

Anarchy, Hegemony, Cooperation:
International Control of the Rhine River, 1789-1848

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INTRODUCTION

Among the many traditional arrangements transformed by Europe's revolutionary waves between 1789 and 1815, none was more profoundly altered, nor with greater long-term consequences than the political structures controlling trade and commerce on the Rhine river. Controls on the Rhine prior to 1789 would be characterized in today's language of international relations as "anarchic." Despite the elaborate institutions of the Holy Roman Empire, there existed no mechanism for limiting, regulating, or coordinating the large number of tolls and other claims that local sovereigns and cities placed on river traffic. Beginning in 1795 with the arrival of overwhelming French power on the left bank of the Rhine, revolutionary France imposed a hegemonic order on the river that produced the "Octroi"-- a single administration that rationalized tolls and commercial practices for the entire length of the river from Switzerland to the Dutch border.

After 1815, the seven states that held Rhine territory (Baden, Bavaria, Hessen-Darmstadt, Nassau, Prussia, France, and the Netherlands) appeared to acknowledge the benefits of the French reforms by agreeing to cooperate on future regulation of the river. The result was the "Central Commission for Rhine Navigation" (*Zentralkommission für die Rheinschiffahrt* or *Commission centrale pour la Navigation du Rhin*) which served both as an important building block for unity among the German states

and as Europe's first example of supranational integration.

My paper begins by briefly tracing the transformation of international control of the Rhine river from anarchy through hegemony to cooperation. More importantly, my essay seeks to explain why conditions on the river did not lapse back into anarchy after 1815. Finally, my paper closes with a preliminary assessment of the importance of the Central Commission for Rhine Navigation both as an historical case study for important questions in current international relations theory and as the institution that supervised the dramatic commercial development of the Rhine in the nineteenth century, thus contributing to the economic and political unification of Germany.

ANARCHY

By 1789, the anarchic state of Rhine regulation had already long been a major source of discontent for inhabitants of the Rhine basin. Despite a number of international treaties, imperial orders, and agreements among local rulers designed to produce some regulatory order on the river, the lack of effective enforcement for any of these provisions had allowed the river's commercial regime to descend into a state of chaos. Tolls, city monopolies, and the privileges of the boatmen's corporations combined to make river commerce unpredictable and expensive, eroding a good deal of the advantage that water transportation generally had at this time.¹

¹ Jeffry Diefendorf has pointed out that "rising river tolls in the eighteenth century forced traders to seek other north-south routes" *Businessmen and Politics in the Rhineland, 1789-1834*

Most damaging to the river's commercial life was the arbitrary and rapacious collection of tolls. Prior to 1789 no effective regulation existed for the number, amount, or location of Rhine tolls. Most sources agree that on the eve of the revolution, thirty-two toll stations collected revenue between Strasbourg and the Dutch border.² In addition, some local potentates imposed loading and unloading fees on merchants. Arbitrary administration and the secret nature of the toll rates compounded the damage inflicted on travelers. Toll rates were not published; most rulers actively sought to keep the level of their tolls secret. Not surprisingly, regulations regarding toll increases were entirely lacking. The unpredictable and capricious nature of the Rhine tolls was a central feature of the anarchy of the regime.

The medieval privileges retained and still exercised by the cities of Cologne and Mainz also impeded commercial use of the river by others. The first of these, the "right of staple" (*Stapelrecht*) required all merchandise passing the city to be

(Princeton, 1980), 29. Numerous contemporary observers commented that the river was under-used for transport because of ruinous tolls.

² E.g. Eberhard Gothein's classic study, *Geschichtliche Entwicklung der Rheinschiffahrt im XIX. Jahrhundert* (Leipzig, 1903), 4-5. Similarly, a Prussian report of 1814 stated that at the time the Peace of Lunéville was signed on 9 February 1801, twenty-nine stations had been collecting river tolls revenues; sixteen on the right bank and thirteen on the left, Graf Solms-Laubach to Staatsminister Baron Karl von Stein, 28 February 1814, Geheimes Staatsarchiv Preussischer Kulturbesitz, Berlin [hereafter GStAP] III.HA I Nr. 1367.

unloaded and offered for sale. The second, the "right of compulsory transfer" (*Umschlagsrecht* or *droit du relache forcée*) required all merchandise to be transferred into boats of the local boatmen's association for the next leg of the river voyage.

