Specificational clauses at the interfaces

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Two kinds of copular clauses (Halliday (1967:§6); Higgins (1979); Akmajian (1979);)

(1) SPECIFICATIONAL

The recipient of this year's Nobel Peace Prize is Shirin Ebadi.

(2) PREDICATIONAL

The recipient of this year's Nobel Peace Prize is Iranian.

Guiding Questions

- What is the syntactic structure of specificational clauses like (1)?
  - Is it related to the syntactic structure of predicational clauses like (2), and if so, how?
- What is the semantic contribution of each of its parts?
  - What are the semantic types of the DPs flanking the copula?
- Why do specificational clauses have a fixed topic–focus structure?
  - Why do predicational clauses not?

Larger Program

- explain Higgins' taxonomy in terms of current theories of clause structure and DP interpretation (Partee 1986, Heggie 1988a, Heycock and Kroch 1999, and others)

Today's agenda A guided tour of my answers to some of these questions.

1 Background

Four candidate syntactic structures for (1)

1. Predicate topicalization (Heggie 1988b,a:66–94)
2. Predicate raising (Moro 1997:17–93)
3. Subject raising from symmetric small clause (Heycock and Kroch 1999)
4. "Transitive" structure (Rothstein 2001:chapter 9)

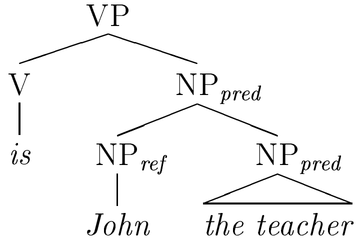
Claims

- There is substantial syntactic evidence against candidate 1 (predicate topicalization).
- Semantic considerations speak against candidates 3 (subject raising from symmetric small clause) and 4 (transitive structure).
- The semantic observations receive a natural account under candidate 2 (predicate raising), which also offers a way of understanding the fixed topic–focus structure of specificational clauses.

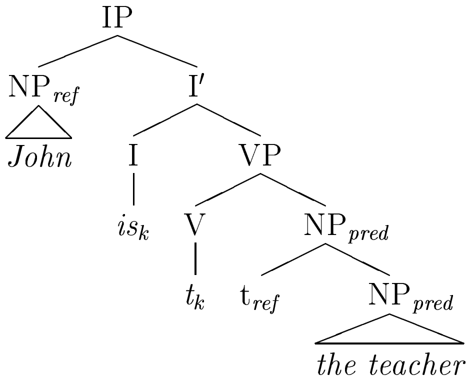
2 Predicate topicalization (Heggie 1988a,b)

Assumptions (from Heggie (1988a:17–62), based on Stowell (1978, 1983))

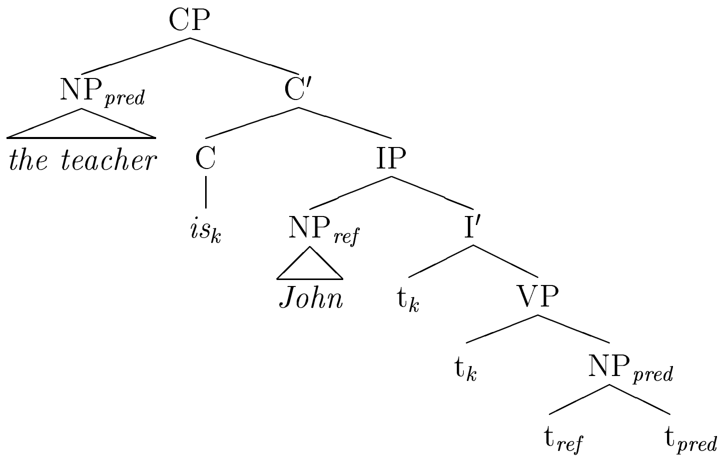
(3) Underlying structure



(4) Predicational copular clause



(5) Specificational clause



- The initial NP is a topicalized predicate
- The post-copular NP is the subject

2.1 Specification vs. predicate topicalization in Danish

- Danish has predicational and specificational clauses:

(6) Minna er den højeste spiller på holdet. [PREDICATIONAL]
M. is the tallest player on team.DEF
'Minna is the tallest player on the team.'

