

Selectional Asymmetries between CP and DP Suggest that the DP Hypothesis is Wrong

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1 The DP Hypothesis

The DP Hypothesis: N is not the head of the nominal phrase; it is dominated by one (or more) functional heads that actually head the phrase.

- Early suggestions: Jackendoff (1972), Hogg (1977), Brame (1981, 1982), Szabolcsi (1983).
- Early proponents: Hudson (1984), Fukui (1986), Fukui and Speas (1986), Hellan (1986), Abney (1987), Szabolcsi (1987), Löbel (1989), Olsen (1989).
- (Generally ignored arguments against: Payne 1993)

Primary Motivation: Parallel with structure of clause, reworked by Chomsky (1986) as CP–IP–VP.

- Functional categories fit X-bar schema, head XPs; should be the same for functional heads like Det.
- Morphological parallels in agreement, case suggest an NP-internal Infl, parallel to the clause.

Extended Projections (Grimshaw 2005 [1991], van Riemsdijk 1998):

- IP and CP are extended projections of V;
- DP (and other FPs) are extended projections of N.

POINT OF THIS TALK:

1. Bare Phrase Structure (Chomsky 1995): Do not expect functional heads to have to project complement and specifier.
2. Clauses and nominals are not parallel at all:
 - (a) Selection: C is selected in clauses, but N is in nominals;
 - (b) Form determination: Downward, head to head, in clauses; but everything determined by N in nominals.
3. Conclusion: N is the head of the (extended) nominal projection; V is not the head of a clause in any sense, functional heads are.

2 First Asymmetry: Complement Selection

(Part of this argument against the DP hypothesis is made by Payne 1993.)

2.1 Clausal Complements

Verbs that select for clausal complements select only elements that are high in the clause:

- (1) *Questions versus declaratives:*
 - a. Sue thinks that the world is flat.
 - b. * Sue thinks whether the world is flat.
 - c. * Sue wonders that the world is flat.
 - d. Sue wonders whether the world is flat.
- (2) *Finite versus nonfinite:*
 - a. Bertrand wants the world to be flat.
 - b. * Bertrand wants that the world is flat.
- (3) *Subjunctive versus indicative:*
 - a. Sue asked that the answer be/*is two.
 - b. Sue thinks that the answer *be/is two.

- Grimshaw (2005) claims that subjunctive selection is an instance of a verb selecting the form of the embedded verb.
- Clearly not the case; it is the form of the *inflected* verb, so INFL or Tense, that is selected, not the main verb:

- (4) I suggest that you **be/*are** studying when I return.

- Baltin (1989) argues that verbs only need to select the complementizer, and nothing else;
- If a verb selects *for*, the clause is nonfinite, if *that*, finite;
- If a verb selects a question, it always allows either finite or non-finite clauses:

- (5) a. I don't know whether or not to work on that. (Baltin 1989, (52))
- b. I don't know whether or not I should work on that. (Baltin 1989, (53))

- Payne (1993) cites Zwicky as pointing out that subjunctives seem to be a problem for this view: both indicatives and subjunctives in English appear under *that*.
- But plenty of languages have distinct subjunctive and indicative complementizers (e.g., Romanian);
- Not crazy to think that English has a *that_{Indic}* and *that_{Subj}*, and selection is only for C.

In other languages, verbs may select for:

1. V2 clauses (German; e.g., den Besten 1983)
2. Illocutionary force (exhortative in Korean, imperative in Japanese) REFS

Verbs that select clauses **never** select for:

1. the main verb
2. modals
3. topic or focus
(suggesting that TopicP and FocusP do not head the embedded CP, contra Rizzi 1997)
4. auxiliaries
5. negation

- All of these can generally appear in any complement CP whose other functional elements they are compatible with.

Conclusion: The verb is not the head of the CP in any sense, C is.

2.2 Nominal Complements

- In contrast, verbs that select nominal arguments *never* select for particular determiners, or numbers, or possessors, or anything else.
- Generally, if a verb admits an NP, any sort of NP is allowed: quantificational, deictic with demonstrative, definite or indefinite, number, adjective, and so on.

(6) *Baltin (1989): There is no verb with this selection pattern:*

- a. John glorped books. (Baltin 1989, (35))
- b. * John glorped his books. (Baltin 1989, (36))

(7) *Also no verb with this selection pattern:*

- a. Samuel is streading a book.
- b. * Samuel is streading the book.

