

Behaim, Martin

Born Nuremberg, Germany, 6 October 1459

Died Lisbon, Portugal, 29 July 1507

Martin Behaim originated the oldest extant globe of the Earth (1492). Son of Martin Behaim the Elder and Agnes Schopper, he was the offspring of an influential noble family that was involved in long-distance trade in the city republic of Nuremberg. After the death of his father in 1474, Martin's uncle Leonhard sent him at the age of 15 to Flanders (Mecheln, Antwerp) for professional training as a textile merchant.

After 1484, Behaim lived in Portugal; the reasons that led him to this foreign country are unknown but probably related to the spice business. Quickly playing an important role as a counselor at the court of King John (Joao) II, he certainly got in touch with prominent cartographers and navigators. In fact, there has been much speculation about Behaim's life in Portugal, and many legends arose for which there is no evidence from archival sources. It can no longer be claimed that he taught celestial navigation to the Portuguese, because the scientific elements that made celestial navigation possible were already present on the Iberian Peninsula before his arrival. But he may have acted as an importer of scientific instruments, the finest of which were produced at that time in his native town of Nuremberg.

In 1490, Behaim visited the city of his fathers to settle a will case, and he stayed in Nuremberg for 3 years. He managed to convince leading members of the city council to finance the manufacturing of the famous globe of the Earth under his direction. The decisive reasons still are unknown, but many inscriptions on the globe indicate an economic motivation. Whereas the final financial account of 1494 indicates clearly which craftsmen were involved in its making, the Behaim globe must be regarded as a joint achievement of the Nuremberg humanist circle. It is an early masterpiece of many kinds of scientific and technological achievements, establishing the intellectual and economic leadership of Nuremberg in late medieval Germany.

Behaim died in the hospice of Saint Bartholomew while on one of his trips to Lisbon.

In fact, nothing can be said about whether Behaim contributed to astronomy at all. Certainly, he was not a student of **Johann Müller** (Regiomontanus), as has often been claimed. Regiomontanus's house was next to the Behaim house at the central market place in Nuremberg. However, when Regiomontanus lived there, Martin Behaim was a boy of 12–15 years, and there is no indication that Regiomontanus gave lessons to Behaim.

Furthermore, one can no longer defend the thesis that celestial navigation was possible only because of Behaim's teaching the Portuguese how to use the cross staff (Jacob's staff or *ballestilla*) and the astronomical tables of Regiomontanus. The cross staff, invented by **Levi ben Gerson**, already was well-known on the Iberian Peninsula. Moreover, the declination of the Sun given in the *Tabula Directionum* of Regiomontanus is different from that found in the *Regimento do astrolabio ... Tractado da spera do mundo* prepared by the Portuguese Council of Mathematicians for use by navigators. The same holds for the use of the astrolabe on ships.

Behaim's great merit lies in his origination of the oldest extant terrestrial globe—although probably not the first at all—which must be regarded as a complex cosmographical model. Nevertheless, his life and his globe give clear evidence that he was not a great navigator, mathematician, and astronomer, as many publications still celebrate him.

The globe is luxuriously decorated. It contains more than 2,000 place names, 100 pictorial illustrations (plus 48 banners and 15 coats of arms), and more than 50 long legends. Many of them deal with peculiarities and fabulous monsters of foreign countries, their inhabitants, plants and animals, and (in particular) with overseas trade, explorations, and famous travels like that of Marco Polo. Not the quality of the information, but its quantity and selection make the globe an important primary source for historical research. Obviously, Behaim had no main source for his *Erdapfel*. He gathered the geographical information from different sources, probably from a nowadays missing Portuguese sea chart, travel narratives like that of Marco Polo, Mandeville, and the Portuguese explorer Diogo Gomes, and of course traditional cosmographical writings like Ptolemy's *Geography*. For that reason, the Behaim Globe is one of the very few existing cartographical works where different "schools" of mapmaking are bound together.

Guenther Görz

Selected References

- Berninger, O. (1959). "Martin Behaim—zur 500. Wiederkehr seines Geburtstages am 6. Oktober 1959." *Mitteilungen der Fränkischen Geographischen Gesellschaft* 6: 141–151.
- Bott, Gerhard and Willers, Johannes (eds.) (1992). *Focus Behaim Globus*. 2 vols. Nuremberg: Germanisches Nationalmuseum.

- Bräunlein, Peter J. (1992). *Martin Behaim: Legende und Wirklichkeit eines berühmten Nürnbergers*. Bamberg: Bayerische Verlagsanstalt.
- Crone, G. R. (1961). "Martin Behaim, Navigator and Cosmographer; Figment of Imagination or Historical Personage?" In *Congresso internacional de historia dos descobrimentos, Lisboa 1960*. Lisbon.
- Hennig, Richard (1956). *Terrae Incognitae: Eine Zusammenstellung und kritische Bewertung der wichtigsten vorcolumbischen Entdeckungsreisen an Hand der darüber vorliegenden Originalberichte*. Vol. 4. Leiden: Brill.
- Muris, O. (1943). "Der 'Erdapfel' des Martin Behaim und Der Behaim-Globus zu Nürnberg. Eine Faksimile-Wiedergabe in 92 Einzelbildern." *Ibero-Amerikanisches Archiv* 17, no. 1–2: 1–64.
- Ravenstein, E. G. (1908). *Martin Behaim: His Life and His Globe*. London: George Philip and Son.
- Willers, Johannes (1992). "Leben und Werk des Martin Behaim." In *Focus Behaim Globus*. Nuremberg: Germanisches Nationalmuseum, pp. 173–188.

Martin of Bohemia

► Behaim, Martin