

OBSERVING THE SKIES OF LISBON.
ISAAC DE SEQUEIRA SAMUDA, AN *ESTRANGEIRADO* IN THE ROYAL
SOCIETY

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SUMMARY

Elected in 1723, Isaac de Sequeira Samuda (1681–1729) was the first Jewish Fellow of the Royal Society. He had arrived in London just a few years earlier, escaping from the Portuguese Inquisition. Despite his past, he had no difficulty in establishing links with his country's diplomatic representatives in London. A physician and adviser on scientific subjects, he became a conduit between the emerging world of Portuguese astronomy and the British scientific community. He reported to the Royal Society on astronomical observations made in the new observatories in Lisbon and helped with the acquisition of scientific instruments and books destined for Portugal. These activities were facets of Samuda's unusual career and the diverse though often converging associations that he established until his death. As the member of a network active in the diffusion of new ideas and in the modernization of Portuguese science, Samuda can be regarded as an *estrangeirado*, as this term has come to be used in the modern literature.

**Key-words: Isaac de Sequeira Samuda; astronomy; estrangeirado; Lisbon;
Judaism; Giovanni Battista Carbone**

‘Many have been the researchers who have tried to unveil the obscure life of this physician, astrologer and poet, but opinions diverge.’ These words were written by Augusto d’Esaguy in a ‘short note’ on Isaac de Sequeira Samuda published in 1934.[1](#)

For 80 years, historiography has limited itself to quoting Esaguy (and his equivocations) or to brief mentions of Samuda as a minor character, usually overshadowed by his contemporary Jacob de Castro Sarmiento. Little is known about Samuda, except that he was a reputable physician, the first Jewish Fellow of the Royal Society, and a keen astronomer. Not even his Christian name was common knowledge until now. This article throws what light we can on Samuda's 'obscure life'.

EARLY EIGHTEENTH-CENTURY LISBON

In 1730, Cesar de Saussure described Lisbon as 'une ville d'un très grand commerce', where the English trade was so substantial that 'on compte que dans une année il entre dans le Tage beaucoup plus de Vaisseaux Anglois que de Portugais et de toutes les autres Nations ensemble'.² From 1640 and the Portuguese Restoration, the Anglo-Portuguese alliance was gradually consolidated. At the beginning of the eighteenth century there was an increase in economic and diplomatic relations between Portugal and England, boosted by the Methuen Treaty and the Portuguese involvement in the War of Succession in Spain. This increase was reinforced with the accession of King John V to the Portuguese throne in 1706.³

Culturally, the new king's reign was characterized by the confrontation between the survival of archaic structures and the rise of new expectations of progress. At a time when the Inquisition was strengthening its influence and Aristotelianism and Scholasticism remained the rule in the educational system, the new scientific rationalism of the Enlightenment was also slowly gaining support in Portuguese intellectual circles,⁴ with the *estrangeirados* playing an essential role in the process.

Recent historical studies have added much to our understanding of what occurred. An important consequence has been a new perception of the *estrangeirado* not only as an individual influenced by foreign scientific and cultural trends, but more importantly also as an element in a network of foreigners and Portuguese citizens who contributed to the introduction of new ideas and practices and whose goal was to ‘integrate Portugal in a new cognitive and epistemological corpus’.⁵ Several diplomats who served the Portuguese crown in London—such as D. Luis da Cunha, António Galvão de Castelo-Branco or, some decades later, Sebastião José de Carvalho e Melo (Marquês de Pombal)—can be identified as participating in this movement. In London, they associated with well-established Portuguese individuals, who became their points of contact with British cultural circles. Some of them had been victims of the Inquisition themselves.

At the same time as telescopes and sundial clocks were arriving in Lisbon from London, the Portuguese Inquisition was striking a dramatic blow against the New Christian community. During the first half of the eighteenth century, successive waves of imprisonments emptied the homes of New Christians (Jewish converts to Christianity) and changed the face of Lisbon's commercial elite. For many of these persecuted, both women and men, there were only two options: prison or escape. Some of the English vessels that then docked in Lisbon became getaway vehicles for many New Christians wishing to flee from the threat of the Inquisition. Among them may have been the eldest son of Rodrigo de Sequeira and Violante Nunes, who was baptized in the Church of São Julião in Lisbon around 1681 with the same name as his grandfather (and godfather), Simão Lopes Samuda, a physician from Odemira.⁶

EARLY LIFE

Information about Simão Lopes Samuda's childhood is sparse. His father, Rodrigo de Sequeira, was a merchant who had begun his career in his family's fabric shop at Rua Nova, one of the liveliest streets of Lisbon, and who was arrested by the Inquisition in 1654, two years after his father, Gaspar Vaz de Sequeira, had also been arrested.⁷ After leaving prison, Rodrigo de Sequeira married and had a son, Gaspar de Almeida, who followed in the footsteps of his father and grandfather. He became a merchant, trading goods between Portugal and England. He was still in Lisbon in 1700 but moved to London permanently soon afterwards.⁸

Unlike his father and half-brother, Simão (a son of Rodrigo's second marriage) did not pursue a business career. In October 1696, he entered the Faculty of Medicine at Coimbra University, where he graduated on 21 May 1702.⁹ He then returned to Lisbon and established his home at Beco das Comédias, living with his mother and his sister, Maria de Melo Rosa. He was already practising medicine in Lisbon when his colleague and relative Dr António de Mesquita e Sá, the husband of his maternal aunt Guiomar Maria Henriques, denounced him to the Inquisition. Simão was accused of believing in the Law of Moses and adhering to its observances, namely not working on Saturdays and keeping the Jewish fasts. The consequence was his imprisonment on 23 August 1703. Simão, however, never confessed to these accusations. In his defence, he tried to demonstrate how true his Christian faith was and how unfounded the charges against him were. He could not avoid torture but was reconciled in the *auto da fé* (act of faith) celebrated in Lisbon on 21 October 1704, receiving a lesser punishment than his sister, who was handed over to the secular arm; that is, condemned to death.¹⁰ After his reconciliation, we lose trace of him. The sources show only that he and his mother were no longer in Lisbon in 1712.¹¹

