LINTRODUCTION

This study attempts to resconstruct the correspondence network of the Lutheran pastor Gotthilf Heinrich Ernst Mühlenberg (1753–1815), the so-called "American Linnaeus." Today, Mühlenberg is particularly remembered for his contributions to the establishment of a national scientific infrastructure in the wake of American Independence. From 1771 to 1815, he exchanged letters and specimens with European and American botanists, plant collectors and seed traders, but he also wrote to merchants, family members, fellow Lutheran pastors and ordinary citizens. For the present study, 109 direct contacts¹ of Mühlenberg could be identified from this period, exchanging a total of 998 letters with him. This number is composed of 693 actual and dated letters, and 297 reconstructed letters, which must be presumed lost or destroyed. Eight additional letters from or to Mühlenberg were undated. Reconstructed letters were identified through references found in the actual source corpus of 693 letters and Mühlenberg's botanical diaries in the archives of the American Philosophical Society in Philadelphia. In total, a data loss rate of approximately 29,76 % must be assumed,² which could partially be amended through Mühlenberg's diaries. These contained a plethora of crucial information on the development of individual correspondences, the dimensions of his botanical exchanges and personal remarks on most of his contacts and were for the first time systematically read and analyzed in the context of this study. In general, however, historical research has so far eluded Mühlenberg's network, as a large portion of the letters were scattered across a number of American and European archives.

By far the largest collections of Mühlenberg letters are found today at the Lutheran Theological Seminary Mt. Airy, in the archives of the Historical Society of Pennsylvania, the American Philosophical Society and the Academy of Natural Sciences, which are all located in Philadelphia, PA.³ Minor holdings, individual letters and other manuscript material could be located at the Library Company of Philadelphia, the Mahn Center for Archives and Special Collections, Ohio University, Ath-

- 1 This number is split up between 107 individual persons and two institutions, counted as individual actors of his network. There was one anonymous letter. For 21 of these 109 confirmed correspondents, no letters have survived, which reduces the core corpus to 693 letters from 88 correspondents.
- As the reconstructed 297 letters presumably contained even more references to lost letters, this rate must even be assumed slightly higher. The earliest actual letter dates from December 4th 1771, and was written by Mühlenberg to his father Melchior Mühlenberg. The last letter was written by the widow of Mühlenberg's cousin Carl Daniel Heinrich Bensen (1761–1805), Sophie Bensen, half a year after Mühlenberg's death in May 1815. Sophie Bensen to Mühlenberg, 09/02/1815, APS Film 1097.
- 3 See bibliography of manuscript materials in the appendix for further details. In fact, the letters accommodated at Mt. Airy archives are available on microfilm in the A.P.S. reading (Mss.Film 1097), under which label they will also be cited.

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ens, OH, the Archives of the Gray Herbarium, Cambridge, MA and the William L. Clements Library, University of Michigan, Ann Arbor, MI. Further material could be located at Harvard University Archives, Cambridge, MA, the Rare Books and Manuscripts division of the Boston Public Library, Boston, MA, Franklin&Marshall College Archives in Lancaster, PA, the Hunt Botanical Institute, Carnegie Mellon University, Pittsburgh, PA, the Library of Congress, Washington D. C, the Trexler Library of Muhlenberg College, Allentown, PA and the William L. Clements Library, Ann Arbor, MI. One Mühlenberg letter is in the private possession of Daniel Weinstock M. D. of Geneva, NY, which has been generously made available to the author by the owner.⁴ In Europe, the archives of the Francke Foundations at Halle, Germany, the University Archives of the Friedrich-Alexander Universität, Erlangen-Nürnberg, Germany, and the Linnean Society of London hold the greatest number of documents in the collections of Mühlenberg's correspondents Sebastian Andreas Fabricius (1716–1790), Gottlieb Friedrich Stoppelberg (†1797), Joseph Friedrich Nebe (1737–1812), Johann Christian Daniel Edler von Schreber (1739– 1810) and James Edward Smith (1759–1828). Further material is accommodated at the Museum für Naturkunde, Alexander von Humboldt Universität Berlin, in the archives of the Martin-Luther Universität Halle-Wittenberg and in the historical image and manuscript collections of the Museum der Naturkunde, Alexander von Humboldt Universität zu Berlin.

