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Session 1

Iron marks as early brand names:

Swedish iron in the Atlantic market during the eighteenth century¹

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A hearing

On 18 August 1738 the senior workmen at Leufsta ironworks in the Swedish county of Uppland were summoned to the works office.² Noe Dandanell, the blast furnace keeper, was accompanied by the master finers who were responsible for refining the pig iron Dandanell produced into malleable bar iron at Leufsta's four forges. Jacob Tillman, Mårten Martinell, Jan Tillman and Raphael Pouset, clad in the shin-length white shifts that they worked in and shod in clogs, clattered into the office. A fifth charcoal-grimed finer, Noe Tillman from the neighbouring *bruk* (ironworks estate) of Åkerby, was also in attendance. In the presence of Leufsta *bruk's* six clerks and the community's pastor, the workmen listened as Eric Touscher, the works *Directeur*, read out 'an austere and earnest letter' from Louis De Geer, operational head of the Leufsta estate. De Geer's missive required Touscher and his subordinates to

respond to the shrill letters of complaint that had been received from the English merchants who had recently contracted to take all the iron made at *Leufstawerken* (the forges of Leufsta, Åkerby, and Carlholm).

Samuel Shore of Sheffield and Graffin Prankard of Bristol had combined to acquire monopoly rights over *Leufstawerken* iron in the mid-1730s because of the unique qualities attributed to the metal. Uppland *bruk* were able to draw upon the pure, non-phosphoric ores of the famous Dannemora mine, and they employed a forging technique that was superior to that used in most other parts of Sweden. As a result, 'Orgrund' iron (so-called because most of Uppland's output was traditionally shipped through the Baltic port of Öregrund) enjoyed a peerless international reputation. It was in particular demand on the British market because of its suitability for conversion to steel; hence the interest of Shore and Prankard, who specialised in supplying iron to the proprietors of steel cementation furnaces in the Midlands and south Yorkshire. In 1734, at a time when the British steel industry was undergoing a major expansion, they had offered unprecedentedly generous terms to Louis De Geer for exclusive rights to the two most sought-after 'Orgrund' brands: Leufsta and Åkerby. Yet no sooner had they secured control over these premier marks than Samuel Shore and Graffin Prankard detected a decline in the quality of the iron. The 'material in it self is indescribably plain and all changed', Prankard lamented, claiming that it had been rejected by his principal Midland customers. The Leufsta and Åkerby brands, in which Shore and Prankard had invested so much, had failed to live up to their reputations.

And brands they were, for although the ‘branding’ of goods is often thought of as a phenomenon of modernity, or one that has taken on sharpened meaning in post-modernity, Swedish iron of the pre-modern era bore identifying marks that were legible to consumers across Europe. Because the export of iron was a major source of revenue for the Swedish crown, it was essential that the movement of iron was monitored. To facilitate that, each forge – and there were over 400 at work in the early eighteenth century – was legally required to stamp its iron with a unique imprint: a *järnstämpel*. These *järnstämplor* may have originated in state policy, but they soon assumed the role usually associated with manufacturers’ trade marks; they announced that the iron so marked possessed certain qualities. It was the belief that specific *järnstämplor* were effective guarantees of an iron’s fitness for conversion to steel that explains the avidity with which Shore and Prankard sought to aggrandise supplies of the Leufsta-made bars that were stamped with an encircled L, the mark known to British users as ‘Hoop L’.

Brands in historical perspective

The current age, we are assured, is the Information Age. We stand astonished at the bulk of information that confronts us in daily life and the velocity with which it circulates.³ As that information became increasingly digitised and globalised in the closing decades of the twentieth century, it became an object of intense scrutiny for social scientists. Economists have not been exempt from this trend. They have stopped treating information as a ‘free good’. Indeed, one of the main thrusts of the new institutional economics is that access to

information is a crucial feature in business decision-making, and that information is a good that can be purchased on the market. It follows that the acquisition and processing of information constitutes a major transaction cost for firms.⁴ This is not news to historians of the early modern world. Fernand Braudel long ago emphasised the uneven spread of economic information in the pre-modern world, and he drew particular attention to the role of correspondence networks in allowing merchants acquire knowledge of price movements in far distant markets.⁵ Business success stemmed from privileged access to information, from having correspondents who were more attentive in their writing than those of a rival. Braudel detected a general acceleration in the circulation of such epistolary data beginning in the sixteenth century as postal services gradually improved.⁶ John McCusker has recently elaborated upon this theme, arguing that business information became 'better, faster, cheaper' as the early modern business world underwent 'an information revolution'.⁷ Printing technology was of critical importance, for it allowed the development of a specialist business press. For McCusker, a seminal moment came in the 1540s when clerks at the Antwerp *Beurs* began to publish commodity price currents and exchange rate currents. Information that had once been kept secret by individual merchants was now marketed at a price. The outcome was favourable both for individual merchants, who were assured that they were paying the lowest possible prices, and for the business community as a whole, because more and more business was attracted to Antwerp. Circulated price-lists lowered transaction costs across the board.