Simão's mother, Violante Nunes Rosa, was reconciled in the *auto da fé* on 6 September 1705. Some months later, on 20 February 1706, Gregório Ferreira, a merchant from Lisbon, offered to pay the expenses of her trial.¹² Thereafter, we hear nothing about her. Although she was condemned to seven years' exile in São Tomé, it is not certain that she ever served the sentence. There was no mention of it in her trial, nor any word about a possible commutation. But it is possible that Simão had fled with his mother to somewhere secure from the unhappy destiny of seven years of suffering on an island in the middle of the ocean. If we accept this hypothesis, we can safely suppose that she left Lisbon at some time between the years of 1706 and 1712. A further question is whether London was their first destination, although very probably it was. After all, Simão's half-brother, Gaspar de Almeida, was already there. In subsequent years, many other members of his family left Portugal and settled in London, including his aunt Gracia Caetana, married to the physician Diogo Nunes Ribeiro (alias Samuel Nunes Ribeiro).¹³

WHO FOLLOWS THE SUN?

‘The Wise Man is not just a light to himself but also to others. He is not only his own light but also that of others. He shines within and he reflects light outwards. Like the Sun, he communicates light. Whoever walks with the Wise Man acquires wisdom.’¹⁴ The author of these words is Samuda, and the ‘Wise Man’ (*sábio* in Portuguese, essentially a ‘sage’) is none other than David Nieto, the *hakham* of the Portuguese and Spanish congregation in London. He wrote them for the sermon preached at the obsequies on the 30th day after Nieto's death in 1728. Eight years before that, Samuda was already living in London. No longer known as Simão Lopes, he had publicly professed the Jewish faith and adopted the first name Isaac and his paternal surname Sequeira. In 1720, this ‘new’ man, Isaac de Sequeira Samuda, appeared along with other important London Jews as the author of two poems in a dedication to Daniel Israel Lopez Laguna's *Espejo fiel de vidas*.¹⁵ This was a sign of integration that proved that Samuda had been in the city long enough to cultivate the respect of his peers.

David Nieto (1654–1728) was the rabbi of the Bevis Marks Synagogue from 1701. Some of his attributes were immortalized by Samuda in an epitaph written for his tomb: sublime theologian, a man of profound wisdom, remarkable physician, famous astronomer, sweet poet, fluent rhetorician, jocund author.¹⁶ In the sermon preached at the rabbi's obsequies, Samuda likened him to the Sun: when he died, he experienced the sunset on Earth but, because of his works, he was given ‘the light of the Celestial Glory’.¹⁷ Nieto was an example to emulate, one that Samuda followed.

In the sermon, Samuda supported his own arguments by drawing on works other than the more traditional sources used for texts of this kind, namely the Holy Scriptures and authors of classical Greece and Rome. He quoted Robert Boyle, Hermann Boerhaave, Willem 's Gravesande and, in particular, Isaac Newton. Religion and science were presented as walking side by side, language that would have been familiar to David Nieto. According to David Ruderman, Nieto ‘was apparently the first Jewish thinker in Europe to grapple with the impact of Newtonianism on his community and its faith.’¹⁸ His ideas were influenced by the Christian Anglican advocates of a new science inspired by the theories of Boyle and Newton: God acts in the processes of Nature, and the new scientific discoveries prove His omnipresence, just as religion guarantees stability and harmony in the social and natural realms.¹⁹ The way in which Nieto

adopted these ideas for Judaism is particularly clear in *De la divina providencia*, published in 1704; this dialogue was written following a sermon that the rabbi had preached in the year before, provoking a wide controversy among the congregation.²⁰ It is also evident in the way Nieto used his astronomical and mathematical knowledge to instil more rigour into religious services, as he did with his works *Binah leIttim* and *Paschologia*.²¹

David Nieto was surrounded by remarkable intellectuals, not only Samuda and the aforementioned Daniel Israel Lopez Laguna but also Solomon da Costa Athias, who gave 180 printed Hebrew volumes to the British Museum; Antonio Ribeiro Nunes Sanches, a celebrated Portuguese physician who had been in London before going to Leiden, where he became a disciple of Boerhaave; and Jacob de Castro Sarmiento.²² Nieto was the Sun communicating light, and Samuda had also been enlightened by him, a relationship to which his life bore witness.

DOCTOR SAMUDA

Samuda was admitted to the Royal College of Physicians on 19 March 1721.²³ However, we know little about his medical career. In 1724 he became physician to the Portuguese envoy extraordinary (later, ambassador) in London, António Galvão de Castelo-Branco. ‘He is a Jew who is known as one of the wisest men here’ is how António Galvão introduced Samuda to the Portuguese secretary of state Diogo de Mendonça de Corte-Real.²⁴ This admiration for Samuda's qualities continued to be demonstrated by the envoy. It was he who chose Samuda for the position, following the recommendation of Dr Fernando Mendes, the former physician of the Portuguese diplomatic community in London. Like Samuda, Fernando Mendes was a New Christian who had left Portugal for England in 1669. Before he died, he had told Antonio Galvão that Samuda would be the only person whom he could trust to be his physician.²⁵ Fernando Mendes, the patriarch of the influential family Mendes da Costa, was certainly a decisive element in Samuda's relatively rapid integration into London life.²⁶

As physician to Queen Catherine of Braganza, he had gained a wide reputation through his production of a medicine based on quinine and used in the treatment of certain diseases, especially malaria: the *Águas de Inglaterra* (‘Waters of England’). Some years

later, another Portuguese physician, Jacob de Castro Sarmiento, adapted the medicine and promoted its commercialization, exporting considerable quantities of it to Portugal.²⁷ Samuda was interested in the production of this kind of medicine. In a letter of 10 September 1728 he referred to ‘medicine waters’, developed by him, that were used by several physicians in Lisbon with good results.²⁸ This suggests that, following the example of his recommender, Samuda had created a medicine and tried to introduce it in Portugal. In doing so, he had probably used the same means as Mendes and, after him, Sarmiento, namely through connections with several influential figures in Portuguese life (such as Marquês de Gouveia or Francisco Teixeira Torres, a future royal physician) whom he had met through his association with António Galvão.

