to the world that it was possible to construct a regional legal community that crossed borders; a stepping stone to what Van Eysinga thought of as most desirable, that is, a global legal community.<sup>3</sup>

### **The CCNR as part of the European security culture in the nineteenth century**

*The Rhine and European Security in the Long Nineteenth Century: Making Lifelines from Frontlines* has told the story of how the frontline of an international river was turned into a lifeline due to the cooperative effort of the respective riparian states in the Central Commission for the Navigation of the Rhine. Thereby, it told the story of the highest state officials, such as Hardenberg, Castlereagh, and King Willem I, but also explained the contribution of second-tier officials such as Clancarty and Humboldt; administrative experts such as Eichhoff and Bitter; engineers, merchants, skippers; and of course the commissioners of the CCNR themselves. Together, they negotiated shared interests and imagined threats and translated these into the coming about of a new regime on the Rhine, based on the modern principle of freedom of navigation. The construction of the Rhine regime consisted not merely of the construction of a legal community, but also of an epistemic community of technocrats as well as an interest community. The CCNR succeeded, as an international forum and platform of communication and cooperation, by trial and error, largely in recalibrating respective national interests towards a common interest.

This book has uncovered the centrality of the concepts of security and prosperity, both as contemporary reflections and discursive practices, within this process of recalibration. And therefore it claims that the security-prosperity nexus, the mutual causal relationship between the organised anticipation of being unharmed in the future, on the one hand, and the organised anticipation of maintaining livelihood, on the other, is key in the study of the formation of a European security culture after 1815. Ultimately, the formation of this security culture consisted of a shared moral commitment, of finding innovative ways of international cooperation and of a sense of imperialist optimism. This shared commitment, cooperation, and optimism helped a great deal in implementing the principle of freedom of navigation and as a result indeed made Europe a more prosperous and more secure place.<sup>4</sup>

Starting with moral commitment, the documents showed that after 1814 contemporaries were charged with a sense of a new beginning for European society, based on a responsible, legitimate, and righteous order advancing the common good. In the discussions during the inception phase of the CCNR, a wide range of stakeholders used terms such as ‘slavery,’ ‘dependence,’ and ‘yoke,’ leading to ‘unpredictability,’ ‘anarchy,’ ‘disorder,’ and ‘chains,’ not only to describe the conditions of Rhine navigation in the era prior to the new order, but also to describe the possible harmful future conditions on the Rhine if the parties concerned did not comply with the Allies’ demands. In a similar vein, opposing Rhine policies was quickly labelled uncivilised or immoral by calling it ‘barbarism,’ ‘feudalism,’ or ‘despotism,’ based on a ‘spirit of egoism,’ ‘privileges,’ ‘abusiveness,’ ‘arbitrariness,’ and ‘dishonesty.’ In other words, opposing and harmful policies belonged to the old, not the present, order. The present order, on the other hand, was described as a ‘moral union’ that consisted of a ‘mild,’ ‘soft,’ and ‘liberal’ system based on ‘freedom,’ ‘equality,’ and ‘competition’ advancing ‘reciprocal civilisation,’ ‘development,’ and ‘the European national interest.’

That sometimes it was as much about *being* as it was about *appearing* morally just, is shown by the example of the Dutch strategy in the 1820s. In the *jusqu’à la mer* dispute the Dutch made a great effort to appear law-abiding, rational, soft, and liberal. This resulted in a successful riparian alliance against Prussia. However, the strategy also caused the de facto closing off of the estuary from the new Rhine regime – thereby limiting the understanding of ‘freedom of navigation.’ In addition, during this inception phase of the new regime, ‘reciprocity’ became a key concept in the interaction between the organised anticipation of maintaining livelihood on the one hand and the organised anticipation of being unharmed in the future on the other. Whereas in 1814 the Allies projected a Rhine regime benefiting Europe as a whole, by 1831 the Rhine states realised a regime based on *riparian* reciprocity, favouring merely each other’s citizens. This restricted notion of reciprocity also explains why Prussia and the Netherlands finally agreed to settle the *jusqu’à la mer* dispute between themselves. After all, Great Power interference would almost certainly have entailed allowing the other European powers to enjoy the liberal Rhine regime as well, possibly affecting emerging German industrialisation along the Rhine. Thus, by 1831 the CCNR had turned from a moral union that was to protect European security, into a moral union that was to protect riparian prosperity, based on inter-riparian reciprocity, trade security, and freedom of navigation.

The innovative ways of international cooperation that the CCNR embodied and produced were the second aspect of this new security culture. Being the first intergovernmental organisation in modern history meant that the CCNR was advancing into unknown territory from the very beginning. The commissioners relied on their administrative experience and managed to establish a diplomatic forum, with all its formal and less formal qualities. In the fields of geophysics, hydraulics, socio-economic data, and navigation they relied on their

young administrative regime that collected local information, but also on often politicised reports coming from national authorities and finally on external expertise. Technological innovations pushed the CCNR along its course to further inter-riparian cooperation and transparency. To counter the accusation of being an abusive power, the Netherlands, for example, felt obliged to share rather sensitive information on state subsidies for the newly established steam tug service on the Waal around the 1830s. But it was, above all, political developments that shaped inter-riparian cooperation. It was only after the increasing disorder on the Rhine had resulted in a severe legitimacy crisis of the CCNR in the 1840s that it started to employ a riparian network of leading hydraulic engineers more consistently and regained increasing prominence.

This network, institutionalised in a Technical Commission, essentially had the task of surveying the river for navigability. Thereby, it contributed to increasing transparency on local conditions, and generated common norms by promulgating uniform indicators of progress, such as the depth of the navigable channel, the height of the constructed bridges, the amount of cargo transported on the Rhine, and, most importantly, the number of investments made by the individual riparian governments in the improvement of the navigable stream. With the Technical Commission, the CCNR harnessed its regime by implementing a soft compliance mechanism of external expert input, internal intermediation, and majority denouncement. This mechanism to promote compliance sometimes resulted in converging national policies only in the longer run, such as in the case of the stream correction programmes. Nonetheless, the convergence increased, and sometimes the mechanism even resulted in the main riparian state, i.e. Prussia, conforming itself to the wishes of the riparian condominium, such as in the case of the Cologne bridge construction.

Finally, the CCNR showed signs of imperialist optimism as well. It stretched its uniform rule over the Rhine with the aim of protecting the principle of freedom of navigation and expanding commerce along its banks. Yet sometimes its tentacles tried to reach further. In the case of the struggle between the sailors and the steam shipping industry in 1848, the CCNR was prepared to look away, at least temporarily, from its main responsibility to secure the freedom of navigation in favour of the sailors' survival. Another example is the case of the protection of the salmon stock in the Rhine. The CCNR was careful not to enter this policy field formally, but it deliberately offered its diplomatic infrastructure to forge consensus among the riparian states. In these cases, its ambitions were greater than its final achievements, but they show how the CCNR assumed responsibilities that went beyond its original purposes. The latter point also counts for the CCNR's ruling over standing bridge constructions over the Rhine, thereby assuming an imperative role in matters that touched other public interests – such as interregional railway construction.

The CCNR thus gradually became a more technocratic platform, with an emphasis on prosperity-enhancing technical interventions for the Rhine,

counterbalancing national political interests. This proved essential both for successfully mitigating the political tensions regarding the Rhine correction programmes and for the very survival of the Commission's legitimacy. Therefore, we can conclude that by the end of the nineteenth century the security-prosperity nexus still set in motion the formation of a Rhine regime that in turn produced, enabled, and influenced a collective security culture. However, we can also observe a major change in the mechanism underlying this formation. In 1815 the CCNR had been mainly the product of European security considerations. The Great Powers believed that European security was contingent on European prosperity, and international cooperation with the aim of implementing the principle of freedom of navigation on international rivers was the way to go. By the end of the nineteenth century, we can observe that the CCNR had become the product of riparian prosperity considerations. Even in the context of ever-expanding railways, the Rhine had fully regained its competitive position as a transport road by 1900. The CCNR had depoliticised the principle of freedom of navigation as a common good and had institutionalised a Technical Commission that produced new norms that helped the convergence of riparian Rhine policies and quelled inter-riparian conflict regarding the freedom of navigation. From a security platform driving prosperity, the CCNR had turned into a technocratic platform driving security.

### **Europe and beyond**

As a body the CCNR successfully expanded its authority and impact on the Rhine societies in the course of the nineteenth century. But the modern principle of freedom of navigation on international rivers itself turned into a much more forceful imperative, bringing order and commercial security to the outskirts of Europe and beyond as well.<sup>5</sup> Constantin Ardeleanu clearly reveals how after the Crimean War the European powers applied this European principle on the Danube, but in a more far-reaching way than they had done in 1815. With the Paris Peace Treaty of 1856, the European powers seized the opportunity to remove Russia from the Lower Danube, and to establish a riparian commission and a European commission. The latter one, the ECD, successfully enforced the freedom of navigation *of all flags* and expanded its authority and assumed ambitions that went far beyond the stipulations of the 1856 Peace Treaty. It applied regulations, tariffs, and hydrotechnical plans. It established diplomatic relations with neighbouring states. And, importantly, it had significant financial resources, as it levied tolls on the Danube and took out loans from international banks. The European powers legitimated their far-reaching authority with the argument that the new sovereign on the Danube, the Ottoman Empire, could not provide the

guarantees of order and security which European navigation imperiously needed, and so, in order to compensate for its inexperience, its notorious

impotence, even its ill-will, the governments deemed it expedient to invest their plenipotentiaries with a part of their sovereign rights.<sup>6</sup>

As signatory of the Paris Peace Treaty, the riparian government of the Ottoman Empire was still part of the ECD, yet its interests were subjected to the larger European interest of opening up the Danube for European commerce.

During the Berlin West Africa Conference in 1884–1885, concerns for local sovereignties along the Congo were completely absent.<sup>7</sup> The conference is generally understood as a diplomatic attempt to resolve the rising tensions among the European powers by creating a legal and political framework that ensured an ‘orderly’ colonial expansion on the African continent.<sup>8</sup> Yet some historians emphasise that the conference’s main objective was to secure access and free trade in an important prospective market without bearing the costs of colonial administration.<sup>9</sup> The conference was, so historian Ronald Robinson writes, ‘essentially the work of diplomats regulating future inter-European relations in African commerce, from the standpoint of the balance of power in the world at large.’<sup>10</sup>

In the Act of Navigation for the Congo that was adopted during the conference, freedom of navigation was granted for all flags, and also applied to the tributaries, lakes, and canals in the entire Congo Basin. Transit rights were prohibited, and roads, (future) railways, and canals that were constructed to substitute for poorly navigable parts of the river were subject to the Act as well.<sup>11</sup> An International Congo Commission, consisting of European powers alone, would ensure compliance with, and the implementation of, the stipulations of the Act of Navigation.<sup>12</sup> With an appeal to the civilising qualities of the European effort to tame the Congo with a modern river regime and turn it into a commercial highway, the European powers legitimised a far-reaching inter-imperial intervention that went much further than any previous river regime and would advance their material benefits greatly at the expense of local communities.<sup>13</sup>

However, the inter-imperialist ambitions on the African rivers turned out to be more problematic than it might have appeared in 1885. For a new organisation in an unknown continent, it was impossible to find sufficient funding. Additionally, King Leopold’s Congo Free State constituted an administrative competitor – leaving very little space for independent action. The Commission, Yao writes, ‘became a diplomatic formality never to leave the pages of the legal document.’<sup>14</sup> Indeed, the implementation of the principle of freedom of navigation on the Congo failed.<sup>15</sup> Robinson concludes, therefore, that ‘the conference has to be seen as an exercise of the European imagination, a typical expression of the contemporary world view,’<sup>16</sup> a worldview that also turned imperial the principle of freedom of navigation.

