

The English Binominal NP: A Construction-Based Perspective

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The 18th International Conference on HPSG

Aug 22–25, 2011

University of Washington at Seattle

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Naturally occurring BNP data in English

English Binominal NPs (BNP) with the skeletal structure of 'Det1 N1 of Det2 N2' display many intriguing syntactic and semantic properties. Examples in (1) are naturally occurring BNP data extracted from the BNC:

- (1) a. It's been [a hell of a day] at the office.
- b. And it introduced her to Budapest, [a jewel of a city].
- c. And you won't be saying anything to [that ponce of a boss] you've got, Howard?
- d. Rune nodded [his shaven dome of a head].
- e. She had [a skullcracker of a headache].
- f. A door opened; and into the assessment room stepped [a giant of a man].

BNP in the Germanic and Romance Languages (Foolen 2004)

- Dutch:
 - (2) a. een boom van een kerel ‘a tree of a man’
 - b. een juweeltje van een universiteit
 ‘a jewel-DIM of a university’
- French:
 - (3) a. un diable d’homme ‘a devil of a man’
 - b. cet imbécile de Jules César
 ‘this idiot of a Julius Caesar’
- German:
 - (4) a. ein Engel von einer Frau ‘an angel of a woman’
 - b. so ein Apparat von Karton ‘such a monster of a box’

Issues

- The construction is quite productive and not an English-particular one.
- Template: Det1 + N1 + of/van/de + Det2 + N2
- Syntax: Which one is the syntactic head? The head properties seem to be distributed to both N1 and N2.
- Semantics: What is the semantic relationship between N1 and N2?
- Pragmatics: Are there any discourse constraints? The construction represents an evaluative comment by the speaker (N1) about the referent of N2. (not discussed here)

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Property 1: obligatory *of*

- (5) a. I had a hell *(of) a time on this tour.
b. And it introduced her to Budapest, a jewel *(of) a city.
c. I don't think it will be too bad a dose, but it's a beast *(of) a complaint.

Property 2: Det1

The types of the first determiner Det1 can vary. The canonical Det1 is an indefinite as in (6), but definite articles are also possible, as in the following attested examples:

- (6) a. He is [**a** hulk of a man] in his middle fifties.
 b. [**Some** dragon of a receptionist] refused to let him see her boss without an appointment.
 c. This situation would be [**one** humdinger of a funny story] to tell his city friends over a drink or two.
- (7) a. [**The** ghost of a smile] glimmered in his eyes.
 b. I suspect she'd been following [**that** fool of a carrier].
 c. She was to marry this mountebank, [**this** hypocritical toad of a Sir Thomas].
 d. And she was old, antique. Deep lines grooved [**her** prune of a face].

Property 3: Det2

While Det1 can be in many different forms, the type of Det2 is fixed. Det2 must be the indefinite article $a(n)$, or the unmarked plural, and no other indefinite determiner is possible.

- (8) a. a hell of **a**/*some/*any/*one day
 b. this slip of **a**/*her/*that/*this/*some/*any/*the/*one girl
- (9) a. It also has [\emptyset jewels of \emptyset villages] like West Burton and Askrigg and the fine falls of Hardraw and Aysgarth.
 b. The all-powerful International Cricket Council showed themselves to be [\emptyset wobbly jellies of \emptyset men] by shaking uncontrollably under pressure from the tainted tourists.
 c. There was a shadowy vagueness about the rest with [**its** hulks of \emptyset desks] and clutter of baskets and papers.

Property 4: semantic headedness

N2 canonically functions as the semantic head:

- (10) a. She's a frightened little mouse of a **woman**, who makes a fierce stand and won't back down.
 b. *She was a frightened little mouse, ...
 c. She was a frightened woman, ...
- (11) a. It was a monster of a **machine** – plugged into the wall, a great big apparatus full of vacuum tubes.
 b. *It was a monster – ...
 c. It was a machine – ...

