

Every Silver Lining has a Cloud: Bach and the Share Register of the Ursula Erbstollen Mine

PETER SMAILL

A visit to Freiberg in 2010 revealed the 1749 Register of the silver mine called Ursula Erbstollen. The register included details of silver mined, revenues, costs and—most interestingly—investors' names. The entry 'Johann Sebastian Bach, Capellmeister in Leipzig' was clear to see. A new branch of research into Bach as an investor had begun.

It was already known that Bach invested in the mine. The footnotes of Spitta's biography of Bach¹ include a statement of his assets when he died; the first item listed is 'A share in a mine known as Ursula Erbstollen, Little Voigtsberg: worth 60 Thalers'. Apart from cash and gold, this share appeared to be the second most valuable item in his estate, surpassed in value only by a harpsichord ('... clavier, which, if possible the family will keep—80 Thl.'). Hence the observation: 'Bach had not died a poor man—he even owned a share, worth 60 thalers, in a small mining business'.²

The discovery of the share registers by the geologist and photographer Jens Kugler in 2010 was closely followed by a visit—suggested by Michael Maul of the Bach-Archiv, Leipzig—by both the author and the historian Michael Fry to the renovated premises of the Mining Archive at Freiberg.³ The purpose of the visit was to ascertain whether any data existed on the mine, other than the ground plan which was already in the public domain, in advance of the BNUK dialogue meeting to discuss Bach and Handel. The contrast between the finances of the two musicians suggested that further enquiries regarding the silver mine might result in a greater understanding of the Bach household's financial situation.

Eberhard Spree—bassist in the Leipzig Gewandhaus and a friend of Jens Kugler—then took over the research. He discovered Bach's name had been

¹ Philipp Spitta, *Johann Sebastian Bach: His Work and Influence on the Music of Germany, 1685 – 1750*, trans. Clara Bell and J. A. Fuller-Maitland (London: Novello, 1899), vol. III, p. 351. Repr. in *NBR/279*, p. 250 and *BDok II/627*.

² Christoph Wolff, *Johann Sebastian Bach: the Learned Musician* (New York and London: W. W. Norton, and Oxford: Oxford University Press, 2000) p. 455.

³ Located in Schloss Freudenstein. I am grateful to the Museum for its assistance and illustrations supplied.

entered forty-four times in thirty-eight registers. These had been produced quarterly from late 1741 to mid-1751, when the family of the deceased composer abandoned the share, properly referred to as the *Kux*.⁴

Spree's work is the basis of a new understanding of the asset. A *Kux* is different from a modern share; a mine was a risky venture, with a fluctuating income which in many years was not enough to pay the miners. Unlike modern shares, the *Kux* required stakeholders (in effect limited partners) to contribute to deficits. In 1744, when returns were poor, Bach abandoned the stake and thus avoided making a contribution; by 1746, when output had risen and prospects improved, he had taken up the *Kux* again. There is no record in the detailed registers of a price being paid to the market-making middleman, Johann Christoph Stiehl. It is therefore probable that the historic value of 60 thalers for the pit, which was founded in 1741, was a nominal and not a real measure of its worth.

Although Bach increased the stake to $1\frac{1}{8}$ *Kux* before his death in late 1749, the 'value' remained the original 60 thalers. This raises two questions. Was Bach's stake ever valuable? And why did Bach invest in it? After his death, his family even briefly enlarged the holding to $1\frac{1}{4}$ *Kux* (of the prescriptive total of 128 *Kuxe*).

Why did Bach invest in the mine?

The simplest explanation is that Bach, as a conventional investor, speculated in order to make a profit. However, the mine required continuous contributions—*Zubusse*—as did the majority of the Saxon silver mines at the time. Only a few, such as the Morgenstern-Erbstollen, progressed through self-financing to returning the original contribution and then, in eight quarters out of forty, actually paying a dividend.

It could be that he was somehow deceived into making an imprudent investment. However, this seems unlikely. Quite apart from the fact that he returned to the registers in 1746 following a winter in which no silver had been extracted, the investors listed in the registers represent the upper echelons of the Saxon state. Any fraudster would run the risk of making dangerous enemies. In 1746, Carl August von Gersdorff, soon to be Commander of the Saxon army, held 8 *Kuxe*; he traded between this peak holding and 4 *Kuxe*, rebuilding to $5\frac{1}{3}$ in 1751. The Master of the Mint in Dresden, Friedrich Wilhelm ô Feral, also held a stake, as did the wealthy Callenberg, Klincknicht and von Dieskau families. The aristocratic sponsor of the *Trauer-Ode* BWV 198, Hans Carl von Kirchbach, was secretary to the mine early in its life. Others knowledgeable about science and mining included the apothecary and astronomer Johann Heinrich Linke and a supervisor of the famous Annaberg mine, whose sixteenth-century prosperity, based on silver, paid for the building of the fine late Gothic St Anne's church of Annaberg-Buchholz. Any inconsistencies in the claims for the mine could have

⁴ See pp. 145–153 in this volume.