McCusker does not analyse the content of business papers, only their existence and development over time, but it is very clear that for him price information is paramount. It was an accurate knowledge of prices and exchange rates at far-flung locations that enabled merchants to make appropriate business decisions and to maximise profits. However, business information is not restricted to prices and exchange rates; the nature of the commodities being traded also has to be taken into account. Merchants were seldom directly involved in the production of the goods they traded. Indeed, behind the unrevealing generic titles of the commodities in which they dealt (rice, iron, wine, etc) stood divergent, often sharply contrasting production systems. Iron from Sweden, to take just one relevant example, was traded on English markets in the 1730s alongside iron that had been shipped from Bilbao, St Petersburg, Rotterdam and Philadelphia. It was imperative, therefore, that merchants understood the differing characteristics that ostensibly plain commodities could have, and that they were able to assess variations in quality across time. This is not a problem that has been widely studied, either in the modern or the pre-modern world.⁸ It might be assumed that the standardisation of goods so associated with scientifically controlled systems of mass production has rendered the question superfluous. In recent decades, however, two developments have re-animated discussion on the character of goods: one is the rise of post-Fordist systems of flexible production; the other is an anthropologically informed concern with the symbolic and semiotic nature of 'things'.⁹ Together, these developments have led scholars to ask questions about the attributes of commodities and how consumers understand these

attributes. Brand names and trade marks have loomed large here. According to one of the most widely used modern text-books on marketing, a brand is 'a name, term, sign, or symbol, or a combination of them, intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors'. It is 'essentially a seller's promise to constantly deliver a specific set of features, benefits, and services to the buyers'.¹⁰

The introduction of brand names is commonly associated with the advent of mass production in American business. In the later nineteenth century small-scale markets, served by local suppliers, were subsumed into regionally or even nationally integrated economies supplied via lengthy distribution chains and 'mass' retailers.¹¹ In such circumstances brands assumed a strategic importance for manufacturers. They were a way of assuring consumers that non-local commodities were as trustworthy as goods produced in their own neighbourhood. Coke and Kelloggs, to take two enduringly successful brands, both date from that critical era.

However, it would be wrong to say that 'branding' was invented in the later decades of the nineteenth century, for there are clear enough examples of branded goods in the eighteenth and early nineteenth centuries.¹² Etymologically, the word 'brand' is of Nordic origin, meaning 'fire', and its modern meaning is derived from the branding of cattle. To 'brand' in this context was to assert a right of property. The stamping of iron bars was an extension of this practice. As has been mentioned, the presence of identifying marks was a boon to tax-gatherers. For that reason, the stamping of bars was insisted upon

by the authorities in medieval Sweden: it is stipulated, for example, in the fourteenth-century law-book of Magnus Eriksson.¹³

This paper uses the example of *järnstämplor* to examine how such marks were used to convey information in the pre-modern world. Brands are commonly understood to be the means whereby consumers are assured of a product's content and consistency, but in the eighteenth century this was no easy matter. Production was carried out by artisans on the basis of acquired craft expertise, not scientifically controlled or automated procedures. This meant that *järnstämplor* were somewhat erratic indicators of an iron's worth, as the controversy surrounding the quality of Leufsta iron in 1738 revealed. For the Swedish state, the 'Hoop L' *järnstämpel* had a fixed function: it signified the point of origin of the bars that passed through the *jernwåg* (weigh-house) at Stockholm, allowing the customs officers to levy the appropriate toll. But for others, the 'Hoop L' had different meanings. To the finers at Leufsta the mark spoke of their craft mastery and the 'inner goodness' of the radiant metal they hauled from their hearths. To those Stockholm merchants who acted as agents for British importers it became a token of their success in negotiating with the De Geer family on behalf of their distant principals. For the proprietors of cementation furnaces in Birmingham and Sheffield the 'Hoop L' promised an iron of 'body' and 'soundness' that would convert into good steel. As these meanings multiplied so the danger grew that agreement over the meaning of the information encoded in the brand might break down.

Swedish iron on European markets

Swedish iron had been exported since the middle ages, but the shipments that went to Danzig and other cities of the southern Baltic in the sixteenth century were rather modest. From the 1620s they underwent a revolution in scale and scope. Iron exports, which had averaged little more than 3000 tons per annum in the late 1620s, leapt to 11,000 tons in 1640, then to 18,000 tons in 1650, and 27,000 tons in 1680. Their destination changed too. Swedish iron now passed through the Sound in large volumes, bound for the Dutch Republic, the gravitational centre of north European commerce.¹⁴

