

Innovation on the Danube and Loyalty in the Habsburg Empire

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Abstract

The Habsburg dynasty ruled over an empire, which from 1815 until its collapse in 1918 encompassed much of modern-day Austria, Hungary, the Czech Republic, Slovakia, Slovenia, Bosnia-Herzegovina, Croatia and parts of Romania, Ukraine, Poland, Montenegro and Italy. Modernizing forces throughout the nineteenth century fueled nationalist sentiment, which disrupted the social cohesion in the multiethnic empire. The state fought to counter these trends by reaffirming the positive role and influence it had on people's lives. Specifically, the Habsburgs supported technological innovations such as river regulation and the rise of steamboats on the Danube, which capitalized on historical associations people had to the river, enhanced the river's importance to people's livelihoods, and re-channeled people's loyalties and connections to both the state and to each other.

"In fact, an intercommunion of knowledge and of benefits must inevitably ensue from the encouragement of steam navigation on the Danube, not the least of which will be the dissemination of liberal principles among the strong holds of absolute power, or of aristocratical pride (Quin 1)."

So expressed the Irishman Michel Quin his unmitigated faith in the transformative effects of new steam technology in his 1836 travelogue *A Steam Voyage Down the Danube*. Quin had been a regular contributor of articles on foreign policy for the London-based newspaper *Morning Chronicle* starting in 1825, and even before his trip on the Danube, he had published numerous accounts of his travels in Europe. When Quin undertook this particular voyage, steamboats were still a relatively new phenomenon on European waterways. One of the first appearances of steam technology on the Austrian Danube had occurred on October 10, 1823, when the newly constructed *Franz I*, named for the Habsburg emperor in power, left its shipyard in Fischamend and sailed a few

miles upstream to Vienna's popular 'Prater' park, where an awaiting crowd cheered its arrival (Grössing 9, 12). Within a decade, regular steamboat routes existed between the imperial capital and numerous cities along the Danube. Quin himself traveled all the way from Vienna to the Black Sea, and his positive assessment stemmed from his encounters with engineers, political figures, merchants, and fellow travelers along the way. The experience convinced him that a rising steamship network would greatly improve communication, trade, and travel opportunities in the multiethnic Habsburg Empire, bringing in its wake political and social transformation (Quin 88).

While steam navigation captured the public's imagination, no doubt fueled by the exciting stories that authors such as Quin published about them, they were only one part of the modernization that the Habsburg state was undertaking on the Danube from the eighteenth to the early twentieth century. While historians have studied industrialization or modernization more generally in the Habsburg Empire,

few have explored how the natural environment and specifically the Danube provided an alluring site for technological innovation, and how the state envisioned such developments would support its imperial agenda. As steam became a more viable means to power transport vehicles, the river and its many tributaries had to be channelized and regulated to enable steamboats to pass unencumbered through their meandering pathways. Natural disasters such as ice flows and flooding, which perennially brought destruction to settlements along the river, also shaped the goals for state-sponsored projects to improve living conditions for residents along the river.

Significantly, while Quin envisioned that steam navigation would spread 'liberal' principles, the Habsburg state saw the Danube and state-driven projects on it as a nexus for transmitting its imperial values. This paper will explore these improvements from the perspective of the state's agenda. Though additional research in Austrian archives would be necessary to determine how influential these efforts ultimately were among the population, I argue here that the state not only saw such technological advancement in terms of material gain, but also a means to improve their international standing, and, more importantly, foster imperial loyalty and social cohesion.

Encouraging unity amongst the empire's ethnically diverse population and loyalty to the imperial state was especially crucial for the Habsburgs in the latter half of the nineteenth century. The spread of education, literacy, mass media, urbanization, and expanding political participation contributed to the rising tide of nationalism among bourgeois and elite circles in Europe; a dangerous and centrifugal trend for the Empire's multiethnic composition (Anderson, Gellner). Numerous political crises, such as the 1848 Revolution, the 1867 Compromise, and the 1897 Badeni Crisis reflected these nationalist tensions and prompted the state to seek out unifying solutions. For the Habsburgs, using and integrating new technology for communities along the Danube presented the opportunity to mitigate these political and cul-

tural strains by facilitating communication and interactions among imperial subjects, and more importantly by reaffirming loyalties to the state through dynastic displays on the Danube.

