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From the head of the snake to the unity of the world: mapping blurred transitions at the Congo estuary, 1859–1880

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Abstract
The Congo estuary is a space of transitions not only in hydrological but also in historical terms. When from the 1860s the centuries-old slave trade ended and foreign companies established trading posts along the lower river to export raw materials, mapmakers from Europe began to relate the Congo with what they perceived as "world traffic" in new ways. Grounded in a close reading and contextualisation of two nautical charts by the British Admiralty, a general map from a German geographic journal, and an economic map by a French officer, this article discusses how maps reflected the dynamics at the lower section of the river under the conditions of colonial globalisation. During the nineteenth century, mapping rivers and oceans translated notions of globality into a visual language and thus significantly contributed to envisioning aquatic and terrestrial parts of the earth as a spatial continuum. Driven by an underlying capitalist desire increasingly directed towards the Congo basin, the maps in question transformed the river area from a terra incognita into a potentially controllable area and confirmed interpretations of the estuary as a portal of global relevance. Royal Navy officers mapped the estuary in contexts of unfolding imperial power and at times during military operations. While aiming at demystifying the river, the maps also formed projection surfaces for fantasies, fictions, and imaginations. Mapmakers processed knowledge from the riverine BaKongo communities only selectively and filtered it through a standardised repertoire of cartographic signs, thus participating in a "nihilisation" (Luckmann/Berger) of African knowledge.

Keywords African history · River history · Congo river · Colonial globalisation · Maps · Charts

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Introduction

Where does the sea end, and where does the land begin?[1] Anyone who has set a boat aground at low tide or, somewhat less presumptuously, undertaken a mudflat hike knows that a coast does not always, perhaps not even often, take on the shape of a rigid line as maps usually assign it. The boundaries become particularly diffuse where a large river flows into a flat coast. Water levels vary under the influence of tides and inland rainfall, saltwater and freshwater mix in sometimes extensive zones, and transitions between land- and waterscapes such as lagoons or mangrove swamps frequently line such estuaries and deltas. In many such places, not only can the boundaries of the water bodies hardly be overlooked, but also their number. Rivers thus contribute to the constitution of distinct spaces and, at the same time, keep these spaces virtually fluid through their inherent dynamic of movement and their definitional indeterminacy.

According to the American sailor Montgomery Parker, in the mid-nineteenth century, ship crews filled up their drinking water barrels at distances of up to 30 nautical miles from the mouth of the Congo River, so much did the out-flowing freshwater masses reduce the salinity there (Parker 1851: p. 573). This water drains out of a funnel mouth, although the Congo is beginning to form a delta in its lower section. However, the three arms into which it divides below the inland port of Boma reunite about 35 kms before the mouth. Due to the previously completed gradient, the Congo reaches an enormous flow velocity and a depth of more than 200 m in places—no river is deeper; only the Amazon exudes more water. Beyond the mouth, the Congo continues as an underwater canyon some 280 kms into the Atlantic. Over an even greater distance, it washes out mud, branches, and grass from the interior. Parker observed entire islands of uprooted land that drifted into the open sea along with plants and animals, where colonies of birds populated them (Parker 1851: p. 573).[2] "That is how a country begins," states author David van Reybrouck, "far before the coastline, thinned down with lots and lots of seawater." (Reybrouck 2014: p. 2).

The Congo estuary must be regarded as a space of transition not only in hydrological but also in historical terms (Schürmann 2021). From the late fifteenth century onwards, in the course of the exchange between the Kingdom of Kongo, which from the interior had annexed the area as a coastal province, and Portuguese seafarers, it took on the function of a trading hub for the emerging Atlantic World. Since the surrounding coasts offered only a few sheltered bays and islands, Portuguese caravels anchored inland on sheltered shores (Birmingham 1981: p. 26). From trading posts there, interwoven with the hinterland by a net of smaller and larger tributaries, wine, firearms, and American crops such as maize and manioc reached the inland, among other things. Ivory, raffia textiles, and copper left the country by the opposite route, and from the sixteenth century onwards an increasing

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[2] The British naval officer Owen as well observed "floating islands coming down the river […] frequently covered with birds" in the estuary (Owen 1833, p. 290f.); the captain of HMS *Dart* came across floating "grass islands" from the river still at Annobón Island in the Gulf of Guinea (Hydrographic Office 1901: p. 89).

number of slaves. Via the peculiar water, no longer river and not yet sea, West-Central Africa was one of the first regions on the continent to come into contact with early forms of colonial globalisation.

The dynamics in West-Central Africa during the early modern period in Europe have been studied in detail (pioneering: Birmingham 1966; Hilton 1985; Thornton 1983; more recent: Austen/Derrick 1999, Heywood/Thornton 2007). Among other things, those centuries involved the dreadful expansion of the Atlantic slave trade to the middle and upper reaches of the river, the political erosion and decentralisation of the Kingdom of Kongo, and the emergence and consolidation of the coastal states of Loango, Soyo, Ngoyo, and Kakongo. To understand the upheavals in the second half of the nineteenth century, which form the framework of my following reflections, it is important to recall two characteristics of the earlier developments:

Firstly, the coastal states successfully prevented monopolies of individual trading companies and the establishment of European forts. Accordingly, those who controlled major trading places at the coast advanced to comparatively strong positions of power (see exemplary for the port of Cabinda Martin 1972: pp. 76–85). Secondly, the rapids of Yellala, located about 135 river kilometres from the mouth, prevented ships from advancing inland. Portuguese, and from the late seventeenth century also Dutch, British, Spanish, and French traders remained dependent on African middlemen such as those of the Mussorongo and Afro-Portuguese brokers who organised caravan and canoe transports from the hinterland to the coast (Birmingham 1981: pp. 32, 35, 60). As with other major rivers and estuaries in Africa or the Americas—the Senegal, the Río Paraguay, or the Potomac River, for example—local pitfalls sobered hopes for wealth, power, and access to inland trade networks that European colonial strategists had associated with such waters (Benton 2010: pp. 41, 44–5).

The end of the slave trade after more than three centuries ushered in a disruption of economic, political, and social structures in the area of the estuary during the 1860s. A new export trade was already emerging, mainly oriented towards ivory, palm oil, and natural rubber. Unlike before, however, European companies now relied on their own trading posts and fleets of riverboats to bypass African intermediaries and transport specialists (MacGaffey 1986a: p. 263). Starting from the trade corridor at the coast, they built up a network of trading posts along the lower course of the river, thus giving the Congo the function of a frontier waterway through which colonial forms of globalisation were to extend ever deeper into the hinterland of the riverbanks.