## **What remained**

In 1919, during the Paris Peace Conference, the European powers took upon themselves the task of re-establishing international river regimes as one of

their priorities. Before the negotiations started, Van Eysinga published an account of the historical evolution of international river law. He deliberately pictured the existing Rhine regime as a benign form of international cooperation that showed a linear development between 1815 and 1919. Intentionally, he did not touch upon the ‘dark’ sides of the encompassing security culture. He merely warned that there was much to spoil and suggested that the regime deserved to be followed up after the horrors of the First World War.<sup>17</sup> During the negotiations in October the same year, Van Eysinga became the Dutch representative to the International Rivers Conference in Paris. There, however, he could not prevent, with Germany and Austria absent, the victorious Powers having a free rein in the design of the new regimes on the Rhine and the Danube.

As was to be expected, Britain finally seized the opportunity to adapt both regimes in such a way that the rivers became entirely freely navigable for all flags. Moreover, the commissions would admit representatives of non-riparian states, which provided, according to the French prime minister Clemenceau, ‘security that the general interest will be considered.’<sup>18</sup> Contemporaries welcomed the new regimes as the concluding step of a process that had started on the Rhine in 1815 and continued with the 1856 example of the Danube regime. The 1919 regime finally adhered to the ‘true and international spirit, and in opposition to national egoism and bad faith.’<sup>19</sup> Yet the new regimes were not as progressive and based on rational considerations as these contemporaries suggested. In fact, by internationalising merely the German rivers and by allowing Germany only a minority vote in the new commissions, while Allied states, primarily Great Britain but also France and Italy, gained a larger say, these regimes were very much a way to contain Germany’s future economic development and political weight. Symbolically, the seat of the CCNR was moved from German Mannheim to French Strasbourg, where it still is today.<sup>20</sup>

In contrast to 1815, when France was directly – and on an equal footing – admitted to the CCNR, the language of legal continuity barely masked the victors’ political power play in Versailles.<sup>21</sup> It was only in 1963, pushed by the growing economic importance of Germany, that the Rhine Commission returned to its pre-Versailles constellation and the Mannheim Convention was largely restored. The year 1919, therefore, clearly constituted a regime shift on the Rhine. In his famous ‘Peace Without Victory’ speech to the Senate, US president Woodrow Wilson (1856–1924) did call the freedom of maritime navigation a ‘*sine qua non* of peace, equality, and cooperation,’ and he called ‘The free, constant, unthreatened intercourse of nations ... an essential part of the process of peace and of development.’<sup>22</sup> Moreover, in his Fourteen Points, he accorded the principle of freedom of navigation the second place on the list. Generally, Wilson considered wealth creation and distribution a pre-requisite to peace and security. Point III of the Fourteen Points therefore called for the removal of economic barriers and the equality of trade conditions among all nations. Yet it was only after the Second World War that economic development and peace or the freedom of navigation and security

became mainstream, mutual complementing elements in international politics again.

Only after the Second World War was security again understood to be inseparable from prosperity. The United States applied the Marshall Plan through the Organisation for European Economic Co-operation in order to create economic development and economic integration for the sake of counterbalancing the expansion of the Soviet Union on the European continent. In 1950, Robert Schuman launched his plan for a European Coal and Steel Community to put the production of the most important commodities for warfare under the auspices of a common authority. Just as in 1815, when Vienna imposed a river regime that eliminated the imperial abuse of the river as a transport resource, sharing coal and steel resources made ‘war not only unthinkable, but materially impossible’ after 1952. ‘The mainspring of the EU’s founding fathers lay in the link between common economic development and sustaining peace on the continent,’ Hans Merket writes.<sup>23</sup>

The prerogative to rebuild the European continent and boost its economy after the Second World War demanded a high level of international cooperation and coordination. Besides the European Coal and Steel Community, the European Economic Community, as founded by the Treaty of Rome in 1956, would also be active in the field of international transport and river transport. With alternative methods and other participants, these organisations constituted administrative competitors to the CCNR. Yet even the first president of the Commission of the EEC, and founding father of the European Union, Walter Hallstein (1901–1982), stated in 1961:

Let us not forget that soon the Mannheim Act governs navigation on the Rhine for a hundred years according to principles closely related to those of our Treaty of Rome. In both we find the principle of equality of treatment, absence of discrimination and above all freedom, which, as you know, we want to employ as the foundation of our transport policy within the Community.<sup>24</sup>

In the decades following the Second World War, the EEC drew upon and worked increasingly with the institutions, norms, laws, and practices of depoliticisation the Rhine Commission had already established in the previous century.<sup>25</sup>

## Notes

- 1 AdBR, 86J, 8, *Fête du centenaire de la commission centrale 1916–1919*. Specifically, protocols xvi, 19 May 1916; xii, 7 September 1917; and 6 September 1918.
- 2 Zentral-Kommission für die Rheinschiffahrt, *Rheinurkunden. Sammlung zwischenstaatlicher Vereinbarungen, Landesrechtlicher Ausführungsverordnungen und sonstiger wichtiger Urkunden über die Rheinschiffahrt seit 1803 I* (The Hague: Nijhoff and München and Leipzig: Duncker & Humblot, 1918), v.
- 3 J.H.W. Verzijl, ‘Levensbericht W.J.M. van Eysinga’, in *Jaarboek, 1960–1961* (Amsterdam 1961), 302–309.

- 4 This trichotomy in the concept of security culture has been coined by Beatrice de Graaf, *Tegen de terreur. Hoe Europa veilig werd na Napoleon* (Amsterdam: Prometheus, 2019), 394.
- 5 Constantin Ardeleanu, *The European Commission of the Danube: 'An Experiment in International Administration'* (Leiden: Brill, forthcoming). Luminita Gatejel, 'Imperial Cooperation at the Margins of Europe: the European Commission of the Danube, 1856–65,' *European Review of History: Revue européenne d'histoire* 24, no. 5 (2017): 781–800. Joanne Yao, "'Conquest from Barbarism": The Danube Commission, International Order and the Control of Nature as a Standard of Civilization,' *European Journal of International Relations* 25, no. 2 (2018): 1–25.
- 6 As cited by Ardeleanu, *The European Commission of the Danube*, chapter 3.
- 7 Yuan (Joanne) Yao, *Constructing the Ideal River: The 19th Century Origins of the First International Organizations* (Unpublished diss., London, 2016), 144.
- 8 A. Anghie, *Imperialism, Sovereignty and the Making of International Law* (Cambridge: Cambridge University Press, 2007), 90–91.
- 9 Immanuel Geiss, 'Free Trade, Internationalization of the Congo Basin, and the Principle of Effective Occupation,' in *Bismarck, Europe and Africa: The Berlin Africa Conference 1884–1885 and the Onset of Partition*, eds. Stig Förster et al. (Oxford: Oxford University Press, 1988), 263–280.
- 10 R. Robinson, 'The Conference in Berlin and the Future in Africa, 1884–1885,' in *Bismarck, Europe and Africa: The Berlin Africa Conference 1884–1885 and the Onset of Partition*, eds. Stig Förster, Wolfgang Justin Mommsen, and Ronald Edward Robinson (Oxford: Oxford University Press, 1988), 1–26.
- 11 Marc de Decker, *Europees internationaal rivierenrecht* (Antwerp and Apeldoorn: Maklu, 2015), 224–226.
- 12 G. De Courcel, 'The Berlin Act of 26 February 1885,' in *Bismarck, Europe and Africa: The Berlin Africa Conference 1884–1885 and the Onset of Partition*, eds. Stig Förster, Wolfgang Justin Mommsen, and Ronald Edward Robinson (Oxford: Oxford University Press, 1988), 252–260.
- 13 Matthew Craven, 'Between Law and History: The Berlin Conference of 1884–1885 and the Logic of Free Trade,' *London Review of International Law* 3, no. 1 (2015): 49–54. T. Maluwa, 'The Origins and Development of International Fluvial Law in Africa: A Study of the International Legal Regimes of the Congo and Niger Rivers from 1885 to 1960,' *Netherlands International Law Review* 29, no. 3 (1982): 381.
- 14 Yao, *Constructing the Ideal River*, 182.
- 15 Maluwa, 'International Fluvial Law in Africa.' De Decker, *Europees internationaal rivierenrecht*, 226–228.
- 16 Robinson, 'The Conference in Berlin,' 19–21.
- 17 W.J.M. Van Eysinga, *L'évolution du droit fluvial international du Congrès de Vienne au Traité de Versailles* (1919), 23p.
- 18 As cited by Yao, *Constructing the Ideal River*, 193.
- 19 *Ibid.*, 194.
- 20 De Decker, *Europees internationaal rivierenrecht*, 229–233, 243–246. *Centrale Commissie voor de Rijnvaart, 1815–2015. 200 Jaar geschiedenis* (Straatsburg: CCR, 2015), 116–126.
- 21 Yao, *Constructing the Ideal River*, 195.
- 22 President Woodrow Wilson, 'Peace Without Victory' speech, 22 January 1917. 64th Cong., 23 Sess. Senate Document No. 685: 'A League for Peace,' accessed 29 January 2020, <http://web.mit.edu/21h.102/www/Wilson%20>.
- 23 Hans Merket, *The EU and the Security-Development Nexus: Bridging the Legal Divide* (Leiden: Brill, 2016), 27.
- 24 As cited in *200 Jaar geschiedenis*, 215.
- 25 *200 Jaar geschiedenis*, 182–223.