Property 4: semantic headedness

There are cases where either N1 or N2 seems to function as the semantic head:

- (12) a. We should have fired $\left\{ \begin{array}{l} \text{that plonker of a plumber.} \\ \text{that plonker.} \\ \text{a (that) plumber.} \end{array} \right\}$
- b. She doesn't want to talk to $\left\{ \begin{array}{l} \text{this idiot of a prime minister.} \\ \text{this idiot.} \\ \text{a (that) prime minister.} \end{array} \right\}$

Property 5: semantic relation

- In terms of meaning composition, N1 and N2 are in a reverse subject-predicate relation. That is, the first noun N1 denotes a property or quality that is predicated of the second noun N2.
 - (13) a. a hell of a day – the day is a hell
 - b. a jewel of a city – the city is a jewel
 - c. a martinet of a mother – the mother is a martinet

- The first noun N1 thus ascribes a property to the second noun N2 which is invariably evaluative (cf. Aarts 1998).
 - (14) a. a fool of a policeman – a foolish policeman
 - b. that idiot of a prime minister – that idiotic prime minister
 - c. a devil of a row – a devilish row

Property 6: determiner scope

- The first determiner Det1 can scope over not only N1 but also N2. Consider examples where the Det1 is a possessive pronoun or a possessive form of N1 (cf. Austin 1980, Keizer 2007):
 - (15) a. He had been sitting quietly in [his hovel of a home].
 - b. You are old enough to get your own food, like [your fool of a father].
 - c. The boy knelt down by [Philip's wreck of a trap].
- Det1's scope can be verified by the copular paraphrase:
 - (16) a. His home is a hovel.
 - b. Your father is a fool.
 - c. Philip's trap is a wreck.

Property 7: adjectival scope

- As with the possible scope of Det1, a pre-N1 modifier can also scope over either N1 or N2; either N can have a premodifier:
 - (17) a. But I ain't scared of that [great [ox]] of a matron.
 - b. This [little [mouse]] of a girl really appeared to be scared of him.

 - (18) a. That fool of a [fairy] Lucinda did not intend to lay a curse on me
 - b. I remember running into a giant of a [young] man at our Buffalo stamping plant.
- AP1 can modify N2:
 - (19) a. another [bitchy] iceberg of a [woman]
 - b. that [clumsy] oaf of a [newscaster]
 - c. that [senseless] maniac of a [driver]

Property 8: freezing effects

The PP and the second NP are frozen in terms of syntactic operations. That is, the *of*-tagged PP cannot be extraposed or the prepositional object NP cannot be involved in a *Wh*-question:

- (20) a. [A monster of a machine] was delivered.
 b. *[A monster __] was delivered [of a machine].
- (21) a. She had [a skullcracker of a headache.]
 b. *What did she have [a skullcracker of __]?

Property 8 continued: no coordination

Neither the PP[*of*] nor the NP2 can be coordinated (though N2 can be coordinated; see below):

- (22) a. *I had a hell of [[a day] and [a time]].
 b. *Into the assessment room stepped a giant of [[a man] and [a woman]].
- (23) a. *I had a hell [[of a day] and [of a time]].
 b. *Into the assessment room stepped a giant [[of a man] and [of a woman]].

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Headedness

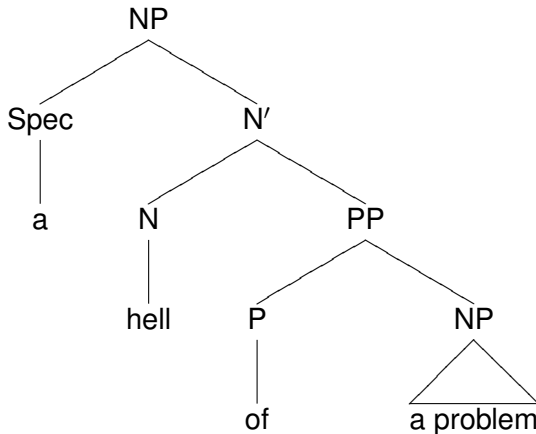
The two nominals in the BNP both display some head properties and the issue of headedness has led to different treatments of the preposition *of*. The three main approaches are summarized:

- (24) Treatments of the preposition *of*
- a. as a preposition selecting the following NP headed by N2 (Abney 1987, Napoli 1989)
 - b. as a pragmatic marker forming a unit with *a(n)* and not the following N2 but the preceding N1 (Aarts 1998, Keizer 2007)
 - c. as a prepositional complementizer F selecting a small clause AgrP (Kayne 1994, den Dikken 2006)

N1 as the head

The basic motivation for the N1-headedness stems from the obligatoriness of the PP:

(25)



Cons: N2 as the head

- N2 is the semantic head together with the first noun N1 being reinterpreted like an adjectival element:
(26) a. that fool of a doctor – that foolish doctor
b. a hell of a problem – a hellish problem
- N2 determines what the overall phrase is ‘a kind of’ (Zwicky 1993). For example (27a) refers to a kind of a head, not a kind of dome.
(27) a. He nodded [his shaven dome of a head].
b. It is [a jewel of a city].

Cons: selectional restrictions

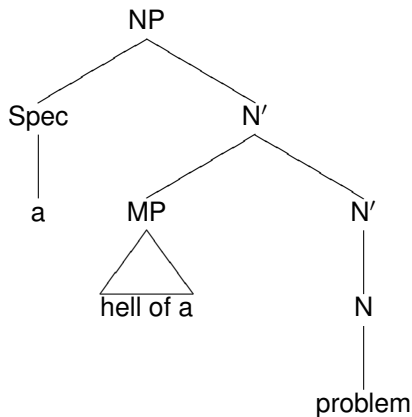
The main verb selects N2 as its semantic argument:

- (28) a. To get an appointment, he persuaded
- | | |
|---|--|
| { | the unpleasant dragon of a receptionist. |
| { | *the unpleasant dragon. |
| { | the receptionist. |
- b. He drove 200 miles on
- | | |
|---|------------------|
| { | a pig of a road. |
| { | *a pig. |
| { | a road. |

N2 as the head

Semantics and selection direct us to the N2 as head. Together with the assumption that the sequence 'N1-of-a' as a whole behaves like a modifier phrase (MP), Aarts (1998) proposes (29) to avoid problems raised by the N1-head analysis.

(29)



N2 as the head: Pros and cons

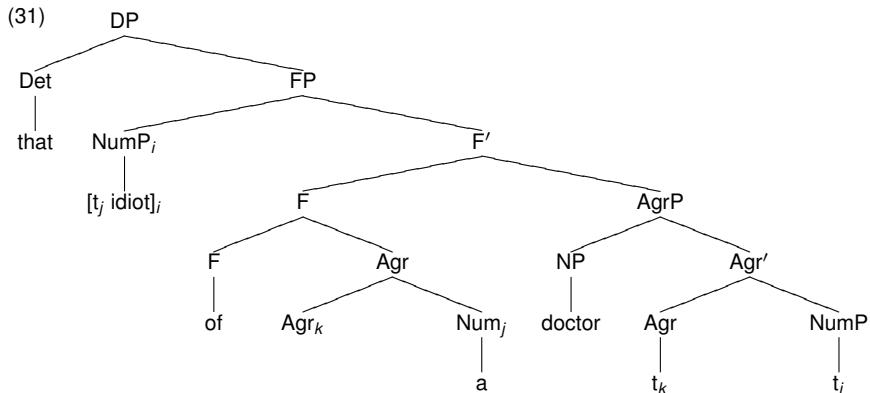
- Pros: it can account for the scope of the pre-N1 adjective as well as the scope possibility of Det1. Another claimed advantage of this kind of analysis comes from coordination and extraction data.
- Cons and concerns:
 - The immediate question arises is how the sequence 'N1-*of-a*' forms a constituent. There is no obvious synchronic or diachronic evidence for this analysis.
 - How can we get a predicate relation between N1 and N2?
 - How to capture the agreement relation between N1 and N2?

ComplementizerP and Derivations

Reflecting the subject-predicate relation between N1 and N2, Kayne (1994) assumes that N1 undergoes predicate inversion within a small clause, as represented in the following structure for the BNP *that idiot of a doctor*:

(30) that [_{D/PP} [_{NP} idiot_j] [_{CP} of [_{IP} a doctor I [_{t_j} ...]]]] ...

