

# Chapter 1

## Argument Structure

Anthony Davis

??

Jean-Pierre Koenig

University at Buffalo

Stephen Wechsler

The University of Texas, Austin

Put abstract here with \abstract.

### 1 Introduction

In this section, we will discuss the nature and purpose of argument structure in HPSG, focusing on the problems that theories of argument structure are intended to solve, including: (1) the relationship between arguments of predicates and their syntactic realizations, (2) the fact that lexical items can occur in more than one syntactic frame (so-called valence or diathesis alternations), and (3) argument structure as the locus of binding principles. We will also point out that we will have little to say about anything but verbs (and why).

### 2 The representation of argument structure in HPSG

In this section we'll briefly survey the formal representation of argument structure in HPSG, including the ARG-ST list and its relationship to the SUBJ, COMPS, and SPEC lists. We'll also note what kinds of objects appear in these lists, note that they are typically seen as lexically determined, and mention locality constraints intended to limit where argument structure information is "visible".



### 3 The architecture of linking in HPSG

#### 3.1 ARG-ST

In this section, we will discuss the basic architecture of linking. We will discuss the notion of ARG-ST in HPSG, how it embodies a notion of obliqueness. We will discuss the kind of phenomena that this obliqueness is meant to account for. We will discuss the relation between ARG-ST and similar proposals in the literature (e.g., Relational Grammar 1's and 2's, ..., Macroroles in RRG, and combinatorial potential in Categorical Grammar). We will also touch on extensions of ARG-ST like a DEPS (dependents) list or of ARG-ST a partially ordered list (for some symmetric object behavior).

#### 3.2 Valence

We similarly will in this section discuss the VAL lists and the role they play in HPSG. We will particularly discuss how VAL is meant to model local realization of arguments and contrast it with other lists meant to handle non-local realization of arguments (clitics, unbounded dependents). We will discuss the “principles” that regulate the relations between all those lists (including the realization of arguments with removal from valence lists ...or not (for some Romance predicate composition phenomena).

#### 3.3 Relation between semantics and ARG-ST

In this section, we will deal with linking proper. We will *briefly* discuss the absence of a thematic hierarchy or anything like that (since it surprisingly remains popular) and two distinct ways of ensuring linking (type hierarchy relations; implicational constraints).

### 4 Valence alternations in HPSG

#### 4.1 How HPSG handles “typical” valence alternations

In this section we discuss how HPSG handles standard alternations (ditransitive, passive, object omission, causative-inchoative, ...).

## **4.2 Extended ARG-ST**

In this section, we discuss various cases where the argument structure of a verb includes more than is predicted from the meaning of the verb alone, including resultatives and complex predicates. Cross references to approaches that aren't based on extended argument structures will be noted.

## **5 Examples**

In this section, we discuss what argument structure constraints look like on some concrete examples. We also discuss some ways in which languages can differ (including ergative and “Philippine-type” languages).

## **6 Interaction of argument structure and other syntactic phenomena**

Argument structure plays a central organizing role for most clauses. It thus interacts with several other syntactic phenomena. In this chapter we discuss the interaction of argument structure with the following: unbounded dependencies, adjuncts (are they on these lists or not? are some on the list, but not others), clitics and agreement.

## **7 How lexical is argument structure?**

Over the years, there has been a healthy debate as to whether argument structure is syntactic (as in various and often incompatible constructional approaches, from Goldberg to Ramchand to Borer) or lexical (as in most HPSG work, particularly the work of Mueller and Wechsler). In this section, we will summarize the issue and present the HPSG perspective on the debate.