In the eighteenth century merchants usually could pay a fee to the city in order to escape the unloading demanded by the *Stapelrecht*, but compulsory transfer to local boats remained in force, provoking great hostility from producers, merchants, and neighboring towns.³

Criticism of the anarchic Rhine regime was widespread, particularly in the German territories below Cologne. Critics cited specific imperial ordinances as well as the general principles of Roman law, natural law, free trade, efficiency, and common sense in demanding an end to compulsory transfer and the imposition of some order in the collection of tolls.⁴ These pleas remained unanswered as long as the system lacked a hegemon possessing sufficient power to impose order.

HEGEMONY

Not surprisingly, the arrival of revolutionary French power

³ Jeffry Diefendorf's statement on Cologne that "the city treasury was supported by fees charged for the use of port facilities" indicates that the sums extracted by Cologne and Mainz for merchandise passing between the Netherlands and the upper Rhine must have been considerable, *Businessmen*, 29.

⁴ See, e.g. Johann Windscheid's collection of legal and historical arguments against the privileges of Cologne in his *Commentatio de Stapula* (Dusseldorf, 1775), GStAP III.HA I Nr. 1368.

into this thicket of particularist privileges initiated a fundamental transformation of the river's commercial regime. As early as November 1791, the French had used a combination of natural law arguments and anti-feudal rhetoric to justify their forced re-opening of the Scheldt, which had been closed by the Dutch since 1648 under the terms of the settlement at Westphalia.

Continued military success as reflected in the treaties of Basel (April 1795), The Hague (May 1795), and Campo-Formio (October 1797) delivered a substantial portion of the left bank of the Rhine to France. The Treaty of the Hague contained a declaration that neither France nor the Netherlands could prohibit friendly commerce on the Rhine, Meuse, and Scheldt (article 18). French attention then turned to the German portion of the Rhine.

A French note of 3 May 1798 demanded that the imperial authorities thoroughly reform their practices on the Rhine.⁵ At the lengthy Congress of Rastatt later that year, the French themselves advanced a number of radical proposals for the river: the abolition of goods tolls; free navigation of the river subject only to a uniform passage toll; the abolition of compulsory transfers; and French access to the interior rivers of Germany. When the remaining imperial authorities, the German princes, and the Dutch all balked at these sweeping French proposals, the congress ended inconclusively.

In February 1801 the Treaty of Lunéville secured further

⁵ Solms-Laubach's report to Stein, 28 February 1814, GSTAP III.HA I Nr. 1367.

French gains along the Rhine and made the river itself the border between France and the empire. Thereafter a landmark compromise agreement was reached between France and the remaining German interests, represented by the imperial arch-chancellor. Signed in August 1804, the "Octroi of the Rhine" dramatically reformed the previously anarchic Rhine tolls and established a truly innovative Franco-German joint administration covering the river from Switzerland to the Dutch border. Most fundamentally, the tolls on goods were rationalized. The number of toll stations was reduced to twelve, fixed toll schedules for three classes of goods established, and toll rates were publicized. First class goods paid a toll of 2 Fr./hundredweight for the upstream trip from the Dutch border to Strassbourg and 1 Fr. 33 for the downstream trip.

Both parties agreed to provide adequate resources from their toll revenues to police and administer the river, maintain the tow paths, and improve shore facilities. This streamlined arrangement provided certainty for merchants, saved them time and money, and promised physical improvements in the river for all travelers.

More significantly, the Octroi agreement created a small bureaucracy controlled jointly by the French government and the arch-chancellor that administered the river as a single unit. Both parties jointly appointed the chief executive officer, the director-general, who supervised toll collection, inspected the tow-paths, and issued provisional new regulations. In addition, each side appointed two of the four "inspectors" for the river and one-half of the toll agents. In a judicial capacity, the

director-general and the inspectors also served a bipartite court of appeals for penalties imposed by toll agents.

