THE BASIC PROPERTIES AND ELEMENTS OF HPSG

Anne Abeillé, Université Paris Diderot
Robert D Borsley, University of Essex

This chapter introduce the basic properties and elements of HPSG. It will be organized as follows:

1. Introduction

The introduction will distinguish three versions of HPSG: early HPSG presented in Pollard and Sag (1987) and Pollard and Sag (1994), Construction-based HPSG in Sag (1997), Ginzburg and Sag (2000), and much other work, and Sign-Based Construction Grammar (SBCG) (Sag 2012). It will also spell out the organization of the chapter.

2. Properties

This section will discuss central HPSG assumptions about the nature of linguistic analyses and the conduct of linguistic research. HPSG assumes that grammars are declarative or constraint-based, and is a monostratal approach, in which expressions have single relatively simple constituent structure with few or no phonologically empty elements. It rejects any core-periphery distinction and is concerned with semantics as well as syntax. It emphasizes the importance of firm empirical foundations in the form of detailed formal analyses of the kind advocated by Chomsky in *Syntactic Structures* and rejects abstract analyses with tenuous links to the observable data. It also rejects the idea that it is reasonable to assume that a language has some element or property just because some other languages do.

3. Elements

This section will introduce the basic ideas of types, features, and constraints. It will emphasize that types are organized into hierarchies. It will pay particular attention to the type *sign* and show how the properties of signs can be represented by an attribute-value-matrix (AVM). It will discuss the features SYNSEM, D(AUGH)T(E)RS and H(EA)D-D(AUGH)T(E)R, and will look at the properties of the *synsem* objects which are the value of the SYNSEM feature. It will introduce the features LOCAL and NONLOCAL, CAT(EGORY) and CONT(ENT), and HEAD, SUBJ and COMP(LEMENT)S. It will also mention the atomic features – PERSON, NUMBER, GENDER, CASE, and AUX. It will illustrate the idea of constraints with a constraint requiring a phrase to be [COMPS <>].

4. The lexicon

This section will focus on the type *lexeme* and its subtypes and the associated constraints, which together constitute the lexicon of a language. It will introduce the feature ARG(UMENT)-ST(RUCTURE), which is confined to lexical signs and show how it can handle null subjects and unbounded dependency gaps. It will also introduce the feature SPR (SPECIFIER), which is assumed in some HPSG work in addition to or instead of SUBJ, and it will introduce the VALENCE feature, which replaces SUBJ and COMPS in SBCG. This section will also highlight the idea of a cross-classification of lexemes in terms of PART-OF-SPEECH and

ARG-SELECTION properties. Finally, it will introduce lexical rules, which are used for morphology and valence alternation such as extraposition.

5. Syntax

This section will consider the type *phrase* and its subtypes and the associated constraints, which constitute the syntax of a language. It will look at constraints on headed-phrases, head-complement-phrases, head-subject-phrases, and head-filler-phrases, and it will discuss how the semantics of a phrase depends on the semantics of its daughters. It will also introduce the idea that the type *phrase* like the type *lexeme* has two distinct sets of subtypes, one dealing with head-dependent relations and the other dealing with the properties of various types of clauses. Finally, it will look at word order.

6. Further Issues

This section will consider two further issues.

6.1. Order domains

This subsection will consider order domains, noting in particular how they may provide an account of certain extraposition and scrambling phenomena.

6.2. Sign-Based Construction Grammar

This subsection will briefly outline the distinguishing properties of SBCG. It will explain how signs and constructions are quite different objects for this approach and will introduce the Sign Principle. It will highlight the ways in which SBCG is more complex than earlier versions of HPSG and also the ways in which it is simpler. In particular, it will note that signs do not need to have the features DTRS and HD-DTR, and that this in turn allows the framework to dispense with the feature SYNSEM.

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