

Complementiser-like *how* clauses and the distribution of finite clausal complements in English*

Rachel Nye (GIST, Ghent University)
rachel.nye@ugent.be

OVERVIEW

1. The traditional view of distribution
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3. The distribution of finite clausal complements in English
4. Accounting for the distribution of finite clausal complements in English
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❖ Main claims of this talk:

- the distribution of English finite clausal complements (FCCs) is not conditioned by the syntactic/semantic type of these clauses (interrogative/question, declarative/proposition etc.).
- rather it depends upon the specification of the FCC in terms of [+/-*wh*, +/-factive].
- implementation of this proposal in terms of syntactic selection.

1. The traditional view of distribution

1.1 Semantic selection¹: Grimshaw (1979)

❖ Grimshaw (1979): Semantic selection (s-selection) by matrix predicate for finite clausal complements (FCCs) of different ‘semantic types’:

- propositions [P] (...that Mary lived in Spain).
- questions [Q] (...where Mary lived).
- exclamations [E] (...what a lot of time Mary had spent in Spain).

think

- | | |
|--|-----------------|
| (1) a. John <u>thought</u> [that Mary lived in Spain]. | [P-complement] |
| b. * John <u>thought</u> [where Mary lived]. | [*Q-complement] |
| c. * John <u>thought</u> [what a lot of time Mary had spent in Spain]. | [*E-complement] |

ask

- | | |
|--|------------------|
| (2) a. * John <u>asked</u> [that Mary lived in Spain]. | [*P-complement] |
| b. John <u>asked</u> [where Mary lived]. | [Q-complement] |
| c. * John <u>asked</u> [what a lot of time Mary had spent in Spain]. | [* E-complement] |

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¹ It should be noted that Grimshaw (1979) does not use ‘semantic type’ in the sense of type theory. Grimshaw also discusses categorial-selection (c-selection) i.e. the syntactic restrictions which matrix predicates place on the category of their XP complements. This lies beyond the scope of this presentation.

forget

- (3) a. John forgot [that Mary lived in Spain]. [P-complement]
 b. John forgot [where Mary lived]. [Q-complement]
 c. John forgot [what a lot of time Mary had spent in Spain]. [E-complement]

Table 1 - Summary of the types of FCC selected by certain classes of predicates (Grimshaw 1979)

	P	Q	E
<i>think</i>	√	*	*
<i>ask</i>	*	√	*
<i>forget</i>	√	√	√

1.2 Semantics in the syntax: cartography (Rizzi 1997)

❖ Rizzi (1997: 362) 'Complementizers express the fact that a sentence is a question, a declarative, an exclamative...and can be selected as such by a higher selector'.

- Grimshaw (1979: 317): 'treating complement selection syntactically is possible only if the relevant aspects of semantic interpretation are built into syntactic structure.'
- This is exactly what Rizzi's (1997) account does:
 - o complementisers/*wh*-elements located in ForceP type the clause (as P, Q, E).
 - o ForceP is the highest projection in the clause, locally selected by the matrix predicate².

1.3 Comparing Grimshaw (1979) and Rizzi (1997)

- Agree upon the key points that:
 - o Table 1 accepted as basic pattern an account of selection must capture.
 - o selection is for the interpretive 'type' of the complement clause.
- Differ as to whether or not this interpretive 'type' is encoded syntactically, and hence as to whether they see selection of FCCs as syntactic or semantic.
- I argue for a more fundamental rethinking of FCC selection in which selection is not for 'types'.
- Motivated by a consideration of a broader range of types of FCC.

² Although note that the implementation of this is complicated by the fact that not all complementisers/*wh*-expressions are taken to sit in ForceP. There are apparent cases of non-local selection - as in the case of *wh*-expressions which are assumed to occupy lower positions (spec-FocP, spec-IntP) or in languages where the complementiser can be preceded by a topic (Shlonsky 2006). Rizzi (2013) emphasises '[t]he necessity of systematically distinguishing between clause typing positions (entering into selectional relations) and criterial positions (hosting the relevant operator)'.