Apart from these manuscript sources, Mühlenberg's letters have not been edited to date with the exception of William Darlington's Reliquiae Baldwiniae (1843), containing the complete correspondence between Mühlenberg and William Baldwin (1779–1819), and the edition of Heinrich Melchior Mühlenberg's letters by Kurt Aland (vols. 1–4) and Hermann Wellenreuther (vol. 5).⁵ This also reflects the general state of historical literature on Gotthilf Heinrich Ernst Mühlenberg. Compared to the historical literature on the Mühlenberg family, and especially in comparison to past and current research on Henry Melchior Mühlenberg (1711-1787), Frederick Augustus Conrad (1750–1801) and John Peter Gabriel (1764– 1807), who found a biographer with Henry Augustus Mühlenberg (1823–1854) as early as 1849, Henry, the botanist in the family, has largely been skipped. Apart from a small number of eulogies and entries in biographical dictionaries published between Mühlenberg's death in 1815 and the American Civil War, it was only with J. M. Maisch's speech "Gotthilf Heinrich Ernst Mühlenberg als Botaniker (1886)" and William J. Youman's biographical sketch in "Pioneers of Science in America" (1896) that the historization and documentation of Mühlenberg's scientific activities began for real. In the 1920s and 1930s, Herbert H. Beck and A. S. Hitchcock unearthed more biographical information on Mühlenberg and his herbarium, al-

⁴ To Turner, 02/21/1803, Weinstock.

⁵ The original letters and manuscripts of the Darlington edition are accomodated at Mertz Library, New York Botanical Garden, NY. In the course of the present study on Mühlenberg's correspondences, which was part of a larger DFG-financed science project entitled *Atlantische Korrespondenzen: Genese und Transformation deutsch-amerikanischer Netzwerke 1740–1870*, the author also composed an online edition of 100 Mühlenberg's letters, which will be available from January 2012.

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though both men only examined a small portion of the letters used in the present study and made no use of the A.P.S. diaries at all. Mühlenberg's herbarium, which is today housed at the Academy of Natural Sciences in Philadelphia, was subjected to a thorough examination by Shiu–Ying Hu and E. D. Merril in 1949. Paul A. W. Wallace's work on the Muhlenberg family (1950) also contained a brief chapter on his botanical activities, which formed the basis of C. Earle Smith's biographical sketch in 1962. Finally, Wolf-Dieter Müller-Jahncke's article from 1977 has a special focus on Mühlenberg's relations with German-speaking botanists, while James Mears traced "Some Sources of the Herbarium of Henry Muhlenberg" in the following year. In none of these articles, however, the extensive correspondence network was ever addressed as a whole, and the author hopes to have filled the gap and therefore to provide a sound basis for further historical and scientific research.

The following study has been conceived as an ego-network approach to the correspondences of Henry Mühlenberg. For this reason, chapter III contains an introduction to the basics of network theory, their general applicability in historical contexts and their actual application used in this study. Chapter IV covers Mühlenberg's biography from his birth to the visit of Johann David Schöpf in late 1783, after which he became an independent transatlantic correspondent and networker. This chapter aims to place him in three individual contexts: within his family, within Pietism in general and the Halle Pietists in detail, and finally within the scientific context of the American Republic of Letters. Chapter V contains the main body of the present study. Here, Mühlenberg's network will be discussed in six individual subchapters that correspond to consecutive phases in his web of correspondence. Chapter VI contains the conclusion to the study, which has been formatted according to Chicago format. In order to keep reference information about the 697 surviving letters short, Mühlenberg's name was generally omitted. A regular letter from Mühlenberg (to Zaccheus Collins, for instance) will therefore only be cited as: "To Collins, 07/14/1812, ANSP Coll. 129." In turn, a letter to Mühlenberg (from William Baldwin here) will simply be cited as: "From Baldwin, 05/26/1812, Darlington. Baldwiniae. 62." All other letters are referenced in full.

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6 In 1978, James Mears stated that "[b]efore any source of specimens of the Muhlenberg Herbarium can be complete, Muhlenberg's botanical manuscripts must be transcribed and associated with the collections." Mears, "Some Sources," 155. A list in the archives of the Academy of Natural Sciences in Philadelphia, there is actually a preliminary list entitled "Botanical Correspondences of G. Henry Muhlenberg located by 22 September 1981," which suggests that Mears or one of his colleagues actually started to compile material on Mühlenberg. The list comprises letters from 1781 to 1815.

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to finish the dissertation in the present form. Prof. Häberlein was also a member of the DFG research project *Atlantische Korrespondenzen: Genese und Transformation deutsch-amerikanischer Netzwerke 1740–1870*, whose other members, Prof. Dr Hermann Wellenreuther, Prof. Dr Claudia Schnurmann, Christina Urbanek M.A., Anna Groeben and Sarah Lentz, I would like to thank for the many inspirations and thoughts on historical network studies, delicious food and great company during our workshops. Prof. Dr. Gabriele Lingelbach (University of Kiel) was the second corrector of my dissertation and I kindly thank her for the maximum of professional advice and support she was able to give me in a minimum of time. The Gesellschaft für Überseegeschichte e.V. (GÜSG) has awarded the honor of the Martin Behaim Award to my dissertation, which included the publication of the present text in the Franz Steiner Publishing House (Stuttgart). There, Harald Schmitt was a constant source of tips and support in handling the final edition of my dissertation.

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