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(*b.* Copenhagen, Denmark, 1 April 1640; *d.* Kieslingswalde, near Görlitz, Germany, 26 January 1697)

mathematics.

Mohr was the son of David Mohrendal (or Mohrenthal), a hospital inspector and tradesman. His parents taught him reading, writing, and basic arithmetic, but his love for mathematics could not be satisfied in Denmark, and in 1662 he went to Holland, where Huygens was teaching, and later to England and France. He returned to Denmark, but about 1687 he went again to Holland, this time because of a difference with King Christian V. Wishing to be scientifically independent, he remained aloof from official positions; but Tschirnhausen finally persuaded him to come to Kieslingswalde to participate in his mathematical projects. Mohr went there in 1695, accompanied by his wife, whom he had married in 1687, and by his three-year-old son. Only one of his works, the *Euclides danicus* (1672), a valuable short work, is known today; but his son claimed that he wrote three books on mathematics and philosophy that were well received by scholars.

Mohr is often mentioned in the intellectual correspondence of the day. He corresponded with Leibniz, with Pieter van Gent, and with Ameltonck Bloeck, a member of Spinoza's circle. In 1675 Oldenburg sent Leibniz a work of Mohr's on the root extraction of $\sqrt[n]{x}$. Leibniz, in a letter of 1676 to Oldenburg in which he refers to "Georgius Mohr Danus, in geometria et analysi versatissimus," mentions that he learned from Mohr that Collins had the expansions for $\sin x$ and $\arcsin x$. Unfortunately, little else of Mohr's scientific activity is known.

In 1928 Mohr's *Euclides danicus*, which had fallen into obscurity, was republished with a preface by J. Hjelmslev. Hjelmslev recognized that in 1672 Mohr had been dealing with a problem made famous 125 years later by Mascheroni, namely, that of making constructions with compass alone.

The book has two parts: the first consists of the constructions of the first six books of Euclid; the second, of various constructions. The problem of finding the intersection of two lines, which is of some theoretical importance, is solved incidentally in the second part in connection with the construction of a circle through two given points and tangent to a given line.

Hjelmslev made the acute observation that a minor variant of Mohr's constructions enables one to add and subtract segments on the sphere and in the hyperbolic plane.

The obscurity that befell Mohr and his book can be attributed, in some degree, to the presentation of the material. In the body of the book, Mohr does not state the issue until the very last paragraph, although the lines are referred to as "imagined" (*gedachte*). In the dedication to Christian V, he does say that he believes he has done something new, and on the title page the issue is explicitly stated. Still, it would be easy for an inattentive reader to misjudge the value of the book.

According to Hjelmslev, Mascheroni's result—that all ruler and compass constructions can be done by compass alone—was already known and systematically expounded by Mohr. (The justice of this judgment and the question of the independence of Mascheroni's work are examined in the article on Mascheroni.)

The laconic Mohr tells us nothing about the genesis of his ideas. A guess is that the fundamental problem stems from a similar problem, that of the compass of a single opening, which was posed in the contests of the great Renaissance mathematicians. This conjecture might be supported by a historical study of the problems in the second part of the book: *pciWk* (inclinations) problems; maxima-minima problems; the problem of Pothenot, solved in 1617 by Snellius in his *Eratosthenes batavus*; and problems in perspective.

BIBLIOGRAPHY

Mohr's *Euclides danicus* (Amsterdam, 1672) was translated into German by J. Pál, with a foreword by J. Hjelmslev (Copenhagen, 1928).

Hjelmslev has written two articles on Mohr: "Om et af den danske matematiker Georg Mohr udgivet skrift *Euclides Danicus*" in *Matematisk Tidsskrift*, B (1928), 1–7; and "Beiträge zur Lebensbeschreibung von Georg Mohr (1640–1697)," in *Kongelige Danske Videnskabernes Selskabs Skrifter, Math.-fysiske Meddelelser*, **11** (1931), 3–23.

