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Copper worlds: a historical archaeology of Abraham and Jakob Momma-Reenstierna and their industrial enterprise in the Torne River Valley, c. 1650–1680

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**ABSTRACT**

This article analyses the industrial enterprise of the Dutch-born brothers Abraham and Jakob Momma-Reenstierna and their investments in Sápmi and the upper parts of the Torne River Valley, northern Sweden, during the second half of the seventeenth century. The aim is to explore the driving forces behind the industrial projects of the two brothers in a larger global and colonial context. With inspiration from recent critical studies on the simplifications, and Eurocentrism, in earlier understandings of the birth of modernity, we focus on the modernizing processes taking place in the upper part of the Torne River Valley as a meeting zone between local populations and landscapes and external capital. Metal extraction was booming in the seventeenth-century Sámi areas. Both the Danish-Norwegian and the Swedish Crowns invested heavily in the mining of silver, copper and iron. The scientific focus in archaeology and history has hitherto been very much on the state-governed projects, and limited interest has been directed towards the private enterprises. Moreover, there is also a need to study the roles of the local Finnish and Sámi populations, as well as the global connections, in these colonial industrial projects.

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**Introduction**

In Solna parish church, north-west of central Stockholm, among the impressive shields of deceased members of the local and national nobility, there is a seventeenth-century epitaph that draws one’s particular attention (Figure 1). On top of the crest, there is a full-size pair of reindeer antlers, and in the centre of the shield a depiction of a wedge cracking a mountain. From the upper right corner, as if by divine providence, coming out of a cloud, there is a pair of arms holding a sledge aimed at the wedge. In the lower part of the shield, there is a stream and a green meadow.

The symbols clearly centre on the northern world and Sápmi, the land of the Sámi, as well as the land of early modern mining and metalworking. The hand holding the sledge-hammer can be interpreted as symbolizing divine providence, which together with the sledge also puts movement and direction into this image. The mountains are symbols...
of riches, the meadow connotes fertility and the stream movement, but this time in the form of water power and transportation.

The owners of the epitaph were the Dutch/Swedish noble family Momma-Reenstierna who, amongst other fields of enterprise, invested in mining industries in the upper part of the Torne River Valley in the seventeenth century. The symbolic mountains depicted on the shield can also be understood in a more concrete fashion – as a depiction of the real riches of the mountains of the north. The reindeer antlers on top of the crest allude to the name taken by the family when ennobled in 1669: Reenstierna (i.e. “Reindeer Star”; see Elgenstierna 1925–1936, 175–176; Awebro 1995–1997, 716).

During a period of 30 years, the Momma-Reenstierna family, led by the two brothers Abraham and Jakob, established themselves as successful industrialists exploiting the riches of the northern parts of the Swedish kingdom. They ran mines, works and shipyards in a trade network encompassing an area stretching from above the Arctic Circle to central Sweden, the Baltic Sea, England and the Netherlands. They were one of the early modern entrepreneurial families that, with great success, gained from connecting the Baltic trade in metals with the Atlantic colonial trade (cf. Müller 1998, 91–119, 159–190).
This paper explores the networks of the brothers Abraham and Jakob Momma-Reenstierna, and their involvement in early modern industrial projects in Sápmi and the upper parts of the Torne River Valley. The aim is to examine the role of a colonial world view in the second half of the seventeenth century in Sápmi and the Torne River Valley, and the role of early modern colonial thinking for the expanding metal industry. The paper examines how the two brothers exploited business opportunities in northern Sápmi, above the Arctic Circle, in a time of growing European colonialism and global trade. Furthermore, we discuss the strategies of the Momma-Reenstierna brothers in a global context, in order to better understand the integration between Sápmi, the Torne River Valley, Sweden, Finland and the global markets during the second half of the seventeenth century.

The main focus of the article is on the upper parts of the Torne River Valley and adjacent areas. The paper’s limitations only allow us very brief outlooks to the archaeology of the lower part of the river valley and the towns along the coast of the Gulf of Bothnia. Our focus is on the seventeenth century and the processes with global repercussions played out at this time. The chronological framework covers the period from the early modern discovery of iron in the Torne River Valley in the 1640s, and the establishment of a metal industry in the region, until the death of Abraham Momma-Reenstierna in 1690. It is, however, important to emphasize that history did not start with the arrival of the mines, works and external industrialists, but that the Torne River Valley had a long and complex multicultural history long before that. The mediaeval period shows evidence of a development that is unique and connects vast territories and cultural experiences (cf. e.g. Wallerström 1995; Ylimaunu et al. 2014; Bergman and Edlund 2016; Kuusela, Nurmi, and Hakamäki 2016).

Our vantage point is global historical archaeology. Using historical, material and spatial source material, we focus on people, places and material objects in the Torne River Valley from Lake Torneträsk (Sw./Duortnosjávri (SaN.)/Torniojärvi (Fi.)) to Kengis (Sw./Köngänen (Fi.)/Geavŋŋis (SaN.) and Torneå (Sw./Tornio (Fi.) (Figure 2), associated with the Momma-Reenstierna brothers and the works, in order to facilitate a wider discussion of the consequences of colonial ideology and practice in the North.

We have elsewhere discussed the role of an Atlantic colonial ideology for the early modern strategies and policies of the Danish-Norwegian and Swedish kingdoms in Sápmi, for instance concerning the exploitation of natural resources and the commodification of land, people and material culture (Nordin 2010, 2012, 2014, 2015; 2017a, 2017b; Nordin and Ojala 2015; Ojala and Nordin 2015; Ojala 2017). However, the role of private entrepreneurs as exploiters of natural resources, traders in colonial goods and brokers of colonial ideas – and their relations with the local populations – has not been discussed much in relation to Sápmi and the Torne River Valley. There is a need to study the positions of the local Sámi and Finnish populations, as well as the global connections, in these colonial industrial projects.

We are also interested in understanding the processes of modernization in the North in a larger perspective, and we ask whether it is possible to challenge some of the traditional narratives of modernity, which have mainly focused on the perceived European “centres” of power and, too often, have missed the underlying connections and networks that help to build the power of the “centres”. Theoretically, we draw inspiration from the critical postcolonial analysis of modernity by the sociologist Gurminder K. Bhambra.
argues that modernity as an episteme has strong Eurocentric connotations. The Renaissance, the nation state and the industrial capitalist society are all generally believed to be European inventions. Modernity and industrial society are still to a large degree viewed as fruits of European thoughts as well as processes taking place more or less exclusively within Europe (Bhambra 2007; cf. also Bhambra 2014).

Europe in the sense of Bhambra’s critique does not mean the whole continent as it is defined today but a Europe consisting of the western and central European states, such as

*Figure 2.* Some of the places mentioned in the article on the seventeenth-century map published in Johannes Schefferus’s *Lapponia*. From Schefferus [1673] 1956, with additions by Carl-Gösta Ojala. A – Lake Torneträsk; B – Torne River; 1 – Svappavaara; 2 – Junosuando/Masugnsbyn; 3 – Kengis; 4 – Torneå/Tornio; 5 – Luleå; 6 – Uleåborg/Oulu; 7 – Jokkmokk; 8 – Silbojokk; 9 – Arjeplog; 10 – Lycksele; 11 – Kalix.
England, France, the United Province and the Holy Roman Empire. Only to a very limited extent does this definition of Europe include the northernmost parts of Fennoscandia.

