Distinguishing between different headed-constructions in HPSG

1 Distinguishing Complements from Adjuncts

The following criteria are often cited in the literature to motivate the distinction between complements and adjuncts.

1.1 Semantic Contribution

Complements denote participants of an event, e.g. *Sandy kissed Robin*, or individuals/entities for which a state of affairs holds, e.g. *Sandy knew the answer*. Adjuncts denote the circumstances under which an event took place or a state of affairs occurred. Adjuncts refer to the time or frequency., e.g. *Sandy knew the answer on Monday*, *Sandy forgot her umbrella twice*; place, e.g. *Sandy kissed Robin in the park*; manner, e.g. *Sandy kissed Robin passionately*; cause; e.g. *Sandy knew the answer because she had studied for the test*; effect or purpose,e.g. *Sandy kissed Robin to show his affection*, etc. of an event or state-of-affairs.

1.2 Iterability

John buttered the toast at midnight with a knife in the bathroom.

1.3 Obligatoriness

Adjuncts are optional, complements are obligatory.

1.4 Predictability

The selection and semantic contribution of complements tends to idiosyncratic, while semantic contribution of adjuncts is uniform and predictable.
Idiosyncratic selection:

John ate/ devoured the steak.
*John ate / * devoured.*

Idiosyncratic selection:

John fears thunderstorms. vs. *Thunderstorms frighten John.*

1.5 Linear Order

1. In languages with relative fixed word order complements allow no scrambling, while adjuncts can be ordered more freely.

John buttered the toast with a knife in the bathroom at midnight .
John buttered the toast at midnight with a knife in the bathroom.
John buttered the toast in the bathroom at midnight with a knife.

Mary gave John a book. vs. * *Mary gave a book John.*

2. In English, at least certain adjuncts tend to occur after complements.

The authorities blamed the arson on the skydivers without checking the facts.
* *The authorities blamed without checking the facts the arson on the skydivers.*

1.6 Substitutability

In English, verbs and their adjuncts can be substituted under *do so* ellipsis, while verbs and their complements cannot; e.g.

Sandy will butter his toast in the bathroom and Robin will do so in the kitchen.
* *Sandy will put her book on the shelf and Jill will do in her room.*

1.7 Extractability

Extraction out of complements is "easier" compared to extraction out of adjuncts.

*How do you believe/ * regret / * deny that John left __ ?*
Who do you believe/ regret / deny that John met __ ?

2 Distinguishing Subjects from other Complements

1. Subject/Object Asymmetries:

Who do you believe that _ wrote this paper?
What do you believe that Sandy wrote _ ?

2. Parasitic Gaps

Who did rivals of _ assassinate _ ?
* *Who did rivals of _ asassinate the President?*

3. Evidence from implicative universals:

a. Agreement systems typically involve subjects. If they affect objects, then subjects are affected as well.

b. Modification, e.g. by relative clauses, is allowed for objects only if it is allowed for subjects as well.

4. Subject-oriented binding conditions:

e.g. long distance reflexive binding in Norwegian, *eius/suus* opposition in Latin.

3 Distinguishing Specifiers from Subjects

1. Semantic criteria:

a. Subjects denote arguments of a predicate, while specifiers do not. Instead, specifiers have either quantificational force, e.g. *few students*, or denote degrees, e.g. *six foot tall.*

b. Subjects can be controllers, specifiers cannot.

c. Subjects can be raised, specifiers cannot.

Possible exception to the above generalizations: possessive phrases.

2. Negative argument:

Since specifiers and subjects can co-occur, they cannot occupy the same position:

Sandy seems to be very intelligent.

We consider Sandy too radical.

4 Distinguishing Specifiers from Markers

1. Semantic Criterion

Markers are semantically vacuous, specifiers are not.

2. Syntactic Argument

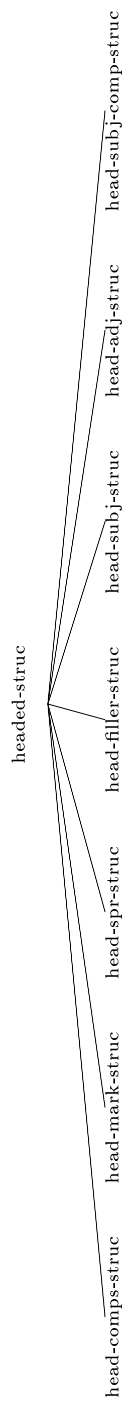
Markers tend to be limited to words, specifiers are not. They can be full, even fully recursive phrases, e.g.

