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Grammatical theory

From transformational grammar to constraint-based approaches

Stefan Müller

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Textbooks in Language Sciences 1

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Grammatical theory

This book introduces formal grammar theories that play a role in current linguistics or contributed tools that are relevant for current linguistic theorizing (Phrase Structure Grammar, Transformational Grammar/""Government & Binding, Generalized Phrase Structure Grammar, Lexical Functional Grammar, Categorial Grammar, Head-Driven Phrase Structure Grammar, Construction Grammar, Tree Adjoining Grammar). The key assumptions are explained and it is shown how the respective theory treats arguments and adjuncts, the active/passive alternation, local reorderings, verb placement, and fronting of constituents over long distances. The analyses are explained with German as the object language.

In the second part of the book the approaches are compared with respect to their predictions regarding language acquisition and psycholinguistic plausibility. The nativism hypothesis that assumes that humans posses genetically determined innate language-specific knowledge is examined critically and alternative models of language acquisition are discussed. In addition the second part addresses issues that are discussed controversially in current theory building as for instance the question whether flat or binary branching structures are more appropriate, the question whether constructions should be treated on the phrasal or the lexical level, and the question whether abstract, non-visible entities should play a role in syntactic analyses. It is shown that the analyses that are suggested in the respective frameworks are often translatable into each other. The book closes with a chapter that shows how properties that are common to all languages or to certain language classes can be captured.

"With this critical yet fair reflection on various grammatical theories, Müller fills what was a major gap in the literature." Karen Lehmann, Zeitschrift für Rezensionen zur germanistischen Sprachwissenschaft, 2012

"Stefan Müller's recent introductory textbook, "Grammatiktheorie", is an astonishingly comprehensive and insightful survey for beginning students of the present state of syntactic theory." Wolfgang Sternefeld und Frank Richter, Zeitschrift für Sprachwissenschaft, 2012

"This is the kind of work that has been sought after for a while. [...] The impartial and objective discussion offered by the author is particularly refreshing." Werner Abraham, Germanistik, 2012

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Preface

This book is an extended and revised version of my German book *Grammatiktheorie* (Müller 2013b). It introduces various grammatical theories that play a role in current theorizing or have made contributions in the past which are still relevant today. I explain some foundational assumptions and then apply the respective theories to what can be called the "core grammar" of German. I have decided to stick to the object language that I used in the German version of this book since many of the phenomena that will be dealt with cannot be explained with English as the object language. Furthermore, many theories have been developed by researchers with English as their native language and it is illuminative to see these theories applied to another language. I show how the theories under consideration deal with arguments and adjuncts, active/passive alternations, local reorderings (so-called scrambling), verb position, and fronting of phrases over larger distances (the verb second property of the Germanic languages without English).

The second part deals with foundational questions that are important for developing theories. This includes a discussion of the question of whether we have innate domain specific knowledge of language (UG), the discussion of psycholinguistic evidence concerning the processing of language by humans, a discussion of the status of empty elements and of the question whether we construct and perceive utterances holistically or rather compositionally, that is, whether we use phrasal or lexical constructions.

Unfortunately, linguistics is a scientific field with a considerable amount of terminological chaos. I therefore wrote an introductory chapter that introduces terminology in the way it is used later on in the book. The second chapter introduces phrase structure grammars, which plays a role for many of the theories that are covered in this book. I use these two chapters (excluding the Section 2.3 on interleaving phrase structure grammars and semantics) in introductory courses of our BA curriculum for German studies. Advanced readers may skip these introductory chapters. The following chapters are structured in a way that should make it possible to understand the introduction of the theories without any prior knowledge. The sections regarding new developments and classification are more ambitious: they refer to chapters still to come and also point to other publications that are relevant in the current theoretical discussion but cannot be repeated or summarized in this book. These parts of the book address advanced students and researchers. I use this book for teaching the syntactic aspects of the theories in a seminar for advanced students in our BA. The slides are available on my web page. The second part of the book, the general discussion, is more ambitious and contains the discussion of advanced topics and current research literature.

This book only deals with relatively recent developments. For a historical overview, see for instance Robins (1997); Jungen & Lohnstein (2006). I am aware of the fact that

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chapters on Integrational Linguistics (Lieb 1983; Eisenberg 2004; Nolda 2007), Optimality Theory (Prince & Smolensky 1993; Grimshaw 1997; G. Müller 2000), Role and Reference Grammar (Van Valin 1993) and Relational Grammar (Perlmutter 1983, 1984) are missing. I will leave these theories for later editions.