Bhambra takes up the critical discourse of Edward Said in his examination of European thought as selective accumulation and deletion (Bhambra 2007, 103–104). This is also valid for the views on global industrialization as a European project discussed by Bhambra, as well as the role of northern Fennoscandia in this process. Global industrial society was not a process only of the workshops of England, but also of interplay between the sugar plantations and metal refineries of the New World. It was a chain of access to cheap labour and resources extending between Europe, Africa, Asia and the Americas. Moreover, industrialization, concentration of capital, and trade networks were entities that existed in many areas around the world. Their integration into greater global trade systems was the result of many factors of which only a few were directed from Europe (Bhambra 2007, 124–144; see also Raj 2007, 1–26). It is here that early modern Sápmi and the Torne River Valley come in – an area of the world often seen as a “periphery” to the major European processes of modernity – but, as will be discussed below, an area, imagined as well as real, which triggered technological development and social movement.

This article discusses the Torne River Valley as a multi-ethnic region in the early modern period, with Finnish, Sámi, Swedish and other cultural influences. This region has also been an arena for conflicts over interpretations of the past, with competing claims for indigenous status, by Sámi groups and Torne River Valley Finnish or Kven groups. As with the Sámi population, the Meänkieli-speaking population has been subjected to discrimination and assimilation pressure from the Swedish state. And like the Sámi, they have long been marginalized or excluded in relation to the Swedish national historical and archaeological narratives, which have led to the present-day situation with a contested history and heritage of the Torne River Valley (see further Elenius 2001; Wallerström 2006; Ojala 2009; Hagström Yamamoto 2010). This situation is important to keep in mind when discussing early modern colonial histories in the Torne River Valley: whose histories are told, and from which perspectives?

Abraham and Jakob Momma-Reenstierna: entrepreneurs and exploiters

The extraction of metals in northern Fennoscandia in the early modern period is related to the European colonial expansion in other parts of the world. A shared colonial world view or ideology drove this expansion in the Americas, Africa and Asia. Several of these shared traits are also visible in private and state strategies and enterprises in the North. The search for metals, and the discursive relation between Danes, Norwegians, Finns, Swedes and the Sámi population, show both similarities and divergences when compared to colonial situations overseas (see for instance papers in Nordin 2012, 2015; Naum and Nordin 2013; Ojala and Nordin 2015). To what extent the situation in the Torne River Valley is related to the concurrent global development is, however, still an understudied field of research.

Abraham and Jakob Momma-Reenstierna chose Solna as the place where to put up the family’s crest. None of the brothers were buried there, however, and they did not own any land in the parish. Instead, they lived a cosmopolitan life with estates and businesses scattered over northern Europe. The brothers came from a family of coppersmiths and copper
producers in Aachen and were born under the name Momma, in Jülich in present-day northern Germany. Abraham was born in 1623 and died in Osnabrück, today’s Germany, in 1690. Jakob was born in 1625, and died in Norrköping, Sweden, in 1678 (Awebro 1995–1997, 716–720).

Abraham and Jakob are two prominent representatives of the many bankers, investors, industrialists, traders and workers that came from western Germany and the Netherlands exploring new business opportunities and seeking religious safe havens (Bedoire 2009). Many went to the New World, others to Africa and Asia, while yet others settled in Sweden. Most of the Dutch capitalists in Sweden invested in metal production and related businesses.

Traders and industrialists such as the Momma-Reenstierna brothers, de Geer, Kock-Cronström and de Besche, among many others, shared knowledge about metal production from their home countries and had experience in the trade with the Baltics, which in the Netherlands was often referred to as the “mother of all trades” (cf. van Tielhof 2002). Amsterdam and other Dutch cities were also important hubs in the North Atlantic trade with the Americas, West Africa and the “Rich Trade” with East Asia. Besides their dealings with copper, gold, grain, hemp, ivory, spices, tar and timber, these Dutch families were also what has been called “traders in good taste” to northern Europe. Badeloch Noldus has shown the influence of this handful of Dutch traders in early modern cities such as Stockholm in the commissioning of architecture, art, design and culture (Noldus 2005, 2011, 2013; cf. also Bedoire 2009 and Keblusek 2011). “Trading in taste” in the case of the Momma-Reenstierna brothers is, apart from their stately home in Södermalm (Figure 3) in Stockholm, most obvious at their works in Sápmi and the Torne River Valley.

Figure 3. The Momma-Reenstierna town mansion at Wollmar Yxkullsgatan 25 in Stockholm. Photo by Jonas M. Nordin.
The Dutch merchant and industrialist families and workers from the Low Countries in Sweden have often been regarded as “immigrants” – many settled and became naturalized in Sweden, making them one of the first recorded waves of modern migration to Scandinavia (Douhan 1985). Looking more closely at these investors and innovators during the seventeenth century suggests labelling them cosmopolitans as a more pregnant characterization (see for instance Rydén 2013). Many did not come to stay in one place but moved around between different countries in northern Europe and sometimes went back to the Low Countries. A case in point is Abraham Momma-Reenstierna, who shared his time between Sweden and the Netherlands.

The metal production and the trade in metals from the mining districts of Sweden to Amsterdam or London cannot be separated from each other. As recent research has demonstrated, the metal production in Sweden is closely related to the metal trade with the Gold Coast, the sugar trade with the Caribbean, and the slave trade in its paths, as well as the fur trade with North America (cf. Evans and Rydén 2007; papers in Müller, Rydén, and Weiss 2010; see also Morton 1985). Metal making in early modern northern Fennoscandia was to a growing degree part of colonial global economy. The role of mineral exploitation and metal production in Sápmi and the Torne River Valley has not been examined much in this larger context (see, however, Nordin 2015; Ojala and Nordin 2015).

Abraham and Jakob Momma-Reenstierna made their fortune from the production of copper, iron and steel (cf. Sondén 1911). The brothers had their own companies along with several mutual enterprises. Among these were the exploiting of the iron mine in Junosuando (Sw.)/Junosuanto (Fi.)/Čunusavvon (SaN.), the copper mine in Svappavaara (Sw.)/Vaskivuori (Fi.)/Veaikevääri (SaN.), and the refining of the metal ores at Kengis (Sw.)/Köngänen (Fi.)/Geavŋŋis (SaN.) works in the Torne River Valley.

In 1669, at the height of their power and their success with industry in northern Sweden, the two brothers were ennobled. Abraham and Jakob Momma-Reenstierna surrounded themselves with symbols of a construed exotic North, as shown in their name and choice of heraldic crest. Symbols for the Sámi such as the reindeer, geres (Sámi sleigh), clothing, etc., were actively used by the brothers and, as will be shown below, were both part of a zeitgeist – other aristocrats, industrialists, merchants and traders did similar things – and part of the brothers’ individual branding. The symbols were integrated into the appearance of the brothers and became part of an ongoing performativity practice (Schechner 2002, 287–296). These activities can be interpreted as a practice to strengthen the brothers’ position in the global market of metal production and trade.