The Danube already held a naturally prominent position in the Empire. It flowed through the Empire's core regions and its hundreds of tributaries connected it to all the imperial crown lands. The Habsburg Empire in the nineteenth century even had the nickname *Donaumonarchie* or "Danubian Monarchy." Some of the Empire's most important cities — including the two largest, Vienna and Budapest were either on the Danube or on prominent tributaries. The social and economic opportunities in these cities drove a general flow of internal migration to them throughout the nineteenth century and early twentieth century (Steidl, Stockhammer, Zeitlhofer 71-3). Eventually, millions of people were settled in these riverine communities, making them a microcosm of the Empire. In 1886, the Habsburg Crown Prince Rudolf bucolically described how the "metropolitan Vienna on the blue Danube" acted as a "cultural stomping ground" for the many nations bordering on one another ("*Landschaftliche Lage*" 3).

The Habsburgs worked assiduously to ossify this association with Danube and Empire. From 1886 to 1902, the Monarchy compiled and printed an encyclopedic collection of twenty-four volumes, *The Austro-Hungarian Monarchy in Word and Image*, which gave a historical and natural overview of the Empire. In the work's introduction, the Crown Prince expressed that the project's intention was to increase imperial subjects' knowledge of, and hopefully also its loyalty to, the Empire and to each other ("*Einleitung*" 5-6). The Danube was mentioned almost 2,000 times within these volumes. In an early article, one Hungarian scholar proudly wrote of the unifying capability of the Danube and its tributaries:

Our fatherland can thus traffic along many far-reaching ways with the neighboring lands in every area of the world...the fact that all rivers of the land flow into the Danube, which opens into the Black

Sea, is in this respect practical and advantageous, as the land contains a unitary character through this, and the traffic ways of the individual areas can be united in one communal focus (Hunfalvy 12).

This 'unitary character' and association with the Danube meant that the state's projects and interventions on the river were highly visible and offered the Monarchy a space where it could project a particular image.

The Monarchy's interventions on the Danube began in the middle of the eighteenth century. The Enlightened monarchical rule of Maria Theresia, and later her sons Joseph II and Leopold II, witnessed a general effort to promote the wellbeing of their subjects through standardizing laws, rationalizing taxes and finances, mandating primary education, and ameliorating access to and usage of the empire's natural resources (Blanning). In practical terms, this meant improving navigation on the Danube for commercial purposes (Good 30). While boats had plied the Danube for thousands of years – the Romans even had a flotilla on it to guard against German tribes on the northern bank – travel entailed a dangerous trip downstream through constantly-changing water depths and speeds, unpredictably-branching river paths, and occasional, rocky rapids (Stokes 163). Boatmen or merchants seeking to return upstream faced an arduous journey towing boats along the riverbank with teams of oxen or hired men. New technology promised to change this relation by changing the river.

The Habsburgs employed new methods of mechanics and hydraulics to greatly increase the river's safety and navigability for both domestic and international utilization. In 1778, the Imperial-Royal Navigation Directory began surveying the Danube with the explicit directive to engineer safe passage through a particularly treacherous stretch known as the Danube "Strudel" in the province of Upper Austria. Using new, underwater blasting techniques to dispense with rocks along the riverbed, their goal was to ensure that not only domestic but also

foreign vessels could make their way safely through this part of the river (Wachler 6-8). These projects weren't quite so simple to complete; one hundred years later, sailors and passengers alike still dreaded passing by this route (Pfundheller 235).