Functional Projections (den Dikken 2006)



Required movement operations

- may be theoretically plausible, but cognitively questionable
- As noted in Aarts (1998), to generate a definite BNP like *that crazy crackpot of a caretaker* where the pre-N1 modifier *crazy* is linked to N2 *caretaker*, this PI (predicative-inversion)-based movement analysis requires at least the following movement operations:
 - movement of Agr to F,
 - movement of the indefinite article *a* preceding N2 to F,
 - movement of NumP to Spec-of-FP, and
 - movement of AgrP to Spec-of-DP at LF via Spec-of-AP.

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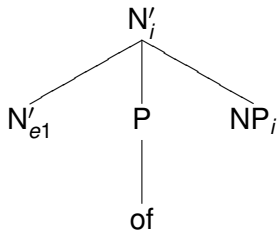
General and idiosyncratic properties of the BNP

- There are two nominals in contiguity, though the preposition intervenes.
- The head properties are distributed to N1 and N2, but N2 seems to be both the syntactic and semantic head of the whole phrase.
- Elements in the BNP are frozen, in the sense that neither N1 nor N2 can be separated as a result of dislocation or other reordering processes.
- The two NPs are parallel in many respects. The two nominals agree in number, semantic gender, and selectional restrictions.
- Det2 can be marked only with the indefinite article *a(n)*, or its zero plural allomorph.
- The two NPs are in a predication relation in which N1 is an evaluative function of N2.

Juxtaposition

What we propose here is that the BNP is a type of nominal juxtaposition construction associated with these idiosyncratic properties. This constructional form means that the preposition *of* is meaningless but just functions as the linker between the two nominal phrases, N' and NP (cf. Jackendoff 1970):

(32)



Constructional constraints

Syntax:

$$N'_i \left[N'_{e1} \quad of \quad NP_i \left[\text{MARKER } a \right] \right]$$

Sem/Prag: *e1* denotes an evaluative property of *i*

Figure: BNP Construction in English

Constructional constraints

This constructional constraint can be reinterpreted in a rule-like format:

$$N' \begin{bmatrix} bnp-cx \\ SPR \langle [1] \text{DetP} \rangle \\ IND \ i \end{bmatrix} \rightarrow \begin{bmatrix} SPR \langle [1] \rangle \\ SUBJ \langle [IND \ i] \rangle \\ SEM \mid IND \ e1 \end{bmatrix}, [PFORM \ of], NP \begin{bmatrix} MRK \ a \\ SEM \mid IND \ i \end{bmatrix}$$

Constructional constraints

The constructional constraint in (32) captures the mismatch between form and function, and explains the following:

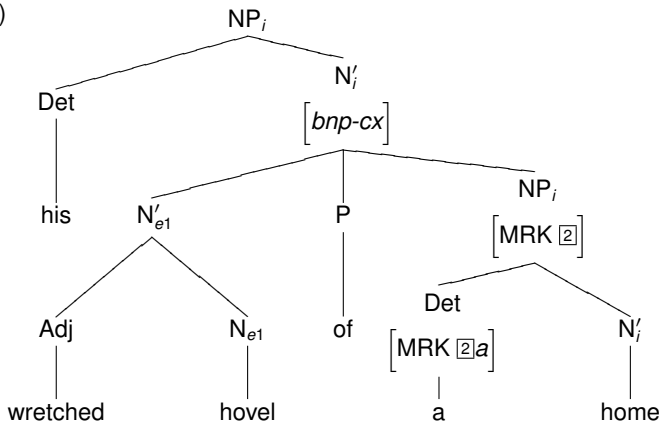
- There is a predicative relation between N1 and N2.
- N1 is predicative.
- The syntactic and semantic head of the construction is N2 rather than N1.
- Det1 is the determiner of the whole phrase.