The brothers’ integration and use of Sámi symbols was concurrent to their establishment in the upper parts of the Torne River Valley and surrounding areas, a process that included the employment of Finnish and Sámi workers, trading with the local populations and using and exploiting lands and resources. The copper and iron works of Kengis, the mining settlements in Svappavaara and in Junosuando (in the village today named Masugnsbyn), Kalix copper works, Vittangi (Sw.)/Vazáš (SaN.)/Vittanki (Fi.) copper works, as well as other places in the inland of the county of Västerbotten, were zones of contact between groups of people with varying identities. Here Finnish, Sámi and Swedish speaking people met, mixed and interacted with Dutch, French and German speaking industrialist, workers and traders.
Copper from Sápmi in the global world

Ingvar Svanberg has shown that a substantial amount of Sámi people lived and worked in southern and central Sweden in districts such as Närke, Uppland and Västmanland during the early modern period (Svanberg 1999; cf. also Nordin 2017a, 2017b). The perception that Sámi people were only to be found in the far mountainous regions of northern Fennoscandia is a myth nurtured by early modern and modern ethnocentric exoticism and nationalism (cf. Broberg 1982; Ojala 2009; Baglo 2011; Hansen and Olsen 2014). This mystification of the Sámi accelerated during the seventeenth century with the scientific descriptions of the Sámi, expeditions to Sápmi and the collecting of Sámi material culture and of Sámi people themselves (Nordin and Ojala 2015; Nordin and Ojala forthcoming). In this context, the actions of the Momma-Reenstierna brothers played an important but little acknowledged role.

Abraham and Jakob Momma-Reenstierna first travelled to Sweden to work with trade – importing luxury commodities to Sweden, exporting bar iron, tar and later on copper and brass to the Dutch, and after some time, to the English markets, and from there out to the Atlantic world. They bought, leased and owned shares in ironworks in central Sweden such as the Färna, Meling and Norn works. The production spanned from bar and pig iron to cannons, ammunition and grenades as well as kettles and statues (Sondén 1911; Müller 1998, 9–119).

Iron was a major export commodity but the profit coefficient was rather modest and competition made it impossible to control the market price (Müller 1998, 166–175). Perhaps as a result of this situation, the Momma-Reenstierna brothers moved into the copper and brass industry. Copper was highly esteemed in the global market as a precious metal, and for its importance in the making of ships’ sheathings, cauldrons, kettles and for its attraction in the New World trade (Müller 1998, 166–175; Horning 2013, 141–146). Copper and brass were commodities, as has been pointed out by Leos Müller, which it was possible to gain monopolistic control over (Müller 1998, 172–175). In the middle of the seventeenth century, half of the world’s copper production took place in Sweden and mainly in Falun/Kopparberget (Magnusson 2000, 32–56).

In West Africa, the Manillas – the Moneta Franca in the gold, ivory and slave trade – was often made of brass (Horton 1996, 290; Cook 2012, 60–62). In Sweden, brass wire was also called Guinean bracelets. Another object made of brass or copper was “negros” – perhaps some kind of copper sheets (Norberg 1956, 205). How much of the copper and brass made in Sweden made its way to Birmingham and Sheffield and further to West Africa is unknown, but the copper was essentially an Atlantic commodity, manufactured for global trade and coveted by an international consumer market (cf. Morton 1985; see also Zahedieh 2013).

A case in point is the Læsø shipwreck from the 1630s, which when excavated was found to have been carrying a shipload of brass wire, sealed with Louis de Geer’s owner’s mark (Helmfrid 1971; Nilhamn 2012, 168). It was probably on its way to Hamburg, Bremen or Amsterdam to sell the brass wire. On the Gold Coast, the de Geer family later established a foothold through the Swedish Africa Company. Even though the company was short-lived, it controlled a substantial part of the European trade on the coast (cf. Nováky 1990). Copper rods and brass wire were among its main export commodities.
Abraham and Jakob had an older half-brother stationed in Amsterdam, Willem Momma, who had a firm grip over the Atlantic brass trade. He owned, for instance, Nyköping brass works in Sweden, and traded with the Marescoe and David families in England (Morton 1985, 6–24; Roseveare 1987; Müller 1998, 231–232; see also Morton and Robey 1985). The Momma-Reenstierna brothers were actually pioneers in switching from the Dutch to the English market, and copper and brass were the commodities that would lead the way (Morton 1985; Müller 1998, 175). This switch is one of the main structural changes in the economic development of the early modern world. Through this change England would get the upper hand not just economically but also politically. It also meant that the Torne River Valley was drawn into the global trade and that global currents were brought to Sápmi.

Brass, the gold-shining, hard, rather inexpensive alloy, met a rapidly growing attraction during the early modern period. It was mainly used for the making of needles, pins, buttons and buckets – objects along with the aforementioned Manillas that were sought after in the West African trade (Morton 1985). Brass was also needed for the making of candlesticks, candelabras and wall sconces (cf. for instance Symonds et al. 2015, 81–84).

Brass enhanced the illuminating effects and particularly the wall sconces changed not only public or display space such as churches or assembly rooms, but also private rooms (cf. Symonds et al. 2015, 81). For a reasonable amount of money, a burgher or a craftsman could buy an object that would substantially prolong the work day. The literal enlightening of rooms and workshops is a pivotal aspect of the birth of the industrious society which has not attracted much scholarly interest (de Vries 2008; Hutchison 2012, 155).

Darkness during the long winter nights of Fennoscandia was more prevalent than we usually perceive it to be. Both public and private space was scarcely lit. Tallow candles and torches (Sw. tjärstickor) were the main means of lighting, but when a candle of tallow or wax was put in a wall sconce the lighting effect would multiply.

The role of light in early modern industrial production is little acknowledged, and the importance of brass in this context is almost completely neglected. During the seventeenth century, there were five major brass works in Sweden – Avesta, Gusum, Norrköping, Nyköping and Skultuna – which all ended up in, or were under influence of, the Momma-Reenstierna family (Müller 1998, 171–172). Jakob Momma-Reenstierna was married to Elisabet Kock-Cronström, daughter of Marcus Kock-Cronström, another entrepreneur of Dutch extraction who became successful both financially and socially (being ennobled under the name Cronström). Marcus Kock-Cronström served as a master minter (Sw. myntmästare) in several towns, of which Avesta in central Sweden was the most important (Boëthius 1931, 346–351).

Jakob Momma-Reenstierna bought the brass works in Norrköping in 1666 from the De Geer family and it became the heart of his economic empire (Sondén 1911, 160). The economic entanglement in the iron, copper and brass industries led Jakob Momma-Reenstierna to lease the islands of Gotland and Ösel in the service of ex-queen Christina who had abdicated in 1654 (Sondén 1911, 162; Awebro 1995–1997, 720). These latter investments might be understood in the light of a wish to be part of the landed gentry, which proved unsuccessful.

In Jakobstad in Finland, Jakob Momma-Reenstierna founded a shipyard which moved after a couple of years to Slite on Gotland (Lyberg 1949; Toivanen 1982). Among the ships
built at Slite ship wharf in 1673–1674 was Het Vliegende Lappe – “The Flying Lapp”, i.e. Sámi (Müller 1998, 179). To our knowledge nothing is recorded about this very unusual choice of name for a ship. In the context of Jakob Momma-Reenstierna’s other activities in and around Sápmi, the name seems rather fitting. Het Vliegende Lappe was a rather small ship; it had cost just a little more than 4000 d.c.m.\(^5\) in comparison to several other ships that cost between about 17,000 and 63,000 d.c.m. This indicates that the ship was only used for local transport in the Baltic (Müller 1998, 179).