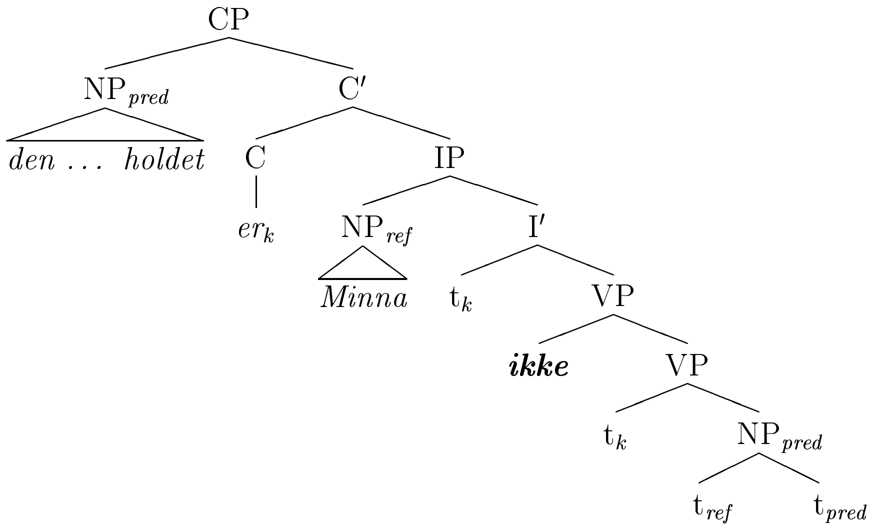
(7) Den højeste spiller på holdet er Minna. [SPECIFICATIONAL]
the tallest player on team.DEF is M.

- If (7) is derived from (6) by topicalizing NP_{pred}, we expect certain word order effects.

- The negation *ikke*, which marks the left edge of VP (Vikner 1995:40), should appear clause-finally (since everything has left the VP):

(8) Den højeste spiller på holdet er Minna **ikke**.
the tallest player on team.DEF is M. not
'Minna isn't the tallest player on the team.'

(9)

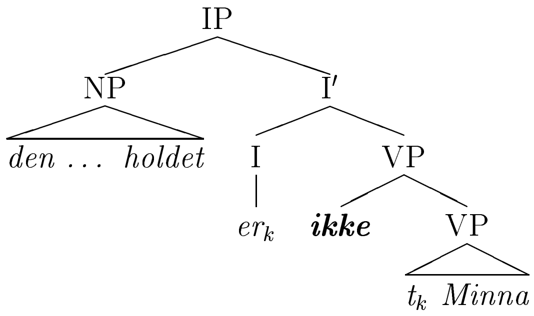


Interim conclusion Predicate topicalization is possible in Danish copular clauses (instance of typical topicalization pattern w. V2).

However (7) can also be negated as in (10) (Jespersen 1924:153, fn. 2):

(10) Den højeste spiller på holdet er **ikke** Minna.
the tallest player on team.DEF is not M.
The tallest player on the team isn't Minna.

(11)



Conclusions

- Danish has both predicate topicalization structures and non-topicalized specificational copular structures:
  - Clause-final negation = predicate topicalization structure = (9)
  - Non-final negation = non-topicalized specificational structure = (11)
- Specificational clauses cannot be analyzed in terms of predicate topicalization (contra Heggie 1988b).[1]
- In a specificational structure, the initial NP is in subject position (Spec-IP), and not a topicalized predicate (in Spec-CP).

2.2 Supporting evidence

The two structures are further distinguished by phenomena that are sensitive to:

- **subject vs. non-subject**
  - reflexive pronouns
  - negative polarity items
  - morphological form of pronouns (*she* vs. *her*),
  - polar questions
- **topicalization**
  - embedding
  - word order in the presence of auxiliaries.

[1] The predicate topicalization analysis also makes incorrect predictions for English as pointed out by Heycock (1994:186–189) and Rothstein (2001:259).