This unified administration departed radically from administrative practices along the river as they had developed in the previous centuries. The French demonstrated an active interest elevating the river's commercial life. The Octroi administration, under the direction of Johann Joseph Eichhoff as director-general, received methodical instruction from Paris and achieved remarkable success not merely in efficiently collecting tolls, but also in standardizing administrative procedures, launching improvement projects, and accumulating a great deal of natural knowledge about the course and condition of the river. Commercial activity along the Rhine increased steadily. The toll revenues of the Octroi rose approximately five percent annually, reaching 2,563,000 Fr. in 1807, before falling off between 1808 and 1813 as a result of Napoleon's continental system and its commercial campaign against Britain.⁶

COOPERATION

Among the victorious powers of 1813-1814, none had an interest in returning to the anarchic Rhine regime of the pre-

⁶ Report by Sebastian Nau, Bavarian member of the Rhine Commission, 15 November 1831, Bayerisches Hauptstaatsarchiv [hereafter BayHStA], Munich, MA 63447. On the upper Rhine, which suffered less under Napoleon's policies of economic warfare, the toll revenues collected at Mannheim increased twenty-nine percent between 1806 and 1809; at Neuburg in the Bavarian Palatinate, toll revenues increased forty-three percent in the same period, Nau's reports 21 December 1827 and 18 February 1828, both in BayHStA, MA 63447.

revolutionary period. Britain and Prussia, each for its own distinct reasons, actively sought to preserve and extend the administrative rationalizations and reductions in tolls introduced by the French. In Austria and Russia, Metternich and Alexander regarded the future administration of the Rhine as an issue of secondary importance. This rough position of interests produced the early general agreement that the Rhine would remain open to the commerce of all states; a principle that was incorporated into the Peace of Paris in May 1814 as article V.

In Vienna the powers established a "*Commission relative à la libre navigation des rivières*" in which the Rhine was the major issue. Work began in December 1814 with representatives from Prussia, Austria, France and Britain. The major powers soon issued an invitation to the smaller Rhine states-- Netherlands, Nassau, Hessen-Darmstadt, Bavaria, and Baden-- to participate in discussions on the future regulation of the river.⁷ The Austrian delegate, Wessenberg, had no substantive impact on the sessions.

The French were not opposed to preserving the reforms of 1804, although the French delegate, Karl Dahlberg, proceeded far more cautiously than French officials had during the period when

⁷ The thirty-two articles "concerning Rhine shipping" were signed in Vienna by the major powers-- Austria, France, Great Britain, Prussia, Russia-- and by the Rhine states on 9 June 1815 and incorporated via article 118 into the final protocol of the congress as Appendix 16B. The Rhine articles of 1815 have been reprinted several times since; most usefully in *Rheinurkunden. Sammlung zwischenstaatlicher Vereinbarungen, landesrechtlicher Ausführungsverordnungen und sonstiger wichtiger Urkunden über die Rheinschiffahrt seit 1803* (Munich, 1918).

France had maintained hegemonic control over the Rhine administration. For Britain, with its industrial and commercial superiority and an emerging ideology of free trade, the preservation of reforms that promised access to continental markets via the Rhine was obviously desirable. However, Britain lacked the standing of a riparian state and therefore even the able Lord Clancarty could not influence the commission to the extent that he desired.

This conjunction of power and interests gave the Prussian delegate Wilhelm von Humboldt the opportunity to advance the Prussian goal of forging a Rhine regime that would foster commercial development of the river in the extensive new Prussian Rhine provinces. With that general goal in mind, Staatsminister Stein had preserved the unified structure of the Octroi administration when Prussia seized control of the river on behalf of the allies in 1813.

After 1815, the Prussian administrative leadership was determined to integrate its heterogenous new possessions in the Rhineland and Westphalia into coherent Prussian provinces and to link the Rhine-Westphalian territory to the older portions of Prussia. Unlike the other German riparians-- Baden, Bavaria, Hessen-Darmstadt, and Nassau-- Prussia was not willing to issue a constitution to help unify its new holdings politically.⁸

⁸ Nassau issued a new constitution on 2 September 1814; Bavaria on 26 May 1818; Baden on 22 August 1818; and Hessen-Darmstadt on 17 December 1820.