**Momma-Reenstierna and the Torne River Valley**

In 1642, Lars Larsson, recorded as a farmer (Sw. bonde), discovered the deposits of iron ore in Junosuando, in the Upper Torne River Valley (this place is today called Masugnsbyn). The county governor Frans Crusebjörn organized the Crown’s support for the founding of a company run by burghers in Torneå to exploit the finds. The master miner (Sw. Bergmästare) Hans Lybecker (Norberg 1958, 7) made the first map with aspirations to accurately depict the rapids and streams of the river. On this map, drawn in 1643, it is stated that the finding of iron was made at a place called Saivijjock, north-west of lounoswa Bÿn (present-day Junosuando). The place name may refer to the mythological Saivo/Saiva complex and sacred lakes (Bäckman 1975). The lake just west of the mines is called Saivojärvi (Figure 4). The ore was probably refined in Torneå some 350 km to the south, but the company was closed already in 1646. The rights to extract the ore were transferred to a German-born burgher of Torneå, Arendt Grape, who also ordered the establishment of a furnace in Junosuando (Brännman 1940; Norberg 1958, 7).

Some 40 km downstream from Junosuando, at a place called Kengis, Grape founded a works to refine the iron. Geavŋŋis, in North Sámi, means waterfall or great rapid. The Finnish Köngänen and the Swedish Kengis are both derived from the North Sámi place name (Swedell 2001, 33). The relatively good conditions for agriculture, rich fishing and good communications along the river suggest that the place had been inhabited for a long time before the establishment of the works. Here, a hammer with two hearths was built; a type in Sweden often called Walloon-forge and an innovation in the metal industry of the seventeenth century (Hildebrand 1992, 49–69). This kind of forge was the most innovative technique available at the time and its products were suitable for the making of the emblematic material of modern society: steel (Norberg 1958, 13; Awebro 1993, 367; Evans and Rydén 2007). The ore from Junosuando was not entirely suitable for the making of bar iron – the sought-after export commodity – due to its high content of sulphur (Brännman 1940, 48).

In spite of the swift development and good production rate, and the grand plans to turn the works into a successful industry that would foster a town to control the lucrative trade with the Sámi and Finnish populations, Grape lacked the financial means to see this through (cf. Wennerström 1923; Awebro 1993, 366–367). Perhaps the inferior quality of the iron also influenced the situation. It was at this stage that the Momma-Reenstierna brothers stepped in. A common pattern for Abraham and Jakob Momma-Reenstierna was to lend money to other industrialists and factory owners and thereby take over the industries – a kind of a hostile takeover of the seventeenth century (cf. Sondén 1911; Müller 1998, 103–109).

In 1652, the brothers bought two-fifths each of the company, leaving one-fifth to Arendt Grape (Contract between Grape and the Momma-Reenstierna brothers 27.2.
The works were granted new privileges, including the right to have its own police, take 30 or 40 vagrants into employment, and trade local things for daily use (Letter from Queen Christina 27.10 1653, RA, MRS 1). On a drawing depicting Kengis from 1660 (see below), there is actually a prison depicted. The works was also exempt from the demand to pay toll in Stockholm; the ships with the iron from Kengis could

**Figure 4.** Hans Lybeckers' map of the Torne River Valley from January 1643 with the mines of Junosuando in the upper left. Note that the ore is marked with both the symbols of Iron (Mars) and Copper (Venus). Photo courtesy of the National Archive, Stockholm.
instead head directly to the Dutch market (Letter from Queen Christina 27.10 1653, RA, MRS 1).

An inventory of the works complex with the mines and the office in the town of Torneå shows that the whole business was still rather limited (Norberg 1958, 16). But that was about to change. The copper from Svappavaara gave the income the brothers and Grape had hoped for: the most successful part of the Momma-Reenstierna enterprise in Sápmi was the mining and refining of copper. A priest was acquired in 1654 and a physician is mentioned in 1663 (Sondén 1911, 157). During this time, many different languages would have been spoken at Kengis, e.g. Dutch, Finnish, French, German, North Sámi, Lule Sámi and Swedish and possibly also Latin (cf. Sondén 1911; Körringh 1956, 25, 51; Lindmark 1963).

Copper was discovered in Svappavaara in the 1650s by a Sámi man, Olof Tålck (Sondén 1911, 154). Olof’s last name denotes his profession: interpreter. The findings were immediately exploited and it was from this period the works gained momentum. The finding was contested by a man called Jonas Bode, but the claim was not accepted by Abraham Momma-Reenstierna (Sondén 1911, 154, note 2).

Svappavaara Mountain was regarded as a sacred mountain by the Sámi. In 1729, the clergyman Henric Forbus described the mountain as *Passe* or *Passevara* – a sacred site or sacred mountain. However, according to Ernst Manker in 1957, no physical traces of ritual or sacrificial practice on or adjacent to Svappavaara Mountain had been identified (cf. Manker 1957, 139). In an archaeological survey in 2013, traces of a Sámi settlement, south-west of the mountain top, was found (Klang 2014, 21). The riches in copper might be a reason why the site was regarded as sacred – the copper-rich bedrock with its special colour might have been alluring to people. But also the Junosuando ore might have been found due to its location near a sacred place, but by the river near a sacred lake in this case (cf. Awebro 1993). The parallel existence of sacred Sámi sites and metal extraction sites has been discussed by Ingela Bergman et al., who have acknowledged the existence of cult places on mining maps in the Arjeplog/Árjepluovve area (Bergman et al. 2008).

Copper also played an important role as a precious material alongside silver. Sámi sacred objects could be made of copper and the metal or alloy was deeply treasured by many Sámi (Immonen 2013, 23–27). At the silverworks of Silbbajähkä/Silbojokk, a rich assemblage of Sámi find material from the period 1635 to 1659 has been excavated. For instance, a rare and distinctly Sámi copper pendant in the shape of AM – Ave Maria – was found (Nordin 2012, 157; Nordin 2015). Sacred Sámi drums, *goavddis* (SaN.) or *gievrie* (SaS.), were often adorned with and partly made of copper. Rivets on the drums, for example, would preferably have been of copper (see Manker 1938; Christoffersson 2016).

In the collections of the Norrbotten County Museum, there is an early modern painted copper canister with the text *Svappavaara 1678 AJR* – the latter probably meaning Abraham and Jakob Reenstierna – however, the letters might have been inscribed later (see Figure 5). The function of the box is unknown but the decoration suggests that it was made to be displayed. And the fact that it remained in northern Sweden indicates that it was used by the brothers, perhaps on their travels along the Torne River. This copper box might have played a role in the enhancing of the power and might of the brothers even in 1678, when their economic position was gradually weakened (Jakob Momma-Reenstierna died the same year).
Olof Tålck’s decision to report the finding of copper to Abraham Momma-Reenstierna in 1654, probably aware of the obvious risk of destroying the mountain, might be understood in this context: more alluring than the mountain was the copper in itself. At the same time, Sámi traditional religion was gradually losing its position in the region as a result of the ongoing missionary activities by the Swedish church, and new perceptions of space, land and its material assets were gaining a foothold (cf. Rydving 1995; Mrozowski 1999; Nordin 2015). In this context, however, it is important to remember that traditional views of the Sámi of the Middle Ages and early modern period as pagans or non-Christians might be profound simplifications (Mundal 2007; Äikäs and Salmi 2013, 21–22; Rasmussen 2014, 2016; Lundmark 2016). As suggested for instance by the finding of the aforementioned Ave Maria copper pendant from Silbojokk, Christianity might have had a strong position among part of the Sámi population before the intensification of the Lutheran mission in the late seventeenth and eighteenth centuries. This is a field where more interdisciplinary research is needed.