2.2.1 Evidence from reflexive pronouns

Danish has a third person reflexive possessive pronoun *sit* which must be bound by, roughly, a clause mate subject (Diderichsen (1966:55–58); Vikner (1985:23))

(12) a. **Han**$_1$ har forladt **sit**$_1$ hold.
he has left SELF-POSS team
'He$_1$ has left his$_1$ team.'

b. ***Sit**$_1$ hold har forladt **ham**$_1$.
SELF-POSS team has left him
(Intended reading: *'His$_1$ team has left him$_1$.'*)

c. ***Han**$_1$ tror **sit**$_1$ hold vinder.
he thinks SELF-POSS team wins
(Intended reading: *'He$_1$ thinks his$_1$ team is winning.'*)

Reflexive inside initial DP of copular clause:

- clause-final negation → $\surd$*sit*

(13) Den højeste spiller på **sit**$_1$ hold er Minna$_1$ **ikke**. [Pred. Top.]
the tallest player on SELF-POSS team is Minna not
Minna$_1$ isn't the tallest player on her$_1$ team.

- canonical negation → **sit*

(14) *Den højeste spiller på **sit**$_1$ hold er **ikke** Minna$_1$. [Specificational]
the tallest player on SELF-POSS team is not Minna
(intended reading: *'The tallest player on her$_1$ team isn't Minna$_1$.'*)

- In (13) the reflexive is within an A-bar position (Spec-CP) and is licensed under reconstruction of A-bar movement, cf. (15):

(15) Af **sit**$_1$ hold fik **han**$_1$ en ny vindjakke. [PP Top.]
from SELF-POSS team got he a new wind-jacket
'From his$_1$ team, he$_1$ got a new wind breaker.'

- In (14) the reflexive is within a A-position (Spec-IP), and it appears that reconstruction of A-movement for the purposes of reflexive licensing is weak at best (cf. (16):

(16) ***Sit**$_1$ hold lod til **Peter**$_1$ til at ville vinde. [Raising]
SELF-POSS team seemed to Peter to INF would win
(Intended meaning: *'His$_1$ team seemed to Peter$_1$ to be winning.'*)

2.2.2 Evidence from embedding

Some embedded contexts allow topicalization, e.g. complements of 'verbs of saying':

(17) Holmes **sagde** [at Moriaty ikke havde stjålet **disse malerier**]. (Vikner 1995:71)
H. said that M. not had stolen these paintings
'Holmes said that Moriaty hadn't stolen these paintings.'

(18) Holmes **sagde** [at **disse malerier** havde Moriaty ikke stjålet].
H. said that these paintings had M. not stolen.
'Holmes said that these painting Moriaty hadn't stolen.'

but many do not (Hooper and Thompson (1973), Gundel (1988:150–152), Iatridou and Kroch (1992), Vikner (1995:70–72), Zwart (1997:234–235))

- complements of 'non-bridge' verbs:

(19) Holmes **beviste** [at Moriaty ikke havde stjålet **disse malerier**].
H. proved that M. not had stolen these paintings
'Holmes proved that Moriaty hadn't stolen these paintings.'

(20) ??Holmes **beviste** [at **disse malerier** havde Moriaty ikke stjålet].
H. proved that these paintings had M. not stolen.

- adjunct clauses:

(21) [Fordi Moriaty ikke havde stjålet **disse malerier**], kunne Holmes ikke komme videre.
Because M. not had stolen these paintings could H. not come further
'Because Moriaty hadn't stolen these paintings, Holmes was stuck.'

(22) *[Fordi **disse malerier** havde Moriaty ikke stjålet], kunne Holmes ikke komme videre.
Because these paintings had M. not stolen, could H. not come further

- sentential "subjects":

(23) [At Moriaty ikke har stjålet **disse malerier**] er helt sikkert.
that M. not has stolen these paintings is completely certain
'That Moriaty didn't steal these paintings is absolutely certain.'

(24) *[At **disse malerier** har Moriaty ikke stjålet] er helt sikkert.
that these paintings has M. not stolen is completely certain

- antecedent of conditional:

(25) [Hvis Moriaty ikke har stjålet **disse malerier**], er Holmes på bar bund.
if M. not has stolen these paintings is H. on bare ground
'If Moriaty didn't steal these paintings, then Holmes is starting from scratch.'