# Appendix 1

## Members of the Central Commission for the Navigation of the Rhine 1816–1914

### Baden

Von Müssig	1816–1818
Von Hartleben	1818–1821
Buchler	1821–1832
von Dusch	1832–1835
Ignaz Fränzing	1835–1836
Franz Frhr von Andlaw	1836–1838
Ludwig Von Kettner	1838–1844
Von Reizenstein	1844–1849
Gustav Kühenthal	1849–1861
Rudolph Dietz	1861–1870
Muth	1870–1878
von Stoesser	1879–1888?
Schenkel	1892?–1899?
Roderich Straub	1902?–1906
Alexander Wiener	1907–1914

### Bavaria

Bernard Sebastian Von Nau	1816–1845
Franz Alwens	1845–1846
Carl von Kleinschrod	1846–1865
Wilhelm Weber	1865–1879
frhr. Von Völderndorff	1879–1895?
Von Bever	1899?–1903
Frhr von Hirschberg	1904–1914

### France

Hirsinger	1816–1824
Hubert Engelhardt	1821–1824/1830–1851
Baron St. Mars	1825–1830

174 *Appendix 1*

Eug. Doumerc	1852–1854
Theodor Goepf	1855–1869
Maria Joseph von Zeltner	1869–1870

**Alsace-Lorraine**

Metz	1873–1888
Wendt (subst.)	1888–?
Munzinger	1892
Von Traut	1895–1910
Cronau	1911–1913
Schlössingk	1914

**Hesse-Darmstadt**

Balthasar Pietsch	1816–1824
Georg Carl August Verdier de la Blaquiere	1824–1846
Carl Schmitt	1846–1871
Carl (v.) Neidhardt	1872–1875
Carl von Werner	1876–1898
Maximilian von Biegeleben	1898–1909
Hermann Imroth	1909–1914

**Nassau**

Ludwig von Roessler	1816–1835
Frh. Hans Constantin von Zwierlein	1835–1844/1848–1859
Moritz von Gagern	1844–1846/1863–1866
Scholtz	1847
Vigelius	1859–1860/1862
Friedrich Wilhelm Schepp	1861–1862

**The Netherlands**

J. Bourcourd	1816–1832
P.A. Ruhr	1832–1848
Theodore Jean Travers	1848–1859
E.F.E. Testa	1859–1868
R.W.J.C. De Menton Bake	1868–1871
W.A.P. Verkerk Pistorius	1871–1879/1887–1889
W.A. Baron van Verschuer	1879–1887
T.M.C. Asser	1889–1895
W.F. Leemans	1895–1910
W.J.M. Van Eysinga	1910–1914

**Prussia**

Jacobi	1816–1825
Heinrich Delius	1822–1833
von Schütz	1833–1837
Westphal	1837–1841
Grafen von Unruh	1841–1842
Johann Friedrich Von Pommer-Esche I	1842–1849
Martin Friedrich Rudolph Delbrück	1849–1860
Moser	1860–1867
Graf von Villers	1867–1868
Herzog	1868–1871
Jacobi	1873
Albrecht Wilhelm Jebens	1874–1876
Wendt	1877–1888?
Gamp	1892?–1895?
von der Hagen	1899?–1904
Walter Eduard Karl von Bartsch	1905–1912
Franke	1913
von Meyeren	1914

## **Appendix 2**

### **Administration of the Octroi/Central Commission for the Navigation of the Rhine 1815–1914**

#### **Special Commission (Preparatory works) 1815–1816**

Johann Joseph Eichhoff

Peter Jacob Gergens

Carl Albrecht Wilhelm Von Auer

#### **Administrative Commission 1815–1831**

Friedrich Christian Solms-Laubach 1815–1817

Carl Albrecht Wilhelm Von Auer 1815–1817

Anton Gergens 1815–1831

Ferdinand Wilhelm August Von Auer 1815–1817

Johann Friedrich Ockhardt dir 1817–1831

Christian Ferdinand Wenzel 1817–1831

#### **Chief Inspector 1831–1867**

Ferdinand Wilhelm August Von Auer 1831–1860

Carl Herman Bitter 1860–1867

# Archival sources

## The Netherlands

*Nationaal Archief, Den Haag (NL-HaNA)*

2.05.01  
2.05.10.10  
2.21.006.48  
2.21.006.51  
2.21.085

## Germany

*Bayerisches Hauptstaatsarchiv, München (BHSt)*

MF 58762

*Geheime Staatsarchiv Preußischer Kulturbesitz, Berlin (GStA)*

III. HA MdA, 1367  
III. HA MdA, 1372  
HA. Rep. 81

*Hessisches Staatsarchiv, Darmstadt (HStAd)*

E 1 J 10

## France

*Archiv Départemental du Bas-Rhin, Strasbourg (AdBR)*

86J  
212J

**United Kingdom**

*The National Archives, London (TNA)*

FO 37/70

FO 92/4

FO 139/11

FO 881/262

# Selected bibliography

- Angeberg, Comte d'. *Le Congrès de Vienne et les traités de 1815 avec une introduction historique par M. Capefigue* I. Paris: Amyot, 1864.
- Anghie, A. *Imperialism, Sovereignty and the Making of International Law*. Cambridge: Cambridge University Press, 2007.
- Ardeleanu, Constantin. *The European Commission of the Danube: 'An Experiment in International Administration'*. Leiden: Brill, forthcoming.
- Arndt, E.M. *Der Rhein. Deutschlands Fluss, aber nicht Deutschlands Gränze*. Leipzig: Wilhelm Rein, 1813.
- Ashworth, Thomas. *Essay on the Practical Cultivation of a Salmon Fishery, Addressed to the President and Council of the International Congress, to Promote the Cultivation of Fisheries, Held at Arcachon, 1866*. London: Judd and Glass, 1866.
- Asser, T.M.C. 'De kluisters van Rhenus.' *De Gids* 25 (1861).
- Asser, T.M.C. *Iets over de Rijntollen*. Amsterdam, 1860.
- Bacon, R. 'British Policy and the Regulation of European Rivers of International Concern.' *British Yearbook of International Law* 10 (1929): 158–170.
- Baedeker, K. *The Rhine and Northern Germany. Handbook for Travellers*. 4th ed. Koblenz and London, 1870.
- Baines, Edward. *History of the Wars of the French Revolution, From the Breaking Out of the War, in 1792, to the Restoration of a General Peace, in 1815. Comprehending the Civil History of Great Britain and France During that Period, II*. London: Longman etc., 1817.
- Becker, Andreas. *Napoleonische Elitenpolitik im Rheinland: die protestantische Geistlichkeit im Roerdepartement 1802–1814*. Köln: Böhlau Verlag, 2011.
- Bennemann, Nils. 'Von der Synthese zur Standardisierung: Kartographisches Wissen in der Zentralkommission ca. 1817–1880.' Kolloquium 'La Commission Centrale pour la Navigation du Rhin: 200 ans d'Histoire.' Strasbourg, 18 and 19 June 2015.
- Bergh, F. van den. *Die Felsen-Sprengungen im Rhein bei Bingen zur Erweiterung des Thalweges im Binger-Loche*. Koblenz: Karl Baedeker, 1834.
- Berghe, P.A. van den et al., 'Messeigneurs. Open Letter by the Chiefs of the Antwerp Bourgeoisie,' 29 November 1787.
- Bernhardt, Christoph. *Im Spiegel des Wassers. Eine transnationale Umweltgeschichte des Oberrheins (1800–2000)*. Cologne: Böhlau Verlag, 2016.
- Betrachtungen über den Thalweg des Rheins, als Grenzscheide zwischen Deutschland und Frankreich: ein Wort zu seiner Zeit an Deutschlands Regierungen, deren Gebieth an diesen Thalweg grenzt*. N.p., 1802.

- Bitter, Carl Hermann. *Gesammelte Schriften*. Leipzig and Berlin: W. Frierich, 1885.
- Blackbourn, David. *The Conquest of Nature: Water, Landscape, and the Making of Modern Germany*. London: Random House, 2011.
- Blanken (Jzn), Jan. *Memorie betrekkelijk den staat der rivieren in opzigt harer bedijingen, der dijkbreuken en der overstromingen van vroegere tijden tot die der laatste in het jaar 1821, benevens de daarin opgeslotene aanmerkingen op het Proef-ontwerp tot sluiting van den Neder-Rijn en de Lek en het storten van derzelven water op den Yssel van C. R. T. Krayenhoff*, vol. 1. Utrecht: O.J. van Paddenburg and O.J. van Dijk, 1823.
- Bock, Benedikt. *Baedeker & Cook: Tourismus am Mittelrhein 1756 bis ca. 1914*. Frankfurt: Peter Lang, 2010.
- Bostridge, Ian, and Richard Stokes. *The Book of Lieder. The Original Texts of over 1000 Songs*. London: Faber & Faber, 2005.
- Brady, Robert A. 'Industrial Policy.' *Journal of Economic History* 3 (1943): 108–123.
- Bright, J. Franck. *English History. For the Use of Public Schools. Period 3 (1689–1837)*. London: Rivingtons, 1877.
- Brophy, J.M. 'The Rhine Crisis of 1840 and German Nationalism: Chauvinism, Skepticism, and Regional Reception.' *Journal of Modern History* 85, no. 1 (2013): 1–35.
- Burgess, J. Peter, and Taylor Owen, eds. 'Special Section: What Is "Human Security"?' *Security Dialogue* 35, no. 3 (2004): 345–387.
- Buzan, Barry. *People, States & Fear. The National Security Problem in International Relations*. Brighton: Harvester Books, 1983.
- Buzan, B., O. Wæver, and J. de Wilde. *Security a New Framework for Analysis*. Boulder and London: Lynne Rienner, 1998.
- Campbell, J.B. *Rivers and the Power of Ancient Rome*. Chapel Hill: University of North Carolina Press, 2012.
- Campbell, R.H., and A.S. Skinner, eds. *An Inquiry into the Nature and Causes of the Wealth of Nations. The Glasgow Edition of the Works and Correspondence of Adam Smith*, vol II. Oxford: Clarendon Press, 1976.
- Central Commission for the Navigation of the Rhine (CCNR), 1815–2015. *200 Years of History*. Strasbourg: CCR, 2015.
- Centrale Commissie voor de Rijnvaart, 1815–2015. *200 Jaar geschiedenis*. Straatsburg: CCR, 2015.
- Chamberlain, J.P. *The Danube. In Five Parts*. Washington, 1918.
- Chamberlain, J.P. *The Regime of the International Rivers: Danube and Rhine, Studies in History, Economics, and Public Law*, vol. CV, no. 1. New York: Columbia University Press, 1923.
- Chisholm, Hugh, ed. 'Albert I.' *Encyclopaedia Britannica* 1. 11th ed. Cambridge: Cambridge University Press, 1911.
- Ciok, Mark. *The Rhine. An Eco-biography 1815–2000*. Seattle and London: University of Washington Press, 2002.
- Clark, Christopher. *IJzeren koninkrijk. Opkomst en ondergang van Pruisen 1600–1947*. Amsterdam: Bezige Bij, 2016.
- Cobbett, William. *Cobbett's Political Register*, vol. 1. *From January to June, 1802*. London: Cox and Bayliss, 1802.
- Cogan, Thomas. *The Rhine: or, a Journey from Utretch [sic] to Francfort; Chiefly by the Borders of the Rhine, and the Passage Down the River from Mentz to Bonn: Described in a Series of Letters Written from Holland, to a Friend in England, in the*