Figure 5. The copper canister from Svappavaara (the canister does not have an inventory number), Norrbotten County Museum. Photo by Kjell Öberg, Norrbottens museum, Luleå.
Christians or not, the Sámi prospectors of the seventeenth century were of central importance. A majority of the largest and most promising findings were made by Sámi hunters, rock-crystal miners and/or pearl fishers, with knowledge not only of the bedrock but also of the landscape as a whole (Schefferus [1673] 1956, 391–395; cf. also Schiebinger 2004; Munkerj 2006, 719). The reward for reporting a finding could be substantial – for instance a silver chalice and lifetime exemption from taxation (Brännman 1940, 50). In 1723, the new mineral law, where finders’ fees were stated, was even translated and published in Sámi (Hedlund 2014).

The making of modern landscapes in the Torne River Valley

The discovery of copper in Svappavaara hastened the industrial development in the river valley. Although the possibilities for transportation were much better than in the silver mines and works in Nasafjäll and Silbojokk in Pite Lappmark, or in Kvikkjokk/Huhttan in Lule Lappmark, the industrial projects in the Torne River Valley still required great investments in cleansing the river system, as well as in the construction of land roads (see Hoppe 1945, 100–101, 117–118, 143). The Torne River and its tributaries were of paramount importance for transportation and communication and connected an area stretching from the Gulf of Bothnia to the Atlantic, but it was an unpredictable force. The spring flood of 1677 was described by Antti Keksi (c. 1622–1705), one of the first known Finnish poets, in the poem which is often called Keksis kväde (Fi. Keksin laulu), composed in the local Meänkieli language, telling how the flood devastated settlements along the river. It also mentions the Mommas (see e.g. Wahlberg 1988).

In 1699, Adam Leijel reported on behalf of the Board of Mines (Sw. Bergskollegium) that there were no more woods around the Svappavaara mines in a radius of one Swedish mile (10 km; Adam Leijels berättelse om Bergwärken uti Wästerbottn år 1699, 149). And in the period 1657–1674, 5000 skeppund (approx. 800 tons) of copper left Torneå (Sondén 1911, 157). An unknown amount was used locally for minting and the making of tokens and objects, such as the aforementioned copper box probably belonging to Abraham and Jakob Momma-Reenstierna.

In 1673, Grape made an expedition up along the river, passed Lake Torne Träsk and on the Norwegian side, in the parish of Ofoten, he had a Sámi point out another copper find. The place was called Rannawaara and it proved promising after test mining by Grape. The Norwegian authorities swiftly stopped the enterprise and the Kengis company never returned (Grape letter to the King, cited in Sondén 1911, 167; Schefferus [1673] 1956, 394). The collection of minerals at the Board of Mines received a sample of the copper ore from Rannawaara, which is still kept in the National Museum of Science in Stockholm (NRM inv. no. 57:9400; Figure 6). Rannawaara lingered on as a tempting source of riches for several decades to come.

A drawing of the works and a map of the works site in Kengis, both made in 1660, are evidence of this rapid change. The drawing of Kengis was made by the Dutch works scribe Denis Joris. When the sketch is compared to the map, the sketch shows great accuracy (Figures 7 and 8). For instance, the situation and location of the small huts, labelled pörte, meaning hut or chalet, close to the river, are very exact. The industrial complex, including the hammer, saw mill, flour mill, smithies, stamp mill and copper mill, is depicted very similarly in the drawing and on the map. The map also shows a rather large manor...
Figure 6. Sample of copper ore from Rannawaara brought to the mineral cabinet of the Swedish Board of Mines. The sample is labelled: “Koppar lazur fr. Rannawari högst upp i Sv. Lappmarken, som Lapparne 1672 eller 73? funnit men de norske sig tilägnat såsom liggande inom deras district” (“Copper from Rannawara at the far North of Swedish Lapland, found by Sámi in 1672 or 73 but taken by the Norwegians as part of their land”; our translation). Photo courtesy of Jörgen Langhof, the Swedish Museum of Natural History, Stockholm.

Figure 7. Map of the Kengis works 1660, “Kiengis bärgsbruck uti öfre Tornöö”. Photo courtesy of the National Archive, Stockholm, collection of mine maps.
with a porch on either side of the building. The manor is to the south surrounded by servants’ quarters, stores and stables (c–f). To the north-west are the workers’ houses, the works office and the vicarage.

Joris’s drawing reveals even more details, for instance, that the courtyard and the garden are not only enclosed but gated, and that there is a sundial in the middle of the herb garden (h). There is also a prison (Sw. arrest) marked, just south of the forge. Most striking are the proportions of the two-and-a-half-storey manor, with the high porches, chimneys, lead stained glass, and with weather vanes on the roof. The building depicted is obviously not a small Swedish timber house, but a more Dutch-style manor (cf. Noldus 2013).

In the foreground, on an island in Torne River called Ängsholmen (Sw.) or Meadow Islet, there are at least two buildings of obvious Sámi type and perhaps two others (difficult to distinguish). The depicted huts represent the traditional Sámi goahti, a dwelling made of timber or turf, or lavvu, a tent with reindeer hides or woollen cloth (see for instance Liedgren 2007, 123–124). In the middle of what might have been the Sámi settlement there is a square feature which might represent a timber goahti, as depicted by both Johannes Schefferus and Carl Linnaeus (Liedgren 2007, 116–121).

How should we understand this depiction and the Sámi presence in it? Why was it made, and what was its purpose? We may assume that it was commissioned by the Momma-Reenstierna brothers. There are other examples from seventeenth-century
Sweden of paintings of factories or works having been painted, which were highly valued by the owners or by their international trading network.

For instance, the Trip family in Amsterdam, who made a tremendous fortune in dealing with arms from Sweden, owned a painting by the Dutch artist Allart van Everdingen depicting the Julita canon factory (“De geschutgieterij Julita Bruk van de familie Trip”, 1640s, Rijksmuseum Amsterdam; cf. Haggrén et al. 2016, 95–96). The Trip family, like other capitalist families of its day, would have used this painting, depicting their economic sphere, as a kind of self-identification or branding, with the purpose of strengthening the company inwards and impressing investors from the outside. This practice can be seen in the light of what we have shown above, regarding the Momma-Reenstierna brothers’ highly conscious effort to brand themselves.

Should Joris’s drawing be interpreted as a sketch for a planned painting to be executed in Amsterdam or elsewhere by a professional artist such as van Everdingen? Why then are the explanatory texts in Swedish? Both Abraham and Jakob, who primarily spoke Dutch and German, visited their works in the Torne River Valley and stayed in Kengis at the manor, so they knew what it looked like (Norberg 1958, 18–19, 30–31). The drawing would then probably have been made to be viewed by others.

The Sámi settlement in the lower part of the drawing, which is not shown on the map, is of key interest here. Do the goahti represent a factual Sámi settlement adjacent to the works or should they be understood as a genre supplement, put there to enhance the exotic content of the drawing? Field studies have not made it possible to determine whether there was any settlement or not.