(26) *[Hvis **disse malerier** har Moriaty ikke stjålet], er Holmes på bar bund.
if these paintings has M. not stolen is H. on bare ground

Copular clauses in embedded contexts

Contexts allowing topicalization → negation in canonical or in final position:

(27) Holmes **sagde** [at den bedste spiller på holdet **ikke** er Minna].
H. said that the best player on team-DEF not is M.
'Holmes said that the best player on the team isn't Minna.'

(28) Holmes **sagde** [at den bedste spiller på holdet er Minna **ikke**].
H. said that the best player on team-DEF is M. not
'Holmes said that Minna isn't the best player on the team.'

Contexts disallowing topicalization → no clause-final negation:

- complements of non-bridge verbs:

(29) Holmes **beviste** [at den bedste spiller på holdet **ikke** er Minna.]
H. proved that the best player on team-DEF not is M.
'Holmes proved that the best player on the team isn't Minna.'

(30) ??Holmes **beviste** [at den bedste spiller på holdet er Minna **ikke**].
H. proved that the best player on team-DEF is M. not

- adjunct clauses:

(31) De gjorde det [selvom den bedste spiller på holdet **ikke** er Minna].
they did it even-though the best player on team-DEF not is Minna.
'They did it even though the best player on the team isn't Minna.'

(32) *De gjorde det [selvom den bedste spiller på holdet er Minna **ikke**].
they did it even-though the best player on team-DEF is M. not.

- sentential "subjects":

(33) [At den bedste spiller **ikke** er Minna] er helt sikkert.
that the best player not is M. is completely certain
'That the best player isn't Minna is absolutely certain.'

(34) *[At den bedste spiller er Minna **ikke**] er helt sikkert.
that the best player is M. not is completely certain

- antecedent of conditional:

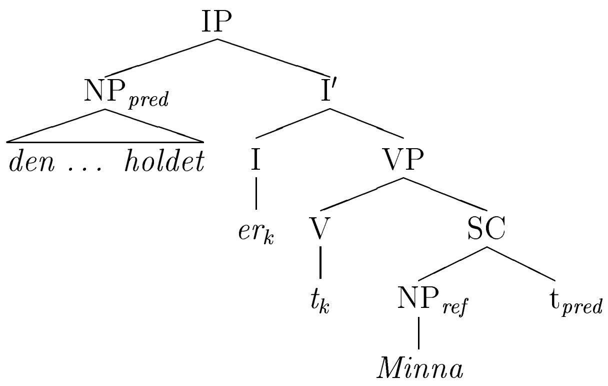
(35) [Hvis den højeste spiller **ikke** er Minna], så må kontrakten skrives om.
if the tallest player not is M. then must contract-DEF be-written again.
'If the tallest player isn't Minna, then the contract must be rewritten.'

(36) *[Hvis den højeste spiller er Minna **ikke**], så må kontrakten skrives om.
if the tallest player is M. not, then must contract-DEF be-written again.

2.3 What about the other candidate structures?

Candidate 2 Predicate raising (Moro 1997:35, ex. 43b):

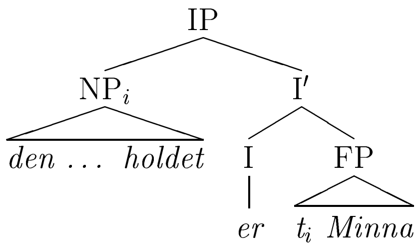
(37)



- the copula takes a small clause complement
- NP$_{pred}$—not NP$_{ref}$—raises to Spec-IP!

Candidate 3 Subject raising from symmetric small clause (Heycock and Kroch (1999)):

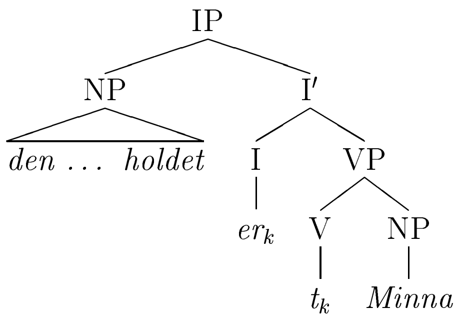
(38)



- the two NPs are of the same semantic type (referential)
- the left-most element of the small clause (FP) raises to Spec-IP.