- Years 1791 and 1792. Embellished with Twenty-four Views in Aqua Tinta and a Map of the Rhine from Mentz to Bonn*, vols. I and II. London: J. Woodfall, 1794.
- Cole, G.D.H. *The Life of William Cobbett*. Reprint, Abingdon, New York: Routledge, 2011.
- Committee of the sailors, *Darstellung der wahren Verhältnisse der Segelschiffahrt, im Geiste des Fortschrittes, zu Jedermanns Aufklärung und zur Beurtheilung der von den Schlepsschiffahrts-Unternehmungen im September 1848 versuchten Entstellung derselben*. Mainz, October 1848.
- Conze, Werner. 'Sicherheit, Schutz.' In *Geschichtliche Grundbegriffe: historisches Lexikon zur politisch-sozialen Sprache in Deutschland*, part 5, edited by Otto Brunner, Werner Conze, and Reinhart Koselleck, 831–862. Stuttgart: Klett-Cotta, 1984.
- Coulomb, F. 'Adam Smith: A Defence Economist.' *Defence and Peace Economics* 9, no. 3 (1998):299–316.
- Craven, Matthew. 'Between Law and History: The Berlin Conference of 1884–1885 and the Logic of Free Trade.' *London Review of International Law* 3, no. 1 (2015): 31–59.
- De Courcel, G. 'The Berlin Act of 26 February 1885.' In *Bismarck, Europe and Africa: The Berlin Africa Conference 1884–1885 and the Onset of Partition*, edited by Stig Förster, Wolfgang Justin Mommsen, and Ronald Edward Robinson, 252–260. Oxford: Oxford University Press, 1988.
- De la Navigation du Rhin. Memoire imprimé par ordre du Comité consultatif du commerce de Strasbourg*. Strasbourg: Levrault, 1802.
- Decker, Marc de. *Europees internationaal rivierenrecht*. Antwerp and Apeldoorn: Maklu, 2015.
- Delbrück, Martin Friedrich Rudolph von. *Lebenserinnerungen, 1817–1867: mit einem Nachtrag aus dem Jahre 1870*, vol. 1 and 2. Leipzig: Verlag von Duncker & Humblot, 1905.
- Denkschrift der Hochverordneten Central-Commission für die Rheinschiffahrt und der Strombefahrungs-Commission überreicht von Rheinschiffahrts-Interessenten im Sommer 1874*. Mannheim, 1874.
- Deseure, B. "'Sa splendeur et sa décadence sont également célèbres" – Het Scheldeverhaal als politiek instrument tijdens de Franse periode.' *Tijdschrift voor Geschiedenis* 123, no. 4 (2010): 534–553.
- Die Kohlen-Kaufmannschaft, Gewerken und Schiffsbesitzer. *Die Dampfschlepsschiffahrt des Rheines und insbesondere mit Beziehung auf den Kohlen-Bergbau*. Dusseldorf, 1848.
- Die Rheinischen Dampf-Schlepp-Schiffahrts-Unternehmungen. *Das wahre Verhältniss der Rheinischen Schlepp- Dampf- Schiffahrt und der Segelschiffer*. Frankfurt am Main: Krebs-Schmitt, 1848.
- Diefendorf, Jeffry M. *Businessmen and Politics in the Rhineland, 1789–1834*. Princeton, NJ: Princeton University Press, 1980.
- Disco, Nil. "'One Touch of Nature makes the Whole World Kin": Ships, Fish, Phenol, and the Rhine, 1815–2000.' In *Cosmopolitan Commons: Sharing Resources and Risks across Borders*, edited by Nil Disco and Eda Kranakis. Cambridge and London: MIT Press, 2013.
- Dodd, Charles Edward. *An Autumn Near the Rhine; Or Sketches of Courts, Society, and Scenery in Germany: With a Tour in the Taunus Mountains in 1820*. 2nd ed. London: J. Murray, 1821.
- Eckert, Christian. *Rheinschiffahrt im 19. Jahrhundert*. Leipzig: Duncker & Humblot, 1900.
- Eichhoff, J.J. *Mémoire sur les quatre départemens réunis de la rive gauche du Rhin, sur le commerce et les douane de ce fleuve*. N.p., 1801.

- Eichhoff, J.J. *Pragmatisch-Geschichtliche Darstellung der Verhandlungen und Beschlüsse des Congress-Comitté für die Freiheit der Flüsse; so wie der Berathungen der, in Gefolge jener Beschlüsse in Mainz niedergesetzten Central-Commission. Gegenwärtige Lage dieser Berathungen.* Mainz, 1819.
- Eichhoff, J.J. *Projet du Règlement Définitif concernant la Navigation du Rhin, son Administration, sa Police, et les Droits à y percevoir. Précédé du Rapport Général développant les principes et les motifs qui ont servi de base à ce travail. Présenté à la Commission Centrale.* Mainz: Zabern, February 1817.
- Eichhoff, J.J. *Topographisch-statistische Darstellung des Rheines: mit vorzüglicher Rücksicht auf dessen Schifffahrt und Handlung bisherigen Zustand seiner polizeilichen Verfassung, deren möglichen Verbesserung und Ausdehnung auf die übrigen grossen Ströme, womit er theils schon in Verbindung steht, theils noch gebracht werden könnte.* Cologne: Rommerskirchen, 1814.
- Eitner, Robert. 'Bitter, Karl Hermann.' In *Allgemeine Deutsche Biographie* 47 (1903).
- Eysinga, W.J.M. Van. *Die Zentralkommission für die Rheinschifffahrt; Geschichtliche Darstellung. Verfasst auf Veranlassung der Zentralkommission für die Rheinschifffahrt.* Leiden: A.W. Sijthoff, 1936.
- Eysinga, W.J.M. Van. *L'évolution du droit fluvial international du Congrès de Vienne au Traité de Versailles.* Leyde: A.W. Sijthoff, 1919.
- Ferrebeuf, Florian. *Der Beginn der Revolution von 1848 in Mainz aus der Sicht eines ausländischen Diplomaten, des französischen Konsuls Engelhardt.* N.p., 2010.
- Foner, P.S. *The Complete Writings of Thomas Paine.* New York: The Citadel Press, 1945.
- Frederick I. *The Crusade of Frederick Barbarossa: The History of the Expedition of the Emperor Frederick and Related Texts.* Farnham and Burlington: Ashgate, 2013.
- Gallie, W.B. 'Essentially Contested Concepts.' *Proceedings of the Aristotelian Society*, n.s., 56 (1956): 167–198.
- Gatejel, Luminita. 'Imperial Cooperation at the Margins of Europe: The European Commission of the Danube, 1856–65.' *European Review of History: Revue européenne d'histoire* 24, no. 5 (2017): 781–800.
- Geiss, Immanuel. 'Free Trade, Internationalization of the Congo Basin, and the Principle of Effective Occupation.' In *Bismarck, Europe and Africa: The Berlin Africa Conference 1884–1885 and the Onset of Partition*, edited by Stig Förster, Wolfgang Justin Mommsen, and Ronald Edward Robinson, 263–280. Oxford: Oxford University Press, 1988.
- Gentz, Friedrich von. *On the State of Europe Before and After the French Revolution: Being an Answer to L'état de la France À la Fin de L'an VIII.* London: J. Hatchard, 1802.
- Glaser, R., and H. Stangl. 'Historical Floods in the Dutch Rhine Delta.' *Natural Hazards and Earth Sciences* 3 (2003): 605–613.
- Goldsworthy, A. *Pax Romana. War, Peace and Conquest in the Roman World.* London: Weidenfeld & Nicolson, 2016.
- Gothin, Eberhard. *Die Schifffahrt der deutschen Ströme: Untersuchungen über deren Abgabenwesen, Regulierungskosten und Verkehrsverhältnisse*, vol. 2: *Geschichtliche Entwicklung der Rheinschifffahrt im XIX. Jahrhundert.* Leipzig: Duncker & Humblot, 1903.
- Götz, Norbert. 'Epilogue: The Alpine System.' In *Regional Cooperation and International Organizations: The Nordic Model in Transnational Alignment*, edited by Norbert Götz and Heidi Haggren. London and New York: Routledge, 2009.

- Graaf, Beatrice de. *The Balancers. Fighting Terror after Napoleon*. Cambridge: Cambridge University Press, forthcoming.
- Graaf, Beatrice de. 'Bringing Sense and Sensibility to the Continent. Vienna 1815 Revisited.' *Journal of Modern European History* 13, no. 4 (2015): 447–457.
- Graaf, Beatrice de. 'Nederland en de collectieve veiligheid.' In *De wereld volgens Nederland. Nederlandse buitenlandse politiek in historisch perspectief*, edited by Jacco Pekelder, Remco Raben, and Mathieu Segers, 42–58. Amsterdam: Boom, 2015.
- Graaf, Beatrice de. 'Second-tier Diplomacy. Hans von Gagern and William I in their Quest for an Alternative European Order, 1813–1818.' *Journal of Modern European History* 12, no. 4 (2014): 546–566.
- Graaf, Beatrice de. *Tegen de terreur. Hoe Europa veilig werd na Napoleon*. Amsterdam: Prometheus, 2019.
- Graaf, Beatrice de, and Cornel Zwierlein. 'Historicizing Security. Entering the Conspiracy Dispositive.' *Historical Social Research* 38, no. 1 (2013): 46–64.
- Graham, M.W. *News and Frontier Consciousness in the Late Roman Empire*. Ann Arbor: University of Michigan Press, 2006.
- Groot, Hugo de. *De jure belli ac pacis*, lib. II, cap. II, Par. V and XII. Paris: Nicholas Buon, 1625.
- Habermas, J. 'Kant's Idea of Perpetual Peace with the Benefit of 200 Years' Hind-sight.' In *Perpetual Peace: Essays on Kant's Cosmopolitan Idea*, edited by K. Baynes and M. Lutz-Bachmann, 113–154. Cambridge, MA: Harvard University Press, 1997.
- Hajnal, Henry. *The Danube: Its Historical, Political and Economic Importance*. The Hague: Martinus Nijhoff, 1920.
- Hansard, T.C. *The Parliamentary Debates from the Year 1803 to the Present Time XXXII*. London, 1816.
- Haus der Abgeordneten. 'Denkschrift betreffend die Uebereinkunft über gemeinsame Bestimmung für die Fischerei im Rheine etc.' In *Aktenstück nr. 231, Anlagen zu den Stenographische Berichte über die Verhandlungen des Preußischen Hauses der Abgeordneten: 1869/70, 2*. Berlin, 1870.
- Heather, Peter. *Fall of the Roman Empire. A New History of Rome and the Barbarians*. Oxford: Oxford University Press, 2007.
- Heckscher, E.F. *Mercantilism I*. London and New York: Routledge, 2007.
- Heezik, Alex Van. *Strijd om de rivieren: 200 jaar rivierenbeleid in Nederland of de opkomst en ondergang van het streven naar de normale rivier*. Den Haag, Haarlem: HNT Historische producties, 2007.
- Herren, M., M. Rüesch, and C. Sibille. *Transcultural History: Theories, Methods, Sources*. Berlin and New York: Springer, 2012.
- Heß, Richard. 'Trunk, Johann Jakob.' In *Allgemeine Deutsche Biographie* 38. Leipzig: Thienemann-Tunicius, 1894.
- Hirschman, A.O. 'Rival Interpretations of Market Society: Civilizing, Destructive, or Feeble?' *Journal of Economic Literature* 20, no. 4 (1982): 1463–1484.
- Hont, Istvan. *Jealousy of Trade. International Competition and the Nation-State in Historical Perspective*. Cambridge, MA and London: The Belknap Press of Harvard University Press, 2010.
- Hooff, Johan op den. *Iets over de vaart op den Rijn*. Amsterdam: H. Gartman, 1826.
- Howe, Patricia Chastain. *Foreign Policy and the French Revolution: Charles-Francois Dumouriez, Pierre LeBrun and the Belgian Plan, 1789–1793*. New York: Palgrave Macmillan, 2008.