been detected by the stakeholders, and their connections to the court and consequent abilities to exact legal penalties would have deterred any fraud.⁵

It is of course possible that Bach invested for patriotic or altruistic reasons. 'Bach also had the merits of being an excellent friend, father and *citizen*', says Forkel.⁶ Investment in the mine could have been a sign of civic devotion to the Elector. However, with around 140 working mines in the Erzgebirge at these dates, each with 128 *Kuxe* and typically 60 to 80 stakeholders, such a gesture would not have been particularly visible. Any decision not to pay the *Zubusse* or reduce a stake would have risked disfavour, and all the stakeholders with court connections listed in the registers occasionally missed a payment or reduced their stake, as did Bach in 1744–46. There is no evidence of strong patriotic devotion to the mines on the part of the stakeholders. Indeed, the organ builder Silbermann gave up his stake in Ursula Erbstollen completely, although the Freiberg superintendent, the pietist Wilisch, maintained his family interest for many more years.

It is more likely that Bach's motivation was altruistic. In the contemporary dictionary of mining, the *Bergwercks-Lexicon* of 1743, the self-styled Minerophilus declaims: 'The development and maintenance of mining is not a task for one man but inevitably requires many from all stations of life to lay out their money for the sake of the common weal and with a good heart'.⁷ The anonymous author is surely on the side of the mining business, but the actions of the holders of the *Kuxe* in withholding support in bad times suggest a limited altruism at work.

The doctrine of *Geschlechtsvormundschaft* in German law at this time meant that married women, although not widows, were generally denied the right of legal persons (aspects of this law continued to apply in West Germany until the 1970s).⁸ However, the Ursula Erbstollen registers name fourteen female investors, nine of whom are listed alongside their husbands' names. Even if in practice the stakes were also funded by the husbands, this rather inappropriate investment for the prospective female survivors of marriage is an unusual phenomenon. It predates specific widows' funds (the *Calenbergische Witwen-Verpflegungs-Gesellschaft*, founded in 1766), and appears to have been a way round the prohibition on female legal ownership.

The existence of silver as a divine gift to be discovered by man is a theme in several texts, and depicted in the retables of the side altars of Annaberg, which have no other religious aspect apart from some helpful angels. Although Luther's father was a silver miner, writing at the zenith of silver mining in Saxony, he offers little encouragement: 'I don't want anything to do with mining shares!

⁵ In 1700, the chemist Boettger was imprisoned at Dresden by Augustus the Strong for failing to produce gold from alchemy. He is sometimes credited as the subsequently developing porcelain manufacture.

⁶ *NBR*, p. 459. Emphasis added.

⁷ Minerophilus, *Neues und wohleingerichtetes Mineral- und Bergwercks-Lexikon* (Chemnitz: Stößel, 1743), quoted as foreword of Spree's article in this volume, p. 145.

⁸ Eve Rosenhaft, 'Women and Financial Knowledge in Eighteenth-century Germany' in Anne Laurence, Josephine Maltby and Janette Rutterford (eds.), *Women and their Money 1700–1950: Essays on Women and Finance* (London: Routledge, 2009), pp. 59–69.

They are play money, and play money does not of itself increase in value!⁹ Despite these strictures, the nomenclature of the Saxon mines (almost invariably religious images, saints' names, or Christian virtues) gives some support to a continuing act of faith in mineral investment.¹⁰ And Ursula Erbstollen is of course named after the saint in question.

How does Saxon mining at this time compare with enterprises elsewhere?

One feature of the central land law behind the profusion of mines up to Bach's time was the doctrine 'der Berg ist frei'. Prospectors could look for silver on anyone's land; a find had to be registered with the mining superintendent, who was in effect part of the state apparatus of Saxony. Although the landowner was awarded one non-contributory *Kux* on the occasion of a find (four if he submitted to the *Zubusse* regime), the *Kux*-holders effectively took over the patrimony of the land, and with it taxation obligations to the Elector (10 per cent of the output, the *ius regale*), plus the right to be offered the silver mined at below-market rates. Nevertheless, a few successful mines paid dividends, as in the case of Morgenstern Erbstollen described above. Thus in practice Saxon law operated a pincer movement between the *Kux*-holders—those with court connections, the bourgeoisie and ecclesiastics (including Bach)—and the Elector, thus squeezing out the hapless landowner.

Did anyone in northern Europe in Bach's time make such a fortune out of silver that risking investment in the many mines was worth a gamble? The Hanoverians did. The Alva Glen silver mine in central Scotland was an intrinsically more profitable mine under the Roman Law legal system providing regalian rights.¹¹ In the period 1714–49, it is estimated that 155,000 troy ounces of silver were extracted, compared with 2,400 TOz at Ursula Erbstollen from 1737–56. However, the House of Hanover at Alva may have had difficulty in obtaining royalty, since it seems that in calculation of the *ius regale*, costs although not deductible by contract were in practice allowed; after deductions little profit was declared. By contrast, the landowner, Sir John Erskine and the successor owners, the London Leadworks Company, prospered on the back of the discovery. So big wins were possible in northern Europe at this time, although, then as now, the greatest reserves were to be found in Mexico and South America. And it would

⁹ Theodor Gustav Werner, 'Das fremde Kapital in Annaberger Bergbau und Metallhandel des 16. Jahrhunderts', *Neues Archiv für Sachsen Geschichte und Altertumskunde*, 58/2 (1937), p. 134: 'Ich will kein kuks haben. Es ist spiegelegelt und es will nicht wudeln dasselbige gelt!'

