Head-Driven Phrase Structure Grammar

The handbook

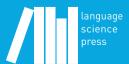
Edited by

Stefan Müller

Anne Abeillé

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Empirically Oriented Theoretical Morphology and Syntax



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Contents

	Preface	v
I	Introduction	
1	Basic properties and elements Anne Abeillé & Robert D. Borsley	3
2	The evolution of HPSG Dan Flickinger, Carl Pollard & Tom Wasow	45
3	Formal background Frank Richter	83
4	The nature and role of the lexicon in HPSG Anthony Davis & Jean-Pierre Koenig	119
5	HPSG in understudied languages Douglas L. Ball	169
II	Syntactic phenomena	
6	Agreement Stephen Wechsler	207
7	Case Adam Przepiórkowski	231
8	Nominal structures Frank Van Eynde	259
9	Argument structure and linking Stephen Wechsler, Jean-Pierre Koenig & Anthony Davis	299

Contents

10	Constituent order Stefan Müller	349
11	Complex predicates Danièle Godard & Pollet Samvelian	397
12	Control and Raising Anne Abeillé	465
13	Unbounded dependencies Robert D. Borsley & Berthold Crysmann	515
14	Relative clauses in HPSG Doug Arnold & Danièle Godard	571
15	Island phenomena and related matters Rui Chaves	635
16	Coordination Anne Abeillé & Rui Chaves	691
17	Idioms Manfred Sailer	743
18	Negation Jong-Bok Kim	777
19	Ellipsis Joanna Nykiel & Jong-Bok Kim	811
20	Anaphoric Binding Stefan Müller & António Branco	851
III	Other levels of description	
21	Morphology Berthold Crysmann	903
22	Semantics Jean-Pierre Koenig & Frank Richter	955

Indexes

1489■

Preface

Head-driven Phrase Structure Grammar (HPSG) is a declarative (or, as is often said, constraint-based) monostratal approach to grammar which dates back to early 1985, when Carl Pollard presented his Lectures on HPSG. It was developed initially in joint work by Pollard and Ivan Sag, but many other people have made important contributions to its development over the decades. It provides a framework for the formulation and implementation of natural language grammars which are (i) linguistically motivated, (ii) formally explicit, and (iii) computationally tractable. From the very beginning it has involved both theoretical and computational work seeking both to address the theoretical concerns of linguists and the practical issues involved in building a useful natural language processing system.

HPSG is an eclectic framework which has drawn ideas from the earlier Generalized Phrase Structure Grammar (GPSG, Gazdar et al. 1985), Categorial Grammar (Ajdukiewicz 1935), and Lexical-Functional Grammar (LFG, Bresnan 1982), among others. It has naturally evolved over the decades. Thus, the construction-based version of HPSG, which emerged in the mid-1990s (Sag 1997; Ginzburg & Sag 2000), differs from earlier work (Pollard & Sag 1987; 1994) in employing complex hierarchies of phrase types or constructions. Similarly, the more recent Sign-Based Construction Grammar approach differs from earlier versions of HPSG in making a distinction between signs and constructions and using it to make a number of simplifications (Sag 2012).

Over the years, there have been groups of HPSG researchers in many locations engaged in both descriptive and theoretical work and often in building HPSG-based computational systems. There have also been various research and teaching networks, and an annual conference since 1993. The result of this work is a rich and varied body of research focusing on a variety of languages and offering a variety of insights. The present volume seeks to provide a picture of where HPSG is today. It begins with a number of introductory chapters dealing with various general issues. These are followed by chapters outlining HPSG ideas about some of the most important syntactic phenomena. Next are a series of chapters on other levels of description, and then chapters on other areas of

linguistics. A final group of chapters considers the relation between HPSG and other theoretical frameworks.

It should be noted that for various reasons not all areas of HPSG research are covered in the handbook (e.g., phonology). So, the fact that a particular topic is not addressed in the handbook should not be interpreted as an absence of research on the topic. Readers interested in such topics can refer to the HPSG online bibliography maintained at the Humboldt Universität zu Berlin.¹

All chapters were reviewed by one author and at least one of the editors. All chapters were reviewed by Stefan Müller. Jean-Pierre Koenig and Stefan Müller did a final round of reading all papers and checked for consistency and cross-linking between the chapters.

Open access

Many authors of this handbook have previously been involved in several other handbook projects (some that cover various aspects of HPSG), and by now there are at least five handbook articles on HPSG available. But the editors felt that writing one authoritative resource describing the framework and being available free of charge to everybody was an important service to the linguistic community. We hence decided to publish the book open access with Language Science Press.

Acknowledgements

We thank all the authors for their great contributions to the book, and for reviewing chapters and chapter outlines of the other authors. We thank Frank Richter, Bob Levine, and Roland Schäfer for dicussion of points related to the handbook, and Elizabeth Pankratz for extremely careful proofreading and help with typesetting issues. We also thank Elisabeth Eberle and Luisa Kalvelage for doing bibliographies and typesetting trees of several chapters and for converting a complicated chapter from Word into LaTeX.

We thank Sebastian Nordhoff and Felix Kopecky for constant support regarding LTEX issues, both for the book project overall and for individual authors. Felix implemented a new LTEX class for typesetting AVMs, langsci-avm, which was used for typesetting this book. It is compatible with more modern font management systems and with the forest package, which is used for most of the trees in this book.

¹https://hpsg.hu-berlin.de/HPSG-Bib/, 2020-03-18.

We thank Sašo Živanović for writing and maintaining the forest package and for help specifying particular styles with very advanced features. His package turned typesetting trees from a nightmare into pure fun! To make the handling of this large book possible, Stefan Müller asked Sašo for help with externalization of forest trees, which led to the development of the memoize package. The HPSG handbook and other book projects by Stefan were an ideal testing ground for externalization of tikz pictures. Stefan wants to thank Sašo for the intense collaboration that led to a package of great value for everybody living in the woods.

The code of the book is available on GitHub, and we hope that it may serve as a role model for future publications of HPSG papers.

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Part I Introduction