One possible case: kinship *have* (suggested by S. Tomioka):

- (8) a. I have a child.
b. * I have the/every child.

- But this is possibly some kind of existential construction; see Freeze (1992), among others.
- Constructions sometimes require indefinites (existentials) or definites (topics), but particular verbs do not (note that *have* in other uses allows definites).

Number is often selected:

- (9) a. I gathered the students.
b. * I gathered the student.
c. I gathered the French Club.
d. * I gathered the scissors. (where there's only one pair of scissors)
- (10) a. The students met.
b. * A student met.
c. A student and a professor met.

- Note that selection for number is semantic, not syntactic;
- Not clear that number should be represented as functional head separate from N (as in Ritter 1991);
- If it is, where is it in 9c and 10c?

2.3 Selection is Strictly Local

- Most common assumption: Selection is strictly local, probably limited to a sisterhood relation (for recent discussion, see Landau 2007).
- Selection facts then indicate that the head of CP is in fact C;
- But the head of the NP is not D, it is N.

2.4 Attempts to Fix the DP Hypothesis

First attempt at fix: Percolation (Abney 1987).

- Features of N percolate up through functional layers (in Abney, AP as well as DP).
- Does not explain why Ds and other things are *not* selected in NPs.
- Would also have to explain why the features of V (or other things) do not percolate up to CP.

Second attempt at fix: Double-Headedness (Radford 1993).

- Nominals have two heads: N and D.
- Again, does not explain why Ds and other things are not selected in NPs.

Third attempt at fix: NP generated inside VP, DP generated outside VP (Sportiche 1997 and other talks¹).

3 Second Asymmetry: Form Determination

(This asymmetry is noted by van Riemsdijk 1998, but it is ignored in that paper and clauses and nominals are treated as equivalent in being extended projections, CP of V.)

3.1 Clausal Domain

Form determination is downward: Each head determines the form of the head of its complement.

- (11) *C determines I (finite vs. nonfinite):*
- I would like for the Jamaicans to win.
 - I expect that the Jamaicans will win.
- (12) *Each auxiliary determines the form of the next:*
- I might have been being handed some cocaine (when the police caught me).
- (13) *The main verb does not determine the form of the functional elements; they determine its form:*
- I broke the vase.
 - I was breaking the vase (when you came in).
 - I have broken the vase.
 - I might break the vase.
 - I want to break the vase.

Only exception: Auxiliary selection with unaccusatives versus unergatives (Romance, Dutch).

- Selection is not determined by the verb itself:
 - Passives: Same verb has one auxiliary in active, a different one in passive.
 - PPs: Adding a PP can change auxiliary for the same verb (e.g., Hoekstra and Mulder 1990).
- Auxiliary selection seems to be determined by several heads in the clause.

3.2 Nominals

The form of everything else is determined by the head noun:

- (14)
- too many/*much people
 - too much/*many rice
 - these/*this scissors
- (15) *Spanish*
- todos esos lobos blancos
all those wolves white
 - todas esas jirafas blancas
all those giraffes white

Might say that choosing a functional element in DP determines form of N, but that doesn't seem to be right, because of asymmetry:

- (16) *A noun will just be incapable of combining with functional elements that mismatch:*

¹Described at <http://www.linguistics.ucla.edu/people/sportich/papers/SplitDPsSplitVPs.pdf>, 2/17/2008.

- a. these scissors
- b. * this scissors

(17) *But there are no cases of verbs like this:*

- a. I think that he geats. (finite)
- b. * I want to geat. (*nonfinite)

Conclusion: Each functional element in the clausal domain is a head taking the next one as its complement; this is *not* the case in nominals.

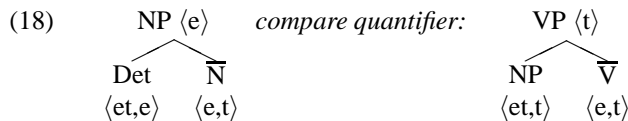
4 One Other Asymmetry, and a Note

Asymmetry pointed out by S. Tomioka:

- Many languages lack Det, none (so far as I know) lack something that can be identified as C.
- (There's always something to mark embedded vs. main clauses, questions vs. declaratives, etc.)

Which brings up another point:

- Function of D often claimed to be turning a predicate into an argument (e.g., Longobardi 1994).
- Seems odd to identify that function with the distinctions that are encoded by determiners (or “articles”) cross-linguistically (e.g., Dryer 2007):
 - Anaphoric: previously mentioned in discourse;
 - Known to speaker and hearer, or inferable from context;
 - Specificity (specific referent in mind of speaker).
- Even if correct, does not require the element doing the conversion to be the *head*:



5 Revisiting Arguments for the DP Hypothesis

(A survey of arguments can be found in Bernstein 2001.)

