1 Introduction

This chapter is an attempt to survey some of the major areas that have seen significant work from an HPSG perspective in the past decade or so. For most of this work, Pollard & Sag 1987; Pollard & Sag 1994 continues to be an important point of reference, but many of the analyses summarized here go significantly beyond the original theory, both in terms of empirical coverage (of English and other languages) and analytic depth and comprehensiveness. The present survey is necessarily biased both in the selection of topics and the way that the various analyses are presented and compared. But these caveats nothwithstanding we hope that it will give the reader a reasonable idea of the research efforts around the middle of the second decade of HPSG's existence.

In keeping with HPSG's emphasis on lexical information, the first section concentrates on the licensing of phrasal dependents. We begin with the highly influential idea of argument composition as a way to dynamically determine the valence information of certain heads and continue with the conceptual separation between argument structure and valence in much of recent HPSG work. A third major topic involves the argument/adjunct distinction (or the lack thereof). In §2, we concentrate on issues of linear order, first on lexicalist equivalents of configurational analyses and second on departures from the "phrase structure grammar" part of HPSG. The common thread of the topics covered in §3 is the notion of "syntactic abstractness". This pertains to both the issue of whether extraction phenomena involve "traces" and the limits of a radically lexicalist view of syntactic licensing. One of HPSG's design features that distinguish it rather strongly from transformational grammar its integrative view with respect to semantic and pragmatic information. In §5 we discuss a number of recent developments in this area, in particular the treatment of scope and distinctions in illocutionary force as well as information structure and the representation of speaker beliefs and intentions. After reviewing a selection of work dealing with morpho-syntactic issues in §6, we conclude with a summary of recent developments in the logical foundations of the HPSG formalism (§7).

2 Argument structure

One of the most significant conceptual changes that distinguish Generalized Phrase Structure Grammar from HPSG is the treatment of combinatorial properties. While in GPSG, lexical items are linked to the subcategorization frame in which they can occur by means of an numerical index, HPSG folds the

combinatorial potential into the lexical description of an item by means of a valence feature. The single list-valued valence feature SUBCAT, proposed by Pollard (1984) and Pollard & Sag (1987) thus can be seen as the equivalent of a type constructor as used in Categorial Grammar. As in Categorial Grammar, the elements of a SUBCAT list directly reflect the combinatorial potential of the word or phrase in question. For that reason, early HPSG exhibits a close similarity to formalisms that combine the combinatorial engine of a categorial grammar with the features of a phrase structure grammar (for instance, Karttunen 1989, Zeevat 1988).

A number of linguistic problems have since been explored in HPSG and solutions have been developed that have significantly refined the original ideas and provided new insights into the nature of valence.

2.1 Argument composition

Since GPSG was designed to be faithful to the formalism of context-free grammars,[1] the kinds of syntactic dependencies that can be expressed in the syntactic rules are very restricted.

Moving subcategorization information into lexical properties at first blush appears to simply redistribute the division of labor between syntax and lexicon. However, it turns out that the HPSG approach affords a much wider perspective on the kind of relationships that are lexically encoded. In particular, the lexicalization of valence makes it possible to consider second-order dependencies, i.e., the valence of valence elements etc. This makes it possible to incorporate a lexicalized version of functional composition into HPSG grammars. Functional composition in categorial grammar is a mode of combination whereby the combinatorial properties of one category (here: `B/C`) are, as it were, "transmitted" to a functor category (here: `A/B`). As a result, we obtain a category that will be of type `A` provided it can combine with an element of type `C`, notated as `A/C`.

(1) $$\frac{\mathrm{A/B} + \mathrm{B/C}}{\mathrm{A/C}}$$

The HPSG analysis of controlled complements can be seen as a variant this basic idea, in that the subject requirement of the selected VP is identified with the subject requirement of a predicate selecting that VP (see Green):

(2) $$\left[\text{SUBCAT}\ \left\langle \boxed{1}, \left[\text{V}\left[\text{SUBCAT}\ \langle \boxed{1}\ \textit{synsem} \rangle\right]\right] \right\rangle\right]$$

[1] The one notable exception in this regard are proposals for the *liberation* of phrase structure, see §3.2 below.