In the archives of the Royal Society are two short manuscript papers on medical matters by Isaac de Sequeira Samuda. One, presented before the Royal Society on 21 May 1724, refers to anatomical observations made by the physician Antonio Monrava after the dissection of a man who had died from an epidemic fever.²⁹ In the other, Samuda reports a distemper in Lisbon, trying to explain it as the result of the excessive heat experienced in the summer of 1723.³⁰ Although both papers were presented at meetings of the Society, neither was published. In fact, the documents by Samuda that are in the Royal Society's collection reveal how eclectic and miscellaneous his scientific interests were. Addressing the Fellows, he expressed his thoughts on subjects as varied as meteorology (‘Weather observations from Lisbon from October to December 1724 by Isaac Sequeira Samuda’), botany (‘An account of an uncommon Phaenomenon of the Verbascum in flower, being part of a Letter from Jos Israel Carrillo Physician to the King of Tunis to Isaac de Sequeira Samuda’, in 1730) and zoology (‘Description of a large fish seen off the coast of Lisbon sent by Samuda’, on 21 January 1723). But most of his contributions, as recorded in *Philosophical Transactions*, concerned astronomy, which was evidently his particular interest.³¹

ISAAC DE SEQUEIRA SAMUDA FRS

Samuda's first paper in *Philosophical Transactions* was a report on the observation of a comet by Francesco Bianchini in October 1723, sent from Lisbon by the Jesuit priest Giovanni Battista Carbone.³² At the time, Samuda was already a Fellow of the Royal Society, having been elected on 27 June 1723. More than six decades had elapsed between the foundation of the Royal Society and the admission of Samuda, its first

Jewish Fellow. In *The History of the Royal Society* (1667), Thomas Sprat writes about the unrestricted admission to the Fellowship of ‘Men of different Religions, Countries, and Professions of Life’ who had a common interest in the ‘Philosophy of Mankind’. However, Sprat adds, ‘the far greater number are Gentlemen, free, and unconfined’.³³ So, although by its statutes the Royal Society was not an elitist institution, a certain kind of conduct, usually associated with high social status, was an important criterion for membership. As Steven Shapin states, the Royal Society materialized the Baconian ideal of a ‘community of gentlemen-scholars’.³⁴ Being a Fellow of the Royal Society was therefore not just a question of scientific reputation; it also reflected a social standing that would guarantee trustworthy conduct and so validate the reliability of any experimental knowledge being conveyed.³⁵

So we can interpret the election of Samuda as a sign of change in the status of the Jewish community of London, specifically the growth of its influence in British society and the more elevated social background of some of its members. According to Rhodri Hayward, in the eighteenth century the community was ‘sufficiently well integrated and well connected to sustain an individual's reputation and provide evidence of good character’, essential features for admission to the Fellowship.³⁶ It is also relevant to note that the procedure for electing new Fellows now limited the spectrum of possibilities, assigning the task of proposing candidates to the existing Fellows. Ultimately, the Society functioned as a network. We do not know who Samuda's proposers were, and we know nothing of his previous connections inside the Society. Among his acquaintances were some personalities who were well integrated into the cultural circles of London: besides Nieto, these included Solomon Costa Athias and Fernando Mendes. None of his acquaintances, however, were Fellows of the Royal Society.

Samuda's election opened the doors of the Fellowship to Jewish and Portuguese candidates more generally. By the end of the century another eight Jews had been elected, among them Samuda's friend and relative Jacob de Castro Sarmiento and Fernando Mendes's grandson, Emanuel Mendes da Costa. It was a small number by comparison with the centuries to come.³⁷ The same happened with regard to Portuguese members. Before Samuda, only two Portuguese nationals had been Fellows of the Royal Society: the diplomats António Álvares da Cunha (elected in 1668) and

José de Faria (elected in 1682). After him, 20 scientists and non-scientists from Portugal entered the Fellowship up to the end of the eighteenth century.³⁸ His influence was evident in the election of two of them: António Galvão de Castelo-Branco in 1725, and the Jesuit Giovanni Battista Carbone in 1728, for both of whom Samuda was one of the proposers.

On 9 September 1728, responding to Carbone's enquiry about the likely procedure for his election, Samuda wrote: As I have told you, the election will not take place on the same day (as the proposal), but on another when, after being approved by the Council, the Society votes. As this Chairman will not postpone it as much as the last one, due to his age, I suppose that there will be no great delay in letting you know, which as your friend I hope for, and which Your Excellency as a wise man deserves.³⁹

Unfortunately, Samuda did not live to see this happen. Death claimed him first.