- Hume, David. 'Of the Jealousy of Trade.' In *Essays and Treatises on Several Subjects. Essays, Moral, Political and Literary*. Part II, essay VI, edited by David Hume. London: A. Miller, 1758.
- Immerzeel Jr., Johannes. *Hollands watersnood van den jare 1809*. 2nd ed. Den Haag: Immerzeel, 1809.
- Inama-Sternegg, Karl Theodor von. 'Nau, Bernhard Sebastian von.' In *General German Biography*, vol. 23 (1886).
- Iriye, A. *Global Community: The Role of International Organizations in the Making of the Contemporary World*. Berkeley: University of California Press, 2002.
- Jarrett, Mark. 'The "Congress System": The World's First "International Security Regime".' Unpublished paper, 2015.
- Jolivet, J.B.M. *Ueber den Thalweg des Rheins, in Hinsicht auf Grenze zwischen Frankreich und Deutschland, über die auf beiden Rheinufern angelegten Zölle, Mauthen und die den zwei Städten Mainz und Kölln zustehende Stapelgerechtigkeit*. Mainz: Crass, 1801.
- Kaczorowska, A. *Public International Law*. 4th ed. London and New York: Routledge, 2010.
- Kalweit, Heino, and Werner Buck. *Der Rhein unter der Einwirkung des Menschen: Ausbau, Schifffahrt, Wasserwirtschaft*. Lelystad: Secretariat CHR/KHR, 1994.
- Kant, Immanuel. *Project for a Perpetual Peace. A Philosophical Essay*. London: Vernor and Hood, 1796.
- Kant, Immanuel. *Zum ewigen Frieden. Ein philosophischer Entwurf*. Königsberg: Friedrich Niolovius, 1795.
- Kehlmann, Daniel. *Die Vermessung der Welt*. Reinbek bei Hamburg: Rowohlt Taschenbuch Verlag, 2018.
- Klemann, Hein A.M. *The Central Commission for the Navigation on the Rhine, 1815–1914. Nineteenth Century European Integration*. Rotterdam, ECHR working paper ECHR-2013-1, 2013.
- Klemann, Hein A.M., and Joep Schenk. 'Competition in the Rhine Delta: Waterways, Railways and Ports, 1870–1913.' *Economic History Review* 66, no. 3 (2013), 826–847.
- Klemann, Hein A.M., and Joep Schenk. 'The Rhine in the Long 19th Century. Creating the Lower Rhine Region.' In *Transnational Regions in Historical Perspective*, edited by Ben Wubs, Hein A.M. Klemann, and Marten Boon. London and New York: Routledge, 2020.
- Klöffler, Martin. 'Mapping the Theatre of War in Southwestern Germany by k.k. Generalquartiermesiter Heinrich v. Schmitt 1796–98.' Presentation at INS-Congress, Vienna, 12 July 2018.
- Klüber, Johann Ludwig. *Acten des Wiener Congresses in den Jahren 1814 und 1815*. Dritter Band, Heft 9–12. Erlangen: J.J. Palm und Ernst Ente, 1815.
- Knox Laughton, John. 'McArthur, John.' *Dictionary of National Biography, 1885–1900*, vol. 34. London: Smith, Elder & Co, 1893.
- Koponen, Juhani. 'The Security-Development Nexus, State Fragility and State Building. A Beginner's Guide to Discussion and Some Suggestions for Orientation.' In *Exploring the Security-Development Nexus. Perspectives from Nepal, Northern Uganda and 'Sugango'*, edited by Henni Alava, 23–42. Ministry for Foreign Affairs Finland, 2010.
- Krayenhoff, C.R.Th. *Proeve van een ontwerp tot sluiting van de rivier den Neder-Rhijn en Leck en het storten van derzelve water op den Ijssel*. Nijmegen: J.C. Vieweg en Zoon, 1821.

- Lauer, *Denkschrift betreffend die nothwendigkeit eines durchlasses für die Schifffahrt in der zwischen Köln und Deutz zu erbauenden Brücke*. Mannheim: H. Hogrefe, 1855.
- Leyens, Stéphane. 'Towards a Transcultural Definition of Prosperity. Insights from the Capability Approach.' In *Redefining Prosperity*, edited by Isabelle Cassiers, 41–56. London and New York: Routledge, 2015.
- Lievyns, A., Jean Maurice Verdot, and Pierre Bégat. *Fastes de la Légion-d'honneur: biographie de tous les décorés accompagnée de l'histoire législative et réglementaire de l'ordre*, vol. 5. Paris: Bureau de l'administration, 1847.
- Lindenfeld, David F. *The Practical Imagination: German Science of State in the 19th Century*. Chicago: University of Chicago Press, 1997.
- Lonnquest, John, Bert Toussaint, JoeManous, Jr., and Maurits Ertzen, eds. *Two Centuries of Experience in Water Resources Management. A Dutch–U.S. Retrospective*. Alexandria: Institute for Water Resources, US Army Corps of Engineers and Rijkswaterstaat, Ministry of Infrastructure and the Environment, 2014.
- Looz-Corswarem, C. 'Der Rhein als Verkehrsweg im 18. Jahrhundert.' In *Der Rhein als Verkehrsweg: Politik, Recht und Wirtschaft seit dem 18. Jahrhundert*, edited by Clemens Von Looz-Corswarem and Georg Mölich, 13–36. Bottrop: Pomp, 2007.
- Looz-Corswarem, Clemens Von, and Georg Mölich, eds. *Der Rhein als Verkehrsweg: Politik, Recht und Wirtschaft seit dem 18. Jahrhundert*. Bottrop: Pomp, 2007.
- Lyons, F.S.L. *Internationalism in Europe. 1815–1914*. Leiden: A.W. Sijthoff, 1963.
- McArthur, John. *Financial and Political Facts of the Eighteenth and Present Century: With Comparative Estimates of the Revenue, Expenditure, Debts, Manufactures, and Commerce of Great Britain*. London: W. Miller, 1803.
- Maluwa, T. 'The Origins and Development of International Fluvial Law in Africa: A Study of the International Legal Regimes of the Congo and Niger Rivers from 1885 to 1960.' *Netherlands International Law Review* 29, no. 3 (1982): 368–400.
- May, Georg. *Das Recht des Gottesdienstes in der Diözese Mainz zur Zeit von Bischof Joseph Ludwig Colmar (1802–1818)*. Amsterdam: B.R. Grüner, 1987.
- Merket, Hans. *The EU and the Security-Development Nexus: Bridging the Legal Divide*. Leiden: Brill, 2016.
- Möller, R.M. 'Steps Towards the Sublime? Jens Baggesen's Account of Strasbourg Cathedral in Labyrinth and the Concept of the Sublime.' *Transfiguration: Nordic Journal of Christianity and the Arts* 6, no. 2 (2004): 80–81.
- Nagler, Carl Ferdinand Friedrich "von". *Briefe des königl. Preuß. Staatsministers, General-Postmeisters und ehemaligen Bundestag-Gesandten Karl Ferdinand Friedrich von Nagler an einen Staatsbeamten: als ein Beitrag zur Geschichte des 19. Jh.*, vol. 1. Brockhaus, 1869.
- Nau, B.S. Von. *Beitraege zur Kenntniss und Beförderung des Handels und der Schifffahrt* I and II. Mainz: F. Kupperberg, 1818/1819.
- Nederland's Adelsboek* 10. The Hague: W.P. van Stockum & Zoon, 1912.
- Neue Allgemeine deutsche Bibliothek* 68. Berlin, 1801.
- Nienhuis, P.H. *Environmental History of the Rhine-Meuse Delta: An Ecological Story on Evolving Human-Environmental Relations Coping with Climate Change and Sea-level Rise*, 34–35. Dordrecht and London: Springer, 2008.
- Notizen über die neue Rhein-Brücke bei Köln. Zusammengestellt aus den Geschäftsberichten der Direction der Köln-Mündener Eisenbahn-Gesellschaft und andern veröffentlichten Berichten*. Köln: F.C. Eisen's Königliche Hof-Buch- und Kunsthandlung, 1859.
- Nusteling, H.P.H. *De Rijnvaart in het tijdperk van stoom en steenkool 1831–1914: een studie van het goederenvervoer en de verkeerspolitiek in de Rijndelta en het*

- achterland, mede in verband met de opkomst van de spoorwegen en de concurrentie van vreemde zeehavens. Amsterdam: Holland Universiteits Pers, 1974.
- Ockhart, J.F. *Der Rhein, nach der Länge seines Laufs und der Beschaffenheit seines Strombettes, mit Beziehung auf dessen Schifffahrtsverhältnisse betrachtet. Ein Beitrag zur nähern Kunde der deutschen Flussschifffahrt.* Mainz: Florian Kupferberg, 1816.
- Ockhart, J.F. *Geschichtliche Darstellung der frühern und spätern Gesetzgebung über Zölle und Handelsschifffahrt des Rheins, mit Rücksicht auf des wiener Kongresses für die künftige Verwaltung dieses Stroms und seiner Nebenflüsse.* Mainz, 1818.
- Over Rijn-vaart en Rijn-handel, voornamelijk met betrekking tot het Koninkrijk der Nederland.* Rotterdam: Conzete et Overbroek, 1827.
- Paine, T. *A Letter Addressed to the Abbe Raynal: On the Affairs of North-America. In which the Mistakes in the Abbe's Account of the Revolution of America are Corrected and Cleared Up.* Reprint, Philadelphia and London: C. Dilly, 1783.
- Paravey, P.F. *De la libre navigation du Rhin, ou de la réclamation des villes de la rive gauche contre le droit d'étape de Cologne et de Mayence.* Koblenz: La Nouvelle Libr., 1801.
- Pfeiffer, F. *Rheinische Transitzölle im Mittelalter*, 389–399. Berlin: De Gruyter, 1997.
- Pollen, Francois P.L. *Is de overeenkomst tusschen de Rijnsoeverstaten over gemeenschappelijke bepalingen op de visscherij in den Rijn in het belang van Nederland? Een vraag op natuurkundige gronden beantwoord en geschiedkundig toegelicht voor hen, die belang stellen in den bloei en de instandhouding der Nederlandsche zalmvisscherijen.* Leiden, 1870.
- Posthumus, N.W. *Documenten betreffende de buitenlandsche handelspolitiek van Nederland in de negentiende eeuw I and III.* The Hague: Martinus Nijhoff, 1919 and 1923.
- Proff, K. Freihern von. *Kurze Bemerkungen über das Recht der Schifffahrt auf dem Rheine. Für die Bürger des deutschen Reichs und der französischen Republik.* Düsseldorf: Schreiner, 1801.
- Quakernaat van Spijk, A. *Eenige beschouwingen over onze zalmvisscherijen naar aanleiding der gesloten overeenkomst te Mannheim dd. 27 november 1869.* Zaltbommel, 1870.
- Quakernaat van Spijk, A. *Eenige opmerkingen naar aanleiding der brochure van den heer Francois P.L. Pollen over de Nederlandse zalmvisscherijen.* Zaltbommel, 1870.
- Rassem, Mohammed. 'Wohlfahrt, Wohltat, Wohltätigkeit, Caritas.' In *Geschichtliche Grundbegriffe. Historisches Lexikon zur politisch-sozialen Sprache in Deutschland* 7, edited by Otto Brunner, Werner Conze, and Reinhart Koselleck, 595–636. Stuttgart: Verw-Z., 1992.
- Reinalda, Bob. 'Nederland en de Centrale Commissie voor de Rijnvaart 1815–1868. Een moeizaam intergouvernementeel leerproces.' In *Jaarboek Parlementaire Geschiedenis, 2012. De Verenigde Staten van Europa*, 25–34. Amsterdam: Boom, 2012.
- Reinalda, Bob. *Routledge History of International Organizations: From 1815 to the Present Day.* London and New York: Routledge, 2009.
- Roberjot, C. *Rapport fait à la Convention nationale, par Roberjot, représentant du peuple, sur sa mission dans les pays conquis par les armées du Nord et de Sambre-et-Meuse.* Paris: Imp. Nationale, An III, 1794–5.
- Robinson, R. 'The Conference in Berlin and the Future in Africa, 1884–1885.' In *Bismarck, Europe and Africa: The Berlin Africa Conference 1884–1885 and the Onset of Partition*, edited by Stig Förster, Wolfgang Justin Mommsen, and Ronald Edward Robinson, 1–26. Oxford: Oxford University Press, 1988.