This startling escalation was a matter of policy. The Swedish state entertained territorial ambitions that could only be fulfilled if the poor and sparsely populated kingdom of Gustaf II Adolf could exploit its latent mineral wealth more effectively. For their part, a group of Amsterdam-based merchants were alert to the advantages that preferential access to Swedish iron and copper would give them. Iron was needed in the capital-rich Netherlands; iron was to be had in capital-poor Sweden. This realisation spurred the intervention of Louis De Geer, Wilhelm De Besche and other Dutch merchants in the 1620s, heralding a transformation of Sweden's industries. The Dutchmen were awarded wide-ranging privileges by the Swedish state, allowing them to establish a network of processing plants. Most of these were concentrated in Uppland, north of Stockholm, around the Dannemora mine. It was to this region that Louis De Geer, the leading merchant-industrialist of the age, brought migrant workers from his native Wallonia, establishing the 'Walloon ironworks' (*Vallonbruk*) that were to be the source of 'Orground' iron: Leufsta, Österby, Gimo and others.¹⁵

When Swedish iron first appeared on west European markets in the 1620s and 1630s it was funnelled through Amsterdam, the headquarters of Louis de Geer. From the 1660s, however, the locus of the European iron market swung westwards, to England.¹⁶ By 1700 the English market took 44 per cent of Stockholm's iron exports, and the Scottish market a further 5 per cent. Less than 25 per cent went to the once dominant Dutch Republic. Such was the destiny of most Swedish iron, but the elite marks from the Walloon enclave in Uppland continued to flow in their accustomed channels. 'Orground' iron still went, so it was said in 1701, nowhere 'save to Holland... so yt it's only to be had through Holl[and] factors'.¹⁷ That remained the case into the 1720s, when the export of iron from Leufsta, Österby and Gimo was in the hands of the Grill family, a Stockholm merchant dynasty of Dutch origin.¹⁸ British merchants who wanted to ship 'Orground' iron to London, Bristol or Hull had to work through the Grills. This situation was to change in the 1730s as both the producers and consumers of the leading 'Orground' marks struggled to exert control over the market. The De Geer family in Sweden and the merchants who imported 'Hoop L' and other top brands into Britain developed rival monopoly strategies.

Monopoly strategies (i): The De Geer family

At the start of the eighteenth century, as the demand for 'Orground' iron began to surge on British markets, the *Vallonbruk* of Uppland were ill-equipped to respond. The investments made between the 1620s and 1650s had not been sustained, so that many *bruk* were visibly run-down. Problems at Dannemora exacerbated the situation. As the mine was driven to ever deeper levels the cost

of drainage mounted and with it the cost of ore, and when most of the pumping equipment was destroyed in a massive cave-in in 1693 production was halted for several years.¹⁹ A long period of decay was rounded off by a sudden catastrophe in the closing years of the Great Northern War, when Russian troops ravaged the coastal districts of Uppland. In July 1719 raiders swept through the *bruk* of Leufsta, Åkerby, Wessland, Harg, and Forsmark, demolishing industrial plant and burning down manor houses and workers' housing alike.²⁰

The disaster of 1719 sparked a renewal, one led by members of the De Geer family. They, after all, had been the principal losers. Attacks had been made not just on the family *bruk* at Leufsta and Åkerby, but on the coastal warehouses of Gimo and Österby as well. Stung by these setbacks, they reverted to the expansionist policies of the great Louis De Geer. Indeed, they revived an ambition that had been unfulfilled at the time of Louis De Geer's death in 1652, that of monopolising 'Orground' iron. The wrecked *bruk* were rebuilt and reorganised, taking advantage of the eight-year tax holiday that the authorities granted to victims of the Russian fury. Furnaces and forges were reconstructed, and new landed estates were purchased, adding to the charcoal-producing capacity of *Leufstawerken*. The foundations were being laid for an increase in iron production. The effects were soon felt: Georg Swebilius, the manager at Leufsta from 1722 until his death in 1735, noted that bar iron output at Leufsta and Åkerby rose from 675 tons in 1722 to 1,200 tons at the end of the decade.²¹

Having refurbished and consolidated their existing assets, the De Geers set about acquiring new plants. Ullfors *bruk* was bought in 1733, and Wessland,

Hillebola and Strömsbergs a year later, forming the basis of a new organisational unit – *Strömsbergswerken* – that paralleled *Leufstawerken*. By 1738 three De Geer brothers had a controlling interest in the most prestigious ‘Orground’ iron-producing *bruk*. Charles De Geer owned the nine forges of *Leufstawerken* and *Strömsbergswerken*; Antoine De Geer operated seven forges at Österby and Forsmark; and Louis De Geer ran the two forges at Gimo, as well as ironworks outside Uppland. In 1730 the family had been responsible for making 2,500 tons of ‘Orground’ iron, half of the total; a decade later the three brothers were making 4,000 tons annually, nearly three-quarters of a somewhat expanded total.²²