Det1's scope

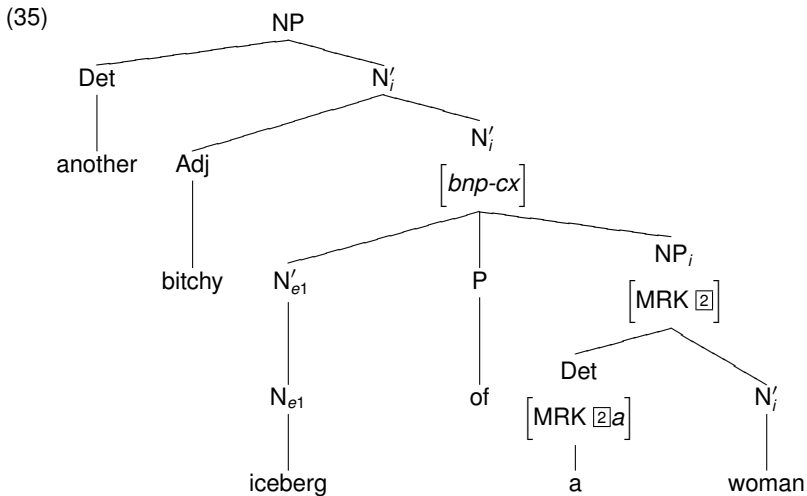
- Det2 can be either $a(n)$, or \emptyset for bare plurals. Det2 has no apparent quantificational force over the whole phrase.
- Det1 is the determiner for the whole NP, and for N2 – this is very clear as seen in the following:
 - (33) a. I have met every scumbag of a lawyer in this town.
 - b. Deep lines grooved her prune of a face.
- (33a) does not mean that I have met every lawyer; it means I have met every lawyer who also has a set of properties P which are characterized by the evaluative N1 part. (33b) also means that her face is grooved, not her prune.

Generated structure: simple case

(34)



Generated structure: AP1 scopes over N2



Licensing Complex NP1 Structures

- The proposed analysis allows a more complex BNP structure such as:
 - (36) a. that [_{N'} destroyer of education] of [_{NP} a minister]
 - b. this [_{N'} manipulator of people] of [_{NP} a mayor]
 - c. my [_{N'} true defender in need] of [_{NP} a husband]

- Nouns like *destroyer* and *manipulator* require their own complements: *of education* and *of people*. This N' is juxtaposed with the indefinite NP. However, our analysis does not license examples like (37), as NP2 must be indefinite:
 - (37) a. *that [destroyer of education] of [the minister]
 - b. *this [manipulator of people] of [the mayor]

Licensing Complex NP2 Structures

- Complex NP2 structures

- (38) a. Don't forget we've both done this [a [hell] of [a lot more times]] than you have!
- b. That is [a [hell] of [a number of dead soldiers]] among an American population.
- c. You have to stand atop [a [mountain] of [a lot of "no's"]] in order to get a successful "yes".

Licensing recursive BNPs

- The BNP can be recursive, as in (39) (data from den Dikken and Singhapreecha 2004):

(39) [that asshole of [an idiot of a doctor]]

- The generation of such a recursive BNP is straightforward within the juxtaposition approach proposed here. However, we do not generate the following structure:

(40) ??/[that asshole of [that idiot of a doctor]]

Predictions: No PP coordination in the BNP

- Aarts (1998) offers coordination examples as evidence for not treating *of* and NP2 as a constituent, taking the string 'N2 + *of* + a' to be a constituent:
(41) *She called him a bastard [of a husband] and [of a father].
- Our structure licenses the coordination of N2 and NP2 in principle, but not all NP2 coordination is possible:
(42) a. *I can talk about that idiot of a referee or/and a linesman.
b. We have that miracle of a friend and colleague.

No Coordinating NP2: Agreement Related

- Coordination of singular NP2 is generally blocked as the referent of the entire NP2 has to be singular. This is why N2 coordination is possible:
 - (43) a. *a giant of a man and a woman
 - b. *a hell of a day and a night
 - (44) a. an angel of a friend and colleague
 - b. a hell of a day and night
- Note however that coordination of plural NP2s is possible:
 - (45) a. those scumbags of politicians and lobbyists
 - b. those fools of bosses and lawyers

No Coordinating NP2: Agreement Related

- The marked value *a* in the NP2 basically requires a singular N2. Considering that N1 is predicate of N2, examples like (43) may be ruled out by the mismatch in number agreement between the subject and the predicate. Compare with:
 - (46) a. *A friend and a colleague are an angel.
b. A friend and a colleague are angels.
 - (47) a. Politicians and lobbyists are scumbags.
b. Bosses and lawyers are fools.