These dynamics attracted attention even in the distant region of Thuringia—more precisely: in Gotha—where in 1882 the geographer Hugo Wichmann enthused about the "pleasure" of witnessing the "first beginnings of the Congo region's being drawn into the world trade". For the "entrepreneurial spirit of the merchant, the explorer, and the missionary", the Congo Basin, he predicted in the geographic journal *Petermann's Geographische Mittheilungen*, would "in time play a scarcely less important role in the world trade (…) than India" (Wichmann 1882: p. 17).[3] Attentive readers may have taken offence at Wichmann's formulation of "first beginnings": Five years earlier, the same journal had described the trade at the mouth of the Congo as a "lively traffic" going on since centuries (Petermann 1877: p. 298).

[3] Unless otherwise indicated, all translations in this article from sources not originally in English are the author's own.

However, the perception of a pioneering time was not only fed by the actual events, but even more by the novel diction of understanding these as elements of a "world traffic" and "world trade", i.e., to associate them with a notion of "world" oriented towards connectivity and economic entanglements.[4] As the founder of *Petermann's Geographische Mittheilungen*, the Gotha cartographer August Petermann, had stated since the 1860s: "The locomotive, the steamship, and the electric telegraph" were gradually forming "a coherent chain of human traffic around the earth" (Petermann 1864: p. 356). Wichmann took up the chain metaphor in another essay for the journal and envisioned a "chain of stations" as a future result of the dynamics on the lower course of the river, which would extend "from Zanzibar to the mouth of the Congo" (Wichmann 1883: p. 183), i.e., right across tropical Africa. Seen in this perspective, the Congo appeared as a crucial link to close the "chain of human traffic around the earth" invoked by Petermann.

The probably most important stimulus for this vision came from an expedition led by the British–American journalist Henry Morton Stanley from 1874 to 1877. This journey through tropical Africa from east to west—a forced march that cost the lives of more than 100 members of the traveling party and fitted into the mode of continental crossing that had become popular at that time—had made known in Europe and the United States what fishing communities living along the river had known since a long time: that the middle section of the Congo was navigable and that the cataracts at the transition from the middle to the lower course of the river could be bypassed on land routes. As a result, geographers like Wichmann began to set the river system and the "world" in new relations.

In this process, two paradigms took form that were to shape Western views of the region for a long time and that only apparently contradict each other, as the historian Achim von Oppen points out: On the one hand, the Congo Basin was increasingly described as the "centre", "middle" and, in a poetic variation, as the "heart" of Africa; on the other hand, the area was designated as the "end of the world", as a remote terra incognita and thus as a periphery (Oppen 2008: p. 1).[5] In this discursive formation, the river mouth appeared as a portal that—expressed in the emphasis of the time—allowed the edge of the world to be brought into its centre and promised to incorporate the "heart of Africa" into the "world traffic".

As the basic operations behind these dynamics, historians have often studied underlying forms of labour—the services of porters, canoe transports by Bobangi, or crop cultivation by BaKongo women, to name a few (Northrup 1988; Samarin 1989; Vansina 2010). As key technologies of the aquatic frontier, researchers have identified quinine-based malaria prophylactics and riverine steamboats (Kubicek 1990a, 1990b; Lynn 1989, 1992). Maps, in contrast, have hardly received attention with regard to the events in question. This is an omission because during the nineteenth century maps, and particularly maps of oceans and rivers, played a significant role in envisioning aquatic and terrestrial parts of the earth as a spatial continuum (Schröder et al. 2021) and thus translated the emerging "consciousness of the world as a whole" (Robertson 1992: p. 8) into a powerful visual language. How did maps model the transitions in the estuary that blurred in a natural as well as in a socio-spatial sense? How did they reflect the processes outlined above before the consolidation of the Congo "Free State" once again transformed the spatial order of the area around 1890?

[4] On "world traffic" as a subject of maps by the Perthes Verlag see Dünne 2011; Schröder 2017 and Siegel and Weigel 2015.

[5] Before Stanley, the botanist and palaeontologist Georg Schweinfurth had popularised the metaphor of a "heart" of Africa for the area of the Congo-Nile watershed (Schweinfurth 1874).

What components of the river, the sea, and the land did maps bring to light, in what relations did they place them to each other? And to what extent did maps process or ignore the knowledge of BaKongo who lived along the water? In what follows I discuss these questions on the basis of two nautical charts by the British Admiralty, a general map from a German geographic journal, and an economic map by a French officer.

Seeing like a sea state

The transformations of trade structures began in the late 1850s on the Banana peninsula. Located on the north bank of the estuary, it was so flat that some spring tides flooded it completely (for historical descriptions, see Rouvre 1880; van Sandick 1881). From the peninsula, the French trading house *Victor Régis Frères* from 1858 shipped men and women it ostensibly ransomed from slavery in Boma to Guadeloupe and Martinique for many years of indentured labour. This pilot project, subsidised by the French government, was supposed to pave the way for what the French considered as legitimate "labour migration" from Africa to the Caribbean and to disempower slave traders through predatory competition. However, by buying back enslaved people at high prices, *Régis* in fact fed the slave trade structures, and among those ostensibly bought free—an average of 2877 per year—very few entered into the contracts intended for them voluntarily (Vos 2012: p. 49f.).

In the immediate vicinity of the *Régis* workers' quarters, the Dutch import–export company *Kerdijk & Pincoffs* set up a small warehouse named "Holland" in late 1858. With the Banana peninsula, the company found an alternative to the Portuguese-controlled ports south of the estuary, where export duties, unfavourable berthing facilities, poor quality of goods, and a prolonged drought affected the business of European merchants. In 1863, *Kerdijk & Pincoffs* took over the area from *Régis*. Previously, the French government had ended the pilot project of shipping indentured labourers as its effects on the slave trade were evaluated as poor (Franssens 1976; Vos 2012, p. 49, 55f.).