Nevertheless, improving the river's course offered many possible economic and social advantages for people living in the Habsburg Empire and for those working beyond its borders. The renowned, nineteenth-century Hungarian statesman Stephen Széchenyi feverishly promoted technological improvement of the Danube in the 1830s and 1840s as the Habsburg's Minister for the Danube Regulation Commission. He believed that better navigation and increased shipping would increase trade, and more importantly improve relations, among neighboring states. He also hoped that it would transform Hungary's primarily agricultural economy into an industrialized one (Barany 247-251). Michel Quin encountered Széchenyi during his journey down the river and recorded the man's optimistic view that steam navigation and "contact with foreign nations" would "excite" Hungarians' "emulation" and induce them to develop all aspects of their land whether by improving roads, building bridges, digging canals, or even "civiliz[ing]their manners" (Quin 86). From Széchenyi's perspective, this intersection of technology on the Danube represented an opportunity for intercultural exchange and the impetus for social and economic advancement.

While Széchenyi hoped that trade and foreign contact would have a positive impact on Hungarian development, his intimations that these interactions would stabilize neighborly relations also allude to the delicate diplomatic situation on the Danube. The Danube's delta at the Black Sea, for example, was a fiercely contested territory, which the Ottoman Empire had controlled since their expansion into the Balkans in the fourteenth and fifteenth centuries. The Russian Empire subsequently acquired control of the delta in the 1829 Peace of Adrianople following their defeat of the Ottomans in the 1828-1829 Russo-Turkish War.

Russia's new possession complicated natural trade routes from the Black Sea onto the Lower Danube, which impacted English, Ottoman, and Austrian merchant fleets (Urquhart 339-343). In 1840, the Austrians had to conclude the Treaty of the Danube with the Russians, which reaffirmed their merchants' right to navigate into the Black Sea. However, the Russians, English, and Ottomans continued to fight for economic dominance. The English were particularly upset by Russian and Ottoman interference at ports near the Danube's mouth and on the Black Sea (Urquhart 343).

This international dispute took its toll on the Danube. The Austrians and English deplored the unfavorable conditions that the Russians allowed the delta's shipping routes to fall into after 1829, especially in contrast to the assiduous efforts of the Ottomans to keep channels free from any build-up (Liddel and Gordon 3). The Austrians, and later the English, suspected that the Russians allowed the silt and sand to accumulate around the Danube's delta so as to make it too difficult for Austrian or British ships to travel upriver, thereby forcing them to dock at Russian Black Sea ports instead (Krehbiel 39). Without any clear solution in regard to who should control and regulate the Danube at strategic, international locations both the river and the diplomatic situation deteriorated.

In the second half of the nineteenth century, the Habsburg state undertook massive regulation projects to mitigate such concerns. These efforts gained particular traction when the Crimean War concluded in 1856, as the subsequent peace treaty transformed the Danube into an international river. Articles 15 and 16 in the Treaty of Paris stipulated that "no obstacle whatever, save the necessary police and quarantine regulations, can be opposed to the free navigation of the Danube" (Liddel and Gordon 5). While the Danube was unsuitable for such large-scale trade, a government publication describing this history maintained that after 1856 "the Danube's regulation became one of Austria-Hungary's most important domestic-economic tasks" (Exner et al

321). The Habsburg state invested a huge sum of money in this endeavor, spending 71 million Guldens between 1848 and 1900 alone to regulate the Danube (Meissinger 10); an amount roughly equivalent to \$800 million in today's terms. This regulation not only improved the Danube's route, but also connected it to 13 of its largest tributaries, expanding its navigable portion from 2,632 kilometers to an 8,000-kilometer-long network: a distance twice the Mississippi River's length.

The river's extensive regulation certainly improved navigation, but the Habsburg authorities had their own domestic reasons for undertaking such projects. Much like other modernizing states, the Habsburgs had to inspire loyalty and support from their people, by advancing their material and social welfare and protecting them from external threats such as natural disasters. The state was keenly aware that river channelization would benefit villages and cities along the Danube in other ways besides navigation.