[How much][more comfortable [than the second chair] was the first chair.

5 Types of nonhead daughters – from Pollard and Sag 1994, p. 391

Daughter Type	Abbreviations	Examples
COMPLEMENT-DAUGHTER	COMP-DTR	saw *John*
		must *leave*
SUBJECT-DAUGHTER	SUBJ-DTR	*John* saw Mary
ADJUNCT-DAUGHTER	ADJ-DTR	*probably* left
		red ball
SPECIFIER-DAUGHTER	SPR-DTR	*two* books
		two feet tall
		six feet under the ground
MARKER-DAUGHTER	MARK-DTR	*that* John left
		for Mary to come
		(Dan is wider) *than* Derek is tall
		Naomi-*ga* (Japanese 'case' markers
FILLER-DAUGHTER	FILL-DTR	*Who* did John see
		Bagels I like

6 Sorts of headed constructions – from Pollard and Sag 1994, p. 391



7 Summary of basic construction types – from Pollard and Sag 1994, p. 392

Type of Nonhead DTR	Bar Level Level of Nonhead DRT(S)	Bar Level of Head DTR	Semantic Head	Syntactic Selector	Selecting Feature(s)
COMPLEMENT	Y”	X^o	Head	Head	COMPS(V)
SUBJECT and COMPLEMENT	Y^o	X^o	Head	Head	SUBJ(V) COMPS(V)
SUBJECT	Y”	X”	Head	Head	SUBJ(V)
SPECIFIER	Y”	X’	Head	Head Nonhead	SPR(V) SPEC(H)
FILLER	Y”	X”	Head	Head	SLASH(N)
MARKER	Y^o	X”	Head	Nonhead	SPEC(H)
ADJUNCT	Y^o	X^o	Nonhead	Nonhead	MOD(H)

8 Some Examples

8.1 Sample partial lexical entry for adjective adjunct

$$
\left[\begin{array}{ll}
\text{PHON} & \langle \text{red} \rangle \\
\text{SYNSEM} & \left[\begin{array}{ll}
\text{CATEGORY} & \left[\begin{array}{ll}
\text{HEAD} & \left[\begin{array}{ll}
\text{MOD} & \left[\begin{array}{ll}
\text{CATEGORY} & \left[\begin{array}{ll}
\text{HEAD} & \mathit{noun} \\
\text{VAL} & \left[\begin{array}{ll}
\text{COMPS} & \langle\rangle \\
\text{SPR} & \left\langle \left[\begin{array}{ll}\text{CATEGORY} & \left[\begin{array}{ll}\text{HEAD} & \mathit{det}\end{array}\right]_{\mathit{cat}}\end{array}\right]_{\mathit{synsem}} \right\rangle
\end{array}\right]_{\mathit{val}}
\end{array}\right]_{\mathit{cat}} \\
\text{CONTENT} & \left[\begin{array}{ll}
\text{INDEX} & \boxed{1}\,\mathit{index} \\
\text{RESTR} & \boxed{2}\,\mathit{list}
\end{array}\right]_{\mathit{nom\text{-}obj}}
\end{array}\right]_{\mathit{synsem}}
\end{array}\right]_{\mathit{adj}}
\end{array}\right]_{\mathit{cat}} \\
\text{CONTENT} & \left[\begin{array}{ll}
\text{INDEX} & \boxed{1} \\
\text{RESTR} & \left\langle \left[\begin{array}{ll}\text{ARG1} & \boxed{1}\end{array}\right]_{\mathit{red\text{-}rel}} \middle| \boxed{2} \right\rangle
\end{array}\right]_{\mathit{nom\text{-}obj}}
\end{array}\right]_{\mathit{synsem}}
\end{array}\right]_{\mathit{word}}
$$

8.2 Sample partial lexical entry for markers

$$
\left[\begin{array}{ll}
\text{HEAD} & \mathit{mark}\left[\text{SPEC S}\left[\mathit{fin} \vee \mathit{bse}, \mathit{unmarked}\right]\right] \\
\text{SUBCAT} & \langle\rangle \\
\text{MARKING} & \mathit{that}
\end{array}\right]
$$