

The *Nachlass* of Wilhelm Lorey

By GERT SCHUBRING

D-4800 Bielefeld 1, IDM, Universität Bielefeld, Bielefeld, West Germany

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Wilhelm Lorey (1873–1955) is well known to historians of mathematics for his classical study of the history of mathematics at German universities in the 19th century [Lorey 1916]. It is not so well known that Lorey did follow-up studies which analyzed in more detail the history of mathematics at particular universities, for example, Giessen, Marburg, and Münster. It has been unknown up to now that Lorey had worked since 1930 on a book on the history of mathematics at Jena (1558–1914). Unfortunately, the major part of his manuscript was destroyed after his death, together with substantial parts of his *Nachlass* [Schubring 1986] [1]. One can regard Lorey, jointly with C. H. Müller [Müller 1904], as a founder of a sociohistorical program—favored by Felix Klein—for historiography of mathematics in Germany.

Lorey, who had attended schools in Frankfurt am Main, began his studies in Halle (with G. Cantor and A. Wangerin). He continued in Munich and then studied in Göttingen with F. Klein and D. Hilbert. After passing the teacher's examination for mathematics and physics, he supplemented his studies with insurance-mathematics. Beginning in 1898, Lorey was a mathematics teacher in several Prussian provinces, till in 1912 he was called to become director of the "Öffentliche Handelslehranstalt" in Leipzig. He taught financial mathematics there, and Lorey never had a position where the history of mathematics was his main occupation. This makes his intensive inquiries into historical sources and his voluminous correspondence the more impressive. Particularly for his numerous studies of biographies of scientists and teachers, Lorey pursued inquiries so vast that even the extant parts of his correspondence constitute a valuable source. Only after his retirement in 1933, when he lived in Frankfurt am Main, could he concentrate entirely on historical research. After 1945 he also had the opportunity to be active in teaching the history of mathematics through a private *Kolloquium* on the history of mathematics.

The extant part of Lorey's *Nachlass* is located at the *Handschriftenabteilung* of the Senckenberg Library at Frankfurt am Main. The *Nachlass* there is perfectly organized and catalogued; moreover the letters are registered in the card index of autographs of the manuscript collection. The main parts of the *Nachlass* comprise scientific correspondence (B.I.), manuscripts (A.I.), and excerpts from archival files and other documents. Even some material from his studies of mathematics has been conserved, for example, documents of his activity as a member of the

mathematical *Seminars* in Halle and in Göttingen (A.I.7). As a member of the Göttingen circle around F. Klein, Lorey was acquainted with a great number of contemporary mathematicians and was in contact with them. Among the more than 1500 letters, exchanged with 537 correspondents, one finds therefore numerous letters to (or from) well-known mathematicians, and also historians and teachers of mathematics: H. Behnke, H. Dörrie, K. Fladt, A. Gutzmer, G. Hamel, L. Heffter, J. E. Hofmann, E. Kamke, F. Klein, M. Krafft, E. Neumann, O. Perron, L. Prandtl, M. Simon, D. E. Smith, P. Staeckel, W. Süß, R. Taton, O. Toeplitz, A. Walther, A. Wangerin, H. Wieleitner, A. Witting, P. Zühlke, and many others. By far the most active correspondent was Felix Klein: 102 letters or postcards manifest his highly active participation in the emergence and composition of the 1916 book. Unfortunately, practically nothing of the vast material collected by Lorey for this book—documents and excerpts from archival files—is extant, with some rare exceptions, for instance, the reminiscences of L. Schlesinger and Georg Faber of their university studies. The reminiscences by Emil Gruhl of his student days have been edited recently [Schubring 1985]. Among the manuscripts of articles and lectures the major part of this unpublished material is related to Lorey's researches on mathematics in Jena.

A particularly remarkable feature of this *Nachlass* is that it comprises parts of the *Nachlässe* of other persons, thanks to Lorey's passion for collecting documents:

1. *Carl Fresenius (1819–1876)*. Fresenius was a mathematics teacher in Weinheim, Eisenach, and Offenbach. The collection contains several manuscripts of books and articles which were important for mathematics education.

2. *Otto Rausenberger (1852–1941)*. Rausenberger, from 1883 mathematics teacher at the "Musterschule" in Frankfurt am Main, up to 1882 corresponded frequently with Felix Klein on research regarding the theory of functions. The collection contains numerous letters by F. Klein which are remarkable for Klein's style (as editor) of critical guidance concerning articles submitted to the journal *Mathematische Annalen* [2]. Moreover, there are letters to Rausenberger from A. Hurwitz, Th. Reye, W. Dyck, and others.

3. *Felix Lindemann (1852–1939)*. Lorey collected a great number of F. Klein's letters to Lindemann. Since Klein's correspondence with Lindemann is now split up, I shall make some remarks concerning its fate. Otto Volk (born 1892, now living in Würzburg)—himself a disciple of Lindemann—obtained from Lindemann himself some of Klein's letters, including those of the years 1881 and 1882 where Lindemann's demonstration of the transcendence of π is mentioned. After World War II, Volk introduced Lorey to Lindemann's daughter, from whom Lorey obtained a substantial number of additional letters from Klein to Lindemann. These letters cover the period from 1872 to 1887 and deal with purely mathematical questions as well as with the professional situation of mathematicians (and their promotion) and their relations with French mathematicians. For unknown reasons, Lorey kept his collection of Lindemann's *Nachlass* in two different parts, one of them containing 29 particularly interesting letters from the

years 1872 to 1883. After Lorey's death this part passed into the possession of Karl Stork (Frankfurt am Main), one of Lorey's cooperators in running the private mathematical colloquium. Today, these letters are in the hands of his son Karl-Georg Stork (Karlsruhe and St. Blasien). In Lorey's *Nachlass* there are now 38 letters (resp. fragments of letters) from Klein to Lindemann (1872–1887). Thus, Klein's letters to Lindemann are divided among at least three collections [3].

NOTES

1. An edition of the extant parts, together with additional manuscripts of Lorey on the history of mathematics in Jena and a biography of Lorey, is in preparation.
2. Lorey does not mention Klein's criticisms in his biographical article on Rausenberger [Lorey 1953].
3. Since the Klein-*Nachlass* in Göttingen contains numerous letters from Lindemann to Klein during the years 1876 to 1922, one cannot exclude the possibility that additional letters by Klein (from 1888 onward) are in the possession of Lindemann's descendants.

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Resources in the History of Mathematics at the University of Alabama

By Joe Albree

Department of Mathematics, Auburn University, Montgomery, Alabama 36193

From storage areas of the Gorgas Library at the University of Alabama, Tuscaloosa, the author has recovered a substantial collection of historically valuable books and materials in mathematics and mathematics education.

One of the most prominent features of this collection is the goodly number of first editions (more than twenty) and first American editions, for instance [Farrar 1818, 1819, 1820, 1822] and [Simpson 1809]. Of nearly equivalent interest are books in the category of "near first editions." These are new impressions of first editions, each of whose publication or copyright date is within eight years of the