Instead Prussia relied exclusively on economic and administrative integration to bring its new lands together. Economic integration of the Rhine provinces and Westphalia required the removal of the impediments to commerce along the river itself.⁹ Prussian ambitions were clearly evidenced in Wilhelm von Humboldt's energetic influence in drafting the Rhine articles of 1815 at the Congress of Vienna. Humboldt doggedly pushed the negotiations forward, repeatedly submitting complete drafts of Rhine articles.¹⁰ He argued for the greatest possible commercial freedom on the river and pushed unsuccessfully for an even stronger central administration than eventually emerged.¹¹ In pursuit of Prussian goals, Humboldt willingly sacrificed the Cologne boatmen's traditional right of compulsory transfer (article XIX). Subsequent Prussian commissioners Johann Jacobi and Heinrich Delius steadfastly refused to support the boatmen's petitions for reinstating the historic right of compulsory transfer at Cologne.

⁹ Set in a larger pattern of Prussian economic liberalization that begins with the Allgemeine Landrecht of 1794 and runs through the tariff reform of 1818, Prussian policy on the Rhine is more understandable, perhaps even predictable.

¹⁰ Documentation of the commission's work at Vienna is reprinted in *Rheinurkunden*, I, 50-162; unpublished material on Prussian efforts in this body in GStAP III.HA I Nr.1371.

¹¹ Humboldt's initial plans also called for weighted majority voting within the commission on all issues, a practice that would have been the first step in transforming the commission into a vehicle for Prussian domination of the Rhine valley. When all the other riparian states rejected this approach in favor of simple majority voting, Humboldt lost enthusiasm for a strong commission and settled for a weaker version than he had proposed originally.

Not surprisingly, Prussia later seized the first practical opportunity to eliminate entirely its own Rhine tolls on all internal Prussian traffic, all imports, and all exports; in effect transforming the Rhine tolls into a transit duty levied only on goods passing through Prussian territory. It had long been consensus opinion in the upper levels of the Prussian foreign, interior, and finance ministries that "our intention is to reduce the Rhine tolls as much as possible for Prussian subjects."¹²

Humboldt succeeded in convincing the French, the Dutch, and the cautious but not unwilling smaller German states to establish a Central Commission for Rhine Navigation (Zentralkommission für die Rheinschiffahrt or Commission centrale pour la Navigation du Rhin) as a replacement for the Octroi. In June 1815 the member states charged the commission with several duties: first, to "provide official communication between the river states concerning all aspects of shipping on the river" (art. X); second, to "develop exact controls for the observation of the common rules" on the river (art. X); third, to issue "interim instructions" on toll-rates for the river (art. XXXI); and fourth, to produce a new long-term comprehensive regulatory agreement for Rhine shipping that would regulate commerce beyond the general guidelines being given by the congress in the thirty-

¹² Minutes of an interministerial meeting, 20 June 1827 attended by Johann Eichhorn, Karl Massen, and other senior members of the interior, finance, and foreign ministries, GStAP, I.HA Rep.113, Nr.244.

two articles of 1815.¹³ This fourth obligation later produced the Rhine Treaty of 1831, also known as the "Treaty of Mainz" from the new seat of the commission. The new treaty of March 1831, reconfirmed the duties of the Central Commission as monitoring enforcement of current rules, offering new regulations, indicating necessary physical improvements in the river, and issuing an annual report on the state of commerce on the Rhine (article 93).¹⁴ In the decades between 1815 and 1848, the commission initiated dozens of regulatory directives, added twenty supplementary articles to the treaty of 1831, created an agreement on common police procedures, and finally arranged for a fundamental overhaul of the 1831 agreement, producing a new treaty in 1868, the "Treaty of Mannheim." In addition to its own active agenda, the Zentralkommission spawned a number of integrating sub-bureaucracies that operated across the territories of the member states: the Rhine inspectors, the revenue stations, the central accounting office, and the Rhine courts.

CONCLUSIONS

The evolution of the international Rhine regime from anarchy through hegemony to cooperation suggests two conclusions about the nature of international politics. First, the period prior to 1805

¹³ *Rheinurkunden*, Bd.1, 42-50. In accordance with the documents themselves, this essay uses roman numerals when referring to the Vienna Rhine articles of 1815 and arabic numerals when referring to articles of the 1831 Rhine Treaty.