2. A typology of finite clausal complements in English

- Since Grimshaw (1979), further distinctions made between English FCCs.
- Types of FCC distinguished on basis of distinct interpretation and syntactic properties.
- Result is a more fine-grained typology than the 3 types (P, Q, E) Grimshaw (1979) considers.
- 6 types of finite clausal complement under consideration³:

“Q” → section 2.1

- (4) I asked [**where** Mary lived]. [interrogative]
 (5) I found out [**where** Mary lived]. [resolutive]

“P” → section 2.2

- (6) I thought [**that** Mary had wanted to go to Spain]. [non-factive *that*-clause]
 (7) I found out [**that** Mary had wanted to go to Spain]. [factive *that*-clause]

“E” → section 2.3

- (8) I found out [**what a lot of time** Mary had spent in Spain]. [exclamative]

“???” → section 2.4

- (9) I found out [**how** Mary had wanted to go to Spain]. [complementiser-like *how* clause]

- Distribution of these 6 types changes the picture for selection → section 3, 4, 5.

2.1 Interrogative vs. resolutive

References: Groenendijk and Stokhof (1984), Munsat (1986), Ohlander (1986), Huddleston (1993), Ginzburg and Sag (2000), Lahiri (2002), McCloskey (2006) a.o.

- *ask, wonder* + interrogative
- *find out, tell* + resolutive
- interrogatives ≈ questions (open, question intensions)
- resolutes ≈ answers to questions (closed, resolved, question extensions)

2.1.1 Subject-auxiliary inversion (McCloskey 2006)

- (10) Where does Mary live? [Hiberno-English]
 (11)a. I asked [where did Mary live]. [SAI]
 b. * I found out [where did Mary live]. [*SAI]

³ Not discussed here are *whether*-clauses (polar and alternative questions). As Huddleston (1993, 1994) notes, these show a different distribution to *wh*-variable questions. Ultimately we would like to incorporate these, but they show their own distinctions which would take us too far afield here (Adger & Quer 2001, Sæbø 2007; Egré 2008). Free relatives are sometimes confused with resolutes (cf. discussion in Munsat 1986, Huddleston & Pullum 2002), but are not treated here as they are widely taken to be nominal rather than clausal complements (see e.g. Groos & van Riemsdijk 1981; Huddleston & Pullum 2002, pace Rooryck 1994). Nor are relative clauses considered.

2.1.2 *wh-the hell* (Huddleston 1993)

(12)a. **Where the hell** has she been all this time?

(13)a. I asked [**where the hell** she had been all this time].

b. * I found out [**where the hell** she had been all this time].

2.1.3 Distinct forms for *wh*-expressions

(14) Dh'fhaighnich mi dheth [**ciamar** a chaidh e don sgoil]. [Scottish Gaelic⁴
 asked I of-him how REL went he to-the school
 'I asked him how he went to school.'

(15) Dh'innis e dhomh [**mar** a chaidh e don sgoil].
 Told he to-me as REL went he to-the school.
 'He told me how he went to school.'

2.2 Factive *that*-clause vs. non-factive *that*-clauses

References: Kiparsky & Kiparsky (1970), Hooper and Thompson (1973), Watanabe (1993) a.o.

- *believe, think* + non-factive *that*-clause
- *regret, find out* + factive *that*-clause

(16)a. John believes [that Mary read this book]. ⇒ Mary read this book
 b. John doesn't believe [that Mary read this book]. ⇒ Mary read this book

(17)a. John regrets [that Mary read this book]. ⇒ Mary read this book
 b. John doesn't regret [that Mary read this book]. ⇒ Mary read this book

2.2.1 Main Clause Phenomena (MCP) (e.g. topicalisation)

(18) This book, Mary read (last semester).

(19)a. John believes [that this book Mary read].
 b. *John regrets [that this book Mary read].⁵

2.2.2 Island strength

- Non-factive *that*-clauses are not islands for extraction:

(20)a. Which book did you think [that she read ~~which book~~?] [argument extraction]
 b. When did you think [that she read the book ~~when~~?] [adjunct extraction]

⁴ With grateful thanks to Christopher Lewin for help with the Scottish Gaelic data.

⁵ (19b) is from Maki et al. (1999: 3), example (2c)). I do not share the judgement - (19b) is grammatical for me. Hooper & Thompson (1973) already observe that some speakers permit MCP even in factive *that*-clauses. The crucial point here is that for some speakers there is a contrast in grammaticality between (19a) and (19b).

- Factive *that*-clauses are weak islands for extraction:

- (21)a. Which book did you find out [that she read ~~which book~~]? [argument extraction]
 b. * When did you find out [that she read the book ~~when~~]? [adjunct extraction]

2.2.3 Distinct factive/non-factive complementisers

- in e.g. Modern Greek (Roussou 2010):
 - o factive declarative complementiser: *pu*
 - o non-factive declarative complementiser: *oti*

- (22) Xerome [**pu**/***oti** o Janis elise to provlim a]. [Roussou (2010: 3 ex. (1c))]
 am-glad that the John solved-3s the problem
 'I'm glad that John solved the problem.'