THE JESUIT CONNECTION

According to Jaime Cortesão, 'King João V made astronomy a royal science, which he wanted to learn and did learn.' Undoubtedly, the King's support for astronomy in Portugal had political aims. First, it was a way of spreading an image of himself as a magnificent protector of the sciences. But the interest that he took in the subject also had practical objectives with respect to the boundaries of the Portuguese overseas Empire.⁴⁰ With the mission of mapping Brazil and clarifying the extent of Portuguese and the Spanish jurisdictions in the territory, the Jesuits Giovanni Battista Carbone and Domenico Capacci arrived in Lisbon in 1722, from Naples. This was not the first occasion on which Portugal turned to foreign scientists in response to the lack of Portuguese experts capable of undertaking scientific missions in extra-European territories. As Henrique Leitão has noted, this made Portugal a 'transit point of a remarkable movement of scientific experts', although Portuguese culture had not been known to take advantage of it.⁴¹

In 1722, neither Carbone nor Capacci had acquired enough mathematical and astronomical knowledge to embark on a project as complex as the determination of Brazil's boundaries. Hence, their time in Lisbon was to be a training period. Capacci embarked for Brazil in 1729, but Carbone stayed in Portugal until his death. He was

granted the title of Royal Mathematician in 1724 and became rector of the College of Santo Antão (Jesuit college in Lisbon) in 1749.⁴² This time for training in Lisbon yielded substantial advantages for the development of Portuguese astronomy. The construction of two observatories, one in Terreiro do Paço, the other at the College of Santo Antão, was concrete evidence of this. Neither observatory survived the earthquake of 1755.⁴³ However, before that date, the astronomical observations made by Carbone and Carpaccio, who became known as the *Padres Matemáticos*, had been disseminated far beyond the frontiers of Portugal. Accounts of their observations appeared not only in *Philosophical Transactions* but also in *Nova Acta Eruditorum* of Leipzig.⁴⁴

In England, António Galvão enthusiastically spread the reports arriving from Lisbon. Towards the end of 1724, he reported to the Royal Society a lunar eclipse that Carbone and Capacci had observed in Lisbon on 1 November of that year.⁴⁵ According to Rómulo de Carvalho, it was ‘the first astronomical observation made in Portugal in an observatory with adequate equipment and with the purpose of making a contribution to the development of astronomy.’⁴⁶

The Lisbon observatories served Portuguese science as a visiting card, facilitating access to the Royal Society. On 9 January 1725 António Galvão wrote to Diogo de Mendonça Corte-Real, telling him that the Society was impressed with the report of the astronomical observations of Capacci and Carbone: They found it so accurate that they ordered it to be published in their Transactions, which is a kind of register where they publish everything that they deem to have public utility, and there are already a large number of volumes. They said that they did not know how to praise the protection that Our Majesty has given to the Sciences, that they would like to correspond with our Mathematicians every year through me and their Fellow, that this is the way in which they correspond with the whole world, designating each Fellow with a province or reign, and that the only one missing was Portugal.⁴⁷

‘Their Fellow’ was Isaac de Sequeira Samuda, who became the spokesman in the Society for the new astronomical achievements emanating from Lisbon. Between 1724 and 1728, Samuda presented a number of reports concerning astronomical observations made by Carbone, as well as others by Francesco Bianchini and Eustachio Manfredi in Rome and by Ignatio Kogler in Beijing, which were also sent from Lisbon by Carbone.

The determination of the longitude of Lisbon was one of Carbone's main aims. The records of such phenomena as lunar eclipses in Rome or Beijing, and comparison between these and observations made in Lisbon, provided essential data for the calculation of the Portuguese capital's longitude.⁴⁸ In addition, this was good training for the work planned for Brazil, work that Carbone did not perform because of his new responsibilities in the metropolis.

The Royal Society showed a continuing interest in these observations, as well as others made in the Portuguese overseas territories. On 19 June 1725 António Galvão mentioned a request from the Society to dispatch instruments to the colonies through 'our mathematicians' (probably Carbone and Capacci) with the goal of conducting astronomical observations there.⁴⁹ Clearly, the correspondence between Samuda, António Galvão and Carbone played a key role in facilitating contact between the Royal Society and the Society of Jesus, whose missionary work made a fundamental contribution to the worldwide diffusion of European culture and science.⁵⁰ The Jesuit mission was a perfect complement to Sprat's conception of the Royal Society as 'the general bank and free-port of the World'.⁵¹

THE SCIENTIFIC LEGACY

The quality of the astronomical observations depended crucially on the use of accurate scientific instruments. When the observatories of Terreiro do Paço and the College of Santo Antão were built, they were equipped with a wide range of scientific instruments and books ordered and shipped from Paris and London to Lisbon during the 1720s. In this process, Samuda had two roles. First, he was responsible for ordering instruments from some of the most reputable London manufacturers, such as George Graham and Edmund Culpeper.⁵² Second, he had shown sufficient technical competence to allow him to deliver informed opinions on their mechanisms and performance. On 13 August 1725 António Galvão wrote about a sundial clock that had been repaired and sent to Lisbon: 'As before, I asked Dr. Sequeira Samuda to examine this clock, and he has let me know that it has been repaired exactly as it was ordered.'⁵³ Attached to the letter were instructions for its use, written by Samuda.⁵⁴

This sundial clock was constructed by Samuel Molyneux, as were other instruments shipped to Lisbon, for example an instrument for the determination of meridians,⁵⁵ a

‘dashing’ portable telescope that could be carried in the pocket,[56](#) and a reflecting telescope presented to King John V.[57](#) Samuel Molyneux FRS, an amateur astronomer, secretary to the Prince of Wales, and ‘the most polite man in England’ according to António Galvão, became a close friend of the Portuguese envoy and a correspondent of Carbone, providing the Jesuit with technical instructions and reporting on astronomical observations made in the observatory of his mansion at Kew.[58](#) Hence when Molyneux died in 1728, he was missed not only in London but also in Lisbon. António Galvão lamented: ‘Mr. Molyneux will be deeply missed because, besides his opinions, he was the only one who constructed these kinds of instrument.’ But António Galvão had already found a solution to fill the gap: a professor from the University of Oxford whom Molyneux had consulted (probably James Bradley, although António Galvão did not reveal his name). In addition, Samuda would continue to deliver his technical advice.[59](#)