¹⁰ Investors were perhaps attracted to the aspirational names traditionally given to the mines, such as Hoffnung, Gewissheit, and Morgenstern, and by the use of several saints' names, even for those opened post-Reformation.

¹¹ Stephen Moreton, *Bonanzas and Jacobites: the Story of the Silver Glen*, (Edinburgh: National Museums of Scotland, 2008), pp. 40 and 46: 'After deducting the charges for refining it, His Majesty's tenth of the output was worth just £20'. It is possible that ore was concealed. 'Bonanza' is a Spanish word referring to a major silver find and originating from the large seams found in Mexico.

appear that the particular attraction of Saxon mining was the ability to profit from someone else's land.

Coincidentally, the Scottish mine leads us back to Handel's world. Alva Glen was investigated by Justus (Jobst) Brandshagen, secretary to Leibniz and a minor figure in Handel's correspondence.¹²

What do Bach's financial dealings reveal about him?

The stories related in *NBR* are ambiguous as to whether Bach was a generous or rather penny-pinching fellow, to whom a loss-making mining interest would have been a concern. Early in his life he gave up a possible dispute over the extent Lämmerhirt inheritance, maybe from disdain for money¹³ – which is often a text in the Cantatas, for example, the expression 'schlechtes geld' in BWV 163/2. However, he simultaneously asks for the undisputed amounts of the inheritance to be forwarded, as if anxious for the cash. Later at Leipzig he asked a cousin not to send wine because of the ruinous taxes to be paid by the recipient.¹⁴ Other sources reveal Bach's concern that his income at Leipzig had fallen due to a lack of fees,¹⁵ and that he appeared to covet the stipend of the University Church.¹⁶

Despite the high level of contemporary philanthropic activity noted in Leipzig,¹⁷ we have no evidence that Bach supported the various hospitals and orphanages there. But as the Thomasschule itself functioned to a degree as a charitable institution,¹⁸ it is hard for us to draw a line between Bach's self-interest and altruism as teacher, citizen and father.

Conclusion

So why did someone like Bach invest?

The question relates to the science of behavioural finance, which has its origins in the contemporary writings of Daniel Bernoulli.¹⁹ He observed that investors who take chances with their money have a varied tolerance of risk, and the outcome is measured not necessarily in hard cash, but according to a wider concept, utility: a prospect has the same mathematical chance for all investors, but different utility of outcome.²⁰

While Bach's peer group included the well-to-do who could have been relatively indifferent to speculation, there were also the miners themselves,

¹² Unrelated to the silver mine. Private communication with Donald Burrows.

¹³ *NBR*/89, p. 94.

¹⁴ *NBR*/258, p.235.

¹⁵ *NBR*/152, p. 152.

¹⁶ *NBR*/135, p. 135–6. See also Wolff, *Johann Sebastian Bach*, p. 315.

¹⁷ See Tanya Kevorkian, *Baroque Piety: Religion, Society and Music in Leipzig, 1650–1750* (Aldershot: Ashgate, 2007), pp. 198–9 and *passim* concerning the Council and burgher funding of the St George's Chapel and poorhouse.

¹⁸ See Michael Maul, *"Dero berühmter Chor": Die Leipziger Thomasschule und ihre Kantoren 1212–1804* (Leipzig: Lehmsstedt, 2012).

¹⁹ Daniel Bernoulli, 'Specimen theoriae novae de mensura sortis', *Commentarii Acad. Petrop.* 5/1730-1 (1738), pp. 175–92. Eng. trans. by Louise Sommer, 'Exposition of a New Theory on the Measurement of Risk', *Econometrica*, 22/ 1 (1954), 23–36.

²⁰ Bernoulli, 'Exposition of a New Theory', p. 24.

whose livelihood was the mine. The registers—there is one Polish entry but nearly all are Saxon or Thuringian—include coopers, farmers, gentry, generals, merchants and clergy. A particular motivation may apply to one but not others: while profit is unlikely to have been a single motivation for anyone at Ursula Erbstollen, the dodging of obligations (when the financial outlook was poor) under this remarkable early-capitalist fund structure suggests profitability was by no means unimportant to the investors.

What the investors themselves thought about their investment as the years rolled on and very little silver was found has not been revealed by the research to date. Continuing research at Freiberg and elsewhere may yet find some record of the investors' thoughts, which would shed some light on the motivation behind the buying and selling of *Kuxe*. But even if it does, it will not be easy to conclude what exactly was in the mind of one active and hopeful participant, Johann Sebastian Bach, Capellmeister in Leipzig.