Upriver, the company established a network of smaller trading posts where palm oil, ivory, and dye plants were exchanged with inland caravans for cotton cloth, guns, and spirits, among other things. *Kerdijk & Pincoffs* did not trade in slaves. However, hundreds of workers in the warehouses and trading posts have been slaves (locally called *coromanos*), prevented from escaping with chains and collars (van Sandick 1881). This business model proved highly successful and allowed the company, renamed into *Afrikaansche Handelsvereeniging* in 1868, to rise to the most powerful trading player in the estuary. Many Portuguese, Americans, and Spaniards who had previously been involved in the slave trade found work with the Dutch. By 1877, the *Afrikaansche Handelsvereeniging's* presence had increased to several dozen trading posts as well as three steamships and four sailing vessels (Wills 2012, p. 38f.).[6]

The boom in export trade brought more and more merchant vessels to Congo estuary. Very likely a British Admiralty Chart was to be found on most of these vessels, as the Royal Navy had been leading in the production of up-to-date nautical charts in the mid-nineteenth century and distributed them widely. More systematically than the navies of other European powers, the Royal Navy has been charting coasts all over the world in

[6] The figure of 44 trading posts given by the company for 1876 (Afrikaansche Handelsvereeniging 1877, De Economist 26.2, pp. 701–2) is probably exaggerated. According to van Sandick, 15 of these posts were closed in 1877 (Sandick 1881).

an extensive series of expeditions.[7] The Royal Navy began exploring the Congo River in 1816 and for this purpose put a steamship into service for the first time in its history, HMS *Congo*. However, this expedition did not get any further inland than the Portuguese had over three hundred years earlier, that is as far as the Yelalla Falls. Tropical infectious diseases killed more than half of the men, including commander James Hingston Tuckey and all the officers except one: Lewis Fitzmaurice, the surveyor (Forbath 1977, pp.162–84). The map constructed on the basis of his notes and the sketches left by Tuckey, entitled "A Chart of the River Zaire" and appended to the expedition report (Fitzmaurice and Tuckey 1817), aimed at creating an overview and thus was hardly suitable for navigation due to its small scale.

Already in 1827, the Admiralty therefore published a new, larger-scale map of the estuary, titled "The River Congo" (Vidal 1827/1859). It was based on surveys taken by officer Alexander Thomas Emeric Vidal, who had anchored in the area with HMS *Barracouta* in December 1825 and January 1826. Since the exploration of the tributaries was interrupted after attacks by riparian villagers and the vessel had to put to sea again after only ten days due to lack of provisions (Owen 1833, p. 281–91), however, Vidal's account remained sketchy in many aspects.

In the following years, the Admiralty had the "River Congo" map corrected and supplemented many times on the basis of material received from other officers. In 1859, i.e., shortly after the establishment of the Dutch and French trading posts, it published an extended new edition of the map (Fig. 1), which followed the course of the river beyond the estuary recorded by Vidal for about 100 nautical miles inland. As with Vidal's map, the information on depths, places for anchoring, compass rose with declination, and the measurement unit of the nautical mile made clear that this was a nautical chart, whereas the omission of a grid as well as northing and easting coordinates broke with the conventions of nautical mapping. It was impossible to enter an astronomically determined position unless one drew a grid of degrees on the chart by hand.

On a river, however, seamen relied on terrestrial navigation and therefore used cross bearings. For this purpose, the chart lists numerous distinctive shore points, mostly specified as "point", "cove", or "bay". Among these locations, a place called "Fetiche Rock" stands out, located about 15 nautical miles below Boma on the left bank (in the middle part of the chart) and already highlighted on Tuckey's map. The term seems to indicate something that nautical charts usually do not show: a cult site.[8] The chart itself gives no further clues to this; an explanation is only found in a later edition of a nautical handbook the Admiralty published in 1901. According to this, the "Fetiche Rock" was an ironstone formation with considerable copal deposits, to which the BaKongo living in the area

[7] In addition to military objectives, these expeditions were also guided by scientific concerns, including the collection of plants, the investigation of coastal geology, and astronomical studies. After the end of the naval wars against revolutionary France and its allies, the West Coast of Africa became a focus of the Royal Navy's charting operations, driven not least by the interest of British geographers and explorers in the region. The resulting nautical charts were not kept secret, but freely available for sale. On the Admiralty's turn towards the sciences relevant to navigation, see Drayton 2001, p. 249.

[8] The categorisation of BaKongo's actions towards their ancestors as "cults" has been objected to on the grounds that these actions resembled actions towards the elders on official occasions, i.e. they were a (social) "etiquette" rather than a (religious) "cult". However, the ancestors were addressed in other places, at other times and, in other contexts than the elders, which is why the social anthropologist Wyatt MacGaffey considers the term "cult" to be suitable for distinguishing meanings (MacGaffey 1986b, p. 64).

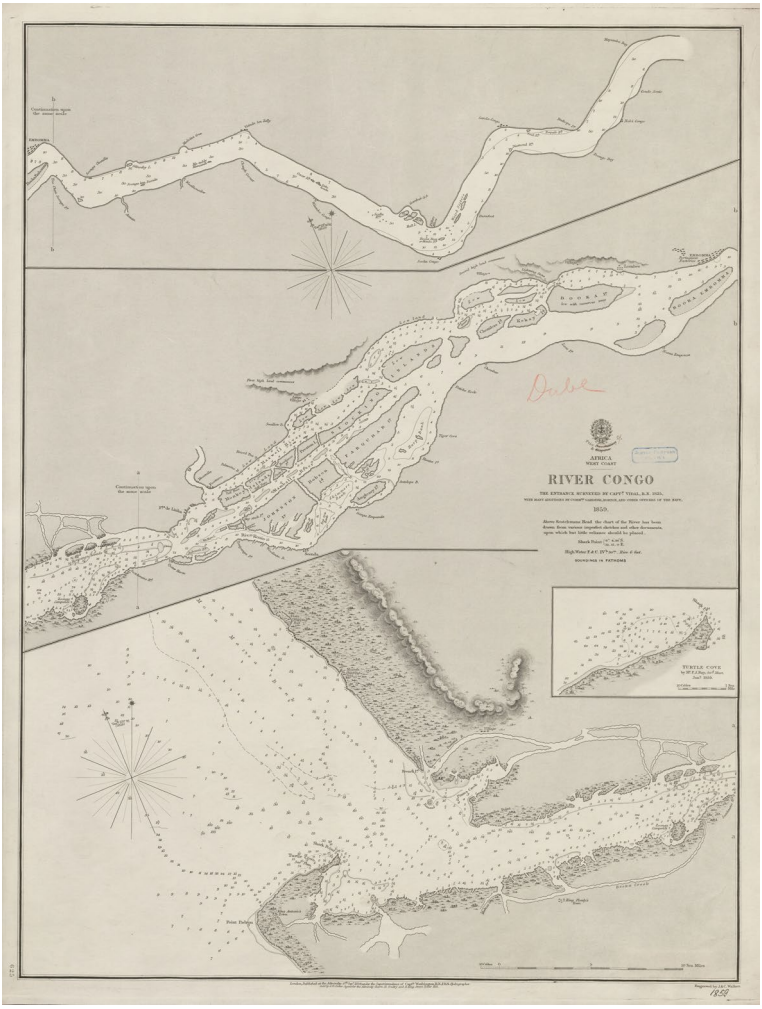

Fig. 1 "River Congo." London: Admiralty, 1859. Gotha Research Library at University of Erfurt, SPK 547$111829313

attributed spiritual significance, but which was also suitable for terrestrial navigation as a clearly identifiable riverbank point (Hydrographic Office 1901, p. 164).