Samuda's skills enabled him to go beyond the orders from Lisbon, as he did when, in April 1728, he dispatched a sundial clock invented by the priest Pardies. Carbone had not ordered it, but when Samuda knew that the University of Oxford had acquired one, he thought that that instrument ‘would be useful to such a curious sage as Your Excellency’.[60](#)

In addition to scientific instruments, Portuguese observatories and libraries were enriched with books sent from London. This is a recurring theme in the correspondence between António Galvão and Diogo de Mendonça Corte-Real. Consulted about English libraries, Galvão described some of them in a letter of 4 December 1727: the Royal Society library consisted of only ‘two very small rooms’, and the libraries of the universities of Oxford and Cambridge were not as interesting or organized as that of the Earl of Sunderland.[61](#) Almost certainly, this report had been composed from opinions provided by Samuda. In fact, the physician had begun his collaboration with António Galvão as a kind of consultant with the mission of evaluating the library of the Earl of Sunderland after his death in 1722, giving his opinion on the books that should be purchased and dispatched to Portugal.[62](#)

In the years that followed, Samuda continued working to enrich Portuguese libraries. On 27 July 1725 he mentioned the shipment of a few books that had been ordered (‘According to the list that Your Excellency had sent me, they shipped Georgio, Wiston, Horrocio, Mercator and Keill’) and others that he believed would be useful in Lisbon,

such as *Harmonicon caeleste* by Vincent Wing and *Astronomia Carolina* by Thomas Street. Samuda also apologized for the delay in the shipment of *Astronomia philolaica* by Ismael Bullialdus (he had only found ‘such an old, stained, dirty and frayed copy that was unworthy to be shipped’) and Johannes Kepler's ‘extremely rare’ *Epitome astronomiæ Copernicanæ* and Johann Bayer's *Uranometria omnium asterismorum*.⁶³ His attitude varied between taking a personal initiative and meticulously following the orders from Lisbon. For instance, when Carbone ordered three copies of John Flamsteed's *Cælum Britannicum* and only two of *Historia Cælestis Britannica*, Samuda simply obeyed his instructions, even though he had alerted Carbone to the inconsistency: ‘I thought that if you wanted three Atlases, you would want three *Historia* too because they go together ... but as Your Excellency's words are clear, I obey.’⁶⁴

Sometimes language became an obstacle. On 8 May 1725 António Galvão complained to Diogo de Mendonça Corte-Real about the absence of Carbone's answer to a letter from Molyneux: ‘if he does not understand French, he could answer in Latin or Italian, because for Mons.^r Molineux it is the same.’⁶⁵ However, even Molyneux could have been confused by linguistic equivocations, because some astronomical vocabulary used by the Portuguese observers was unknown in England.⁶⁶ In this scenario of so much information lost in translation, Samuda's fluency in English, Portuguese and Latin was an essential aid to clarification. For Carbone he translated some papers published in *Philosophical Transactions* as well as extracts from scientific works, such as a chapter from Francis Hauksbee's *Physico-mechanical experiments on various subjects* about experiments on the refraction of the air ‘because I suppose it would be very beneficial for the use of the instrument that I am sending you.’⁶⁷ Samuda's pragmatism guided his choices.

In 1728 Samuda sent Carbone the translation of a letter from James Bradley to Edmond Halley about the newly discovered motion of the fixed stars. In the letter, published in *Philosophical Transactions* in 1727, the ‘Anti-Copernicans’ were openly challenged.⁶⁸ This translation was most probably not requested by Carbone; it is more likely to have been an initiative of Samuda's. However, the sending of a text defending the Copernican cosmology, at a time when Copernicus's *De revolutionibus orbium coelestium* was still included in the *Index* (until 1758), did not cut across other orders from Lisbon, such as

that, some years earlier, for Kepler's *Epitome astronomiæ Copernicanæ* (mentioned above).

In fact, according to Samuda's letters to Carbone, his main objective was to interpret his correspondent's needs: 'Not only do I want to obey your words, but I also wish to guess your thoughts.'⁶⁹ He used his knowledge and his experience and contacts in British scientific circles to select what would be the most useful books and instruments in Lisbon. His efforts to please Carbone were evident in his initiative in sending a sundial clock by Pardies 'from the extremely wise and so venerable Society [of Jesus]', in the laudatory tone of his words ('I assure you that your so scientific and pleasant correspondence causes me very great pleasure'⁷⁰), and in his efforts to have Carbone elected a Fellow of the Royal Society. Was Samuda trying to draw a veil over his past or to secure some kind of advantage for himself or his family? Or was his devotion just a straightforward sign of friendship and admiration? Unfortunately, we do not have enough information to allow firm conclusions. We only know the outcomes: by this conduct Samuda was strengthening his position in the eyes of the Portuguese diplomatic community in London (which needed his services) and the Royal Society (which was interested in his connection with Portugal and, particularly, with the Society of Jesus).

All in all, Samuda was reinforcing his role as a go-between in the circulation of knowledge between England and Portugal. But this was not a one-way process. In one direction, Samuda dispatched scientific instruments and books to Portugal, where they were used in accordance with local goals and context. The typology of these items mirrored the practical objectives of early-eighteenth-century Portuguese astronomy, which gave primacy to technical matters rather than to theoretical ones. Samuda was familiar with this interest, and his choices demonstrated it. In the other direction, however, he reported on astronomical observations made in Lisbon, Rome and Beijing, gaining the interest of other Fellows of the Royal Society, who used the information in their work. This was the case with James Bradley, who quoted 'some curious Astronomical Observations having lately been communicated to this Society from Lisbon' in an article about the determination of the longitude of Lisbon and the fort of New York by using observations of the eclipses of the first satellite of Jupiter.⁷¹