The original German book was planned to have 400 pages, but it finally was much bigger: the first German edition has 525 pages and the second German edition has 564 pages. I added a chapter on Dependency Grammar and one on Minimalism to the English version and now the book has 809 pages. I tried to represent the chosen theories appropriately and to cite all important work. Although the list of references is over 85 pages long, I was probably not successful. I apologize for this and any other shortcomings.

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This book was the first Language Science Press book that had an open review phase (see below). I thank Dick Hudson, Paul Kay, Antonio Machicao Y Priemer, Andrew McIntyre, Sebastian Nordhoff, and one anonymous open reviewer for their comments. Theses comments are documented at the download page of this book.

I thank Wolfgang Sternefeld and Frank Richter, who wrote a detailed review of the German version of this book (Sternefeld & Richter 2012). They pointed out some mistakes and omissions that were corrected in the second edition of the German book and which are of course not present in the English version.

Thanks to all the students who commented on the book and whose questions lead to improvements. Lisa Deringer, Aleksandra Gabryszak, Simon Lohmiller, Theresa Kallenbach, Steffen Neuschulz, Reka Meszaros-Segner, Lena Terhart and Elodie Winckel deserve special mention.

Since this book is built upon all my experience in the area of grammatical theory, I want to thank all those with whom I ever discussed linguistics during and after talks at conferences, workshops, summer schools or via email. Werner Abraham, John Bateman, Dorothee Beermann, Rens Bod, Miriam Butt, Manfred Bierwisch, Ann Copestake, Holger Diessel, Kerstin Fischer, Dan Flickinger, Peter Gallmann, Petter Haugereid, Lars Hellan, Tibor Kiss, Wolfgang Klein, Hans-Ulrich Krieger, Andrew McIntyre, Detmar Meurers, Gereon Müller, Martin Neef, Manfred Sailer, Anatol Stefanowitsch, Peter Svenonius, Michael Tomasello, Hans Uszkoreit, Gert Webelhuth, Daniel Wiechmann and Arne Zeschel deserve special mention.

I thank Sebastian Nordhoff for a comment regarding the completion of the subject index entry for *recursion*.

Andrew Murphy translated part of Chapter 1 and the Chapters 2–3, 5–10, and 12–23. Many thanks for this!

During the past years, a number of workshops on theory comparison have taken place. I was invited to three of them. I thank Helge Dyvik and Torbjørn Nordgård for inviting me to the fall school for Norwegian PhD students *Languages and Theories in Contrast*,

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which took place 2005 in Bergen. Guido Mensching and Elisabeth Stark invited me to the workshop *Comparing Languages and Comparing Theories: Generative Grammar and Construction Grammar*, which took place in 2007 at the Freie Universität Berlin and Andreas Pankau invited me to the workshop *Comparing Frameworks* in 2009 in Utrecht. I really enjoyed the discussion with all participants of these events and this book benefited enormously from the interchange.

I thank Peter Gallmann for the discussion of his lecture notes on GB during my time in Jena. The Sections 3.1.3–3.4 have a structure that is similar to the one of his script and take over a lot. Thanks to David Reitter for the LaTeX macros for Combinatorial Categorial Grammar, to Mary Dalrymple and Jonas Kuhn for the LFG macros and example structures, and to Laura Kallmeyer for the LaTeX sources of most of the TAG analyses. Most of the trees have been adapted to the `forest` package because of compatibility issues with XeLaTeX, but the original trees and texts were a great source of inspiration and without them the figures in the respective chapters would not be half as pretty as they are now.

I thank Sašo Živanović for implementing the LaTeX package `forest`. It really simplifies typesetting of trees, dependency graphs, and type hierarchies. I also thank him for individual help via email and on stackexchange. In general, those active on stackexchange could not be thanked enough: most of my questions regarding specific details of the typesetting of this book or the implementation of the LaTeX classes that are used by Language Science Press now have been answered within several minutes. Thank you! Since this book is a true open access book under the CC-BY license, it can also be an open source book. The interested reader finds a copy of the source code at **specify url**. By making the book open source I pass on the knowledge provided by the LaTeX gurus and hope that others benefit from this and learn to typeset their linguistics papers in nicer and/or more efficient ways.

Viola Auermann and Antje Bahlke, Sarah Dietzfelbinger, Lea Helmers, and Chiara Jancke cannot be thanked enough for their work at the copy machines. Viola also helped a lot with proof reading prefinal stages of the translation. I also want to thank my (former) lab members Felix Bildhauer, Philippa Cook, Janna Lipenkova, Jakob Maché, Bjarne Ørsnes and Roland Schäfer, which were mentioned above already for other reasons, for their help with teaching. During the years from 2007 until the publication of the first German edition of this book two of the three tenured positions in German Linguistics were unfilled and I would have not been able to maintain the teaching requirements without their help and would have never finished the *Grammatiktheorie* book.

