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A challenge for stylometry and authorship attribution methods:

Goethe's contributions to the *Frankfurter Gelehrte Anzeigen* 1772/73

After the bookseller Hofrat Johann Conrad Deinet had bought the *Frankfurter Gelehrtenzeitung* in 1771, the concept of Frankfurt's oldest literary-scientific newspaper changed radically. The new owner changed the title of the newspaper founded as early as 1736 to *Frankfurter Gelehrte Anzeigen*, the scope of the periodical was extended to cover a thematical range from law via history, philosophy, politics to theology. The articles („Rezensionen“) were published without any indication of author names, as each of them was supposed to reflect the result of a discussion amongst all contributors. Next to the editors-in-chief Merck and Schlosser, also Johann Gottfried Herder, Johann Wolfgang Goethe and others contributed to the first two year's volumes 1772/73 and reviewed, edited articles. For these two years, the *Frankfurter Gelehrte Anzeigen* became the programmatic „Sturm und Drang“ periodical of its time. Up until today, it is unclear which of the „Rezensionen“ without author indication have been penned by Goethe. Vague estimations for the 1772 volume assume a range of 30 to 60 and another 30 which Goethe might have redacted. Wilhelm Scherer had to deal with this question in his reprint edition of the *Frankfurter Gelehrte Anzeigen* (Scherer 1883). Hermann Brüning-Oktavio endowed a large part of his career to this question, ending up with an „Ignoramus – and maybe ignorabimus“ (Bräuning-Oktavio 1966: 592). Karin Haenelt anticipated with her exemplary study in 1984 that computational, quantitative methods might be the solution. She tried to determine the probability of Goethe's authorship for a few selected examples, applying a combination of a parts-of-speech-distribution-model and features such as richness of vocabulary, syntactic and stylistic features of sentence beginnings and endings and certain systematic spelling peculiarities (Goethe consistently wrote „Shäckespear“). Haenelt's results enabled her to attribute a new text to Merck and rule his authorship out for another, but were otherwise inconclusive for most texts.

We endeavor to apply modern stylometry methods such as *delta*, approaches implemented in JGAAP and the ‚impostor‘ authorship verification method (Stover, Winter, Koppel, Kestemont 2016) in a project cooperation with Mike Kestemont in order to determine Goethe's contributions to the *Frankfurter Gelehrte Anzeigen* 1772/73. These new approaches offer the advantage of working with much larger main and background corpora than before and with methodologically more consistent feature sets. Especially *delta* and its variants perform with relatively high precision on German text corpora (Rybicki, Eder 2011, Eder 2011). The challenges are that a) the „Rezensionen“ are relatively short and b) that we want to cover the whole years 1772/73 in our study which has not been done before – although there are reasons to assume Goethe still occasionally contributed to the *Frankfurter Gelehrte Anzeigen* in 1773. Next to the philological purpose, we aim to evaluate which of the applied methods perform best under these circumstances. The project is in an early phase, this talk will sketch the state of affairs.

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