On 16 April 1728 Samuda alerted Carbone, ‘as a friend and as a physician’, that he had to take into consideration the harm that studies could do to his health, because ‘the hasty walker stops due to languor’.⁷² In the following year, Samuda ‘stopped’ after a two-day illness, as António Galvão mournfully informed Diogo de Mendonça Corte-Real on 22 November 1729.⁷³ He probably died during that month because, by the end of October, he had been able to propose Carbone as a Fellow of the Royal Society.⁷⁴ However, his place as a physician and scientific adviser to Portugal's diplomatic representatives in London was quickly taken by someone close to him: Jacob de Castro Sarmiento, a Fellow elected on 5 February 1730.⁷⁵ Hence, Sarmiento became responsible for reporting to the Royal Society the Jesuits' astronomical observations made in Lisbon.⁷⁶

The nature of Sarmiento's association with Samuda is not entirely clear. António Galvão introduced him to Carbone as Samuda's relative and disciple.⁷⁷ I assume that Isabel, Sarmiento's wife, was Samuda's cousin.⁷⁸ If that is true, their family bond would justify the close relationship that they maintained in the Diaspora. In fact, Samuda must have been responsible for Sarmiento's introduction into the scientific circles of London. The two men shared a love not only of science but also of literature. During his final years, Samuda dedicated himself to writing an epic poem, *Viriadas*. However, he died before its completion. The poem was completed by Sarmiento, although it was never published. Nowadays, the whereabouts of the manuscript is unknown.⁷⁹ Richard Barnett had seen a copy in 1961, when it was the property of the Duke of Palmela. He considered the poem a long paraphrase of the Book of Esther, punctuated with criticisms of the Catholic Church and particularly of the Inquisition.⁸⁰

Neither Sarmiento nor Samuda forgot who had forced them to leave their homeland. Even so, Sarmiento dedicated *Viriadas* to King John V, the ‘great patron of Letters’, and hence to a ruler of Portugal during a period when many of his relatives (and Samuda's too) were imprisoned by the Inquisition. John V, however, was also a monarch who had built two astronomical observatories in Lisbon, ordered scientific instruments and books aimed at raising the standards of Portuguese science, and always shown gratitude for the role of Sarmiento and Samuda in the relations between Portugal and England. Science had reunited what religion had divided.

CONCLUSION

The circulation of information, books and instruments between Lisbon and London in the 1720s supports recent re-evaluations of the categories of scientific centres and peripheries and the conventional separation of functions between them, resting on a supposed dichotomy between the production/distribution of knowledge and its use. This dichotomy has been reinterpreted with the aid of the concept of appropriation, which implies the transformation of the communicated knowledge according to the local framework and the role of the individuals involved in the process.[81](#)

In this article, selection has been the key concept: we have referred to the selection of books and instruments to be ordered and shown how these orders were interpreted in London by the intermediaries who undertook the final selection of books and instruments to be shipped. It follows that to understand the process we need to know the men. We have noted how Samuda's scientific career was influenced by the course of his life (networks, mobility, education and family) and his identity: initially as a New Christian persecuted by the Inquisition and forced to emigrate, ultimately as a Jew and a member of a community growing not just demographically but also in its influence in British society.

During his life, Samuda was active in several overlapping networks. His Sephardic identity brought him into contact with social and economic networks defined by kinship, affinity and friendship connections that had been built generation after generation. These facilitated his integration into the Jewish community settled in London and, above all, into the circle of remarkable men of science and culture under the spiritual (and other) guidance of David Nieto, a circle that had a decisive influence on his trajectories, both religious and scientific. The membership of an increasingly influential group, such as the Jewish community in eighteenth-century London, helped him to secure a reputation that enabled him to become a member of renowned scientific institutions only a few years after his arrival in the city. His election as a Fellow of the Royal Society was an unequivocal sign of social integration at a level more elevated than was common in normal Jewish circles: he now belonged to a 'great assembly of Gentlemen'.[82](#)

Samuda's involvement in these various networks facilitated his entry, in turn, to another one. His close relationship with the Portuguese envoy extraordinary in London put him in contact with scientific circles in Portugal, even overcoming religious boundaries. Through his reporting on astronomical observations in Lisbon, the dispatching of scientific books and instruments, and the contacts he established with scientists such as James Bradley and Samuel Molyneux, the relationship between Samuda and the Jesuit Carbone became a vehicle of communication for the Royal Society with the Society of Jesus, both of whose missions were worldwide in scope.

It was the convergence of these various networks that enabled Samuda, a notable example of an *estrangeirado*, to make a significant contribution to scientific exchanges between England and Portugal in the 1720s and, consequently, to the diffusion of new ideas and practices that served ‘to introduce into Portugal the scientific rationality of the Enlightenment’.[83](#)

Footnotes

- 1 Augusto d'Esaguy, ‘Breve notícia sôbre o médico português Isaac de Sequeira Samuda’, *O Instituto* **87**(3), 262–269 (1934). See also *idem*, ‘A short note on Isaac de Sequeira Samuda’, *Bull. Hist. Med.* **4**, 783–788 (1936).
- 2 *Voyage de Mons.r César de Saussure en Portugal. Lettres de Lisbonne* (Typographie Nationale de V. Ramperti, Milan, 1909), p. 42.
- 3 See José Luís Cardoso (ed.), *O Tratado de Methuen (1703)* (Livros Horizonte, Lisboa, 2003).
- 4 Ana Simões, Ana Carneiro and Maria Paula Diogo, ‘Constructing knowledge: eighteenth-century Portugal and the new sciences’, in *The sciences in the European periphery during the Enlightenment* (ed. Kostas Gavroglu), pp. 1–9 (Kluwer Academic Publishers, Dordrecht, 1999).