Having enhanced their control over the supply of ‘Orground’ iron, the De Geers now set about adapting that supply to the British market, a market defined by the demand of cementation furnace owners for iron worthy of conversion to steel. Whilst ‘Orground’ iron as a whole enjoyed an enviable reputation in this respect, there were some brands that were more coveted than others. English steel makers hungered for bars from the forges at Leufsta or, better still, bars from the neighbouring forge at Åkerby: ‘no other marks will answer here for steel’, as one English merchant told his Stockholm agent in 1732.²³ A year later, Georg Swebilius, the manager at Leufsta, was inclined to be more generous, declaring that the ‘Leufsta, Österby and Gimo brands are the best in the country (Åkerby apart).’²⁴ For many within the De Geer empire, it seemed time to add to this select group by improving the quality of what were known in England as the ‘second Orground’ brands. If the ‘second Orground’ irons could be made to match the elite brands, their price could be raised and

the De Geers' revenue boosted. The acquisition of *Strömsbergswerken* in 1734 provided an opportunity to experiment. The new manager of that complex, Georg Kiörning, dedicated himself to improving the output of the three forges under his care. The outcome would be an upgrading of the 'Orground' brands controlled by the De Geer family – an outcome that would surely have been welcomed by steel producers in Britain. It was not, however, looked upon favourably by those English merchants who were striving to monopolise the supply of the elite 'Orground' marks. They wanted the exclusivity of the elite brands preserved.

Monopoly strategies (ii): Samuel Shore and Graffin Prankard

Given the finite quantity of 'Orground' iron that came to the market every year, there was a strong incentive for merchants to attempt to monopolise that supply. Accordingly, the major merchant houses in Stockholm contracted with the different *bruk* for exclusive rights to the iron produced: 'ye Iron works wch make it are under contract to part[icu]lar Men who ship it for holland and England'.²⁵ In the 1720s De Geer iron was contracted to the firm of Carlos & Claes Grill, who in turn exported it to Holland or, through intermediaries like Samuel Worster or Francis Jennings, to Britain.²⁶

In this way the most desirable 'Orground' brands made their way to the English market. Such a system was pleasing to those Stockholm merchant houses that could secure contracts with the leading works. It was less attractive to provincial English merchants like Graffin Prankard or Samuel Shore who were forced to pay a considerable premium to guarantee access to the best

brands. The benefits of contracting directly with the Leufsta estate were obvious, and made ever more so by the growth of steel making in Britain. The cementation furnace, wherein bar iron was converted into steel, had been introduced into the British Isles in the 1610s. But such furnaces remained few in number until the 1690s, when a major upturn in furnace construction began. By the 1730s there were approximately twenty cementation furnaces at work, clustered in the West Midlands, the Sheffield region, and the North East of England. This growth was contingent upon supplies of 'Orground' iron, and above all upon securing access to the 'Hoop L' iron of Leufsta and the 'PL with Crowns' of Åkerby. It was this that spurred on Prankard and Shore, for they were centrally involved in the English steel making: Prankard as a supplier to John Kettle, the largest steel master in the West Midlands, and Shore as a leading actor in the Sheffield steel trade.

In the late 1720s Graffin Prankard and Samuel Shore aimed at engrossing the entire import of Åkerby and Leufsta bars to Britain. Their initial thought was to reach an accord with the Grills. Prankard and Shore proposed to join Carlos Grill in negotiating with the De Geers. The two Englishmen would take sufficient Leufsta and Åkerby bars to supply the entire British steel trade, bringing the whole quantity through Hull and Bristol, and thereby extinguishing an open market in London for those key steel-making brands. Grill would be left in sole command of the Dutch market, provided that he would agree not to release any part of his share of *Leufstawerken* iron onto the London market.

The scheme came to naught, and the De Geers made a new contract with Robert Campbell, the Scottish-born Stockholm merchant, not with the Grills.

This was a major setback, for Campbell was the Stockholm correspondent of Henry Norris, one of London's premier Baltic merchants. And Norris, for his part, was the London agent of Abraham Spooner, the largest ironmonger in the West Midlands in the 1720s and 1730s. From Prankard's perspective, this Campbell-Norris-Spooner axis was the most dangerous of liaisons. Spooner was the bitter rival of John Kettle, the Birmingham steel maker who was Prankard's main customer for Åkerby and Leufsta iron.

By the autumn of 1731, when negotiations began for the distribution of iron in the 1732 season, Prankard was becoming desperate. He offered Robert Campbell in excess of 50 *daler kopparmynt* for Åkerby 'to prevent its falling into Norris hands'.²⁷ It was to no avail. Prankard and Shore were excluded once more. The following year brought no relief. Prankard had to yield to Henry Norris yet again, whilst picking up small parcels of Åkerby iron on the Rotterdam market. He had the mortifying experience of watching a shipment of Åkerby iron from Norris being landed at Bristol en route to Abraham Spooner. It was, he complained, 'very hard on me to See it Pass by me here & up into ye Markett & Sold by a Person that wont Sell it on any reasonable terms or really not at all to my best Chapp [i.e. Kettle] but endeavour to thwart his Interest to the utmost of his Power'.²⁸

Prankard and Shore resolved that in future they would bid for the output of the *Leufstawerken* forges by themselves, accepting the tutelage of neither Robert Campbell nor the Grills. Prankard summarised their preferred terms:

'Shore & Self to take 350 Tons each of us Yearly of [Åkerby] & [Leufsta] viz all that Shall be Struck yearly of the [Åkerby] allowing it

to be 280 Yearly or thereabouts and 420 Tons of ye [Leufsta] so that ye Remainder of ye [Leufsta] to be Shipt for Holland... and by agreement betwixt us not any of said Marks is to be Shipt for London but the whole for Hull & Bristol.²⁹

Prankard showed an almost reckless determination. The 350 tons that he pledged to buy was in fact more than he could dispose of 'in the Steele way', but such was the importance of the steel market to him that he was prepared to dump up to 50 tons of high-grade 'Orground' in the guise of Swedish 'common sorts' rather than risk being deprived of Åkerby and Leufsta iron for a further year.³⁰ Moreover, Francis Jennings, Prankard's Stockholm agent, was authorised to offer an unprecedented 55 *daler kopparmynt per skeppund*. This strategy bore fruit. Graffin Prankard and Samuel Shore concluded a two-year contract with the De Geers early in 1734. 'Mr Prankard hath the Bristoll London Birmingham and Ireland marketts to himself', Shore announced, 'I the Hull & Newcastle Marketts as we may not prejudice each other.'³¹

Getting access to the Leufsta and Åkerby iron was a startling success for Prankard and Shore, but success very quickly brought its own problems. Not least, when Prankard and Shore were apprised of the projected production of the Leufsta and Åkerby forges they found it far in excess of their expectations: 'the Quantity...Struck Yearly is near About 1470 Tons... at least 270 Tons More than Wee really had a Notion off.' The problem was not insurmountable, but it required careful management. The excess production could be directed partially into the provincial markets that Shore and Prankard had command of. Some of

it could go to Holland. The rest would have to be absorbed by the London market.

Shore and Prankard had, of course, resolved to prevent Leufsta and Åkerby bars from circulating freely on the London market. That remained their aim, but they were happy for their Stockholm partners to service certain institutional buyers in the capital. The Navy Board and the East India Company were both significant consumers of Swedish iron, but they were unlikely to interfere in the markets that Shore and Prankard hoped to master. The Navy Board bought iron for consumption in the Royal Dockyards; there was little or no leakage of its iron into the civilian market. The East India Company purchased bar iron for re-export to Madras or Calcutta, not for further sale in northern Europe.

There was one other actor on the London market worthy of individual consideration – the ironmonger business built up by Sir Ambrose Crowley (1658-1713). The firm operated three massive metalware factories in the Tyne valley, a central depot at Greenwich, and a set of warehouses that supplied outworkers across the Midlands.³² The Crowleys were by some distance the largest producers of metalwares in Britain. They were necessarily major consumers of Baltic iron and, having their own steel making facilities at Winlaton Mill and Swalwell on Tyneside, they were perforce regular buyers of ‘Orground’ iron. Indeed, by virtue of its four cementation furnaces in the north east, equal to at least 20 per cent of Britain’s steel making capacity in the 1730s, the Crowley business was the country’s single largest customer for ‘Orground’ iron, taking in excess of 300 tons annually. They had been supplied with ‘Orground’ iron via Henry Norris during the period of Campbell’s contract

with the Leufsta estate, and Shore and Prankard were happy for this to continue. For as long as Norris's residual supplies of Åkerby and Leufsta were shipped to Winlaton and Swalwell they could not interfere in the markets that were of most concern to them. Indeed, Prankard positively encouraged the cordial relationship between Norris and the Crowleys. 'Contrive it', he told his London correspondents, 'so as for Norris to work of what he has to the Lady Crowley by which means London would be Clear.'³³

Henry Norris had been expelled from most of the markets for 'Orground' iron in Britain. He was not inclined to accept his ejection. He did what he could to disrupt the division of the English market that Prankard and Shore had settled upon. He released 100 tons of cut-price Leufsta iron onto the Bristol market in June 1735, just before the arrival of Prankard's ships from Stockholm. A further 100 tons was sent north to discomfort Samuel Shore.³⁴ This 'Politically & Revengefull Stroke' would not, Prankard vowed, 'Cause me to Sink the Price without Reason'. Excluded from the contract with the De Geers, Norris's ability to thwart Prankard and Shore in the sale of Åkerby and Leufsta was limited and diminishing. Soon, one of Prankard's Midland customers was assured, 'Affairs may be Ordered So as to have the Sale of it Contracted into a Narrer Compass'.³⁵ This was to prove overly optimistic, for Norris had other weapons in his armoury.