¹⁴ *Rheinurkunden*, I, 212-273.

indicates that hegemonic power is required for the establishment of a fundamentally new international regime. The Octroi was a compromise response to French insistence on sweeping reforms along the Rhine and it is unrealistic to imagine that the particularist interests in the empire could have produced these extensive and rapid reforms without enormous external pressure. Second, the years between 1815 and 1831 demonstrate that cooperative international institutions can maintain a regime intact even after the original source of hegemonic power is withdrawn. After 1815 seven sovereign states recognized the advantages of a unified administrative regime for the river and preserved that unity by institutionalizing it in the Central Commission. By offering evidence for these conclusions, the origins of Central Commission serve an informative case study that directly addresses a major question standing at the center of contemporary international relations theory: How are international regulatory regimes constructed and maintained? One reason why international relations theory finds it so difficult to answer these questions is because political scientists have not adequately recognized and assessed existing historical cases of international cooperation. By explicating the rich historical record of evolving international control of the Rhine, we ought to be able to draw new theoretical inferences regarding international regime construction.

In a similar way, The Central Commission is also significant as a historical case study in European integration. The

commission itself is surely recognizable as an early proto-type of our contemporary structures of European supranational integration.

For example, the chief administrative officer of the commission, the Ober-Inspector of the Rhine, clearly embodied the pooling and transfer of sovereignty characteristic of federal arrangements. In many ways, the Ober-inspector was modern Europe's first supranational official. He was an official not of any one state, but rather served the Central Commission itself. Appointed for life, he was paid from common funds and took an oath of loyalty to the commission (articles XIII, XVIII, 92, 95, 96, 99). The Vienna articles authorized the Ober-Inspector to issue "orders" to the state-run revenue stations and all local officials in the member states were required to follow his instructions in matters relations to the enforcement of Rhine regulations (article XV). I suspect that a good many scholars of European international relations will be astounded to find that the early nineteenth century produced a supranational authority with the power to harmonize commercial practices among several sovereign states.

The significance of the Central Commission extends far beyond its possible contributions to contemporary political theory. Emerging in 1815, the commission had a number of far-reaching consequences for the economic and political development of early nineteenth century Germany, most of which we are just beginning to fully assess. Most immediately, the Central Commission forcefully advanced the economic integration of North and South Germany by preserving earlier toll reductions and permanently

voiding the right of compulsory transfer. In subsequent decades the commission continued to administer the river as a unitary whole, moving toward a progressively more liberal regime, and modifying the rules of the river to accommodate changes in technology and business organization, thus transforming the river into the enormous freightway that it remains today.¹⁵

For example, the commission adapted the regulatory regime of the river to accommodate the growing use of steam power on the Rhine. Shortly thereafter, the commission also modified the prevailing Rhine regime to accommodate the revolutionary organizational change in the business of shipping as new shipping corporations with large fleets of steam tugs moved to capture the business in large-scale long-distance shipping. Both steps were crucial in the evolution of Rhine commerce in the nineteenth century. Without a coordinating institution such as the commission, it is impossible to imagine that several states would have been able to manage parallel reforms along the length of the river in a unified manner. Well-managed regulatory evolution was indispensable for the introduction and growth of the large new corporate lines that brought low-cost, steam-powered barges to the length of the river, integrating several German states through massive merchandise exchanges.

¹⁵ As early as 1832, Hanover cited the "beneficial effects" of the Rhine regulations under the Central Commission in its arguments to the German Confederation for a liberalization of the transit trade in Germany, 29th Bundestagsitzung, 9 August 1832, in *Vorgeschichte und Begründung des Deutschen Zollvereins 1815-1834*, H. Oncken and F.E.M. Saemich, eds. (Berlin, 1934), I, 272-73.

Successful cooperation on Rhine issues provided evidence of the economic gains that could result from a coordination of trade policies and procedures among the German states. In this way, the Central Commission provided a working model of economic cooperation that prefigured the Zollverein by almost twenty years.

Indeed, substantial evidence indicates that patterns of commerce on the Rhine exerted pressure on Bavaria to join the Zollverein and that Prussian policies within the commission deliberately intensified that pressure in order to bring Baden and Nassau into the customs union in 1835.