- 5 Maria Paula Diogo, Ana Carneiro, and Ana Simões, ‘Ciência portuguesa no Iluminismo. Os estrangeirados e as comunidades científicas europeias’, in *Enteados de Galileu? A Semiperiferia no Sistema Mundial da Ciência* (org. João Arriscado and Maria Eduarda Gonçalves), pp. 210–211 (Afrontamento, Lisbon, 2001).
- 6 Lisbon, Arquivo Nacional da Torre do Tombo (National Archive of Torre do Tombo), Inquisição de Lisboa (Inquisition of Lisbon), process no. 7178, ff. 216r–216v and 405v (henceforth cited as ANTT, IL number); ANTT, IL 25, f. 34r.
- 7 ANTT, IL 637, f. 11299. David Grant Smith, ‘The mercantile class of Portugal and Brazil in the seventeenth century: a socioeconomic study of the merchants of Lisbon and Bahia’ (PhD thesis, University of Michigan, Ann Arbor, 1975), pp. 74–76.
- 8 ANTT, IL 138, ff. 55v–56r.
- 9 Arquivo da Universidade de Coimbra (Archive of the University of Coimbra), Livros de matrículas (Enrolments' books), vol. 27, 1696–97, ff. 219v and 228r; 1697–98, ff. 246r and 254r; vol. 28, 1698–99, ff. 245v and 254r; 1699–1700, ff. 275v and 285r; vol. 29, 1700–01, ff. 275r and 285r; 1701–02, ff. 271r and 283r. Livro de autos e graus (Acts and grades' book), vol. 51, 1700–04, ff. 128r–129r. Esaguy wrongly quotes *Roll of the Royal College of Physicians of London* on Samuda's graduation year: 1720 instead of 1702.
- 10 ANTT, IL 2784.
- 11 ANTT, IL 11493, ff. 11v–12r. ANTT, IL 8144, ff. 13v–14r.
- 12 ANTT, IL 7733, f. 206r.
- 13 ANTT, IL 7371, ff. 7v–8r and 13v. About Diogo Nunes Ribeiro, see Leon Hühner, ‘The Jews of Georgia in colonial times’, *Publ. Am. Jewish Hist. Soc.* **10**, 65–95 (1902); Malcolm H. Stern, ‘New light on the Jewish settlement of Savannah’, *Am. Jewish Hist. Q.* **52**, 169–199 (1962–63).

- 14 ‘É o Sábio não só luz para si, mas para outros: não só própria, mas alheia, no interno brilha, no externo reverbera: como Sol comunica luzes, quem anda com sábio adquire sabedoria’. Isaac de Sequeira Samuda, *Sermam funebre pera as exequias dos trinta Dias do insigne, eminente e pio Haham e Doutor R. David Netto*, (London, 5488 [1728]), pp. 6–7.
- 15 ‘Elogios dedicados ao Sr. Daniel Lopez Laguna, por o Dr. Y. de Sequeira Samuda’ [‘Eulogies dedicated to Mr. Daniel Lopez Laguna by the Dr. Y. de Sequeira Samuda’], in Daniel Israel Lopez Laguna, *Espejo fiel de vidas que contiene los Psalmos de David en verso. Obra diversa, util y deleitable ... dedicada al muy benigno y generoso Señor Mordejay Nunes Almeyda* (London, 5480 [1720]).
- 16 ‘Theologo sublime, Sabio fundo, / Medico insigne, Astronomo famoso, / Poeta doce, Pregador facundo, / Logico arguto, Physico engenhoso, / Rhetorico fluente, Author jucundo, / Nas Linguas prompto, Historias noticioso: / Posto que tanto em pouco, aquy se encerra, / Que o muito, e pouco em morte hé pouca terra’. Samuda, *op. cit.* (note 14), p. 119.
- 17 *Ibid.*, p. 117.
- 18 David B. Ruderman, *Jewish Enlightenment in an English key: Anglo Jewry's construction of modern Jewish thought* (Princeton University Press, 2000), p. 185.
- 19 David B. Ruderman, ‘A Jewish thinker in Newtonian England. David Nieto and his defense of the Jewish faith’, in *Jewish thought and scientific discovery in early modern Europe*, p. 314 (Wayne State University Press, Detroit, MI, 2001).
- 20 Israel Solomons, *David Nieto Haham of the Spanish & Portuguese Jews' Congregation Kahal Kados Sahar Asamaim London (1701–1728)* (Jewish Historical Society of England, London, 1931), pp. 10–17.
- 21 Cecil Roth, *Essays and portraits in Anglo-Jewish history* (The Jewish Publication Society of America, Philadelphia, PA, 1962), p. 122.