The account books of the Kengis works support the interpretation that the depicted Sámi dwellings reflect a real Sámi presence. There were Sámi employed at Kengis and in Svappavaara, and many Sámi were employed with transportation along the river from the mines to the works (Hoppe 1945, 134, 143). Hundreds of reindeer were used and many Sámi people were involved in the trade with the Momma-Reenstierna enterprise. Gunnar Hoppe has acknowledged a peak in transportation in 1660 when between 15,000 and 20,000 reindeer loads with charcoal were sent to the Svappavaara mines. The majority working with this transportation were not long-term contract workers but hired personnel, most of them probably Sámi (Hoppe 1945, 143). In 1657, Nils Dunder was sent by Kengis works to buy 19 reindeer from Olof Tåleck. Dunder did not succeed with the reindeer and several of them died, probably due to exhaustion (Lindmark 1963, 46). At the Svappavaara mines, of the 77 workers employed in 1661, several were Sámi (List of workers in the Svappavaara mines, published in Lindmark 1963, 47–48).

The business did not only export metals but also Sámi products. For instance, in 1663, 59 pairs of lappskor, Sámi boots, were shipped out from Torneå, along with 771 sheets of “copper plates” (Sw. blekkoppar), 923 sheets of “roof copper”, 125 “Hungarian” copper sheets, as well as red gloves (probably of red fox or squirrel; Kengis account book, 15 August 1663). Many of the Sámi who took part in the economy of Kengis works lived a nomadic life in the river valley and beyond. Others might have been more stationary – like most of the workers in Svappavaara, including the Finnish workers. A note in the court records for Torneå and Kemi lappmarker (Lapp districts) mentions that nine Sámi had come from the Kaitum/Gáidum (SaL.) Sámi village in Luleå lappmark and wished to settle in Torneå lappmark due to the hard conditions at the Crown’s silverworks in Kvikkjokk. Jakob Momma-Reenstierna offered them work transporting iron between Kengis and
Kvikkjokk, which they accepted (Svea hovrätts domböcker, also published in Lindmark 1963, 44).

The Sámi who worked in the industry must have lived somewhere at the works and the mining villages. Contemporary sources suggest a strong urge on the part of Swedish institutions to separate Sámi and Swedes, and sometimes also Finns. The best-known example of this is the town plan of Arjeplog, from 1640, where the proposed town was divided into a Lappstad (“Lapp town”) and a Köpstad (“burghers’ town”). Archaeological fieldwork from Arjeplog also suggests that a similar division, at least to some extent, might have been practised in the late seventeenth and eighteenth centuries (Liedgren 2004, 2015). The church and market place of Lycksele/Liksjoe in southern Lapland had a similar arrangement, with separate parts for the Sámi population, new settlers and traders/burghers (Rydström 2009). At the aforementioned silverworks of Silbojokk, a similar pattern of separation between different groups is also discernible (Awebro et al. 1989; Nordin 2012, 2015).

This leaves us with the possibility that the sketches of two goahti in the lower part of Joris’s drawing represent the factual situation, and that the practice at the works, during its most prosperous period, coincided with the wish of the works owners. In the payrolls, Sámi are distinctly separated from Swedes, Finns and sometimes French (Dutch Walloons), and we may assume that the Sámi workers, visitors and traders, distinguished themselves through their dresses, food habits, language and perhaps also dwellings (cf. Ljung 1937; Lindmark 1963, 47–66; Kuoksu 2003).

The Momma-Reenstierna brothers as brand-makers

The second half of the seventeenth century is characterized by both an expanding economy and a constant shortage of cash. There was simply not enough currency circulating in the Swedish realm. The Momma-Reenstierna brothers could circumvent this problem through a royal decree allowing them to make tokens to be used as currency at Kengis. Later, in 1674, they held the right to make copper plate coins. The tokens were made from c. 1660 in Svappavaara, to a value of 20 öre, with a running reindeer as a symbol and with the text AIM, Abraham Jakob Momma, from 1669 changed to AIR (Hyötyniemi 1978; Tingström 1986, 92–93; Figure 9).

The system of tokens was heavily criticized by the burghers of Torneå since they saw how it came to spread in the whole river valley. Right from the start, in 1642, Arent Grape had royal permission to trade at Kengis and Momma-Reenstierna also had privileges to run shops for trade in most commodities (Norberg 1958, 27–28; Hyötyniemi 1978). This was highly unusual. In early modern Sweden, all trade was directed to the towns except for a handful of market places in Sápmi where annual markets were allowed. Kengis became a hybrid works with town-like privileges where trade with the local Finnish population, Sámi groups, works people and foreigners took place, to the great annoyance of the burghers of Torneå (Norberg 1958, 27; Awebro 1993, 374).

Trade goods, such as what were labelled Hungarian copper plates, kettles or Sámi boots, were made in Sápmi and sold to the global markets to become hull sheathings of East India traders, Manillas on the Gold Coast, or collectors’ items at European courts. Other objects came the other way. China, faience, earthenware ceramics, woollen cloth, wine and tobacco were imported and sold by merchants in Luleå, Torneå and Uleåborg,
but also at markets in Jukkasjärvi, Enontekiö/Markkina, Arvidsjaur or in Kengis (cf. for instance Bergling 1964; Mäntylä 1971, 1993; Nurmi 2011).

Recent studies in the towns of Torneå/Tornio and Uleåborg/Oulu have revealed a bursting regulated urban space with vast continental and global connections. At the same time, there is evidence of the making of a particular way of urban life, related and similar, but not identical, to the towns of the southern part of the Gulf of Bothnia (Ylimaunu 2007; Herva and Nurmi 2009; Herva and Ylimaunu 2010; Nurmi 2011). The region’s distinct features as a borderland between different power structures, religious traditions, cultures, economies and ethnic groups have led Timo Ylimaunu et al. to label the region as a “third space” during the late mediaeval and the early modern periods (Ylimaunu et al. 2014).

Other commodities came to the North as well, some on the Momma-Reenstierna brothers’ ships. One distinct object is a cabinet dated to the second half of the seventeenth century, which was brought to the county museum in Norrbotten in 1878 from the Maunu settlement by the Könkämä River, some 150 km north of Kengis and close to the former market place of Enontekiö/Markkina (Odencrants 1938; Figure 10). How the cabinet ended up in Maunu is not known, but it is rare piece of handicraft and one of only four so-called Schefferus cabinets known in the world.

This cabinet is made of dark-coloured wood with inlay of bone, perhaps of reindeer antler, and engraved with pictures similar to the those printed in Moses Pitt’s Atlas of the World in 1680 and based upon a colour painting sent by William Allestree, working
for the English Ambassador to Sweden, to John Locke in 1672 (Talbot 2010, 49–57). Johannes Schefferus’s *Lapponia*, first printed in 1673, might also have served as inspiration (Schefferus [1673] 1956). Three almost identical cabinets are known, one in Nordiska Museet, inv. no. 62 320, one in Skokloster Castle, inv. no. 3160, and one at Skottorp Castle in the county of Halland, which was sold in 1979 and whose whereabouts are not known (cf. Nordiska Museet inv. no. 62 320). All four cabinets are probably from the same workshop.

There is no direct link between the cabinet and the Momma-Reenstierna family, so the connection needs to be regarded as tentative. However, there are several traits that connect the brothers with the cabinet. As discussed above, the reindeer and Sámi were symbols frequently used by the brothers. Abraham Momma-Reenstierna also corresponded with Johannes Schefferus at Uppsala University and even sent him samples of iron ore from Gällivare (Sw.)/Váhčir (SaN.)/Váhtjer (SaL.)/Jellivaara (Me.) (Norberg 1958, 90; Schefferus [1673] 1956, 394). Schefferus played a paramount role in the dissemination of an exotic understanding of the Sámi, contrary to his intent (cf. e.g. Löw 1956; Bergesen 2015). These rich finds of iron later became some of the most important in the Swedish iron industry (see further Hansson 2015). The cabinet might have been displayed at Kengis but saved from the raiding Russian troops in 1717 (Norberg 1958, 46).