In mapping the "Fetiche Rock", the chart translated an element into the sign repertoire of marine cartography that points to a different conception of bodies of water, unrecognised by the survey officers. In the BaKongo cosmology—their basic assumptions about the world, its spatial and temporal order, and the existence of people—the sea, the river, and other deep waters were seen as transitions between the world of the living and a world of the dead lying below the water, from which ancestors and spirits influenced the living sometimes with harmful, sometimes with benevolent powers. Shrines, places of worship, and cult sites near the water allowed contacting these ancestors and spirits and to have an effect on their actions, for example by making offerings. The locative quality that such sites inhered for BaKongo was constituted by their functions for the ritual exchange between

Fig. 2 Ivory pendant with Congolese cosmogram from Boma, 19th century, 4,9×3,9×0,5 cm. Koninklijk Museum voor Midden-Afrika (Tervuren), EO.1953.74.764

both worlds, which reflected the assumed unity of physical and metaphysical reality (MacGaffey 1986b, p. 5f., 42, 248).

BaKongo visualised their environment, understood in the sense of this cosmology, not by means of maps, but by means of cosmograms, which they applied in varying degrees of complexity and detail for example on shrines, tombs, dolls, or pendants (exemplified by Fig. 2). In such a cosmogram, to explain only the most central elements, the vertical line marked the distance between the world of the living (above) and the world of the dead (below), and the horizontal line stood for the body of water and thus represented the proximity between the two worlds. The four circles signify four moments of the sun's position, which parallel four phases of human existence and the four days of the Congolese week. In this aspect, the cosmogram brings out yet another difference from European ways of thinking, namely the assumption of a cyclical progression of time. Through repetitive interrelationships in terms of space and causality, the world on this side and the world beyond merged into a reciprocating universe (Fu-Kiau Bunseki 2001, p. 17–43; MacGaffey 1986b, p. 12, 14, 42f., 55, 63, 79, 85f.).

Seamen are unlikely to have known much about Congolese world views and understandings of water. Rather they were interested in cult sites like the "Fetiche Rock" as distinguishable landscape elements that promised to be useful for navigation. When using the "River Congo" chart, seamen were probably irritated by something else, that is the assertion of clear outlines of the river, visualised by solid lines. In fact, in the lowlands, characteristic of many sections of the river including that surrounding the "Fetiche Rock" (Hydrographic Office 1901, p. 164), even slight changes in water level could cause the banks to narrow, widen, or even blur with surrounding bodies of water. On some alluvial plains of its middle section, the Congo widens to an extent of up to 13 kms at high water. However, by integrating interruptions into the contours, the chart also confesses ignorance; moreover, it abruptly interrupts the course of many tributaries. The legend explicitly warns that the chart behind "Scotchman's Head" and thus for the longest part of the selected section is based on "various imperfect sketches and other documents", "upon which but little reliance should be placed".

The "River Congo" chart found a critical user who confirmed this concession of imperfection in the British explorer Richard Francis Burton. Among other maps, Burton used it for his expedition to the rapids of Yellala in 1863. He noticed that the chart only showed a small part of the tributaries flowing up from Boma and that they were too straightforward. In addition, Burton considered some place names to be wrong—"three mistakes in as many words", he complained about the name "Ponta de Linha". Finally, he objected to the positioning of Banana as too far north and took offence at the omission of the *Kerdijk & Pincoffs* buildings (Burton 1876, p. 64f., 84, 92, 96, 128f., 140, verbatim quote: 92).

The Admiralty's interest in the Congo estuary, however, was less in the dynamics emanating from Banana than in combating the resurgent slave trade. Since the prohibition of that trade in the British Empire in 1808, the Royal Navy had been patrolling the coasts of West and Central Africa to intercept slave ships. With the prohibition of the slave trade in Brazil—until then one of the largest buyers—the abolition campaign recorded one of its most important successes in 1850, although not only British pressure but also domestic political considerations had prompted the Brazilian government to do so (Needell 2001).

Despite all this, from the mid-1840s onwards, not fewer, but more slave ships set out across the Atlantic from the Congo estuary. From 1850 on, about two-thirds of all slaves taken across the Atlantic from Africa came from the lower Congo. Since African rulers there had always prevented the establishment of European forts, the treaties between Great Britain and the European slave-trading nations had little effect. From Boma, traders distributed enslaved persons to barrack-like temporary camps (*barracoons*) on poorly visible river arms and small islands that were not marked on the British chart. There, particularly Spanish-Cuban slave ships found reliable alternatives to the West African ports that were closed to them. In the outflowing river water, a slave ship could quickly gain speed and thus reduce the risk of being seized by a patrol (Harms 1981, p. 28f.; Vos 2012, p. 45–8). Under these conditions, blockading slave ships at the mouth was "literally impossible", one of the officers involved, Charles Hotham, stated before a British parliamentary committee in the late 1840s (Barrister 1850, p. 113). To intercept slave ships at the landing sites before they could set sail, Royal Navy patrols extended their area of operation upriver. To evade them, slave ships also sailed further and further up the Congo. The slave ship *Erie*, for example, sailed a remarkable 45 nautical miles inland in 1860 (Thomas 1997, p. 774, 780).

In the light of these contexts, the inland orientation of this nautical map is explained by its context of origin and use in a military operation that extended ever further from the sea to the river. Unlike many other maps and charts of estuaries, which since the late eighteenth century articulated the orientation of littoral societies towards the sea and the prospect of participating in intercontinental trade (Schröder et al. 2021, p. 72f.), the "River Congo" chart reflects the aspiration of a maritime state to follow the water counter-currently into the land and not to enable, but to prevent trade—more precisely: one particular type of trade.