The commission also served as a model for the political integration of five German states at a time when no other structures in Germany were performing that task. The very act of several German states meeting regularly to produce a program of closer administrative and economic cooperation in itself made the Rhine commission a unique institution for Germany in the 1820s. The success of the commission in generating the comprehensive new Rhine treaty of 1831 made the Central Commission the only institution in Germany with tangible results in political and economic integration.

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French Reforms on the Rhine and
Their Legacy for German Economic and Political Integration

Remarks presented at the Thirtieth Annual Meeting of the
Consortium on Revolutionary Europe
Huntsville, Alabama
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In view of the enormous volume of literature on the impact of the French Revolution on Germany, any scholar who wishes to present a paper falling under that broad title must offer at least a brief explanation of why he or she might wish to do so. In my case, I can offer some hope that the material I am about to present might differ from what you may have heard in other presentations on the subject. First, and perhaps not particularly encouragingly, my topic is more narrow than many you may have encountered. Specifically, I am talking about French reform efforts and successes on the Rhine river itself, rather than in the Rhineland (by which one means the left bank of the Rhine) or in the Rhine valley (by which one might mean an undefined body of territory on both sides of the river). In other words, my subject is strictly the commercial regime of the river, the laws, practices, and institutions that controlled the movement of traffic on the Rhine. In exchange for this narrowness, I hope to offer specificity. Rather than discuss large and important, but difficult-to-assess megatrends such as nationalism, secularization, or economic integration, I shall analyze the importance of a particular institution, the Octroi, a joint Franco-German administration that regulated the commercial life of the river beginning in 1804.

First, my paper briefly recounts the reforms that culminated in this unique joint administration. Second, my essay indicates that the arrangements of the Octroi were not merely ad-hoc solutions to the particular problems of Rhine navigation. Rather

French reforms on the Rhine embodied key ideological precepts of the revolution as understood by Napoleonic administrators. The specific structures and duties of the Octroi were shaped by fundamental principles that characterized Napoleonic reforms throughout Europe. Lastly, my essay suggests that French reforms on the Rhine had unforeseen long-term consequences for Germany. Specifically, the most innovative French reforms were continued in a modified form by the Central Commission for Rhine Navigation in Germany after 1815 and made both direct and indirect contributions to the economic and political integration of Germany in the early nineteenth century.

I. By 1789, the anarchic state of Rhine regulation had already long been a major source of discontent for inhabitants of the Rhine basin. Despite a number of international treaties, imperial orders, and agreements among local rulers designed to produce some regulatory order on the river, the lack of effective enforcement for any of these provisions had allowed the river to descend into a state of near chaos. Tolls, city monopolies, and the privileges of the boatmen's corporations combined to make river commerce unpredictable and expensive, eroding a good deal of the advantage that water transportation had at this time.¹

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Most damaging to the river's commercial life was the arbitrary and rapacious collection of tolls. Prior to 1789 no effective regulation existed for the number, amount, or location of Rhine tolls. Most sources agree that on the eve of the revolution, thirty-two toll stations collected revenue between Strasbourg and the Dutch border.² In addition, some local potentates imposed loading and unloading fees on merchants. Arbitrary administration and the secret nature of the toll rates compounded the damage inflicted on travelers. Toll rates were not published; most rulers sought to keep the level of their tolls secret. Not surprisingly, regulations regarding toll increases were entirely lacking. The unpredictable and capricious nature of the Rhine tolls was a central feature of the anarchy of the regime.

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Not surprisingly, the arrival of revolutionary French power into this thicket of particularist privileges began a fundamental transformation of the river's commercial regime. As early as November 1791, the had French used a combination of natural law arguments and anti-feudal rhetoric to justify their forced re-opening of the Scheldt, which had been closed by the Dutch since

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II. While these reforms directly addressed the pressing problems of Rhine commerce, they did so in a manner that embodied the reformist impulse of the revolution as it had come to be understood by the Napoleonic administration. In view of their long-term consequences, it is important to understand is that these reforms were not the product of chance or fortune. Rather French reforms on the Rhine incorporated three fundamental

⁶ Report by Sebastian Nau, Bavarian member of the Rhine Commission, 15 November 1831, Bayerisches Hauptstaatsarchiv [hereafter BayHStA], Munich, MA 63447. On the upper Rhine, which suffered less under Napoleon's policies of economic warfare, the toll revenues collected at Mannheim increased twenty-nine percent between 1806 and 1809; at Neuburg in the Bavarian Palatinate, toll revenues increased forty-three percent in the same period, Nau's reports 21 December 1827 and 18 February 1828, both in BayHStA, MA 63447.