For the Momma-Reenstierna brothers, the cabinet might have been thought of as a material manifestation of their righteousness and just behaviour. In the brothers’
correspondence there are, to our knowledge, only a few passages that talk of the Sámi in negative terms, but they still consistently distinguish Sámi as something different from Swedes or Finns (Letter from Abraham Momma-Reenstierna, 26 May 1654 to Count Axel Oxenstierna, 26 May 1654; Letter from Abraham Momma-Reenstierna to the King, 1672; about the correspondence see below). They express a general Eurocentric colonialist worldview which declares that industry and trade will open “Lappmarken”, the land of the Sámi, to civilization, education and prosperity. They also express the wish to have more people moving to the northern Torne River Valley in order to show the Sámi the value of industry.

The networks of Abraham and Jakob Momma-Reenstierna also included Sweden’s most popular painter at the time, the court artisan, David Klöcker Ehrenstrahl, who was married to Maria Momma, the daughter of Willem Momma, thus the niece of Abraham and Jakob Momma-Reenstierna (Sjöblom 1949, 369). Ehrenstrahl is well known in Sweden for his portraits of royals, their dogs and horses. He is also recognized, however, for his paintings of exotic animals, curiosities and immigrants such as an African servant. One of his most emblematic paintings is the “Sámi equipage”, or Ren dragande en ackja (Rapp 1951; Bedoire 2009, 129; Figure 11). The painting was believed already in the eighteenth century to portray Abraham Momma-Reenstierna, but we do not know for certain if this is actually the case. The contact between the brothers and the artist did however influence the choice of motif, and it is one of the first in a long series of paintings depicting this particular motif (Rapp 1951; Nodermann-Hedqvist and Manker 1972; Mathiesen 2014; Nordin 2017b; Nordin and Ojala forthcoming).

Figure 11. Ren dragande en ackja (“Reindeer and sleigh”). Painting by David Klöcker Ehrenstrahl, in private collection. Photo courtesy of Fredric Bedoire; see also one version of the painting in Nationalmuseum, Stockholm, inv. no. NMGrh 235.
Production of space at the northernmost industries in the world

In his extensive study of the vast Momma-Reenstierna conglomerate, Leos Müller has pointed out the importance of personal relations in their networks. According to Müller, the Momma-Reenstierna brothers’ correspondence shows the ability to create and maintain an enormous personal network. In these networks, relatives such as Willem Momma, Mathias Momma, Caspar Bruyn and Abraham Kock-Cronström were part of the family sphere as well as the business sphere (Müller 1998, 227–232). Müller has estimated the number of letters written yearly in Jakob Momma-Reenstierna’s office in the 1650s and 1660s at between 600 and 1000 (Müller 1998, 231). The brothers’ correspondence during this period, and in the letter books that Müller has studied, shows that Amsterdam is, not surprisingly, the most important destination. London, however, was becoming more important in the 1660s and 1670s, whereas Torneå peaks in the 1660s and seemingly loses its position totally after that (Müller 1998, 213).

This rapid growth and subsequent decline in correspondence is mirrored in the activities in and around the Kengis works. In 1659, a new source of copper was found further to the south in Pahtavaara, outside of Kalix. Mines were opened and a furnace was soon established beside the Moån River. Kenneth Awebro has studied this copper industry and has concluded that it was run as a “shell” company by the Momma-Reenstierna brothers and their companion Arendt Grape, in alliance with a group of burghers from Torneå (Awebro 1989, 26–30).

The conflict over the trade in the Torne River Valley between Kengis works and the town of Torneå led the Momma-Reenstierna brothers to take precautions. An open conflict would hardly have been favourable for exploiting the new finds in Pahtavaara or for the industry and trade in general (cf. Norberg 1958, 28). All the products from Svappavaara, Junusuando and Kengis had to pass through Torneå on their way to the continent. Grape as well as the brothers had offices in or adjacent to Torneå, in order to control trade, but the long transportation must have been vulnerable to foreign interference. The Kengis works office was located in Hellälä, just outside of the town of Torneå (Sondén 1911, 176, note 2).

The Kalix works was much smaller and not as successful as Svappavaara/Kengis. Still, it exhibits some similarities to the Kengis works. The Kalix works was closer to the mines; there was actually copper found in a mountain ridge just a couple of kilometres from where the furnace was established. Another copper ore find was in Pahtavaara, some 10 km north of where the furnace was established. Here, a small settlement was also established but the main dwellings seem to have been by the Moån River. On the southwestern slopes of the ridge, called Bruksberget (Works Mountain), three distinct settlement areas are distinguished on a map from 1660 (i.e. the same year as both Svappavaara and Kengis were surveyed, but judging by the outline and style it does not seem to be the same surveyor).

Two of the three areas are placed on small islets in the surrounding marshland. In the north, close to the mines, was a settlement area with distinct house foundations still visible today. The four houses are labelled pörte (chalet), gruvdrängarnas stuga (the mining workers’ house) and two outbuildings. In the middle of the yard there is a tids sten (sundial). Further to the south, connected with a corduroy road, there was another settlement area consisting of one outbuilding and the administrative building – the largest
house at the works except for the furnace itself. Not far from this islet was the industrial area with the furnace, coal shed, roast ovens, smithy, flour mill, stables, etc. (Map of Kalix/Pahtavaara works 1660, Riksarkivet, Stockholm, Bergskollegii gruvkartor).

In 1986, there was a limited excavation of the two dwellings of the northern settlement area (Bäärnhielm 1986). The two houses were erected on a foundation of gravel and had been made of timber. The eastern dwelling had a hearth and glass windows. The western building, labelled pörte, might have had in its eastern part a rökugn – a distinctive heating device used by Finns and found in forested areas in Sweden and Finland (cf. Ekengren 2013). A rökugn would not have a chimney but the smoke would pour out through the covering layer of small stones. Two shards of red earthenware with yellow spiral decoration probably dating to the seventeenth century were found in this building (Bäärnhielm 1986, 50–51; Westerberg 1987, 36–42).

The same features are found in the Kengis and Svappavaara works, except for the red earthenware, but almost no archaeology has been conducted at these industry sites. The workers’ dwellings and the cabins are all on the maps, but only vague features are visible on the surface. According to the historical maps of the eighteenth and nineteenth centuries, the activities at the Kalix works were rather limited and concentrated around the furnace. These buildings and features, the charcoal kilns, the flour mills and the stables, were all of the utmost importance to efficiently run a metal industry. As with Kengis, there are also other features not directly derived from function and necessity.

The separation of different parts of the production is clear. Administration, power and control were placed on one side, in Kalix on an islet in the middle of the area, and in Kengis on top of the ridge. In Kengis, the workers’ dwellings were erected along a main street (or bruksgata in Swedish) – the usual pattern of the Dutch-run works in central Sweden (see Bedoire 2009, 285–315; Nordin 2012). In Kalix, that system was replaced by settlements on separate islets.