- 22 Richard Barnett, ‘Dr. Jacob de Castro Sarmiento and Sephardim in medical practice in 18th century London’, *Trans. Jewish Hist. Soc. Engl.* **28**, 84 (1982).
- 23 William Munk, *The Roll of the Royal College of Physicians of London* (Longman, Green, Longman & Roberts, London, 1861), vol. 2 (1701–1800), p. 73.
- 24 Academia das Ciências de Lisboa [Academy of the Sciences of Lisbon], Série Azul, cod. 600, f. 168v (cited hereafter as ACL, SA number).
- 25 ACL, SA 602, f. 138v.
- 26 Norma Perry, ‘La chute d'une famille séfardie. Les Mendes da Costa de Londres’, *Dix-huitième Siècle* **13**, 11–25 (1981).
- 27 Barnett, *op. cit.* (note 22), p. 88.
- 28 Arquivo Nacional da Torre do Tombo, Cartório dos Jesuítas [Jesuits' Registry], maço 78, document 76 (cited hereafter as ANTT, CJ 78, document number).
- 29 Royal Society Archives, Classified Papers, vol. 12ii, doc. 19 (cited hereafter as RSA, Cl.P/volume number/document number).
- 30 RSA, Cl.P/14ii/18.
- 31 RSA, Cl.P/5/34. Royal Society Archives, Register Book Original, vol. 14, doc. 118 (cited hereafter as RSA, RBO/volume number/document number); RSA, RBO/11/75. The last of these is the English translation of an article published in the Portuguese periodical *Gazeta de Lisboa Occidental* on 21 January 1723.
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- 33 Thomas Sprat, *The History of the Royal Society of London, for the Improving of Natural Knowledge* (J. Martyn, London, 1967), pp. 63 and 67.
- 34 Steven Shapin, “‘A Scholar and a Gentleman’”: the problematic identity of the scientific practitioner in early modern England’, *Hist. Sci.* **29**, 295–296 (1991).
- 35 Steven Shapin, ‘The house of experiment in seventeenth-century England’, *Isis* **79**, 390–395 (1988).
- 36 Rhodri Hayward, ‘Emmanuel Mendes da Costa (1717–1791). A case study in scientific reputation’, in *Travels of learning. A geography of science in Europe* (ed. Ana Simões, Ana Carneiro and Maria Paula Diogo), p. 106 (Kluwer Academic Publications, Dordrecht, 2003).
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- 40 Jaime Cortesão, *Alexandre de Gusmão e o Tratado de Madrid* (Livros Horizonte, Lisbon, 1984), vol. 2, pp. 349–351.
- 41 Henrique Leitão, ‘A periphery between two centres? Portugal on the scientific route from Europe to China (sixteenth and seventeenth centuries)’, in Simões *et al.* (eds), *op. cit.* (note 36), pp. 31 and 39.
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- 43 J. Pereira Osório, ‘Sobre a história e desenvolvimento da Astronomia em Portugal’, *História e Desenvolvimento da Ciência em Portugal. I Colóquio—até*

ao Século XX. Lisboa, 15 a 19 de Abril de 1985 (Academia das Ciências de Lisboa, Lisbon, 1986), vol. 1, pp. 123–124. See also Rómulo de Carvalho, *A Astronomia em Portugal no século XVIII* (Instituto de Cultura e Língua Portuguesa, Lisbon, 1985), pp. 40–42; Henrique Leitão, *A Ciência na ‘Aula da Esfera’ no Colégio de Santo Antão 1590–1759* (Comissariado Geral das Comemorações do V Centenário do Nascimento de São Francisco Xavier, Lisbon, 2007), pp. 82–83.

- 44 André Ferrand de Almeida, *A formação do espaço brasileiro e o projecto do Novo Atlas da América Portuguesa (1713–1748)* (Comissão Nacional para as Comemorações dos Descobrimentos Portugueses, Lisbon, 2001), pp. 84–100.
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- 46 Carvalho, *op. cit.* (note 43), p. 46.
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- 55 ANTT, CJ 78, doc. 53.
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- 58 ACL, SA 600, ff. 169r–170r and 179r; ANTT, CJ 78, docs 45, 51 and 54.
- 59 ACL, SA 603, f. 73r.
- 60 ANTT, CJ 78, doc. 72.
- 61 ACL, SA 602, ff. 86v–88r.
- 62 ACL, SA 600, ff. 95v and 168r–168v.
- 63 ANTT, CJ 78, doc. 52.
- 64 ANTT, CJ 78, doc. 675.
- 65 ACL, SA 600, f. 179r.
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- 67 ANTT, CJ 78, doc. 72.
- 68 ANTT, CJ 78, doc. 56. See ‘A Letter from the Reverend Mr. James Bradley Savilian Professor of Astronomy at Oxford, and FRS to Dr. Edmond Halley Astronom. Reg. &c. giving an Account of a new discovered Motion of the Fix'd Stars’, *Phil. Trans. R. Soc. Lond.* **35**, 637–661 (1727).
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- 70 *Ibid.*, doc. 72.
- 71 James Bradley, ‘The Longitude of Lisbon, and the Fort of New York, from Wansted and London, determin'd by Eclipses of the First Satellite of Jupiter’, *Phil. Trans. R. Soc. Lond.* **34**, 85–90 (1726).
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- 73 ACL, SA 602, f. 138v.
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- 75 See Matt Goldish, 'Newtonian, *Converso* and Deist: the Lives of Jacob (Henrique) de Castro Sarmiento', *Science in Context* **10**, 651–675 (1997); Barnett, *op. cit.* (note 22), pp. 84–114; Augusto d'Esaguy, *Jacob de Castro Sarmiento. Notas relativas à sua vida e à sua obra* (Edições Ática, Lisbon, 1946); José Pedro Sousa Dias, 'Jacob de Castro Sarmiento e a sua fuga para Londres em 1721', *Cad. Estud. Sefard.* **5**, 53–61 (2005).
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- 77 ACL, SA 603, f. 101r.
- 78 According to Teresa Eugénia da Veiga (Samuda's cousin), her cousin Isabel Henriques was married to Henrique de Castro, which was Jacob de Castro Sarmiento's given name (ANTT, IL 3692, f. 43v).
- 79 In the middle of the nineteenth century, two copies of this manuscript were known in Portugal: one was the property of the Duke of Palmela; the other was the property of Francisco de Paula Ferreira da Costa. See Inocência Francisco da Silva, *Dicionário Bibliográfico Português* (Imprensa Nacional, Lisbon, 1859), vol. 3, p. 233.
- 80 Barnett, *op. cit.* (note 22), p. 87.

- 81 See Kostas Gavroglu, Manolis Patiniotis, Faidra Papanelopoulou, Ana Simões, Ana Carneiro, Maria Paula Diogo, José Ramón Bertomeu Sánchez, Antonio García Belmar and Agustí Nieto-Galan, ‘Science and technology in the European periphery: some historiographical reflections’, *Hist. Sci.* **46**, 153–175 (2008). See also Kostas Gavroglu (ed.), *op. cit.* (note 4).
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