Candidate 4 "Transitive structure" (Rothstein 2001:chapter 9):

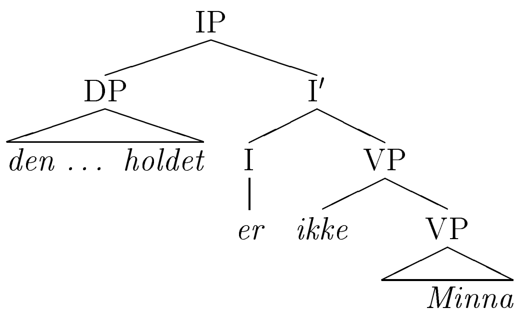
(39)



- The initial NP is base-generated in subject position.
- The post-copular NP is a complement (sister of V)

Observation These converge on roughly the non-topicalized surface structure in (40) (= (11)):

(40)



- Hence, the syntactic tests reviewed above (placement of negation, distribution of reflexive pronouns, embedding in contexts disallowing topicalization, etc.) will not distinguish between them.

Observation the three candidates make different claims about the semantic type of the subject:

- Candidate 2: subject is **predicative**
- Candidate 3: subject is **referential**
- Candidate 4: subject is **referential**

My claim Specificational subject is not referential (in support of candidate 2).

3 The semantic type of the subject

3.1 Evidence from pronominalization

Starting assumption pronominalization is sensitive to the semantic type of its antecedent.[2]

- In the domain of humans:
  - *she* and *he* are used to pronominalize referential DPs,
  - *it* and *that* are used to pronominalize non-referential DPs, including predicative DPs.[3]
- Use pronominalizations to probe the semantic type of copular subjects.
- Three environments:
  - Tag questions
  - Left dislocation structures
  - Question–answer pairs

3.1.1 Tag questions

The form of the pronoun in a tag question is determined by the subject of the tagged clause.[4]

(41) The lead actress in that movie lives in Belmont, do(es)n't {**she**/*he/*it/*they/*we}?

Predicational copular clause: *she* → referential subject.

(42) The recipient of this year's Nobel Peace Prize is Iranian, isn't **she**/*it?

Specificational clause: *it* → predicative subject:

(43) The recipient of this year's Nobel Peace Prize is Shirin Ebadi, isn't **it**?

[2]See Jespersen (1927:123–124), Kuno (1972:355–363) and Doron (1988:282–286), Heggie (1988a:67–71), Moro (1997:71–75), Zamparelli (2000:17–18), Engdahl (2001:132–133), Schlenker (2003:169–173), and Mikkelsen (2002c, 2003, in preparation: chapter 3) for data and discussion.

[3]The wording is intentionally vague here, since *it* and *that* can also be used to denote other types of non-referential objects, li ke individual concepts (Romero 2003) and propositions (Schlenker 2003). In what follows, I use the terms 'predicate' and 'property' interchangeably.

[4]Bolinger (1957:17–22, 116–122; 1975:279); Bowers (1976:237); Bresnan (1994:97); Jespersen (1924:198, 302, 323); Kay (2002:§4); McCawley (1998:251); Quirk et al. (1985:§11.8).

Danish: *hun* = Eng. *she*, *det* = Eng. *it/that*

(44) Den højeste spiller på holdet er ikke svensker, er {*det / **hun**}? [predicational]
the tallest player on team.DEF is not Swedish, is { it / she}?
*'The tallest player on the team isn't Swedish, is {*it / she}?'*

(45) Den højeste spiller på holdet er **ikke** Minna, er **det**? [specificational]
the tallest player on team.DEF is not M, is it?
'The tallest player on the team isn't Minna, is it?'

(46) Den højeste spiller er Minna **ikke**, er {*det / **hun**}? [predicate topicalization]
the tallest player is M. not, is { it / she}
*'Minna isn't the tallest player on the team, is *it/she?'*

3.1.2 Left dislocation

Left dislocation leaves resumptive pronoun inside CP:

(47) My father, **he**'s lived here all his life. [cf. Ross (1967:235, ex. 6.136)]

Use subject left dislocation to probe semantic type of copular subjects:

Predicational copular clause: *she* → referential subject.