principles and practices that characterized French reforms throughout Europe in the years 1803 and 1804.⁷

First, and most fundamentally, French administration in occupied Europe (if we might use that phrase) generally insisted on compiling voluminous data and in-depth factual knowledge of the territories under French control. Along the Rhine, this drive was reflected in French insistence that a portion of Rhine toll revenues be dedicated to assessing and improving the river's infrastructure. The Octroi administration produced the first attempts at a comprehensive study of the river as a geographic and natural phenomenon. French efforts provided the starting point for the scientific study of the river as a whole, a project that could be undertaken only by an administration that controlled at least one side of the river for its entire length from Switzerland to the lower Rhine delta.

A second characteristic of French reforms, the radical alteration of traditional legal categories of the Ancien Regime, was also evident in the Rhine reforms. The rationalization of toll collection abolished a network of privilege and practice that was strangling the river. When those toll reforms were maintained after 1815 they provided the starting point for a commercial expansion that revealed the potential of the river in the industrial age. The rise of upper Rhine commerce was clearly

⁷ Here I am relying on Stuart Woolf, "The Construction of a European World-View in the Revolutionary-Napoleonic Years," *Past and Present* 137 (1992), 95 and his analysis of the "three pillars" of the "Napoleonic vision of modernity."

related to reform of the toll regime and the subsequent rise of upper Rhine commercial hubs such as Mannheim would have been impossible without a continuation of those reforms after 1815.

Third, last, and perhaps most importantly, the new Rhine administration coopted the remaining German elites into the French reform structure. Although the principle of coopting elites was practiced by the French throughout Europe, the institutional form that it took along the Rhine proved to be of enormous significance. By creating a joint bipartite administration under the control of Paris and the German imperial arch-chancellor, the French brought the remaining German powers along the Rhine into a cooperative arrangement. The desire to find a cooperative arrangement with the remaining German powers gave rise to the unique "supranational" institutions of the Octroi. As we shall be able to suggest briefly, these bipartite structures acquired immense significance when adapted to the multilateral world of the Rhine after 1815.

III. As a third and final topic, let us sketch how these French reforms impacted Germany in the period after French power was withdrawn in 1813. Most fundamentally, the two most innovative precepts of the French-imposed Octroi administration continued to serve as guideposts for managing the river throughout the nineteenth century. First, the new German Rhine states of Prussia, Nassau, Bavaria, Hessen-Darmstadt, and Baden retained the concept of administering the river as a single whole. To

facilitate this, these five German states came together with France and the Netherlands in a new Central Commission for Rhine Navigation (Zentralkommission für die Rheinschiffahrt or Commission centrale pour la Navigation du Rhin) as a replacement for the Octroi. Second, the member states of this new commission retained, adapted, and expanded the Octroi principle of joint administration of the river. Sovereignty over the river, which had been shared on a bipartite basis under the Octroi was now pooled on a multilateral basis under the Central Commission. In addition, almost all of the specific reforms of the Octroi administration were carried over into the new commission. For example the overall toll rate of 2 Fr./hundredweight for the upstream trip from the Dutch border to Strassbourg and 1 Fr. 33 for the downstream trip remained in effect until the abolition of all Rhine tolls in 1868. It is important to recognize the new commission, which regulated the river until 1914, as a continuation of the reforms brought to the river by Napoleonic France a century earlier.

