Assessing the Connections between English Grammarians of the 19th Century - A Corpus-Based Network Analysis

Kirsten Gather, Ingo Kleiber and Beatrix Busse (University of Heidelberg)

English grammar books are the genre that mirrors the development of language norms and language use most clearly. By stating the defects of language use and by criticising the seemingly inadequate works of predecessors and contemporaries, many grammarians authorise themselves to publish their own, better grammars. The high number of references to other grammars and grammarians shows that grammar books are usually not produced out of thin air, but that they emerge on the basis of the works of others, whether they are cited as authorities or criticised.

Our presentation aims at visualising such a network of grammars and grammarians by performing a network analysis on an XML-annotated corpus of 19th-century English grammars. The ties between authors will be examined quantitatively, i.e. in terms of the number of references, and qualitatively, i.e. by classifying and comparing different kinds of references, e.g. quotation, approval, the citing of authorities, and forms of criticism.

In so doing, a network will become visible, which mirrors complex relations between authors, clusters of authors, isolated grammarians, and – viewed diachronically – the development of a grammarian's standing in the linguistic community. The network will reflect paradigm shifts in grammar writing by showing, for instance, the rise of descriptive grammars after the predominance of prescriptivism, and changing views on new linguistic fields, such as comparative linguistics and phonetics.

The corpus contains the 40 most well-known and widely distributed grammars of the 19th century (cf. Leitner 1986, 1991, Linn 2006, Michael 1987, Görlach 1998) as full texts in digitised form. References to other grammarians are annotated, including the referenced author and work, and the kind of reference, as attributes.

A list of grammarians' names, i.e. predecessors and contemporaries, is used as search terms to produce an adjacency matrix on the basis of the corpus. For visualisation and analysis, this matrix is then transformed into a directed weighed graph.

This combination of corpus-based historical linguistics (see Jucker and Taavitsainen 2014: 4) and network analysis (see, for instance, Freeman 2004, White 2011) is rather uncharted territory. In recent years, network analyses have been conducted using social media data, literature, or drama (e.g. Elson et al. 2010), but so far there have not been any similar studies on historical non-fictional texts.

Apart from the presentation of results, we would like to discuss how well such a network approach can mirror connections between grammarians and by which other means results can be refined. Moreover, we are interested in discussing practical aspects of network analysis, such as levels of error tolerance and means of (semi-automated) error avoidance with respect to wrong hits in the data.

References

Elson, David K., Nicholas Dames, and Kathleen R. McKeown. 2010. "Extracting Social Networks from Literary Fiction". In: *Proceedings of the 48th Annual Meeting of the Association for Computational Linguistics (ACL 2010)*, Uppsala, Sweden. URL: http://www1.cs.columbia.edu/~delson/pubs/ACL2010-ElsonDamesMcKeown.pdf.

Freeman, Linton C. 2004. *The Development of Social Network Analysis. A Study in the Sociology of Science*. Vancouver: Empirical Press.

Görlach, Manfred. 1998. *An Annotated Bibliography of Nineteenth-Century Grammars of English*. Amsterdam/Philadelphia: John Benjamins.

Jucker, Andreas, and Irma Taavitsainen. 2014. "Diachronic Corpus Pragmatics. Intersections and Interactions". In: Taavisainen, Irma, Andreas Jucker, and Jukka Tuominen (eds.). *Diachronic Corpus Pragmatics*. Amsterdam/Philadelphia: John Benjamins, 3-26.

Leitner, Gerhard. 1986. "English Traditional Grammars in the Nineteenth Century". In: Kastovsky, Dieter and Aleksander Szwedek (eds.). *Linguistics Across Historical and Geographical Boundaries; 2: Descriptive, Contrastive, and Applied Linguistics. Trends in Linguistics. Studies and Monographs [TiLSM] 32*. Berlin [et al.]: Mouton de Gruyter, 1333-55.

Leitner, Gerhard. 1991. English Traditional Grammars: An International Perspective. Studies in the History of the Language Sciences 62. Amsterdam: John Benjamins, 1991.

Linn, Andrew. 2006. "English Grammar Writing". In: Aarts, Bas, and April McMahon. *Handbook of English Linguistics*. Malden, Mass.: Blackwell, 72-92.

Michael, Ian. 1987. *The Teaching of English*. Cambridge: Cambridge University Press.

White, Howard D. 2011. "Scientific and Scholarly Networks". In: Scott, John and Peter J. Carrington (eds.). *The Sage Handbook of Social Network Analysis*, 271-285.