(48) The recipient of this year's Nobel Peace Prize, **she**/*it/*that is Iranian.

Specificational clause: *it*, *that* → predicative subject:

(49) The recipient of this year's Nobel Peace Prize, **it/that** is Shirin Ebadi.

Danish facts are parallel (Mikkelsen 2003).

3.1.3 Question–Answer pairs

(50) Q: What nationality is the recipient of this year's Nobel Peace Prize?
A: **She**/*it/*that is Iranian. [Predicational]

(51) Q: Who is the recipient of this year's Nobel Peace Prize?
A: {**It/That**} is Shirin Ebadi. [Specificational]

Danish facts are parallel (Mikkelsen 2004b).

3.2 Overall Type Distribution

(52) (Geist 2002; Mikkelsen 2002b, 2003)

CLAUSE TYPE	SUBJECT	COMPLEMENT
SPECIFICATIONAL	predicative	referential
PREDICATIONAL	referential	predicative

- favors candidate 2 (predicate raising) over candidates 3 and 4.

3.3 An aside on predicative denotations

Question What does it mean to say that the subject denotes a predicate?

- In extensional terms, that the subject DP denotes a set of individuals.
- For *the recipient of this year's Nobel Peace Prize* and *the tallest player on the team*, the set is singleton, but that is not necessarily the case (Mikkelsen 2004b).

A prediction Only DPs capable of denoting predicates can occur as subject of specificational clauses. (Mikkelsen 2004b)

3.3.1 Case 1: Definite descriptions, possessive DPs, and partitive DPs

Can denote predicates (Partee 1987) → do occur as specificational subjects.

- Definite description:

(53) **The most successful such enterprise** is i-flex solutions Ltd., whose Flexcube is the world's bestselling banking software package.[5]

- Possessive DP:

(54) **Our next speaker** is Claudia Maienborn.[6]

[5] Shailaja Neelakantan "India's IT Firms: Beyond Outsourcing", *The Wall Street Journal Europe*, November 20, 2003, p. A9.

[6] Rainer Blutner, session chair at the workshop "Pragmatics in Optimality Theory" at the 14th ESSLLI in Trento, August 14 2002.

- Partitive DP:

(55) **En af de danske skribenter, jeg altid har beundret næsten uden reservation**,
One of the Danish writers I always have admired almost without reservation
er den som tennisspiller mere kendte Torben Ulrich.[7]
is the as tennis-player more known Torben Ulrich
'**One of the Danish writers that I have always admired almost without reservation** is Torben Ulrich, who is in fact better known as a tennis player.'

3.3.2 Case 2: Strongly quantificational DPs, (most) pronouns, and names

Can not denote properties → do not occur as specificational subjects.

- Strongly quantificational DP:

(56) ***Most actresses in that movie** are Ingrid Bergman and Liv Ullmann.

- Most pronouns:

(57) ***She** is Ingrid Bergman, isn't it?

(58) ***They** are Ingrid Bergman and Liv Ullmann, isn't it?

... except the predicate anaphors *it* and *that*, which do occur here (Mikkelsen 2004a):

(59) **That**'s Ingrid Bergman, isn't it?

(60) **That**'s Ingrid Bergman and Liv Ullmann, isn't it?

(61) Carla heard the car coming before it topped the little rise in the road that around here they call a hill. **It**'s her, she thought. Mrs. Jamieson — Sylvia — home from her holiday in Greece.[8]

(62) **It**'s her, isn't it?

- Names:

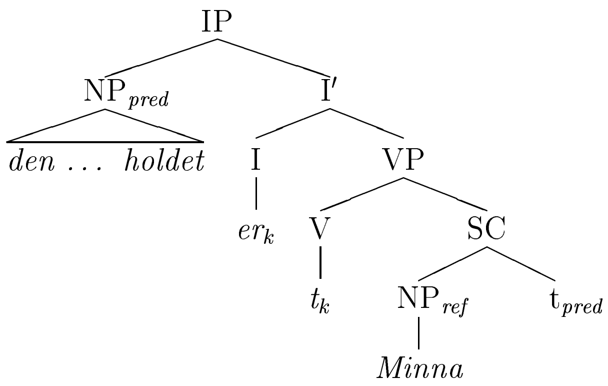
(63) ***Susan** is Mrs. Robertson, isn't it?