Projections of imperial power and capitalist desire

From the middle of the nineteenth century, Britain increasingly connected its operations against the slave trade with economic and colonial strategies. This change in motives became manifest in the annexation of Lagos in 1861. The operation was intended to prevent the shipment of slaves from the surrounding estuaries and at the same time to create an advantageous position for British palm oil traders (Mann 1999, p. 175–83). The event established a pattern of decision making by political and military strategists to subdue by

force African states and societies that opposed British interests. With regard to the mouth of the Congo, naval officer Wilmot wrote to Rear Admiral Walker after disputes over trading posts of British companies in 1863: "Our object in dealing with the natives of this country should be to make a great and terrible example amongst them when it becomes necessary to use force and show our power (…)" (Quoted from Wills 2012, p. 73).

While Wilmot expressed these thoughts, the shipment of slaves from the estuary came to an end. The Royal Navy had never been able to blockade the slave ships completely, but it had forced a considerable increase in their business risk. Even more serious was the effective closure of Cuba, the primary sales market for slave traders in the lower Congo. The last recorded journey of a slave ship through the estuary was in 1865, when the steamer *Cicerón* left for Cuba with 1200 enslaved persons.[9] The inland slave trade, however, did not end at the same time. People continued to be sold at the Malebo Pool and in other inland markets until the 1880s (Vos 2012, p. 58f.). However, this trade no longer extended to the estuary and thus remained largely invisible to the Royal Navy.

Meanwhile, British interests in West Central Africa continued to evolve dynamically. More and more, the fight against the slave trade, the promotion of "legitimate" trade, the exploration of the interior, and the spread of the Christian faith merged in the overarching goal or justification narrative of a "civilisation" of the region, which, from the British point of view, legitimised far-reaching interventions (Wills 2012, p. 38f.). In 1875, the Royal Navy found cause for a demonstration of military power as Wilmot had envisaged. After the British merchant vessel *Geraldine* had run aground in the lower reaches of the Congo in January and four sailors were killed by unknown assailants in a subsequent attack, the Admiralty sent a squadron of warships and gunboats to the river at the end of August. From the mouth to Punta da Lenha, a distance of 30 kms, they attacked the riverine communities for a fortnight (Clowes 1897, p. 276f.). The later Admiral Percy Scott, who served on the participating steam frigate HMS *Active*, reports on the events in his autobiography:

> On nearing a village the boats carrying the guns shelled the place all round as a preliminary to the landing of the marines, who formed a cordon and fired into the bush, while the remainder of the brigade disembarked. An advance was then made, firing the whole time. The villages were generally found deserted and a search usually revealed some relic of the *Geraldine*. Such operations ended with the destruction of the village and canoes by fire. (Scott 1919, p. 18)

Since the "River Congo" chart of 1859 did not reliably show the tributaries in the estuary, the paddle steamer HMS *Spiteful* reconnoitred the area of operations in preparation for the attack. From mid-August, Commander Mervyn B. Medlycott and his navigation officer Flood drew comprehensive sketch maps, which were then expanded during the fighting by an officer of the *Active*, Hannay, with information on sandbanks. Still in the same year, the Admiralty had the resulting material processed into an official nautical chart (Fig. 3), which under the title "River Congo and Adjacent Creeks" supplemented the map from 1859 (Clowes 1897, p. 275–7; Petermann 1877, p. 299; Scott 1919, p. 17–9).

As the title promises, the "River Congo and Adjacent Creeks" chart puts more emphasis on the tributaries of the estuary than its predecessor. These are by no means complete, but

[9] Slave Voyages: The Trans-Atlantic Slave Trade Database, https://www.slavevoyages.org/ [accessed 27 January 2023], Voyage ID 5052. Under British pressure, Spain had already banned the slave trade to Cuba in 1817, but driven by high demand in the wake of the sugar revolution it continued as smuggling for more than 40 years (Murray 1971).

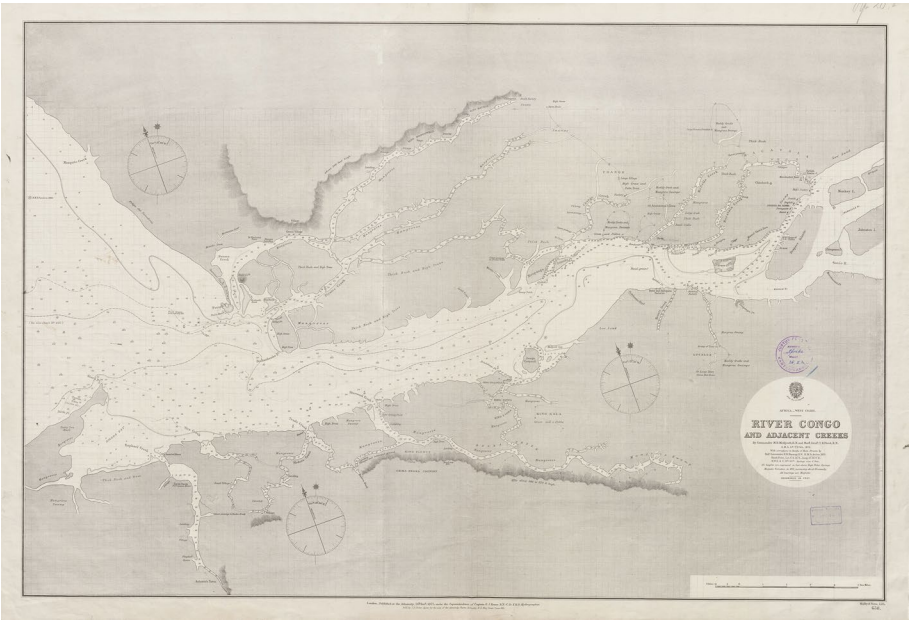

Fig. 3 Mervyn B. Medlycott & T. H. Flood. "River Congo and Adjacent Creeks." London: Admiralty, 1875. Gotha Research Library at University of Erfurt, SPK 547$111757436. This is Petermann's copy of the chart; his numerous pencil entries give clues to the cartographer's approach

they are more numerous and detailed, and in some cases depth information is provided for the first time. Some of the narrower tributaries are still left off the chart and labelled "Canoe passage". The chart follows the course of the river only as far as the beginning of the island chain before Punta da Lenha but has a larger scale and level of detail than the 1859 chart. Again, there is no grid and no northing and easting coordinates, but there are clearly identifiable points for terrestrial navigation such as "Clump of Palms" or "Deserted House". "Fetiche Rock" is not included in the selected section. However, the chart shows a group of "Fetish Towns" near the riverbank above Punta da Lenha and thus refers to other BaKongo cult sites near the water.