- Roelofsen, C.G. 'Eysinga, jhr. Willem Jan Mari van (1878–1961).' *Biografisch Woordenboek van Nederland*. Accessed 28 February 2019, <http://resources.huygens.knaw.nl/bwn1880-2000/lemmata/bwn3/eysinga>.
- Rößler, Ludwig Christian von. In *Hessische Biografie*. [www.lagis-hessen.de/pnd/1032215836](http://www.lagis-hessen.de/pnd/1032215836).
- Rowe, Michael. 'Economic Warfare, Organized Crime and the Collapse of Napoleon's Empire.' In *Revisiting Napoleon's Continental System. Local, Regional and European Experiences*, edited by Katherine B. Aaslestad and Johan Joor, 187–203. London: Palgrave Macmillan, 2015.
- Rowe, Michael. *From Reich to State. The Rhineland in the Revolutionary Age, 1780–1930*. Cambridge and New York: Cambridge University Press, 2003.
- Sambrook, A.J. 'Cobbett and the French Revolution.' In *The French Revolution in English Literature and Art* (The Yearbook of English Studies 19), edited by J.R. Watson, 231–242. Modern Humanities Research Association, 1989.
- Sas, N.C.F. Van. *Onze natuurlijkste bondgenoot: Nederland, Engeland en Europa, 1813–1831*. Groningen: Wolters-Noordhoff, 1985.
- Schenk, Joep. 'The Central Commission for Navigation of the Rhine. A First Step Towards European Economic Security?' In *Securing Europe After Napoleon. 1815 and the New Security Order*, edited by B. de Graaf, I. de Haan, and B. Vick. Cambridge: Cambridge University Press, 2019.
- Schenk, Joep. 'Coal, Iron Ore and the Rise of the Rotterdam-Ruhr Relationship, 1850–1914.' In *Transnational Regions in Historical Perspective*, edited by Marten Boon, Hein A.M. Klemann, and Ben Wubs, 57–102. London, New York: Routledge, 2020.
- Schenk, Joep. 'National Interest versus Common Interest. The Netherlands and the Liberalization of Rhine Navigation at the Congress of Vienna, 1814–1815.' In *Shaping the International Relations of the Netherlands, 1815–2000: A Small Country on the Global Scene*, edited by Ruud van Dijk, Samuël Kruizinga, and Vincent Kuitenbrouwer, 13–31. New York, London: Routledge, 2018.
- Schlöder, Christian. 'Johann Joseph Eichhoff (1762–1827), Politiker und Verwaltungsbeamter.' *Portal Rheinische Geschichte*, 2013. [www.rheinische-geschichte.lvr.de/Persoenlichkeiten/johann-joseph-eichhoff/-/DE-2086/lido/57c69f159a1fa0.40276060](http://www.rheinische-geschichte.lvr.de/Persoenlichkeiten/johann-joseph-eichhoff/-/DE-2086/lido/57c69f159a1fa0.40276060).
- Schmitz, Wilfried. 'Wohlstand.' In *Bonner Enzyklopädie der Globalität*, edited by L. Kühnhardt and T. Mayer, 795–809. Wiesbaden: Springer VS, 2017.
- Schulz, M. *Normen und Praxis: das Europäische Konzert der Grossmächte als Sicherheitsrat, 1815–1860*. München: R. Oldenbourg, 2009.
- Schwann, Mathieu. *Geschichte der Kölner Handelskammer. Band 1*. Cologne: Neubner, 1906.
- Security Dialogue* 41, no. 1 (2010): 5–120, special issue on security-development nexus revisited.
- Šedivý, Miroslav. *Crisis Among the Great Powers. The Concert of Europe and the Eastern Question*. London and New York: I.B. Tauris, 2017.
- Smith, Adam. *An Inquiry into the Nature and Causes of the Wealth of Nations*. Amsterdam: Metalibri, 2007.
- Spaulding, Robert Mark. 'Anarchy, Hegemony, Cooperation. International Control of the Rhine River, 1789–1848.' [2007]. [www.ccr-zkr.org/files/histoireCCNR/21\\_anarchy-hegemony-cooperation.pdf](http://www.ccr-zkr.org/files/histoireCCNR/21_anarchy-hegemony-cooperation.pdf).
- Spaulding, Robert Mark. 'The Central Commission for the Navigation of the Rhine and European Media, 1815–1848.' In *International Organizations and the Media in*

- the Nineteenth and Twentieth Centuries. Exorbitant Expectations*, edited by Jonas Bredebach, Martin Herzer, and Heidi J.S. Tworek, 17–37. London: Routledge, 2018.
- Spaulding, Robert Mark. ‘Changing Patterns of Rhine Commerce in the Era of French Hegemony, 1793–1813.’ *VSWG/Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte*, 100, no. 4 (2013): 413–431.
- Spaulding, Robert Mark. ‘Revolutionary France and the Transformation of the Rhine.’ *Central European History* 44, no. 2 (2011): 203–226.
- Spaulding, Robert Mark. ‘Rhine River Commerce and the Continental System.’ In *Revisiting Napoleon’s Continental System. Local, Regional and European Experiences*, edited by Katherine B. Aaslestad and Johan Joor, 114–132. London: Palgrave Macmillan, 2015.
- Sperber, Jonathan. *Rhineland Radicals. The Democratic Movement and the Revolution of 1848–1849*. Princeton, NJ: Princeton University Press, 1992.
- Stein, Karl. *Briefe und amtliche Schriften: Band IV Preussens Erhebung. Stein als Chef der Zentralverwaltung. Napoleons Sturz (Januar 1813–Juni 1814)*. Stuttgart: W. Kohlhammer, 1957.
- Stråth, Bo. *Europe’s Utopias of Peace: 1815, 1919, 1951*. London: Bloomsbury, 2016.
- Tacitus, *The Works of Tacitus. The Oxford Translation, Revised, with Notes*, I, *The Annals*. London: H.G. Bohn, 1854.
- Teclaff, L.A. *The River Basin in History and Law*. The Hague: Martinus Nijhoff, 1967.
- Thiemeyer, Guido. ‘Die Zentralkommission für die Rheinschifffahrt und der Vertrag von Versailles.’ Vortrag Historical colloquy ‘Central Commission for the Navigation of the Rhine 200 years of history,’ Strasbourg, 18 June 2015.
- Thiemeyer, Guido, and Isabelle Tölle. ‘Supranationalität im 19. Jahrhundert? Die Beispiele der Zentralkommission für die Rheinschifffahrt und des Octroivertrages 1804–1851.’ *JEIH Journal of European Integration History* 17, no. 2 (2011): 177–196.
- Tölle, Isabelle. *Integration von Infrastrukturen in Europa im historischen Vergleich*. Baden-Baden: Nomos, 2016.
- Traut, J.B.E. von. *Die Zentral-Kommission für die Rheinschifffahrt und ihre Rechtsprechung von 1832–1911*. Strasbourg: W. Heinrich, 1912.
- Trunk, Johann Jakob. *Des französischen Ministers, Kardinals Fleury, Apostel an sämtliche Mächte und souveräne Staten in Europa; oder untrügliches Mittel, alle Kriege und Volksunruhen, ohne stehende grose Heere und kostspielige Vestungswerke, in Zukunft leicht zu verhüten: folglich auch die seufzenden Völker, mit Aushhebung der Rekruten, so, wie mit der bißher ungeheuern Last von Steuern und andern drückenden Abgaben zu verschonen*. Mainz: Johann Wirth, 1814.
- Vanchena, Lorie A. ‘The Rhine Crisis of 1840: Rheinlieder, German Nationalism, and the Masses.’ In *Searching for Common Ground: Diskurse zur deutschen Identität 1750–1871*, edited by Nicholas Vazsonyi, 239–251. Weimar: Böhlau, 2000.
- Verzijl, J.H.W. ‘Levensbericht W.J.M. van Eysinga.’ In *Jaarboek, 1960–1961*, 302–309. Amsterdam, 1961.
- Vitányi, Béla. *The Regime of Navigation on International Waterways. Part I: The Beneficiaries of the Right of Navigation*. N.p., 1974.
- Völderndorff, Otto von. *Die richterliche Thätigkeit der Centralcommission für die Rheinschifffahrt von 1832 bis 1894*. Frankfurt am Main: Druck von Krebs-Schmitt Nachf. Aug. Weisbrod, 1894.
- Walter, A. *Adam Smith and the Liberal Tradition in International Relations*. London: LSE Research Online, 1996.

- Ward, A.W. *The Cambridge History of British Foreign Policy, 1783–1919*. Cambridge: Cambridge University Press, 2011.
- Weirauch, Elias. *Die Karten in Baedeker-Reiseführern zwischen 1827 und 1945. Eine Kulturgeschichte des Reisens und der Reiseführer*. Saarbrücken: AV Akademikerverlag, 2014.
- Williams, Faith M., and Carle C. Zimmerman. *Studies of Family Living in the United States and Other Countries: An Analysis of Material and Method*. United States Department of Agriculture. Miscellaneous Publications no. 223. Washington, DC: US Department of Agriculture, 1935.
- Wilson, David A. *Paine and Cobbett: The Transatlantic Connection*. Kingston and Montreal: McGill-Queen's University Press, 1988.
- Wilson, Woodrow. 'Peace Without Victory' speech, January 22, 1917. 64th Cong., 23 Sess. Senate Document No. 685: 'A League for Peace.'
- Wolfert, H.P. *Geomorphological Change and River Rehabilitation*. Wageningen: Alterra Greenworld Research, 2001.
- Wolterbeek, J.L. *Proeve eener geschiedenis van de scheepvaartwetgeving op den Rijn*. Amsterdam: Frederik Muller, 1854.
- Woud, Auke van der. *Een nieuwe wereld. Het ontstaan van het moderne Nederland*. Amsterdam: Bert Bakker, 2006.
- Yao, Joanne. "'Conquest from Barbarism': The Danube Commission, International Order and the Control of Nature as a Standard of Civilization.' *European Journal of International Relations* 25, no. 2 (2018): 1–25.
- Yao, Yuan (Joanne). *Constructing the Ideal River: The 19th Century Origins of the First International Organizations*. Unpublished diss., London, 2016.
- Zentral-Kommission für die Rheinschiffahrt. *Rheinurkunden. Sammlung zwischenstaatlicher Vereinbarungen, landesrechtlicher Ausführungsverordnungen und sonstiger wichtiger Urkunden über die Rheinschiffahrt seit 1803 I (1803–1860)*. The Hague: Nijhoff and München and Leipzig: Duncker & Humblot, 1918.
- Zentral-Kommission für die Rheinschiffahrt. *Rheinurkunden. Sammlung zwischenstaatlicher Vereinbarungen, landesrechtlicher Ausführungsverordnungen und sonstiger wichtiger Urkunden über die Rheinschiffahrt seit 1803 II (1860–1918)*. The Hague: Nijhoff and München and Leipzig: Duncker & Humblot, 1918.
- Zschokke, Em. *Voyage pittoresque des bords du Rhin / dessiné par Louis Bleuler et Federly, gravé par Hurliman, Hemely, Salaté et Weber. Et accompagné d'un texte explicative*. Translation by C.F. Girard. Strasbourg: G. Silbermann, 1845.