In more tangible terms, the Central Commission played both direct and indirect roles in the growing economic and political integration of early nineteenth century Germany. Most immediately, the Central Commission forcefully advanced the economic integration of North and South Germany by preserving earlier toll reductions and permanently voiding the right of compulsory transfer. In subsequent decades the commission continued to administer the river as a unitary whole, moving

toward a progressively more liberal regime, and modifying the rules of the river to accommodate changes in technology and business organization, thus transforming the river into the enormous freightway that it remains today.⁸

For example, the commission adapted the regulatory regime of the river to accommodate the growing use of steam power on the Rhine. Shortly thereafter, the commission also modified the prevailing Rhine regime to accommodate the revolutionary organizational change in the business of shipping as new shipping corporations with large fleets of steam tugs moved to capture the business in large-scale long-distance shipping. Both steps were crucial in the evolution of Rhine commerce in the nineteenth century. Without a coordinating institution such as the commission, it is impossible to imagine that several states would have been able to manage parallel reforms along the length of the river in a unified manner. Well-managed regulatory evolution was indispensable for the introduction and growth of the large new corporate lines that brought low-cost, steam-powered barges to the length of the river, integrating several German states through massive merchandise exchanges. Unencumbered low-cost transportation was, in turn, the sine qua non for the rise of new industrial centers on the upper Rhine, such as Ludwigshafen.

⁸ As early as 1832, Hanover cited the "beneficial effects" of the Rhine regulations under the Zentralkommission in its arguments to the German Confederation for a liberalization of the transit trade in Germany, 29th Bundestagsitzung, 9 August 1832, in *Vorgeschichte und Begründung des Deutschen Zollvereins 1815-1834*, H. Oncken and F.E.M. Saemich, eds. (Berlin, 1934), I, 272-73.

Successful cooperation on Rhine issues also provided evidence of the economic gains that could result from a coordination of trade policies and procedures among the German states. In this way, the Central Commission provided a working model of economic cooperation that prefigured the German customs union (Zollverein) of 1834 by almost twenty years. Indeed, explicating the structures of the Central Commission reveals that the commission and the Zollverein exhibited a number of obvious parallels in terms of principles of shared sovereignty, administrative arrangements, and membership. Specifically, the mechanisms that stood at the center of the commission's arrangements-- individual state collection of tolls, revenue and expense sharing among the member states, and Prussian administration of a central bookkeeping bureau-- served also as the guiding principles of the Zollverein after 1834.⁹

As odd as it may seem in light of the enormous volume of scholarship on the Zollverein, we lack any accepted explanations for the origins of the pooled and shared sovereignty that characterized the Zollverein's working arrangements. I would suggest that scholars of nineteenth century Germany closely

⁹ In the Zollverein, individual state governments collected revenues and sent the "Reineinnahme" to a "Zentralbureau" in Berlin where they were shared among the member states in proportion to population, on Zollverein administration see Francke Schört-Röhlk's contribution in Kurt Jesserich et al. (Hrsg.), Deutsche Verwaltungsgeschichte, 5 vols. (Stuttgart, 1984), vol. 2, p. 256 ff. Even in the Reich after 1871, individual state customs services continued to collect tariff revenue which was sent on to Berlin.

consider the Central Commission as our best current working explanation for the source of the unusual concepts and arrangements that underlay the Zollverein. We might venture to push the recognized pedigree of German unification that runs from the Reich back through the Zollverein even further back to the Central Commission and ultimately to the Octroi administration established in 1804, at least for some of the organizational innovations that allowed for increasingly closer cooperation among the member states of these successive organizations.

The Central Commission also provided a second, more tangible link to the customs union. Substantial evidence indicates that Prussian policies within the Central Commission exerted powerful and direct commercial pressure on Bavaria for the formation of the Zollverein in 1834. Immediately thereafter Prussia carefully and consciously used the structures of the commission as part of an economic strategy to bring both Baden and Nassau into the customs union in 1835. The Central Commission served as one of the most decisive arenas for Prussian leverage of the upper Rhine states in the political struggle over membership in the customs union, yet its importance in this regard remains almost universally unrecognized.¹⁰

¹⁰ In his unsurpassed study of Rhine commerce in this period, Eberhard Gothein takes to task the leading nineteenth century scholars of the Zollverein, including Heinrich Treitschke, for failing to perceive the important role of the Rhine tolls in the pre-history of the customs union, Geschichtliche Entwicklung p. 221, note 1. Gothein himself did not have the archival material to fully illuminate this point. Recent work has not filled this gap. Prussian manipulation of Rhine commerce as a means of leveraging other states in this period remains an important yet

I hope the material presented here will allow us to appreciate that both directly and indirectly, French reforms on the Rhine initiated in the Octroi of 1804 and continued in the Central Commission after 1815 had enormous consequences for German economic and political integration in the half century thereafter.