For their surveys, Medlycott and Flood could rely not only on the 1859 chart, but also on the "Africa Pilot", the Admiralty's nautical handbook for the coasts of Africa. Its first volume had appeared already in 1856, but only the second volume, published in 1868, contained a chapter on the Congo estuary. In 1875, this volume was published in a second edition and gave explanations on many aspects of the lower course of the river that could only be represented approximately or not at all on a chart. Naval officers might have read the following note with particular attention: "Above Zoonga Campendi no dependence can be placed on the chart, as every spring tide alters the position of the shoals." (Hydrographic Office 1875, p. 96) Referring to shifting sandbanks, the book also warned: "strangers should not attempt to enter without the assistance of local knowledge" (Hydrographic Office 1875, p. 90). Remarks like this reflect the volatility of the Congo. A flowing space that is permanently in motion can hardly be fixed on a map according to the standards of accuracy that navigation requires. Whereas this volatility favoured certain activities (e.g., the use of side arms as hiding places for slave traders), it made others more difficult (e.g., operating vessels on a timed schedule).

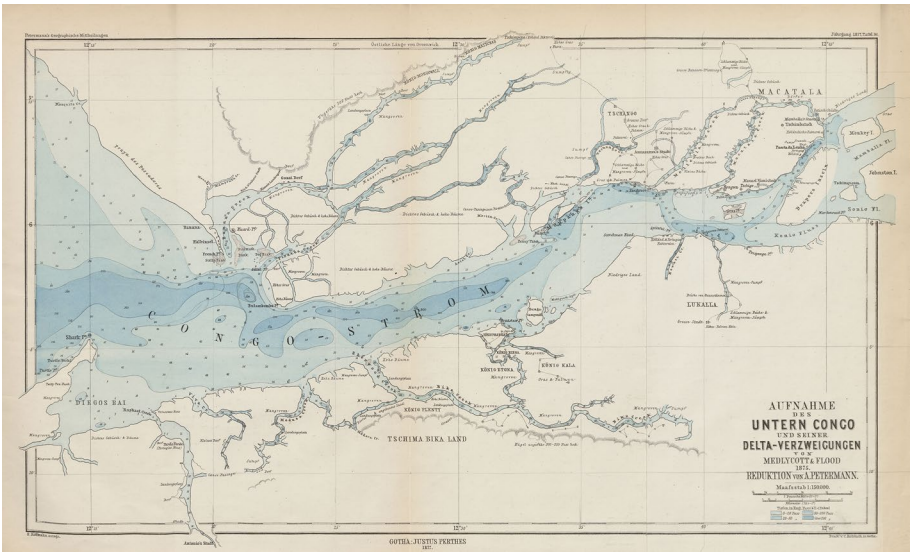

Fig. 4 Petermann A (1877) Aufnahme des untern Congo und seiner Delta-Verzweigungen, map, 24×42 cm, 1:150.000, Mittheilungen aus Justus Perthes' Geographischer Anstalt über wichtige neue Erforschungen auf dem Gesammtgebiete der Geographie 23: T 16. Gotha Research Library at University of Erfurt, SPA 4°00100 (023)

"Local knowledge" usually came in the form of a pilot who offered his services when a ship entered the estuary. Even further upstream, according to the "Africa Pilot", pilots proved indispensable in view of the "strong currents and whirlpools, and the ever-changing channels and depths" (Hydrographic Office 1875, p. 93f.). Their knowledge, however, only found its way into the manual and the charts to the extent that it could be translated into a nautical repertoire of terms and signs. For example, the "whirlpools" that the manual warned against were considered by BaKongo to be dwellings of nature spirits. As in other distinctive places along the river, such as press waters or swells, people assumed they could hear the echo of the voices of spirits in the sounds made by the water (MacGaffey 1986b, p. 6f.).

Far from the sea, a copy of the "River Congo and Adjacent Creeks" chart reached Gotha. There, the *Perthes* publishing house systematically collected maps and charts from all available sources in order to process them as input material for its own maps. As the leading cartographer, August Petermann considered the chart from London so important that he produced a reduced-scale version of it with German-language lettering (Fig. 4). For this purpose, he transferred the original to a scale of 1:150,000, covered the map image with northing and easting coordinates, and interpolated the selective data on depth into zones. To distinguish the depth zones, Petermann coloured the water areas in four shades of blue, including the ochre river water. In this way, he extended the sea into the land in terms of colour, since blue became established as the colour convention

for visualising marine areas in atlases since the mid-nineteenth century, whereas rivers often appeared merely as colourless lines.[10]

While the map image of Petermann's "Aufnahme des untern Congo" remained identical to that of Medlycott and Flood in its basic features, the publication context differed significantly: Petermann's map appeared in 1877 in the *Mittheilungen*, which he edited, and thus in a journal that aimed equally at a specialist audience from geographical research as well as at an educated middle class interested in this field. As usual, Petermann explained his work in an accompanying commentary. For pages, he discussed the history of exploration on the river, its natural features, and the political, military, and economic developments of the preceding years (Petermann 1877). Why did Petermann consider all this significant enough to present his readers with a new map of the Congo estuary? Because after the end of the slave trade, in addition to the already flourishing export of palm oil and peanuts, cotton and coffee from the area "may become of greater importance in the future", the mapmaker stated, and added: "The mineral treasures of the interior are still completely unknown." (Petermann 1877, p. 304)

Petermann in no way concealed the violent context in which the British chart came into being. On the contrary, he welcomed the military action in racist emphasis as an "energetic chastisement" of "predatory Negro princes" (Petermann 1877, p. 299). In his adaptation, however, he transferred what had been created for the purpose of exercising colonial violence into a new context of producing an overview for a geographically interested audience. For the scientific study of the oceans, map publishing houses such as *Perthes* and geographic journals such as Petermann's *Mittheilungen*, together with marine observatories and hydrographic authorities, formed the primary supporting institutions (Weigel 2020) until the establishment of university and non-university research institutes established oceanography as an academic discipline around 1900. One of the defining characteristics of this proto-disciplinary phase was that the surveying of marine spaces and their visualisation in maps and charts rarely served solely to develop elementary hydrological knowledge but was usually accompanied by an extra-scientific plausibilisation. In case of Petermann's map, his accompanying remarks about the "treasures of the interior", the "value of exports", and a possible "trade boom" (Petermann 1877, p. 304) attest to the fact that this plausibilisation was guided by a capitalist desire, as the historian Gregory Rosenthal identified it also in the ocean charts of Matthew Fontaine Maury (Rosenthal 2018, p. 56).