More on the marker *a*

- If N2 is a proper name, then N1 cannot be preceded by an indefinite article (den Dikken 2006, Aarts 1998):

- (48) a. *a creep of a James
 b. *an egotist of an Alex

- When Det1 is demonstrative, we can have a proper N in N2:

(49) that clever little wretch of a Rebecca (Austin 1980: 361)

- (50) a. She was to marry this mountebank, this hypocritical toad of a Sir Thomas. (BNC: H8A W fict prose)
 b. He rode past earlier, that slip of a Sophie at his side.

- Det2 is indefinite, but N2 here refers to a definite individual: it is not Det2 but Det1 that specifies N2, as noted by Aarts (1998: 132), and also above.

On the marker *a*

- Even though the Det2 *a* has no quantificational force over the whole phrase, it still places a restriction on the countability of N2. No non-count noun can be N2:

(51) a. *That's a jewel of an information.
 b. *That is a dome of an evidence.
- However, a collective noun, which can denote a singular group or plural individuals, can appear as N2:

(52) a. What to do with those fools of a crew?
 b. He would have been acquitted by 12 absolute fools of a jury by now.

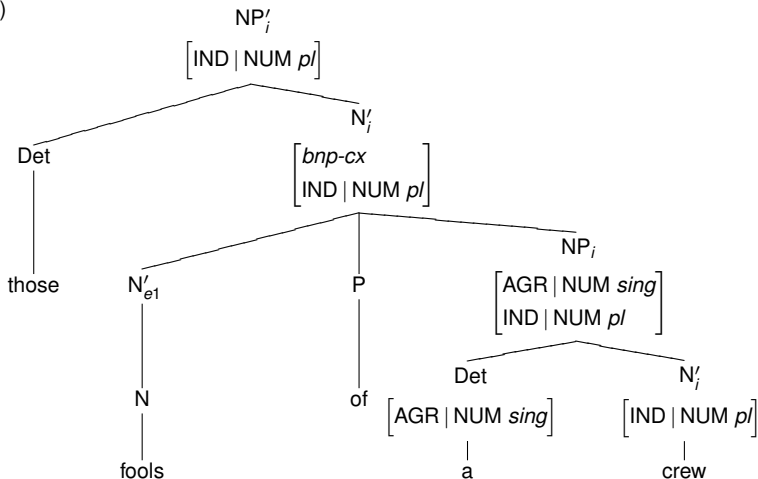
(53) a. The crew were recruited from the artillery unit;
 The crew was split at the time.
 b. The jury were finally getting the case;
 The jury was given incorrect instructions.

Agreement

- The agreement pattern is particularly intriguing in certain examples, since there is a mismatch, given that N2 is the semantic head and the overt Det2 *a(n)* requires N2 to be singular:
(54) a. Those fools of a crew were/*was expelled from the ship.
b. Those fools of a jury were/*was totally unreliable.
- Proposal: There are two different levels of agreement: morphosyntactic and index agreement (cf. Kim 2004). Given that the subject and verb agreement is index-agreement, the semantic head 'crew' here refers to a plural index value and agrees with the verb (Det2 only specifies the morphosyntactic singular AGR value).

Hybrid Agreement (cf. Kim 2004)

(55)



On the Preposition *of*

- Quirk et al. (1985): The preposition *of* introduces this special ‘apposition’ construction
- den Dikken (2006): a spell-out form of an abstract functional category
- Our approach: It contributes no truth-conditional, compositional meaning, but plays a role in linking N1 with N2 in a parallel fashion while distributing head properties to both (N1 as the expressive head and N2 as the referential head; cf. Foolen 2004).