The state invested in regulation because it also reduced the perennial risk of flooding and ice flows, which routinely brought death and destruction in their wake (Ritter von Wex 8). Flooding occurred during heavy rains and during the spring thaw when Alpine rivers sent torrents of melting snow downstream, overwhelming riverbanks and devastating settlements (Exner et al 321). Ice flows were often just as dangerous. When the river began to thaw, large sheets of ice would flow downstream, destroying wooden bridges and quays along the Danube. More devastating still, these ice flows piled up across the river and created natural dams, which eventually burst and sent great floods rushing downstream. For people living in the low-lying regions past Vienna and down the Danube into the Hungarian plains, the river's unpredictable, often dangerous moods destroyed villages and settlements, causing people and livestock to perish in great numbers, and sometimes even swallowing up whole villages, which 'disappeared' after such heavy flooding (Meissinger 10). These floods and ice flows also prevented the Monarchy

from building solid bridges across river, which halted traffic and hindered commerce (Weiß 46). A dearth of bridges meant, for example, that even communication between Buda and Pest – cities which straddled different banks on the same section of the Danube – was often completely cut off for weeks at a time during periods when the river was swollen or laden with ice. Only in 1849 did the state successfully build the first permanent bridge between the two cities.

These tragedies were shared by all along the river's lowlands at one time or another; however, these floods also instigated positive technological development: the rise of improved communication across the Habsburg Empire. Before the advent of telegraphs, flooding along the river arrived without warning, damaging urban infrastructure and shocking residents. To increase Vienna's preparedness for such natural disasters, the first telegraph lines developed in 1849 "were installed along the course of the Danube, connecting Upper Austria to Vienna. Telegrams were then used to send flood warnings from the upper stretches downstream to the capital city, where the k.k. Telegraf-Centrale subsequently disseminated the warning to city dwellers "(Neundinger). Thus, while the state pursued river regulation as a solution to the floods and ice flows, the Danube also encouraged the state to spread innovations such as the telegraph to improve the lives and safety of the Monarchy's subjects, with the additional benefit of extending an important means of communication.

Expanding communication along the Danube intertwined with Mr. Quin's much lauded steamboat technology, which heralded an era of increased cultural exchange and connection in the Empire. The Franz I may have been one of the first steam journeys on the Danube, but Habsburgs ensured that it would not be the last. The state had promoted early efforts to capitalize on steamboat technology, which was spreading in America, England and along a few German rivers such as the Rhine in the early 1800s. In 1813, the Habsburg Emperor Francis promised a 15-

year monopoly to any company that could ensure safe and regular transport for people along the Danube (Wunderl 16). Businessmen and shipbuilders John Andrews and Joseph Prichard founded a shareholding corporation in 1829, which they named the "Erste Donau-Dampfschiffahrts-Gesellschaft"(First Danube Steam Navigation Company) and a year later they successfully sent a steamboat from Vienna down to Budapest and back upstream to Vienna, winning their company the exclusive privilege, guaranteed by the Habsburg state, of steam-shipping on the Danube.

As the nineteenth century progressed, steamship networks became extensive and well connected, bringing together people from all over the Empire. In 1830, a single steamboat line connected Vienna and Budapest, and by 1880, the Danube alone had over 86 cities and towns from Passau (on the German border) to Orsova (on the Black Sea) with regular service to and from the Viennese imperial capital (Hetsch xii). A German travel guide published in 1880 for both tourists and business travelers taking a trip down the Danube described in its introduction:

The Danube is not only a trade and traffic path, but also has high importance in its cultural-historical relationship. The history and development of many nations in middle and south Europe, are tightly bound with this mighty river. . . The trade and ship traffic brought all these people together (Heksch v, vi).

And it brought many people together. In 1835, when steamboat technology was still quite new and river improvement projects had not yet progressed to their later levels, the imperially-supported Danube Steam Navigation Company recorded having transported 17,724 travelers. Just under fifty years later in 1883, this number peaked at 3,586,342 travelers, with the company transporting an average of 9,825 passengers each day (Grössing 173).