# Index

- Aachen 60, 112  
Act of Mainz/Convention of Mainz/  
Rhine Navigation Act (1831) 5, 80–1,  
94–6, 98, 101, 103–5, 114–16, 124,  
127–9, 142, 144–6, 170  
Act of Navigation for the Congo 169  
*Allgemeine Justiz-, Cameral- und  
Polizei-Fama* 73  
*Allgemeine Zeitung* 78  
Allied Council 7–8  
Allied Powers, Allies 3–4, 7–8, 37, 44–5,  
76, 78, 166  
Alsace-Lorraine 152  
Altbreisach 140  
Amsterdam 60, 68–9  
anti-Jacobinism 25–6  
Antwerp 22–3, 26, 43, 139  
Army of the Rhine 23  
Arndt, Ernst Moritz 2–3  
Arnhem 127  
Association for the Protection of Rhine  
Shipping Interests 154–5, 159  
Auer, Carl Albrecht Wilhelm von 50, 62  
Auer, Ferdinand Wilhelm August von  
95–6, 117–20, 141  
Austria 3, 23, 27, 44–5, 48, 50, 59–60, 72,  
75, 78–9, 111, 115, 137, 139, 170  
  
Baden, Grand Duchy of 46–7, 69, 52, 60,  
69–70, 72, 77, 92, 96, 100, 105–7, 118,  
122–3, 125–7, 129, 140–1, 145–6, 148,  
151, 164  
*Baierische National-Zeitung* 59  
balance of power 2–3, 7, 11, 16, 25, 27–8,  
30, 35, 41, 169  
Baltic states 19  
Basel 92, 96, 100, 126–7, 142–3, 158  
Batavian Republic 23, 28  
  
battle, battles: Battle of Leipzig (1813)  
30; Battle of Trafalgar (1805) 30  
Bavaria 46, 60, 69, 77–8, 96, 105, 112,  
122–3, 129, 140, 145–6  
Belgium 23, 105, 127  
Berlin 100, 123, 138, 155  
Berlin West Africa Conference (1884–85)  
169  
*Beurtvaart* 105  
Biebrich 114  
Bingen 88, 96, 100, 102, 114, 126, 142–3,  
156  
Binger Loch 102–3, 142–3, 157  
Bitter, Karl Hermann 141–6, 165  
Black Sea 26, 44  
Bonn 1, 21, 35–6, 143  
Bourcourd, Johan 59–60, 66, 68–71, 73,  
79, 81, 89, 113  
Breisach 143  
Bremen 139  
bridge, bridges 99, 120, 125–33, 139–40,  
144–5, 159, 167; construction of  
128–32, 140, 145, 167; passage fees  
120, 129, 139; pontoon 126–7; stand-  
ing 126–7, 131, 145, 167; Treaty  
between the Rhine riparian states  
concerning the construction of a fixed  
bridge to Cologne (1858) 131  
bulwark system 3–4, 7–8, 45, 112  
  
Cassini map 99  
Castlereagh, Robert Stewart, Viscount 42  
Caub 140, 143  
Central Bank of Cologne 77  
Central Commission for the Navigation  
of the Rhine (CCNR) *passim*  
Central Octroi Administration 30–1,  
35–7, 51, 47, 59, 62–4, 67–8, 71, 92, 95

- Chamber of Commerce: of Cologne 36, 67–8, 103, 154; of Mainz 36, 114
- Chamberlain, Joseph 5–6
- Chief Inspector of the Navigation of the Rhine 10–12, 49–50, 59, 95–97, 100, 102–3, 106–7, 117–9, 122, 125, 131, 137, 141, 143–146; *see also* Auer, Ferdinand Wilhelm August von 95–6, 117–20, 141; Bitter, Karl Hermann 141–6, 165
- Cisalpine Republic 23
- Clancarty, Richard Trench, 2nd Earl of 51–2, 67, 75, 165
- Cleves 1
- Cobbett, William 25–6
- Cogan, Thomas 21–3
- Cologne Cathedral Bridge 127, 130, 133
- commerce 1, 3–8, 11, 16, 21–30, 35–53, 59, 62–3, 66–9, 74–5, 78, 81, 92, 94, 104–5, 113, 132, 167, 169; transnational 4, 81, 158
- Commission for the Navigation of the Elbe 50, 144
- Committee of Rhenish Sailors 115–6
- committee of the united interested parties in Rhine navigation 140
- common good 9, 11, 48, 53, 58, 63–5, 81, 166, 168
- Congo 169; Congo Free State 169
- Congress of Vienna (1814–15) 3–4, 7, 11, 35, 37–8, 41–2, 59, 66–7, 72, 76; Final Act of 49, 52, 59; Vienna Congress System 7–8, 42–3, 66
- Congress, Congresses: of Aix-la-Chapelle (1818) 8; of Rastatt (1797) 23; of Verona (1822) 74–7, 79, 141
- Constantinople 60
- Continental Blockade 1
- Continental System 30, 36, 39, 67
- Dalberg, Emmerich Joseph Wolfgang Heribert de, Duke of 46
- Danube 3, 5, 17–8, 23, 26, 44, 141–2, 168–70
- Delbrück, Martin Friedrich Rudolph 127–9, 137–9, 141, 147
- Delius, Daniel Heinrich 76–7, 81
- Democratic Revolution (1848) 114, 116, 129
- Deutschlands Strom* 154
- Deutz 127
- Dordrecht 68, 103
- Dresden 50
- Drusus 18
- Dutch Authority of Major Rivers 157
- Dutch West India Company 60
- Edict of Fraternity (1792) 23
- Eichhoff, Johann Joseph 35–8, 46–50, 53, 58, 61–6, 68–70, 72–3, 80, 97, 145, 165
- Electorate of Cologne 36
- Emmerich 95
- empire, imperial 2, 4, 9, 11, 16–20, 27, 29–30, 35–7, 43, 50, 53, 67, 152, 155, 158, 165, 167, 169, 171
- Engelhardt, Pierre-Hubert 115, 118–9
- European Coal and Steel Community (ECSC) 8, 171
- European Commission of the Danube (ECD) 5, 141
- European Economic Community 171
- Eysinga, Willem Jan Mari van 5–6, 77, 139, 147–8, 159, 164–5, 170
- Falck, Anton Reinhard 1–2, 7
- Federal Chancellery in Berlin 155
- fishing industry 147–151
- Flanders 26
- Foreign Office 52
- France 1–4, 7–8, 11, 16, 21–31, 39, 41, 43, 45–6, 51, 59, 68–9, 74, 77, 96, 99, 106, 111–12, 118, 122, 127, 139–40, 154, 156, 170; post-Napoleonic 1–4, 7–8, 45–6, 51, 69, 74, 77; Revolutionary 16, 21–3, 28
- Frankfurt am Main 23, 48, 60, 78, 115, 117, 138
- Frankfurt, Duchy of 60
- Frankfurter Trade Fair 102
- Frederick William IV, King of Prussia 77, 129
- freedom of navigation (principle) 3–4, 7–12, 16–31, 35, 38, 42–5, 47–8, 50–3, 68–9, 72–4, 80, 93, 97, 101, 106–7, 111, 117–8, 128, 132–3, 141–2, 144, 147, 149, 151, 158, 165–70
- French July Revolution (1830) 111
- French Revolution 23, 25, 36, 40, 89
- French-German war (1871) 152
- Galaçi 142
- General Assembly of the League of Nations 5
- General Director of the Octroi Administration 30, 35–7, 47, 49, 62, 64, 71–3
- Generalcorrectionsplan* *see* Rhine correction programme
- Gentz, Friedrich 41

- Gergens, Peter Jacob 47–8, 50, 62, 68, 95  
 German Confederation 59, 70, 139  
 German Customs Union 6, 140, 146  
 Germany 2, 6, 22, 26, 41, 44, 68, 88, 99, 112, 115, 127, 148–50, 157, 170;  
   German Empire 151, 154–5  
 Gorinchem 103, 106  
 Great Britain 2–3, 11, 22–8, 30, 39, 41–3, 45, 47, 51–3, 71–2, 74–6, 79–81, 111, 127, 150, 170  
 Great Powers 3–4, 11, 35, 38, 67, 71–2, 74–6, 78–81, 141, 168, 170  
 Grenville, William, 1st Baron 25  
*Großherzoglich Badische Oberdirektion des Wasser- und Straßenbaus* 92  
 Grotius, Hugo 22, 28, 43
- Hanseatic League 19  
 Hardenberg, Karl August von 3, 37, 43, 67–8, 70, 73–4, 165  
 Hartleben, Theodor 72–3  
 Heine, Heinrich 88–9, 102  
 Hesse-Darmstadt, Grand Duchy of 46, 59, 69–70, 96, 105, 118, 123, 125–6, 140, 145–6, 151, 156–7  
 Hock map 97  
 Holland 24–6, 39–41, 44, 67–9, 78, 89, 92  
 Holy Roman Empire 20, 29, 59  
 Humboldt, Wilhelm von 46–7, 50, 61–2, 67, 165  
 Hünigen 160  
 hydraulic expertise 87, 89, 92–3, 126, 130, 132; hydraulic engineers 12, 92, 99, 111, 123–6, 130, 143, 159, 167; water management 89, 91–2, 105, 122–6, 152–3, 157–9, 166
- Imperial Recess 48  
 International Congo Commission 169  
 international river law 23, 170  
 international river regimes 4–9, 11, 16–17, 31, 63, 79, 111, 169–71  
 International Rivers Conference 170  
 Italy 2, 170
- Jacobi, Johann Friedrich 60, 67–71, 74, 76, 97–9  
 Jacobinism 25–6  
 jealousy of trade (perspective) 38–9  
*jusqu'à la mer* (principle) 49, 77, 80, 149, 166
- Kant, Immanuel 40–2  
 Karlsruhe 92  
 Karlsruhe Agreement 141  
 Koblenz 16, 20–1, 28, 88, 114, 143–4  
 Köln-Mindener Railways 127
- Lahn 37  
 Lauter 96  
 Lek 69, 79, 103, 149, 153  
 Liege, Prince-Bishopric 46  
 Lobith 106  
 London 60, 75  
 Loreley (poem) 88–9, 102  
 Loreley (rock) 102, 143, 154  
 Louis Napoleon, King of Holland 92  
 Louis XVI, King of France 25  
 Louis XVIII, King of France 43
- Mainz 1, 3–4, 7, 11, 16, 20–1, 23, 28–31, 36, 46, 48, 50, 58–60, 63–4, 66, 68, 70, 72, 74–77, 79, 88, 94–5, 97, 99, 102, 112–15, 117–19, 123, 126–127, 129, 132, 137–40, 145, 156  
 Mannheim 20, 138–9, 141–2, 146, 148–50, 158, 170  
 Mannheim Act/Convention of Mannheim/Revised Rhine Navigation Act 146, 150, 156, 158, 170–71  
 Marshall Plan 171  
 Mäusethurm-Isle 143  
 McArthur, John 26, 39  
 Merwede 68, 123  
 Metternich, Klemens von 3, 41, 48, 50  
 Meuse 18, 22–3, 26  
 monopoly 22, 39, 41, 116, 139  
 Montesquieu 40  
 Moselle 18, 29
- Nagell, Anne Willem Carel Van 45, 66  
 Nahe 89, 96  
 Napoleon Bonaparte 1–3, 16, 25–6, 30, 36–7, 50, 60, 75, 98, 138  
 Napoleon III 139  
 Napoleonic wars 1–2, 7, 30, 35, 37, 66, 75, 98  
 Nassau, Duchy of 46, 60, 66, 69–70, 96, 102–3, 106, 118, 123, 125–6, 140–1, 145–6, 156  
 National Bureau of Water Management 89–92  
 National Convention (Revolutionary France) 27, 30  
 Neder-Rijn 153  
 Nederlandse Stoomvaart Maatschappij 106

