

Köhler, Reinhard & Altmann, Gabriel: *Problems in Quantitative Linguistics, Vol. 4*. Lüdenscheid: RAM-Verlag 2014. 148 pages. ISBN: 978-3-942303-22-4

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The reviewed book is No. 14 of the series “Studies in Quantitative Linguistics”, published by the German RAM-Verlag in Lüdenscheid. “Problems in Quantitative Linguistics, Vol. 4” (henceforth *Problems 4*) is a collection of various problems of the quantitative analysis of selected linguistic issues and open ongoing research tasks and projects in quantitative linguistics (cf. Strauß/Fengxiang/Altmann 2008; Čech/Altmann 2009 and Köhler/Altmann 2009 for the previous issues)¹. The inner structure of a discussed problem is as follows: (a) short description of the stated problem, including links to published works, and (if available) a ready-made hypothesis; (b) short methodological instructions in which way a problem can be handled, plus some suggestions on how to prepare data, set up a hypothesis, test it and find a theoretical mathematical model for it; and (c) basic and important (older and recent) references where the problem has been discussed or raised.

Problems 4 is aimed especially at those who will enter the domain of quantitative linguistics and who seek an initial orientation, but it also presents advanced problems yielding the possibility to develop the methods and new insights. Since both Reinhard Köhler and Gabriel Altmann are distinguished scientists in the field of quantitative linguistics and synergetic linguistics (cf. Köhler/Altmann/Piotrowski 2005), their main aim is to find laws, or more specifically law-like relations and links between linguistic entities and properties (formalised by means of so-called synergetic control cycles, which can be modelled mathematically). *Problems 4* contains 93 individual problems (even though some of them are closely interrelated), divided into five disciplines of linguistics and a mixed chapter consisting of some general problems (e.g. quantitative laws, scaling problems, typology, positional problems, etc.). The individual chapters and the number of problems are as follows. The **Syntax** chapter contains 25 problems with a focus on adnominal modifiers, cohesion, coherence and sequential anaphorical and cataphorical distances; many of these problems rely heavily on Givón 2001a, 2001b, but in *Problems 4* some of them are quantitatively reformulated and specified. In the **Semantics** chapter there are 23 problems, mainly devoted to diverse approaches of the quantitative analysis of polysemy and metaphoricality in texts and modality. In the **Textology** chapter one finds 15 problems, especially some “old” problems of quantitative approaches, namely in stylistics, the problems of the calculation of the type–token ratio etc., but also explicitly some “new” approaches, concentrating on the sequential order of stylistic features within texts. The **Pragmatics** chapter contains five problems about quantitative interpretations of speech acts and in the **Synergetics** chapter there are five problems devoted to various interrelations of linguistic properties, e.g. between word length and polysemy, and some quantitative approaches to the phonological, allomorphic and

¹ Cf. <<http://www.ram-verlag.eu/books-e-books/studies-in-quantitative-linguistics/>> [accessed 07-02-2015] for details.

morphological complexity. The final chapter **Various issues** focuses on 20 problems about word frequency studies, quantitative language typology, diversification and borrowing.

Problems 4 contains a good and balanced mixture of new problems coming from qualitative linguistics, especially at the syntax/semantics interface, some known problems of quantitative linguistics which require further and in-depth analysis and broader empirical foundation, and finally some new problems which have not been discussed so far. This also holds true for the required mathematical and statistical knowledge needed for the realisation of the proposed research problems. Many of them require only basic statistical competence, but for many problems a more profound linguistic background is required for a reliable quantification, with some of the offered problems requiring strong skills in advanced statistical methods and mathematical modelling. Hence *Problems 4* will be of interest for beginners in linguistics, scholars as well as for advanced researchers seeking new challenges in the growing field of quantitative linguistics and the application of statistical methods in linguistics. Thus, all in all, this volume fulfils its intention, and will give the interested reader easy access to the state of the art in quantitative linguistics.

References:

- Strauß, Udo; Fan, Fengxiang; Altmann, Gabriel (2008): *Problems in Quantitative Linguistics 1. Second edition*. Lüdenscheid: RAM-Verlag (Studies in Quantitative Linguistics, 1).
- Čech, Radek; Altmann, Gabriel (2009): *Problems in Quantitative Linguistics 3. Dedicated to Reinhard Köhler on the occasion of his 60th birthday*. Lüdenscheid: RAM-Verlag (Studies in Quantitative Linguistics, 12).
- Givón, Talmy (2001a): *Syntax 1*. Rev. ed. Amsterdam: Benjamins.
- Givón, Talmy (2001b): *Syntax 2*. Rev. ed. Amsterdam: Benjamins.
- Köhler, Reinhard; Altmann, Gabriel (2009): *Problems in Quantitative Linguistics 2*. Lüdenscheid: RAM-Verlag (Studies in Quantitative Linguistics, 4).
- Köhler, Reinhard; Altmann, Gabriel; Piotrowski, Rajmund G. (eds.) (2005): *Quantitative Linguistik. Quantitative Linguistics. Ein internationales Handbuch. An International Handbook*. Berlin, New York: de Gruyter (Handbücher zur Sprach- und Kommunikationswissenschaft, 27).