5.1 X-Bar Theory

Was a compelling argument, but is no longer with Bare Phrase Structure.

5.2 Morphological Parallels

Possessor agrees and is case-marked just like a subject:

- (19) *Hungarian (Szabolcsi 1983)*
- a. az én-Ø vendég-e-m
 the 1S-Nom guest-Poss-1S
 ‘my guest’
 - b. (a) Mari-Ø vendég-e-Ø
 (the) Mary-Nom guest-Poss-3S
 ‘Mary’s guest’
 - c. Mari-Ø alud-t-Ø
 Mary-Nom sleep-Past-3S
 ‘Mary slept.’

- This evidence is offset by the many languages that mark subjects and possessors differently (like English).
- In some languages where the morphological parallels exist, they are only morphological:

(20) *Passamaquoddy*

- a. **k-tus-*onu*-wok**
2-daughter-1P-3P
'our (Incl) daughters'
- b. **k-nomiy-a-*nnu*-k**
2-see-Dir-1P-3P
'We (Incl) see them.'

- Order of morphemes, features encoded by morphemes are the same;
- But suffix *-(o)k* marks number of head noun in nominal, but number of object on the verb.
- Order of morphemes in nominal unexpected: number of head noun is *outside* the number of the possessor.
- I take this to show that parallels are *superficial*, and do not reveal deep structural properties.
- Parallels probably a reflex of general economy: use the same grammatical elements for different functions.

5.3 Semantics: Arguments Versus Non-Arguments

Bare NPs are predicates, DPs are arguments.

- Supported by languages in which presence of an article correlates with use as argument (Szabolcsi 1987, Longobardi 1994).
- But in many languages, bare singular NPs can be arguments;
- Or, even predicates require articles (English).

5.4 Syntax: Extraction

Szabolcsi (1983, 1987, 1994):

- Spec-CP is escape hatch for movement out of CP.
- It appears that in Hungarian, a possessor can only be extracted out of a left-peripheral position within the NP (based on case marking).
- Szabolcsi: This indicates a nominal CP.

Even if this is correct, it's not an argument for the DP Hypothesis:

- Phase Theory (Chomsky 2000): Have to get to edge of phase in order to be visible for operations outside.
- If nominals are phases, will have to get to edge in order to extract further, regardless of what the *head* is.

5.5 Syntax: Ellipsis

For overview and references, see Lobeck (2006).

- Argument: Can have uniform theory of licensing of ellipsis by heads if D is a head taking NP as complement.
- It appears that the class of items that license ellipsis inside NPs is not uniform.

5.6 Syntax: Word Order

Parallel between relative position of V-Adv and N-Adj; **N-to-D movement**.

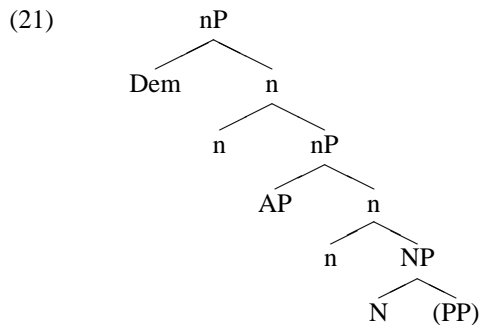
- Romance: e.g., Bernstein (1993), Cinque (1994), Longobardi (1994).
- Scandinavian: Delsing (1988, 1993), Taraldsen (1990), among others.
- Also Hebrew (Ritter 1988, Ritter 1991), Romanian (Dobrovie-Sorin 1987, as cited by Bernstein 2001).

Not uncontroversial:

- Cinque (2005) argues that there is no head movement inside nominals; if there were, word order typology could not be accounted for.
- Scandinavian: Hankamer and Mikkelsen (2005) argue that N-to-D movement is not the right account (see also Embick and Marantz 2008).

6 Conclusion

- None of the arguments for the DP Hypothesis are compelling.
- Asymmetries between clauses and nominals in selection and form determination show that the claimed parallels between clauses and nominals do not exist.
- They also indicate that the head of a nominal is not D.
- However, the pre-DP structure is not really adequate, either.
- Possibility: nP Shells; n contentless except for category (see Marantz 1997 on nP):



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