- Netherlands, The 5–6, 23, 30, 44–7, 49, 58, 62, 66–71, 73–81, 87, 89, 91–2, 103–6, 113, 116, 118, 124–5, 140, 145, 149–53, 156–8, 164, 166–67; Austrian Netherlands 24, 46; United Netherlands 23
- Neuburg 140
- Neue Rheinische Zeitung* 120
- Nieder-Walluf 126, 142
- Nijmegen 91
- Nile 39
- North German Confederation 155
- North Sea 26, 127
- Ockhart, Joseph Franz 71, 93–4, 97
- Octroi rights 30, 68
- Organisation for European Economic Co-operation (OEEC) 171
- Oriental Crisis (1840) 111
- Ottoman Empire 111, 142, 168–9
- Paine, Thomas 40–2
- Paris 35–8, 44, 50, 60, 170
- Paris Peace Conference (1919) 169–70
- Paris Peace Treaty (1814) 3–4, 37, 41–5, 51–2,
- Paris Peace Treaty (1856) 168–9
- Peace of Westphalia (1648) 21, 50
- Poland 41
- Political Register* 25
- Pollen, Francois P.L. 149–51
- Pommer-Esche, Johann Friedrich von 122, 138
- prosperity (principle) 4, 6–12, 17, 19, 21, 26–8, 30, 39–40, 65, 67, 72, 78, 81, 94, 132–3, 148, 150, 154, 157, 165–8, 171; European 51–3, 58
- Prussia 4, 6, 12, 35, 37, 44–7, 51, 58–82, 95–7, 99–100, 103, 105, 111–12, 115, 118, 120, 122–33, 137–41, 143, 146, 148–9, 151–8, 166–7
- Prussian Construction Commission/Royal Prussian State Construction Commission (*Ober-Bau-Deputation*) 100, 107, 123
- Quakernaat van Spijk 150
- railways 12, 114–15, 127–29; competition of 12, 139, 158; construction of 137, 141, 154, 167–9
- reciprocity (principle) 12, 52–3, 67–9, 78–81, 87, 166; inter-riparian 80–1, 166
- Revised Rhine Navigation Act [1868] *see* Mannheim Act/Convention of Mannheim
- Rhein-Bezirk* 142
- Rheingau 102, 121, 125–6, 138, 152–159
- Rheinurkunden* 164
- Rhenish League 20
- Rhenish Palatinate 112
- Rhenish Prussia 112
- Rhine Campaign (1796) 24
- Rhine correction programme 92, 123, 137, 168
- Rhine customs 1–2, 6, 20, 28, 36, 92, 96, 138, 140, 146
- Rhine Octroi Convention (1804) 29, 49, 51, 59, 62
- Rhine Survey: of 1849 122–5, 130, 132, 143, 152; of 1858 126; of 1861 142, 152; of 1862 130; of 1874 153; of 1896–7 157; of 1908 157
- Rhine tolls 18–23, 29–30, 36–7, 44–5, 49–52, 59, 63–4, 67–9, 77, 80–1, 95–8, 100–1, 106–7, 117–20, 132, 137, 139–142, 144–147, 149, 151, 168; abolition of 52, 132, 137, 140, 145, 147; reduction of 116, 119–20, 132, 140–1, 146–7
- Rhine-Meuse delta 18
- Rhine: commerce 4–8, 11, 16, 21–30, 35–53, 59, 62–3, 66–9, 75, 78, 81, 92, 104–5, 113, 132, 167, 169; geophysical aspect of 11–2, 61, 87, 89, 93, 97; international trade 7, 19, 30, 39–40; knowledge system 87, 89, 106–7, 111; Lower Rhine 44, 63, 114, 153, 158–9; management of 91–2, 111, 157; maritime conditions of 36, 93; Middle Rhine 143, 157–8; navigation of 1, 4–12, 16–31, 35–8, 42–53, 62–82, 87, 92–107, 111–3, 116–9, 122, 124, 126–130, 132–3, 137–47, 149, 151–3, 155, 157–60, 164–71; regime 4, 10–2, 28, 31, 37, 44–8, 51–3, 60–6, 69, 71–6, 79–82, 87, 94, 96, 111–33, 142, 144, 146, 160, 165–71; security 12, 20, 51, 63, 65, 77–8, 80–1, 87, 111, 145, 153, 159, 168–71; topography of 97–101; Upper Rhine 48, 91–2, 102–3, 106, 149, 151, 153, 157–9
- Rhône 18
- River Congress Committee (1815) 45–9, 51–2, 67, 75

- river rivalry 16–7, 27, 58–82; fragmentary 4, 16–7, 31, 53; imperial/hegemonic 4, 8, 16–7, 31, 35, 53
- robber barons 20, 149
- Roman Empire 17–20, 26–7
- Rose, H.S.J. 153, 157–8
- Rößler, Ludwig Christian von 60, 66
- Rotterdam 68–9, 106, 122, 146, 164
- Rüdesheim 102
- Russia 3, 23, 36, 41, 45, 72, 75, 111, 168
- sailors 12, 111–20, 131–2, 139, 146–7, 167; sail boats 48, 59, 64, 79, 97, 100, 102, 120, 128; sailing industry 107, 113, 116–9
- salmon fisheries 147–51, 167
- Sankt Goar 102–3, 123, 143, 154
- Saône 18
- Savoy, annexation of 24
- Scandinavia 19
- Scheldt 22–6, 42–4, 74; blockade of 22, 44; opening of the 23–5, 42–4; Scheldt Decree 23
- Schuman, Robert 8, 171
- sea rights 66–71, 81
- Second Peace Conference The Hague (1907) 5
- security 3, 6–12, 20, 24–5, 27, 35, 39–40, 45, 51–3, 63, 65, 77–8, 80–1, 87, 92, 107, 111, 133, 145, 147, 153, 159, 165–6, 168, 170–1; collective, 3, 10, 45, 168; culture 9–10, 165–6, 168, 170; European, 7–10, 81, 165–6, 168
- security-prosperity nexus 9–11, 52, 80, 107, 133, 165, 168
- Sixth Coalition War 37
- skippers 18, 20, 28, 36, 48–50, 52, 62, 64–5, 69, 81, 94, 102–7, 113–15, 119, 129–30, 132, 160, 165; guilds 94, 114–6
- Smith, Adam 39–40
- Smithsonian-cameralist view 61, 64–5
- Solms-Laubach, Friedrich Christian, Count 37, 47, 59, 62, 68, 95
- sovereignty 5, 11, 47, 50–1, 78–9, 81, 126; maritime 79; national 11, 47, 50–1, 78, 81, 126
- Soviet Union 171
- Spaen de Voorstonden, Gerrit Karel van 46–8, 66
- Städel, Heinrich 114–5
- staple rights 16, 20–3, 28–9, 31, 41, 48–9
- steamboats 102, 104, 112–4, 117–9, 129, 143, 146; steam shipping industry 12, 107, 111, 113–4, 118–20, 128, 132; steam tugs 104, 106, 113, 114–20
- Stein, Heinrich Friedrich Karl vom und zum 2, 37, 44, 47, 68, 95
- Strasbourg 29, 36, 122–3, 127, 143, 170
- Strombau-Verwaltung* 143
- Switzerland 2, 141, 150
- Tacitus 17–9
- tariffs 1, 18, 29, 60, 63, 74–5, 98, 100–1, 147, 168
- taxation 1, 6, 8, 11, 19, 21, 29–30, 47, 64–6, 69, 80, 97, 99, 118–20, 132, 139
- Technical Commission 12, 111, 122–3, 125–6, 130, 132, 137, 142–3, 152–60, 167–8
- Testa, Emil 144–5
- Thames 26
- Thirty Years' War (1618–48) 20
- Thorbecke, Johan Rudolph 124
- tolls 6, 18–23, 29–30, 36–7, 44–5, 49–52, 59, 63–4, 67–9, 77, 80–1, 95–101, 106–7, 117–20, 132, 137, 139–47, 149, 151, 168; revenues 36, 63, 69, 81, 98, 100; tolling procedures 19–20, 63–4; tolling stations 37, 45, 63–4, 77, uniform toll system 49, 80, 107
- towpaths 18, 28–9, 36, 52, 64, 92–7, 99–100, 102–6, 122, 124, 126; German-Dutch dispute about 102–6; maintenance 18, 29, 52, 103–6; surveillance of 63
- trade 1–2, 7, 16–21, 26–30, 38–42, 45, 48–9, 52–4, 58, 60–1, 63, 65–9, 72–3, 77, 81, 93, 103, 113–4, 119, 128, 139, 146, 149, 156, 166, 169–70; international 7, 19, 30, 39–40; security of 52–3, 81, 166
- transshipment 21, 48, 59, 63–5, 67–73, 75–6, 79–80, 153; abolition of 68, 75, 80; forced 21, 48, 63–4, 66–7, 69–73, 75–6, 79–80; rights, 48, 68
- Treaty, treaties: of Amiens (1802) 23–5; of Baden (1714) 21; of Campo-Formio (1797) 23, 28; of Lunéville (1801) 23; of Rastatt (1714) 21; of Rome (1956) 171; of Ryswick (1697) 21; of The Hague (1795) 23, 28
- Trier 29, 76
- Trunk, Johann Jakob 1–3
- tugging 106, 117, 119; tug service 104–7, 114–7, 119, 120, 156, 167
- Tulla, Johann Gottfried 77, 92, 142

- United States of America 5, 171
- Vereins zur Wahrung der Rheinschiffahrts-Interessen*  
see Association for the Protection of Rhine Shipping Interests
- Vermessungs-Commissar* 100
- Versailles 170
- Versailles Peace Treaty 10
- Vienna 3–4, 7, 11, 35–53, 58–9, 61–2, 61–81, 95, 171
- Vienna Convention 64, 67–9, 72–3, 75, 77, 80, 95
- Vollenhoven, Hendrik van Beeck 148, 150–1
- Von Mier, Count Félix 78–9
- Waal 44, 68–9, 79–80, 87, 103–7, 121, 123–4, 152–4, 156–7, 159, 167
- War of the First Coalition (1797) 23
- Weissenturm 114
- Wellesley, Arthur, 1st Duke of Wellington 74–5, 141
- Wellington barrier 99
- Wiesbaden 89, 129, 138
- Willem I, King of the Netherlands 30, 46, 75, 78–9, 105, 165
- William-Luxemburg railway 141
- Wilson, Woodrow 8, 170
- World War I 5, 8, 160
- World War II 8, 170–1
- Worms 1, 60
- Zeevenaar 91



**Taylor & Francis**

Taylor & Francis Group

<http://taylorandfrancis.com>