This pattern can also, at least in part, be identified at the Vittangi copper works. This industry, equal in size to Kalix, was owned by the Momma-Reenstierna brothers and Grape and situated some 15 km north-east of Jukkasjärvi along the Vittangi river. Little is known of this works. It was in use from around 1655 to the death of the Momma-Reenstierna brothers and consisted of a mine (Pahtavaara) and a furnace (Leppäkoski) some 2 km north-east of the mine (Tegengren 1924, 85–88; see also Schefferus [1673] 1956, 393). Most of the settlement was located on a ridge near the mine, including a substantial building foundation with two hearths and a cellar, measuring at least 12 × 8 metres (Wallerström n.d., 6). This well-preserved works were partly excavated in 1977, providing results showing no industrial activity after the third quarter of the seventeenth century (Wallerström n.d.).

The industrial production in itself was separated from administration and dwelling at Kengis, Kalix and Vittangi and other contemporary works. Industrial production was located along the river and the stream, the main provider of energy, and would, if possible, be located away from the settlement. This separation can be explained by environmental reasons. A blast furnace and certainly the hammer, as in Kengis, would cause terrible noise and smoke.

There is also another similarity between Kengis and the Kalix works which cannot be found in Svappavaara or at any other contemporary works – the sundials. At Kengis, the sundial is placed in the formal garden to be used by the servants and inhabitants of the
manor. In Kalix, the sundial is placed at the workers’ dwelling. Why would one have a time-keeping device, long before it became a common feature in that part of the world, and who would use it? Kengis and Vittangi are placed well above the Arctic Circle, whereas Kalix is slightly below, meaning that the three places have midnight sun. Would the midnight sun be the reason for the use of sundials, in order to tell the time at a place where time for a foreigner could seem to be non-existent?

Symonds et al. (2015) have discussed the role of different time perceptions in the advent of modernity in Torneå. They have shown that several ways of measuring and dealing with time were used concurrently. Parallel systems of recognizing time were used by the Sámi, farmers, the priests and burghers, based on seasonality, ceremonies, technical development and relation to the centre of the empire. As discussed by Timo Ylimaunu, Risto Nurmi and others, the urban space of Torneå balanced between the global trade currents, demands from the monarch in Stockholm and local and regional interests in the Gulf of Bothnia and its hinterlands (Ylimaunu 2007; Nurmi 2011; see also Mäntylä 1971, 1993).

The three works discussed here were linked together through their owners and what was produced, but also, as discussed above, through their form and layout, including the use of sundials. They formed contact zones between different peoples, material cultures and technologies. The copper had two main purposes: to make copper sheets and to make brass. From brass, the Momma-Reenstierna brothers manufactured lighting devices such as candlesticks and wall sconces – all made to prolong the work day in a fashion similar to the natural version of the never-setting summer sun of the works in Sápmi and the Torne River Valley.

**Modernity from the “periphery”**

The lives of Abraham and Jakob Momma-Reenstierna, and people around them, were full of references to the Sámi and the Sámi lands. The master of mines Olof Larsson exclaimed in 1661 that the metal industry would civilize the Sámi (Sondén 1911, 156). In 1672, Abraham makes no distinction between the different peoples of the north except for the Sámi, whom he singles out (Letter from Abraham Momma-Reenstierna to the King, 1672). On the other hand, he also states that he prefers Sámi to the farmers, whom he found lazy, and he expresses appreciation for the reindeer of the Sámi population.

Kalix, Kengis, Svappavaara and Vittangi works and mines were central nodes in the productive landscapes of the Momma-Reenstierna brothers, although the big brass works of central Sweden were far more important in a strict economic sense. The northern works can also be viewed as markers of the identity and brand of the brothers. The Kengis works complex became pivotal in the ongoing construction of Abraham and Jakob Momma-Reenstierna as subduers of the North. As discussed in this article, the brothers recurrently used Sámi people and symbols for the Sámi as means for their project of self-enhancement and self-promotion. It is unclear whether these strategies can be understood as a result of the brothers’ reformed Christian conviction and to what degree the idea of divine providence guided the actions of the two brothers.

The importance of the construction of places in the Torne River Valley and their distinct layout based on social and ethnic segregation, as shown both in travellers’ accounts (such as Johan Ferdinand Körningh 1956) and in maps and plans, together with the use of
disciplining devices such as clocks, a prison and regulated space, suggest that a kind of modernity was at play here. In Sápmi and the Torne River Valley, to a much larger degree than at their other works sites and industries, the brothers experimented with architecture and ethnic and social distinctions.

In this article, we have explored the Torne River Valley as a multicultural region in the early modern period. More research is, however, needed concerning the relationships between the Sámi and Finnish inhabitants in the Torne River Valley, and their interrelations and interactions with state, church and industrial agents, during the early modern period. In order to better understand the transformations in the local communities in connection with the industrial enterprises in the seventeenth century, more archaeological investigations in the Torne River Valley would be very valuable.

Gurminder K. Bhambra has discussed the role of modernity, for instance in the Haitian revolution, and the reversed role of the Caribbean in its relation to Europe (Bhambra 2007, 148–149). Revolutions did not solely occur in Europe but were an emblem of the modern and took place wherever modernity spread. The same goes for industrialization. The plantation system can itself be viewed as a product of modernity based on elements from Europe, Africa and the Americas. Modernity in its multitude, at least in some senses, was born here rather than in the cafés and libraries of Paris (Hetherington 1997). We argue that the Torne River Valley and the exploitation of its resources also played a part in this process.

The copper from the Torne River Valley greased the wheels of commerce and consumption in Europe, West Africa, the Caribbean and North America. The Sámi boots exported by Abraham and Jakob Momma-Reenstierna from Kengis to the markets of the global world were also part of an ongoing othering and commodification of the Sámi, as constructed by a Eurocentric view of the world. Metals, material culture and people were part of the networks that would stretch from Svappavaara and Kengis to Europe and the Americas – and which were an element in the creation of the modern world. By following the connections and exploring the power relations of these global networks, we might be able to start rethinking modernity from the “periphery”.

Notes

1. Sápmi (SaN.), Sábme (SaL.) or Saepmie (SaS.), the land of the Sámi, an area that roughly stretches from the Atlantic Ocean to the White Sea, from Dalarna in central Sweden to the North Cape and is part of Finland, Norway, the Russian Federation and Sweden. Sápmi is not an official region and its borders in time and space have been contested in many ways (see Ojala 2009). The use of the concept of Sápmi in relation to the Torne River Valley is particularly controversial because of the long historical presence of the Torne River Valley Finnish population. In using the notions of Sápmi and the Torne River Valley, we wish to emphasize the complex, multicultural and multi-ethnic history of the region.

2. In this paper, all places with a Finnish, Sámi, and/or Swedish history will be referred to with their names in the three languages in order to show respect for the cultural and social diversity of the area. For the names and their spelling, see Swedell (2001). Abbreviations: Fi. = Finnish, Me. = Meänkieli, SaL. = Lule Sámi, SaN. = North Sámi, SaS. = South Sámi, Sw. = Swedish.

3. Meänkieli is the native language of the Torne River Valley Finnish population, which is today an official minority language in Sweden.
4. During this period, northern Sweden-Finland was divided into the counties of Västerbotten and Österbotten. Lapland was divided into a set of Lappmarker administratively belonging to either Västerbotten or Österbotten.
5. d.c.m. = Daler coppar mynt (Copper dollars).

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References


***Archival Material***

**Abbreviations**

NBM = Norrbottens museum, Luleå

RA MRS. = Riksarkivet (Stockholm) Momma Reenstierna Samlingen


Map of Kalix/Pahtavaara works 1660, Riksarkivet, Stockholm, Bergskollegii gruvkartor.