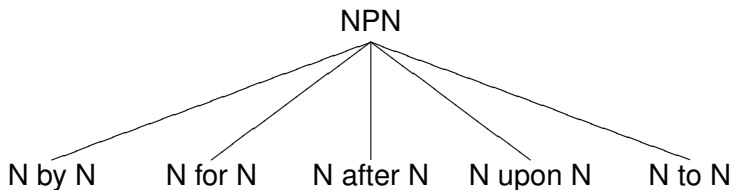
Similar 'juxtaposition' constructions?

One interesting point to note here is that Jackendoff's (2008) observation that English has a liking for N-P-N constructions (cf. Culicover 1997, Beck and von Stechow 2006, de Smedt et al. 2007):

- (56)
- a. house by house; inch by inch (succession)
 - b. line for line; snake for snake; syllable for syllable (matching, exchange)
 - c. house to house; door to door; face to face (transition)
 - d. day after day; telephone pole after telephone pole (succession)
 - e. hundreds upon hundreds; argument upon argument (large quantity, succession)

NPN Constructions (Jackendoff 2008)

(57) Inheritance hierarchy for the family of NPN constructions:

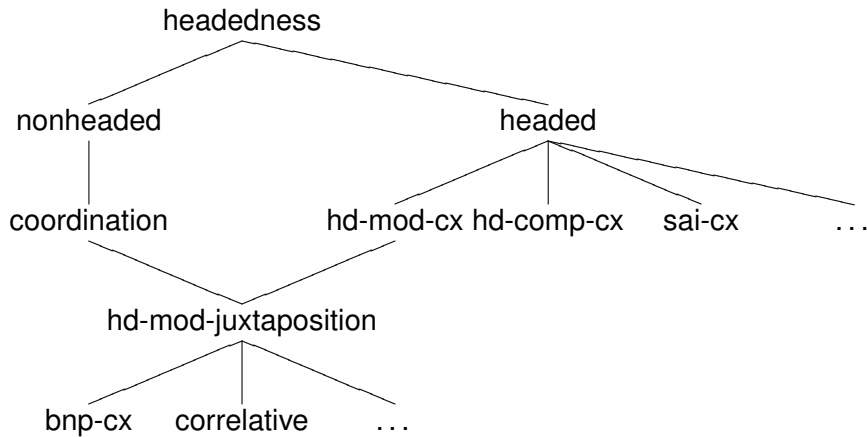


Where is this construction located in the grammar?

- Matthews (1981) assumes four different syntactic dependency relations: complementation, modification, coordination, and parataxis. In addition to these four, he places 'juxtaposition' as an additional dependency that lies between modification and coordination.
- Of the cases of juxtaposition, one exemplar construction is the correlative construction and apposition:
(58) a. The less I do, the better I feel.
b. I met your brother, the poet.

Juxtaposition-cx

(59) Inheritance hierarchy for headedness-cx:



Predictions: freezing effects as a subtype of coordination

- Freezing effects

(60) a. [A monster [of a machine]] was delivered.

b. *[A monster __] was delivered [of a machine].

(61) a. *What (kind of politician) do we have [an idiot of __]?

b. *What was there [a hell of __]?

Predictions: freezing effects

In our analysis, the frozen properties stem from the coordination-like juxtaposition.

- (62) a. *[Of a lawyer], he was a fool __ .
b. *[Of a girl], she was a little slip __ .
- (63) a. *[That fool __] showed up [of a lawyer].
b. *[A little slip __] came in [of a girl].

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Main features of the constructional approach

- All levels of description (including morpheme, word, phrase, and clauses) are understood to involve pairings of form with semantic or discourse function.
- Constructions vary in size and complexity and form and function are specified if not readily transparent.
- Language-specific generalizations across constructions are captured via inheritance networks, reflecting commonalities or differences among constructions.

Main points of the proposal

- In this paper we have shown that the BNP is a type of NP-*of*-NP construction with high-level constraints on (morpho-syntactic) form and (grammatical) functions. The English BNP construction thus has a special form and function mapping
- Due to its specific syntactic form with a special meaning, we have analyzed the BNP as a nominal juxtaposition construction linked by the marker *of*. The construction rule has variables to be filled out.
- The English BNP construction displays a certain constructional regularity as well as peculiarities. Within the grammar, this construction, as a type of juxtaposition, has both coordination as well as modification properties.

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