[7] Dan Turrel, quoted in Lars Bukdahl "Beatnik med boldøje" (Beatnik with an eye for the ball), *Weekendavisen Bøger*, May 9–14 2003, p. 2.
[8] Opening paragraph of Alice Munroe's "Runaway", *The New Yorker*, August 11 2003, p. 63.

Upshot

- Considerable semantic evidence for specificational subjects denoting predicates.
- Considerable syntactic evidence against specificational clauses being derived by predicate topicalization
- These together favor Candidate 2 (predicate raising) for the analysis of specificational clauses.

(64)



4 Topic–Focus Structure

(65) **Question–Answer Congruence** (Halliday 1967)
The constituent in the answer that corresponds to the *wh*-phrase in the question is the focus.[9]

Observation 1 Predicational clauses have a flexible focus structure.

- Complement focus:

(66) Q: Who is John?
A: John is the mayor.

- Subject focus:

(67) Q: Who is the mayor?
A: John is the mayor.

[9]It is controversial exactly what type of focus this is a test for, but I cannot go into that here.

Observation 2 Specificational clauses have a fixed focus structure:[10]

- Complement focus is fine:

(68) Q: Who is the mayor?
A: The mayor is John

- But subject focus is infelicitous:[11]

(69) Q: Who is John?
A: #The mayor is John.

- also no contrastive focus on subject DP:[12]

(70) Q: Is the mayor Sam?
A: #No, the FIRE CHIEF is Sam.
A: No, the mayor is JOHN

- Specificational clauses have a fixed information structure:
  - complement is focus
  - subject is topic (Mikkelsen 2004b)

Question Why this difference between predicational and specificational clauses?

An intuition

- the fact that the subject of a specificational clause is always topic is related to the fact that the subject DP is less referential than the post-copular DP

The idea in outline

- Other things being equal the most referential DP occupies the subject position. This is the case in predicational copular clauses.
- But the preference for the topic to be in subject position (Prince (1981), Beaver (2003)) may override this default alignment. The result is a specificational clause.
- The reason the subject of a specificational clause is always topic is that this is precondition for getting a specificational clause at all!

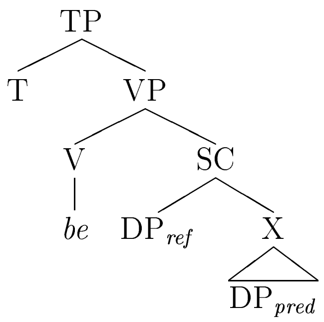
[10]See Higgins (1979:234–6), Partee (2000:199–200), Heycock and Kroch (2002:148–149), Mikkelsen (2002a:§4) and the works cited there.
[11]See Heycock and Kroch (2002) for detailed discussion and defense of this claim.
[12]Data from Partee (2000:200, ex. (46)), who credits Williams (1997).

4.1 Towards an implementation

Work in progress

- Optimality Theoretic analysis (Appendix)
- Minimalist analysis (below)

(71)



- When T bears a standard EPP feature, locality constraints demand that DP$_{ref}$ moves to subject position (Spec-TP), since it is closer to T than DP$_{pred}$. The result is a predicational clause.
- When T bears an uninterpretable topic feature, and DP$_{pred}$ bears an interpretable topic feature, DP$_{pred}$ is the closest element to T bearing a relevant feature (a "goal" in Chomsky's sense). Therefore DP$_{pred}$ raises to Spec-TP. The result is a specificational clause.
- The fact that predicational clauses have a free topic-focus structure can be understood in the following way:
  - when T bears the standard EPP feature and no topic feature, we get a predicational clause (because of locality)
  - either of the DPs may bear an interpretable topic feature without T bearing an uninterpretable topic feature
  - thus either DP may be topic in a predicational clause

Observation What is special about *be* under either implementation is that

- it allows either of its arguments to surface as the subject without any passive marking
- theta roles do not play any role
- animacy plays no role
- topichood does play an important role

A speculation Perhaps these observations are related: either DP is allowed to surface as subject, exactly because theta role (and animacy) considerations are neutralized. Instead, we see topichood emerge as a deciding factor in subject choice in copular clauses (Li 1976).