"Mysterious silence" and economic promises

> One day, a few people from the riverside came to visit my parents. (...) They said they had seen something bizarre on the river, a spirit perhaps. 'We saw a huge, mysterious canoe,' they said, 'that rowed itself. In that canoe is a man, white from head to toe, like an albino, covered completely in garments, you could see only his head and his arms.' (Quoted from Reybrouck 2014, p. 33)

The boat that Disasi Makulo (ca. 1870–1941) describes in his memoirs was the *Lady Alice* of the aforementioned Henry Morton Stanley. It could be sailed as well as rowed and be broken down into portable segments to bypass river obstacles. Disasi Makulo lived in the

[10] Various precursors of the blue convention, however, can be traced back much longer and include, for example, Urbano Montes' planispheric map of 1587.

Fig. 5 Charles Marie Philippe Brunot de Beyre de Rouvre. "Factories de la côte occidentale d 'Afrique au nord et au sud de l 'embouchure du Congo." Map, 19×17,5 cm, 1:2.500.000, Bulletin de la Société de Géographie 1880. Gotha Research Library at University of Erfurt, SPK 547$111757592

village of Bandio, close to where the Aruwimi River meets with the Congo. The riverine communities spread the news of the boat's arrival in February 1877 through drums—and decided to attack it. With their muskets, however, Stanley's men shot their way through the attacking canoe fleet. (Reybrouck 2014, p. 33f.).

Stanley's arrival in Boma in August marked the end of his almost three-year crossing of tropical Africa from east to west. Charts and maps of the estuary such as Petermann's "Aufnahme des untern Congo", published only a short time before, did not became obsolete because of this event, but they needed revision. The expedition brought clarity to questions about the course of the Congo and its possible connections with the East African Great Lakes and the Nile, which had long been discussed only on the basis of hypothetical assumptions. In Europe and the United States, Stanley's widely read travelogue "Through the Dark Continent" (1878) drew enormous interest to the Congo Basin. In 1878, under the aegis of the Belgian King Leopold II, wealthy entrepreneurs came together in the capital company *Comité d'Etudes du Haut Congo* to realise the value of Stanley's findings. Maps that showed only the estuary or the lower course of the river now appeared deficient, as economic, scientific, and colonial interests in Central Africa extended to the inland areas.

However, Stanley's expedition had not produced any medium- or large-scale maps, but only a little-detailed "Map of Central Africa" that illustrated the route and was published as an appendix to his book. The missionaries of the *Baptist Missionary Society*, the *Congregatio Sancti Spiritus*, and the *Livingstone Inland Mission*, who were sent to the Congo from 1878 onwards under the impression of Stanley's expedition, did not publish any maps either—nor did the explorer Pierre Savorgnan de Brazza, who established trading posts on the northern bank of the middle Congo on behalf of the French government. For several years, cartography remained disconnected from exploration—an unsatisfactory situation for map publishers, which Wichmann lamented in 1883 as a "mysterious silence" of the travellers (Wichmann 1883, p. 178, 183).

In the years of this disengagement, many maps appeared that, in explicit or implicit reference to Stanley's voyage, offered new views of the river region but, in the absence of new source materials, could not provide much topographic detail. In contrast to the aforementioned charts and maps, many maps from the years around 1880 aimed at providing an overview on a smaller scale that encompassed the lower course of the river, the sea area off the coast, and the trade corridors located to the north and south of the estuary. In this manner, the map "Factories de la côte occidentale d'Afrique au nord et au sud de l'embouchure du Congo" (Fig. 5) exemplarily[11] shows the trade establishments as the main subject in its title ("factories"); these are assigned to the companies' nations of origin by abbreviations. For each section of the coast and for some ports, the map names major products exported there, thus enriching the cartographic profile with an additional layer of information that inscribes recent dynamics into the rigid topography. Additional trading posts are depicted in the areas surrounding the river, the visual centre, as well as tributaries, settlements, and an older mission station. Boma is the only inland place on the map that is assigned export products like the seaports, specifically palm oil, palm kernels, and peanuts.

In the blue-coloured Atlantic—unlike in Petermann's map, the river has not the colour of the sea but of the land—arrows mark another dynamic element, specifically the prevailing ocean current: the Benguela (depicted but not named on the map), which comes from Antarctica and merges with the South Equatorial Current at about equatorial height. Since this current flows northward and the wind in this region almost always blows from a south-westerly direction (Martin 1985, p. 82), sailing vessels in particular tried to avoid approaching from a northerly direction. By marking the ideal approach lines, the map relates the area to the outside of its frame and thus to what Petermann had called the "chain of human traffic around the earth" (Petermann 1864, p. 356). Compared to the abovementioned maps showing the estuary, however, the map image is extended not only into the sea but also into the land, following the course of the river far beyond the rapids of Yellala into the middle section of the Congo.

The map was created in 1877 and published three years later in the *Bulletin of the French Société de Géographie*, accompanied by an essay from its author, Charles de Rouvre. The French officer, who according to his own account had been active in the estuary area from 1870 to 1878, affirms the colour distinction between river and sea on the map: "After all, the water of the Congo is of a colour that contrasts strongly with that of the sea." (Rouvre 1880, p. 297) Unlike on the map, de Rouvre also mentions the "pierre du fétiche" in the text and explains that the riverine communities revered it and dared not climb it (Rouvre 1880, p. 300). In addition, de Rouvre enthuses about fertile soils and

[11] The group of similarly designed maps includes, for example, the one in Sandick (1881).

mineral treasures—as with Petermann, it is economic promises that make the preoccupation with the area plausible. However, while Petermann outsourced the capitalist desire in his "Aufnahme des untern Congo" to the accompanying commentary, de Rouvre let it wander into the map itself.

