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(*b.* Ausås, Kristianstad, Sweden, 19 August 1736; *d.* Lund, Sweden, 20 May 1798)

mathematics.

The son of Iöns Bring, a clergyman, and Christina Elisabeth Lagerlöf, Erland Bring studied jurisprudence at Lund University from 1750 to 1757. Beginning in 1762 he was a reader at Lund and from 1779 a professor. He taught history at the university, although his favorite field was mathematics. In the university library are preserved eight volumes of his manuscript compositions on various questions of algebra, geometry, mathematical analysis, and astronomy, and commentaries on the work of L'Hospital, Christian von Wolf, [Leonhard Euler](#), and other scholars.

In 1786 Bring's *Meletemata* was published. Like many eighteenth-century mathematicians, he attempted to solve equations of higher than fourth degree in radicals by means of reduction into binomial form, employing the transformation of the unknown quantity first proposed by Tschirnhaus (1683). Bring succeeded in reducing a general fifth-degree equation to the trinomial form $x^5 + px + q = 0$, using a transformation whose coefficients are defined by equations of not higher than the third degree. This remarkable result received practically no attention at the time and was obtained independently by George Birch Jerrard in his *Mathematical Researches* (1832–1835). Shortly thereafter, Sir William R. Hamilton demonstrated (1836) that with the aid of this operation a general fifth-degree equation reduces to any of four trinomial forms. It is not known whether Bring hoped to solve the fifth-degree equation in radicals with the aid of his transformation; Jerrard retained this hope, even though Niels Abel proved (1824–1826) that such a solution is impossible for a general fifth-degree equation.

In 1837 Bring's nephew, the historian Ebbe Samuel Bring, tried unsuccessfully to attract the attention of mathematicians to the algebraic investigations of his uncle. The deep significance of the Bring-Jerrard transformation was ascertained only after [Charles Hermite](#) (1858) used the above-mentioned trinomial form for the solution of fifth-degree equations with the aid of elliptic modular functions, thereby laying the foundations for new methods of studying and solving equations of higher degrees with the aid of transcendental functions.

Hermite cited only Jerrard, calling his result the most important event in the theory of fifth-degree equations since Abel. Shortly thereafter, in 1861, the scholarly world also recognized Bring's merits, mainly through the efforts of Carl J. D. Hill, professor of mathematics at Lund University.

BIBLIOGRAPHY

Bring's major work is *Meletemata quaedam mathematica circa transformationem aequationum algebraicarum* (Lund, 1786).

Writings on Bring include Moritz Cantor, *Vorlesungen über Geschichte der Mathematik*, IV (Leipzig, 1908), 130–132; C. J. D. Hill, "Nagra ord om Erland Sam. Brings reduktion of 5te gradens equation," in *Öfversigt of Kongelige vetenskapsakademiens förhandlingar* (1861), pp. 317–355; [Felix Klein](#), *Vorlesungen über die Ikosaeder* (Leipzig, 1884), pp. 143–144, 207–209, 244; and *Svenska män och kvinnor biografisk uppslagsbok*, I (Stockholm, 1942), 466.

A. P. Youschkevitch