5 Conclusion

Progress

- First steps towards characterizing Higgins' taxonomy in formal terms.
- Narrowing down of hypothesis space for syntactic structure of specificational clauses
- Specificational clauses are characterized by an unusual alignment of the subject position with the less referential DP, grounded in information structure

Prospects

- gain better understanding of how information structure affects syntactic realization
- extend investigation to remainder of Higgins' taxonomy; equatives and identificational clauses.

Appendix: An optimality theoretic implementation

Starting assumption Predicational and specificational clauses compete for expression of the same input (cf. Moro (1997))

Markedness constraints derived by harmonic alignment of prominence scales (Aissen 1999).

- relevant scales:
  - DP type scale: $\langle e \rangle > \langle e,t \rangle$
  - Discourse prominence scale: topic > non-topic
  - Relational scale: subject > non-subject[13]
- Harmonic alignments:
  - Su/$\langle e \rangle \succ$ Su/$\langle e,t \rangle$ (Partee 1987)
  - Non-Su/$\langle e,t \rangle \succ$ Non-Su/$\langle e \rangle$
  - Su/Top $\succ$ Su/Non-Top (Chafe 1976, Prince 1992)
  - Non-Su/Non-Top $\succ$ Non-Su/Top
- Constraint hierarchies:
  - *Su/$\langle e,t \rangle \gg$ *Su/$\langle e \rangle$
  - *Non-Su/$\langle e \rangle \gg$ *Non-Su/$\langle e,t \rangle$
  - *Su/Non-Top $\gg$ *Su/Top [cf. Beaver's (2003) align]
  - *Non-Su/Top $\gg$ *Non-Su/Non-Top

The input

- copula takes two DP arguments: one predicative, one referential
- the DPs carry information about semantic type and discourse prominence (topichood)[14]
- the copula assigns no theta roles
- example: BE (DP/$\langle e \rangle$/Top, DP/$\langle e,t \rangle$/Non-Top)

[13] I use 'non-subject' as a cover term here. What is intended is the non-subject complement of copular a verb. Higgins (1979) suggests the term 'Predicate Complement', which might be a better choice.

[14] With respect to topichood, this is a simplification. A more realistic approach would try to derive the topic marking in the input from the preceding discourse context, as in Beaver (2003).

Constraint Ranking

- FAITH ... $\gg$ ***Su/$\langle$e,t$\rangle$, *Su/Non-Top** $\gg$ ***Su/$\langle$e$\rangle$, *Su/Top** ... *NON-SU/TOP, *NON-SU/$\langle$e$\rangle$ $\gg$ *NON-SU/NON-TOP, *NON-SU/$\langle$e,t$\rangle$
- FAITH = faithfulness to semantic type and discourse prominence

The candidates

- Predicational candidate: Su/$\langle$e$\rangle$ and Non-su/$\langle$e,t$\rangle$
- Specificational candidate: Su/$\langle$e,t$\rangle$ and Non-su/$\langle$e$\rangle$

Note: a specificational candidate will always violate *SU/$\langle$e,t$\rangle$!

Four kinds of input

1. Neither DP is topic $\rightarrow$ predicational clause only, because *SU/$\langle$e,t$\rangle$ $\gg$ *SU/$\langle$e$\rangle$
2. DP/$\langle$e$\rangle$ is topic $\rightarrow$ predicational clause only (because *SU/$\langle$e,t$\rangle$ $\gg$ *SU/$\langle$e$\rangle$)
3. DP/$\langle$e,t $\rangle$ is topic $\rightarrow$ predicational clause or specificational clause, because

   *SU/$\langle$e,t$\rangle$, *SU/NON-TOP $\gg$ *SU/$\langle$e$\rangle$, *SU/TOP ...
4. DP/$\langle$e,t $\rangle$ and DP/$\langle$e$\rangle$ are both topic $\rightarrow$ predicational clause only[15]

A worry Optionality in the realization of input 3 (and crucially unranked constraints)

[15]See Heycock and Kroch (2002) for relevant discussion of these cases.

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