I thank Tibor Kiss for advice in questions of style. His diplomatic way always was a shining example for me and I hope that this is also reflected in this book.

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On the way this book is published

I started to work on my dissertation in 1994 and defended it in 1997. During the whole time the manuscript was available on my web page. After the defense, I had to look for a publisher. I was quite happy to be accepted to the series *Linguistische Arbeiten* by Niemeyer, but at the same time I was shocked about the price, which was 186.00 DM for a paperback book that was written and typeset by me without any help by the publisher (twenty times the price of a paperback novel).[1] This basically meant that my book was depublished: until 1998 it was available from my web page and after this it was available in libraries only. My Habilitationsschrift was published by CSLI Publications for a much more reasonable price. When I started writing textbooks, I was looking for alternative distribution channels and started to negotiate with no-name print on demand publishers. Brigitte Narr, who runs the Stauffenburg publishing house, convinced me to publish my HPSG textbook with her. The copyrights for the German version of the book remained with me so that I could publish it on my web page. The collaboration was successful so that I also published my second textbook about grammatical theory with Stauffenburg. I think that this book has a broader relevance and should be accessible for non-German-speaking readers as well. I therefore decided to have it translated into English. Since Stauffenburg is focused on books in German, I had to look for another publisher. Fortunately the situation in the publishing sector changed quite dramatically in comparison to 1997: we now have high profile publishers with strict peer review that are entirely open access. I am very glad about the fact that Brigitte Narr sold the rights of my book back to me and that I can now publish the English version with Language Science Press under a CC-BY license.

[1] As a side remark: in the meantime Niemeyer was bought by de Gruyter and closed down. The price of the book is now 139.95 €/ $ 196.00. The price in Euro corresponds to 273.72 DM.

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Language Science Press: scholar-owned high quality linguistic books

In 2012 a group of people found the situation in the publishing business so unbearable that they agreed that it would be worthwhile to start a bigger initiative for publishing linguistics books in platinum open access, that is, free for both readers and authors. I set up a web page and collected supporters, very prominent linguists from all over the world and all subdisciplines and Martin Haspelmath and I then founded Language Science Press. At about the same time the DFG had announced a program for open access monographs and we applied (Müller & Haspelmath 2013) and got funded (two out of 18 applications got funding). The money is used for a coordinator (Dr. Sebastian Nordhoff) and an economist (Debora Siller), two programmers (Carola Fanselow and Dr. Mathias Schenner), who work on the publishing plattform Open Monograph Press (OMP) and on conversion software that produces various formats (ePub, XML, HTML) from our LaTeX code. Svantje Lilienthal works on the documentation of OMP, produces screencasts and does user support for authors, readers and series editors.

OMP is extended by open review facilities and community-building gamification tools (Müller 2012b; Müller & Haspelmath 2013). All Language Science Press books are reviewed by at least two external reviewers. Reviewers and authors may agree to publish these reviews and thereby make the whole process more transparent (see also Pullum (1984) for the suggestion of open reviewing of journal articles). In addition there is an optional second review phase: the open review. This review is completely open to everybody. The whole community may comment on the document that is published by Language Science Press. After this second review phase, which usually lasts for two months, authors may revise their publication and an improved version will be published. This book was the first book to go through this open review phase. The annotated open review version of this book is still available via the web page of this book.

Currently, Language Science Press has 16 series on various subfields of linguistics with high profile series editors from all continents. Series editors and authors are responsible for delivering manuscripts that are typeset in LaTeX, but they are supported by a web-based typesetting infrastructure that was set up by Language Science Press and by volunteer typesetters from the community. Proofreading is also community-based.

If you think that textbooks like this one should be freely available to whoever wants to read them and that publishing scientific results should not be left to profit-oriented publishers, then you can join the Language Science Press community and support us in various ways: you can register with Language Science Press and have your name listed on our supporter page with more than 500 other enthusiasts, you may devote your time and help with proofreading and/or typesetting, or you may donate money for specific books or for Language Science Press in general. We are also looking for institutional supporters like foundations, societies, linguistics departments or university libraries. In case of questions, please contact me or the Language Science Press coordinator at contact@langsci-press.org.

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Berlin, January 14, 2016 Stefan Müller

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Part I

Background and specific theories

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