Henry Norris began to broadcast the merits of some of the so-called 'second' 'Orground' brands, arguing that they were of comparable quality to Åkerby and Leufsta. Particular attention was paid to iron from the forge at Ullfors: 'Norris has used all Possible means to represent it of equall goodness... & Still

Continues his Endeavours for So doing by Prevailing on Sundry Noted Steel Converters for make Assay & Tyralls of it.³⁶ If steel manufacturers could be persuaded that iron from Ullfors or Strömsberg was an adequate substitute for Åkerby bars then Shore and Prankard's hard-won monopoly would be capsized. Norris was assisted by the fact that Georg Kiörning, the manager at *Strömsbergwerken*, was indeed, as we have seen, trying improve the quality of the bar iron made at Ullfors, Wessland and Strömsberg. And in 1734 these marks had been contracted exclusively to Robert Campbell, the Stockholm ally of Henry Norris.³⁷

This development was deeply troubling to Shore and Prankard. Not only did the greater care taken with the iron at Ullfors and Strömsberg tend to undermine the pre-eminence of Åkerby and Leufsta, but the quality of Åkerby iron seemed to deteriorate in tandem. The priority that Åkerby enjoyed on international markets was attributable not just to the superior materials used in its production, but to the peerless workmanship with which it was finished. The Åkerby hammermen had an unmatched reputation, even amongst their fellow Walloons. They managed, Prankard noted, 'to have less raw Ends in it than Either [Leufsta] or bullets [i.e. Österby]'; that is, they were supremely skilled in expelling slag inclusions from the ends of the bars.³⁸ But no sooner had Shore and Prankard achieved monopoly rights over Åkerby iron than they detected a lapse in standards. Samuel Shore was quick to complain: 'the Proprietor of Said Works is very Defficient in keeping it to Its usual Goodness So that Instead of making it Sound good & Free from Flaws & Cracks it dont Prove So good in that

respect as the best Common Iron'.³⁹ The iron was not 'so rotten... [that it is] not fit for Conversion into Steel'.⁴⁰

Shore and Prankard faced a crisis. They had contracted to take a large amount of iron from the forges at Åkerby and Leufsta, but iron that was of increasingly uncertain quality. At the same time a high-quality product from Ullfors and Strömsberg was being offered to their customers at a bargain rate. So, when the contract with the Leufsta estate came up for renewal in 1736, Shore and Prankard demanded a rebate on the price they were paying for Åkerby and Leufsta bars.⁴¹ They also urged their Stockholm agents to contract for the output of Ullfors as well as that from *Leufstawerken*, as 'it very much prejudice us in the sale of the [Åkerby] and [Leufsta]'.⁴² In the event, Prankard and Shore reached an agreement with the De Geer family to take a whole range of 'common Orgrounds' rather than allow them to fall into the hands of Campbell and Norris. Prankard took shipments from Ullfors, Vattholma, Strömsberg, and Harg, in addition to his existing shipments from Åkerby and Leufsta.⁴³ This amounted to some 560 tons.⁴⁴

Shore and Prankard had stifled the threat of competition but at the cost of taking far more 'Orground' iron than could possibly be absorbed by the markets they regularly supplied. Alternative uses had to be found for the glut of steel-making iron they had on their hands. Prankard demanded that the 'common Orgrounds' were struck in a different form. They should be hammered into square bars of a fine gauge, rather than the broad flat bars that steel makers preferred for their furnaces. Better still, they should be struck 'without any Stamp on it yt I might Sell it under ye Determination of English Iron'.⁴⁵ In

Sweden, new instructions were issued accordingly. The forgemen at *Leufstawerken* were to concentrate on making bar iron of superlative 'inner quality', but their counterparts at the *Strömsbergswerken* were to attend to the outward form of the iron, producing finely finished bars in preset dimensions, just as Prankard and Shore demanded. *Leufstawerken* bars were to be sold at a premium rate to denote their superior quality; *Strömsbergswerken* iron was to be marketed on the strength of 'its assortment and beauty'.⁴⁶ The De Geer family had attempted to disrupt the hierarchy of brands produced at the Uppland works by elevating the 'second Orgrounds'; their English customers insisted on that the old hierarchy being restored.

The changes that Graffin Prankard and Samuel Shore wanted in the iron they had from *Leufstawerken* and *Strömsbergswerken* had important repercussions at the Uppland *bruk*. Walloon forgemen were not accustomed to having their work criticised, still less to following precise instructions as to the form that the bars should take. This became apparent when Prankard and Shore issued further complaints about the declining quality of Leufsta and Åkerby bars in the summer of 1738. Samuel Shore reviewed the situation: 'in order to Support ye Creditt of those marks [i.e. Leufsta and Åkerby] we have Joyn'd in Contracting for the other 2d orgrounds & Subjected our Selves to have it Struck in to Such Sorts... [that] may be Sold for Common uses'. This was done so that 'ye market might not be overburthened with orgrounds Iron', but it was a loss-making strategy that was only justifiable if the premium quality of Leufsta and Åkerby iron led to compensating gains. Alas, the *Leufstawerken* brands had not been kept to their 'wonted goodness', despite 'fair words and Promises' from Leufsta.

Indeed, they were so poorly wrought as to be unfit for conversion to steel.⁴⁷ It was this accusation that led to the hearing at Leufsta in August 1738.