From the head of the snake to the unity of the world

"An imaginatively written Notice to Mariners would be a deadly thing. It would be sure to kill a number of people before its imaginative quality had been appreciated and suppressed." With this statement, Joseph Conrad introduced an essay that appeared in the *Manchester Guardian* in December 1922 under the ambiguous title "Notices to Mariners" (Conrad 1926, p. 59f).[12] In the *Notices to Mariners*—the information sheets in which British shipping authorities announced corrections to nautical charts from 1834 onwards—Conrad saw realised an "ideal accuracy": a language of truth unclouded by fantasy, suggestion, and emotion, focused on the sole purpose of conveying information and thus the most trustworthy form of all prose. To the writer, lack of imagination could hardly be considered desirable. Yet Conrad liked to design his characters—mostly seamen—as cool rationalists who, however, often fail to keep their heads in dangerous situations and act against their reason.

What Conrad conceded to the corrections of nautical charts was, of course, also claimed by those charts themselves from the turn of the nineteenth century onwards: an ethic of sober precision, committed to no other purpose than that of navigation. The closeness to a measuring and standardising geography that naval cartography thus entered into helped nautical charts to acquire an aura of objectivity. However, in the case of the "River Congo" chart, Burton's critical remarks as well as the confessions of ignorance on the chart itself prove that a claim to perfect accuracy could hardly be fulfilled in the challenging environment of a transitional space in which both the boundaries between water and land and the depths of the waters changed fluidly.

The significance of nautical charts was not, of course, limited to their quality of allowing informed navigation on a challenging water. Even the plainest charts intended exclusively for navigation could stimulate imagination and be linked with text-bound descriptions and narratives.[13] In Petermann's translations of nautical charts into geographical maps, tributaries abruptly breaking off, riverbanks outlined only approximately, or ominous designations such as "Pirates Creek" invited bourgeois finger and armchair travellers in distant living rooms to continue spinning possibilities of discovery in their own imaginations. Also Conrad, in "The Heart of Darkness", let his narrator Charles Marlow's fascination with the Congo start from a map on which the river was

> resembling an immense snake uncoiled, with its head in the sea, its body at rest curving afar over a vast country, and its tail lost in the depths of the land. And as I looked at the map of it in a shop-window, it fascinated me as a snake would a bird – a silly little bird. (Conrad 1899, p. 197f.)

[12] The essay has become known under the title "Outside Literature", with which it was republished in the United States in 1923.

[13] Dünne (2009, p. 55); Struck et al. (2020).

While Petermann's translation of marine cartographic source material into a medium of professional and popular geographic communication contributed on the one hand to the demystification of the river through scientification, on the other hand maps such as his "Aufnahme des untern Congo" formed projection surfaces for fantasies, fictions, and imaginations—in the sense of a remark by Wolfgang Struck: "Maps are always a little science fiction, a place where reality and fiction intertwine" (Struck 2020, p. 133). The boundary between the map as "flagship of an 'ethics of accuracy'" (Krämer 2007, p. 81) and the map as "reservoir of imagination" (Foucault 2013, p. 21)[14] blurs like a riverbank in a mangrove swamp; geography is as unable to shed myth as Conrad's characters are to shed the irrational. Shifting sandbanks, changing positions of shoals, varying water levels and further factors suggest that the river should not be seen as an environmental constant. Rather, it is an active and dynamic fluvial actor that, in its volatility, demands reactions from humans—as well as from animals—and has thus contributed to shape the history of the region.

Petermann's processing of the British Admiralty Chart exemplifies how surveys from naval officers from the mid-nineteenth century onwards paved the way for a pluralisation and differentiation of map images of the Congo estuary, for which the transition from the Atlantic slave trade to a "world traffic" in raw materials provided the crucial framing. Driven by a capitalist desire that began to be directed towards the region from Europe and North America, maps transformed first the lower, and later also the middle and upper sections of the river from a terra incognita to an addressable, manageable, calculable, and thus potentially controllable area. In the discursive field of tension between the perceptions of the Congo basin as the end of the world and then as a key region through which a unity of the world, conceived primarily in economic terms, could be established, maps confirmed interpretations of the estuary as a portal of global relevance.

However, the maps only partially depicted the portal qualities of the water. The selective adoption of African knowledge filtered through the standardised repertoire of cartographic signs—observable in the processing of the "Fetiche Rock" and the non-processing of many other meaningful sites of the BaKongo—proves that the maps did not unveil a space as it appeared to the people living there, but rather, by visually fixing what is permanently in motion, created their own space. The meanings that gave places in the area of the estuary a quality of *genius loci* from the point of view of the riverine communities, and that identified the water as a space of transition between the world on this side and the world beyond, were not reflected. The maps thus participated in a "nihilisation" (Luckmann and Berger 1980, p. 121–4) of African knowledge. The orientation of the Admiralty Charts towards imperial ambitions is also indicated by their focus on the parts of the water relevant to steam navigation, which downgraded the "canoe passages", which were only hinted at, to marginalia. Indeed, canoes continued to carry most of the transport volume on the river (Samarin 1989, p. 158f., 161) even in the period when, in Wichmann's words, "steamships proudly navigated the calm waters of the (…) middle Congo" (Wichmann 1882, p. 25). In the map rhetoric, however, this backbone of river transportation remained a blind spot.

Naval cartographic scaling and relationing of water and land remained authoritative for map images of the area until Stanley's voyages from the late 1870s onwards provided impetus to consider the Congo estuary as part of a larger space of opportunity in Central Africa. In their quest for an overview of this space, maps such as de Rouvre's "Factories

[14] Foucault used this expression not specifically for maps, but more general to describe the significance of seafaring as a projection space for desires and emotions.

de la côte occidentale…" enriched the image of the area with an economic topography of trading ports, business locations, and export products.

If we broaden our gaze from the maps as carrier media or visual protocols of more or less accurate geometries to their contexts of origin and initial use, other standards and ethical parameters become apparent than those of exact representation. For its Admiralty Charts of 1859 and 1875, the Royal Navy mapped the estuary not for the sake of its mere navigability, but in the context of unfolding imperial power. The cartography of steamboat imperialism (Headrick 2010, p. 177) aimed to make the seas not only comprehensible and navigable, but also available. Those days in August 1875, when the officer Hannay on HMS *Active* surveyed sandbanks while the ship's artillery bombarded villages on the riverbank, exemplify a legacy of colonial violence in the cartography of the river that remains invisible in the map images themselves and whose dimensions still await systematic investigation.[15]

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[15] Such an investigation would have to take into account the United States Exploring Expedition (1838–1842), in which cartographic and proto-oceanographic knowledge production was combined with military operations against Pacific Island societies (Smith 2013).

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