This increased traffic along the Danube represented a huge step in integrating different economies and people within the Empire. One scholar declared that the Empire signified a "coherent, uninterrupted complex of lands and the "main artery" of the Danube connected [the land] on one side to the West and on the other side to the East. Every important river of the land is a tributary of the Danube"(Hunfalvy 10). An 1868 publication reported that ship landings on the river were increasing in significance for riparian communities. On a more modest level, this stemmed from the increase in local traffic, which aided those selling products at weekly food markets. More importantly, the report maintained that this integration brought with it an exchange of goods and cultural products from all across the Empire ("Der Schiffs- und Waaren-Verkehr" 166-7).

An economic overview from 1870 confirmed that connections between different regions in the Empire were increasing. Analyzing the shipment of goods in the year 1865, the report calculated that ships carried approximately 61,870,000 centner of goods along the Danube and its tributaries (one centner is equivalent to 100 kilograms). Approximately 30% of this amount was loaded and unloaded directly on the Danube, 26% was loaded and unloaded just along its tributaries, 8% was loaded from sites on the Danube and unloaded in tributary communities, and the largest amount, approximately 36%, was loaded from sites along tributaries and unloaded in communities on the Danube (Winckler 7).

The report's figures indicate that even people living along one of the Danube's tributaries, and not only along the main river itself, were still strongly connected to the imperial economy. For example, in 1868, the village of Gmunden on the Traun river sent 7,180 centner of salt down the river to Vienna via its oar-powered boats, and Kupfstein on the Inn, in the far west region of Tirol, sent 13,720 centner of cheese, butter, fat and eggs (Winckler 35, 37). This list also included scores of other products, such as fruits, vegetables, chalk, timber

for building, granite, and many other things, and it demonstrates how diverse swaths of the population—like salt miners and dairy farmers—didn't need to work directly on the Danube to benefit from it.

Farmers and merchants, however, were not the only groups linked to the Danube for their livelihood. The rise of steamboats aggrandized the Danube Steam Navigation Company (DDSG), which in 1873 had a fleet of 200 steamers, 655 iron and 65 wooden tugboats, 5 excavators, and 200 longships and coal tenders (Bachinger 309). By the 1880s, it was the largest river shipping company in the world. This company alone hired scores of architects and engineers to design its ships, and hundreds of ship captains and sailors to run them. It employed tens of thousands of men to work in coalmines to produce its fuel and to work in its shipyards building its products (Wunderl 28). In fact, the establishment of shipyards, such as the ones at Floridsdorf near Vienna and in Hungary at Óbuda, near Buda and Pest, "would become of extreme importance and constitute a vast industrial zone specialized in naval construction" (Buffe 216).

The formidable task before the Habsburg state was to transfer or transform these associations and connections to the Danube with a unifying sense of identity or loyalty. Festivals provided the Habsburg Monarchy with a perfect opportunity to reaffirm people's loyalties to the dynasty, and the state took advantage of many opportunities to throw lavish celebrations – often for religious holidays or dynastic anniversaries – to reconnect people with their leaders (Shedel). Imperial displays to promote patriotism and loyalty were an integral component in the Habsburg state's arsenal to combat any disintegrative influences of nationalism (Unowsky).

The Danube and its steamships offered the Monarchy an opportunity to give people a festive reason to connect the state with the river in a more patriotic manner. As previously mentioned, the Franz I became one of the first steamships to sail on the Austrian Danube in 1823. Meaningfully, its landing at

the Prater Park 'pleasure pavilion'[Lusthaus] corresponded to the location of other patriotic displays that the state had undertaken. In 1814, the Lusthaus was the site for a huge festival commemorating the Battle of Leipzig's one-year anniversary (a battle in 1813, in which Austria and its allies defeated Napoleon, leading to his eventual abdication). Franz I was presented to the public on October 12th – almost ten years to the day since the Battle of Leipzig – and was "as in all such cases, a huge public festival" (Grössing 9).