The *Leufstawerken* finers rejected indignantly the claims that the iron they made had deteriorated in any way. Yet the forgers themselves were aware that their product had been subject to criticism for some time, even though, in their eyes, its essential goodness remained unsullied. Complaints about Leufsta and Åkerby iron had first been heard when *Directeur* Swebilius had fallen in with 'an Englishman calling himself Mr Campbell'. Campbell was a Scot, not an Englishman, but the forgers were not wrong in thinking that closer ties to the English market had brought a new, harsher tone to working life at Leufsta and Åkerby. Once, they lamented, the forge had been their own domain; they had governed the pace of work themselves. The criterion by which their work was judged was 'the goodness of the iron'. Little attention was paid to 'the fineness of the sorts'; that is, the exactness with which the bars were finished. Indeed, it was a matter of notoriety that Walloon forgers concerned themselves with the inner quality of the material, not its external form. In the 1730s, however, the management at *Leufstawerken* began to insist that bars of very particular dimensions were made. Sometimes, the finers complained, 'so much of that sort is commanded, then of others'.

Conditions on the British market now dictated that more and more 'Orground' iron was finished to a precise standard. 'Broad bars', two to three inches wide, were best suited for conversion in cementation furnaces because of their high surface-to-volume ratio. But because Prankard and Shore were taking far more iron than could be absorbed by the steel industry in Britain, it was also

necessary that part of the annual make was drawn into the slender square bars required by the generality of smiths. When 'Orground' iron had been sold on the Amsterdam staple market, as it had been at the end of the seventeenth century, the 'inner goodness of the iron' had been all that the forgemen had needed to concern themselves with. Now, their working lives were subject to new and unwelcome pressures. When summoned to the works office at Leufsta on 18 August 1738 the forgemen's resentment tumbled out of their mouths.

Brands and Monopolistic Strategies – A Conclusion

The hearing at Leufsta in August 1738 arose from the clash of the rival monopoly strategies that have been outlined here. The rise of the British steel industry wrenched 'Orground' iron from the markets in which it had once circulated and restricted it to the role of feedstock for the cementation furnaces of the North East of England and Sheffield. It was this development that made control over the principle steel-making brands so important; it explains the avidity with which English merchants like Graffin Prankard and Samuel Shore sought to monopolise the iron of Leufsta and Åkerby. The growing demand for 'Orground' iron also had important repercussions in Sweden. It encouraged members of the De Geer family both to acquire as many of the Uppland *Vallonbruk* as they could and to refurbish those works that came under their control. The outcome was a growth in the volume of 'Orground' made and an erasure of the distinction between 'first' and 'second Orgrounds' as the forges at Ullfors and elsewhere were upgraded. In their eagerness to respond to the demands of the English market the De Geers overthrew the hierarchy of brands

that English consumers understood. More importantly, it was a hierarchy in which the De Geers' commercial partners on the English market – Samuel Shore and Graffin Prankard – had invested heavily, hence their insistence on reinstating the *status quo ante*.

When the Swedish traveller Reinhold Angerstein visited the Crowley steelworks in the North East of England in the 1750s he found that 'Hoop L' iron retained the eminence that had been momentarily threatened in the 1730s. The Crowleys produced three grades of steel. The best of these, 'Crowley No.1', was converted from Leufsta iron. 'Crowley No.2' was made from 'second Orgrounds', and No.3 from Russian iron bearing the 'sable' stamp of the Demidov family.⁴⁸ A century later these distinctions still held. The French metallurgist Frédéric Le Play, visiting Sheffield in the 1840s, found that steel makers preferred 'Orground' iron to all others for its non-phosphoric, slag-free qualities, but that some 'Orground' marks were preferred to others. 'Hoop L' from Leufsta headed the list.⁴⁹ Indeed, by the nineteenth century the 'Hoop L' mark had broken free from its origins as a *järnstämpel* – an administrative device of the early modern Swedish state – to become a global brand. When, in 1814, Francis Wyman, an iron merchant of Cambridge-port, Massachusetts, told his customers that he could supply them with 'Genuine English Hoop L Steel', he was announcing that the Swedish mark had been magically transformed into a British brand that was recognized across the northern hemisphere.⁵⁰

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Endnotes:

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- ² What follows is based upon the record of this hearing in Leufstaarkivet, vol. 43B. The letters from Bristol can be found in Somerset Archives (SA), D/D DN 427: Graffin Prankard (GP) to Francis Jennings (FJ), 28 June 1738, and GP to FJ, 1 July 1738.
- ³ Castells 1996-1998.
- ⁴ Coase 1988; North 1990.
- ⁵ Braudel 1985, pp. 408-12.
- ⁶ Braudel 1981, pp. 424-25.
- ⁷ McCusker 2005.
- ⁸ For exceptions see Engdahl 1999 and Styles 2000.
- ⁹ Appadurai 1986; Sabel and Zeitlin 1985.
- ¹⁰ Kotler 1997, p. 443.
- ¹¹ Chandler 1977.
- ¹² Duguid 2003; Higgins and Tweedale 1995.
- ¹³ Dahlgren 1930, pp. 1-7.
- ¹⁴ Hildebrand 1957, pp. 35-59.
- ¹⁵ Nergård 2001; Behre, Larsson, and Österberg 2001, pp. 190-194.
- ¹⁶ Åström 1963.
- ¹⁷ Mitchell Library, Glasgow, SR 352, Adam Montgomerie to John Crosse Senior & Co, 27 April 1701.
- ¹⁸ Müller 1998, pp. 84ff; Georg Swabilius (GS) to Jean Jacques De Geer (JJDG), 5 April 1731, Leufsta Arkivet, vol. 106, Riksarkivet (RA).

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- ¹⁹ Lindqvist 1984, pp. 229-231; Wahlund 1879, pp. 72ff. See also 'Relation om Bergvärken uti Upland och Roslags samt Giästrike och WästerNorlands BergMästaredöme Åhr 1737', Bergskollegiums arkiv, Bergverksrelationer, m.m. vol. E lif: 4, RA.
- ²⁰ Mörner 2004. For a description of what happened at Leufsta and other ironworks in Uppland, see Bergskollegiets Arkiv, Bergverksrelationer Uppland och Västernorrland, vol. E II f:1, folios 929-991.
- ²¹ 'Relation om Bergvärken uti Upland och Roslags'; GS to JJDG, 5 April 1731, Leufsta Arkivet, vol. 106, RA.
- ²² Bergmästarämbetet i Gävleborgs, Uppsala och Stockholms län, Bergmästarens tjänsteberättelser 1737, Landsarkivet i Uppsala. See Rydén 2002 for a discussion about the overall size and expansion of the production of 'Orground' iron.
- ²³ SA, DD/DN 425, GP to FJ, 16 August 1732.
- ²⁴ GS to JJDG, 18 June, 1733, Leufsta Arkivet, vol. 106, RA.
- ²⁵ Mitchell Library, Glasgow, SR352, Adam Montgomerie to John Corse senior, 28 November 1700.
- ²⁶ We disagree with King 2003 where it is claimed that 'Orground' iron was from the beginning of the eighteenth century under the control of a cartel of Sheffield steel makers.
- ²⁷ SA, DD/DN 424, GP to FJ, 4 August 1731.
- ²⁸ SA, DD/DN 425, GP to FJ, 16 August 1732.
- ²⁹ SA, DD/DN 425, GP to FJ, 27 July 1733.
- ³⁰ SA, DD/DN 425, GP to FJ, 28 July 1733.
- ³¹ SA, DD/DN 426, Samuel Shore (SS) to Francis Bird, 15 August 1735.
- ³² See the inventory taken at the death of John Crowley in 1728: Suffolk Record Office (Ipswich), HAI/GD/5/1-17.
- ³³ SA, DD/DN 426, GP to Pat & Robert Mackey, 20 September 1735.

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- ³⁴ SA, DD/DN 426, GP to Pat and Robert Mackey, 20 September 1735.
- ³⁵ SA, DD/DN 426, GP to William Bowyer, 18 September 1735.
- ³⁶ SA, DD/DN 426, SS & Son to Worster, Wordsworth & Jennings, 15 August 1735.
- ³⁷ GS to JJDG, 22 April and 26 August 1734, Leufsta Arkivet, vol 106, RA.
- ³⁸ SA, DD/DN 424, GP to FJ, 13 October 1731.
- ³⁹ SA, DD/DN 426, SS & Son to Worster, Wordsworth & Jennings, 15 August 1735.
- ⁴⁰ SA, DD/DN 427, SS & Son to Worster, Wordsworth & Jennings, 7 August 1738. See also SA, DD/DN 426, GP to FJ, 13 December 1735.
- ⁴¹ SA, DD/DN 426, GP and SS to Worster, Wordsworth and Jennings, 17 March 1736.
- ⁴² SA, DD/DN 427, SS to Samuel Worster and Samuel Wordsworth, 30 July 1736.
- ⁴³ SA, DD/DN 427, GP to FJ, 16 February 1737.
- ⁴⁴ Louis De Geer (LDG) to Eric Touscher (ET), 28 October and 18 November 1736, Leufsta Arkivet, vol. 105, RA.
- ⁴⁵ SA, DD/DN 427, GP to FJ, 16 February 1737.
- ⁴⁶ LDG to ET, 28 October, 4 and 18 November 1736, Leufsta Arkivet, vol. 105, RA.
- ⁴⁷ SA, DD/DN 427, SS & Son to Worster, Wordsworth and Jennings, 7 August 1738.
- ⁴⁸ Angerstein 2001, p. 258.
- ⁴⁹ Le Play 1845.
- ⁵⁰ Winterthur Library, Joseph Downs Collection of Manuscripts and Printed Ephemera, no.66x31.