Spring of 1854 witnessed a far grander string of celebrations following a special steamboat heading to Vienna from Munich. Aboard was the Bavarian Duchess Elisabeth Eugenie, known as Sisi, bride-to-be to the young Habsburg emperor Franz Joseph. According to a twentieth-century biographer:

All the towns and villages along the river were festively decorated. Bands played and cheering crowds lined the riverbank. . . in Linz Sisi set foot on Austrian soil for the first time and was honored by cannon salutes and the tolling of church bells. She was greeted by little girls dressed in white and received by all the city dignitaries. . . Her arrival [in Vienna] was marked by all the pomp and circumstance of the imperial city, and with the diplomatic corps, the officials of the church, the aristocracy, the court ministers, and civil servants in attendance (Hamann 135).

In this narrative, the Danube becomes a site for the Monarchy to unite its progressive and traditional qualities. On one hand, it demonstrates its trust in the modern innovation of steam technology, but clothed in the trappings of a traditional, monarchical context. The journey down the river mirrored historical processions that traditionally wove their way around cities, which permitted subjects and guests to catch sight of their monarch and to bolster

their affection for the dynasty. Sisi's journey took on a grander scope as her procession travelled through 34 towns – and numerous other smaller communities – on her 400-kilometer-long watery voyage from Straubing to Vienna.

While festivities and celebrations could inspire loyalty, the state sometimes also had to reassert its presence, using technology and communication to promote its connection to the river in small but vital ways. On March 22, 1849, a year after the state had experienced empire-wide revolutions, and with continued fighting in Hungary, the government passed Imperial Law 180. This small action reaffirmed the DDSG's privileges to fly the imperial colors, enabling captains to display flags of black and gold on the bow and mast of all their ships. These flags signified the official status held by the DDSG as the sole steamboat company with monarchical support. Placing the Monarchy's flags along increasingly traversed steamboat routes guaranteed the Habsburgs a widely visible presence for travelers on the boats as well as those living along the river.

Besides flying the imperial colors, this company also had the exclusive privilege – guaranteed by the Monarchy in 1846 – of sending and delivering mail to people living along the river. The DDSG's post-ships, along with the river that carried them to and fro, became a visible symbol of communication and information for and between inhabitants of the Monarchy. Post-ships' arrivals, especially to smaller communities, often inspired eager anticipation among the local populace (Child 2). The state and the company were so intertwined that between 1866 und 1879, the state permitted it to issue its own stamps to use for mailing letters and goods on the Danube (Dosch). In this way, the DDSG and its steamboats supported the Habsburg state's efforts to expand its communication network, and helped forge greater associations between the Danube and the state's positive role in people's lives.

The nineteenth century witnessed a vast expansion in technological advances and social innovations, which modernized state and society by allowing new forms of political participa-

tion, increasing access to education, revolutionizing travel and communications, industrializing the economy, and redefining the relation between society and nature. These transformations shrank the distance between people, both physically and socially. One consequence was the effort on the part of nationalist elites to break down and reconstruct social relations based on the principle of ethnic nationalism, which propagated the idea that political boundaries should encompass exclusive, ethnic communities (Roshwald 15-16). Such radical ideas threatened the cohesion of the Habsburgs' multiethnic empire.

The Habsburg state sought to combat such irredentist tendencies by employing new technology to help reaffirm people's loyalty and connection to the state and to their fellow subjects. The Monarchy, in particular, saw the Danube as a space where it could infuse dynastic and imperial symbols with the natural and historical connections people already had with the river. The state expanded the Danube's role in people's daily lives by ameliorating navigation and encouraging the rise of steamboat networks. These burgeoning networks encompassed both personal and freight traffic across the empire, bringing together cultural communities and boosting economic links. This regulation also benefitted the millions of inhabitants who no longer had to fear the deleterious effects of flooding and ice flows prevalent in the river's natural state. Ultimately, the state hoped that its technological innovations on the Danube would reaffirm people's connections to the state and save it from the waves of nationalist voices that threatened the Empire. These innovations, instead, offered people a more fluid and natural source of identity, which united the Empire together: the Danube.

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