- (23) Pistevo/nomizo [***pu**/**oti** efije noris]. [Roussou (2010: 23 ex. (21a))]
 believe-1s/think-1s that left-3s early
 'I believe/think that he left early.'

2.3 Embedded exclamatives

References: Elliott (1971, 1974), Grimshaw (1977, 1979), Huddleston (1993), Zanuttini & Portner (2003), Abels (2010).

- *wh*-expressions introducing unambiguous cases of (matrix and embedded) exclamatives⁶:
 - *what a* + sg. N
 - *how very* + adj./adv.

- (24)a. What a great man he is!
 b. * What a great man is he?

- (25) She told me [what a great man he is].

- Embedded exclamatives are factive (Grimshaw (1979), Zanuttini & Portner (2003), Abels (2010)):

- (26)a. She forgot [what an idiot he was]. ⇒ he was an idiot
 b. She didn't forget [what an idiot he was]. ⇒ he was an idiot

- Convey something **surprising/noteworthy/unexpected** and/or **high degree**.

- Formalised in terms of:

- o 'scalar implicature to the effect that the proposition they denote lies at the extreme end of some contextually given scale' (Zanuttini & Portner 2003: 47).
- o violation of speaker's expectations and (null) degree operator (Rett 2011).

⁶ Grimshaw (1979) and Zanuttini & Portner (2003) claim that English exclamatives in the embedded but not the matrix domain can be introduced by a broader range of *wh*-expressions, including *who*, *where*, *what*. See Huddleston (1993) and Lahiri (2002) for detailed and convincing counter-arguments to these being exclamatives.

2.4 Complementiser-like *how* clauses (CLHCs)

References: López Couso & Méndez Naya (1996); Legate (2010); Defrancq (2009); Nye (2012).

- “declarative” *wh*-clauses
- surface syntax = *wh*-clause, interpretation ≈ factive *that*-clause:

(27)a. A lot of people have told me [**how** I am more happy and outgoing as a person compared to back then].⁷

b. Jurors have heard [**how** the boy had been placed on the child protection register with Haringey social services nine months before his death].⁸

c. An enthusiastic staff member explained [**how** the 1830s redbrick building had been an outmoded remand center].⁹

d. As an Irishman, I never grew up with the traditional grandfather-in-the-war stories but this made me realize [**how** a whole generation made the ultimate sacrifice].¹⁰

e. Yesterday Daniel Guest recalled [**how** his father had spoken of the risk of sharks] and [**how** he had ‘loved and respected the ocean environment’].¹¹

- CLHCs are factive (Legate 2010):

(28) a. She forgot [how he’d never been to Spain]. ⇒ he’d never been to Spain

b. She didn’t forget [how he’d never been to Spain]. ⇒ he’d never been to Spain

- And have much in common with (factive) *that*-clauses - unlike other *wh*-clauses:
 - embedded only
 - finite only
 - *how* not sensitive to island effects (from negation for instance)
 - *how* not quantificational (no scope interaction with subject quantifiers)

⁷ From *The Observer* 27.07.2008, page 11 col. 2.

⁸ From *The Guardian* 31.10.2008, page 8 col. 5.

⁹ From *The Independent on Sunday, Travel* 27.07.2008, page 7 col. 1.

¹⁰ From *The Independent, Magazine* 28.07.2002, page 7 col. 3.

¹¹ From *The Guardian* 29.12.2008, page 8 cols. 3-5.

3. The distribution of finite clausal complements in English

- Which distributional generalisations fall out of this richer typology of FCCs?
- Impossible to discuss all types in detail, thus **focus on CLHCs**.

- **Hypothesis (i): CLHCs are of the same interpretive type as factive *that*-clauses** (cf. Ginzburg & Sag 2000 for a similar proposal for exclamatives and factive *that*-clauses)
Prediction: factive *that*-clauses and CLHCs have the same distribution.
Outcome: difference in distribution despite similarity in interpretation.

- (29)a. We found out [**how** they hadn't been given the opportunity to return].
 b. We found out [**that** they hadn't been given the opportunity to return].

- (30)a. Sandra described/detailed/discussed [**how** they weren't given the opportunity to return].
 b. * Sandra described/detailed/discussed [**that** they weren't given the opportunity to return].

- (31)a. * I'm happy/glad/sorry [**how** they weren't given the opportunity to return].
 b. I'm happy/glad/sorry [**that** they weren't given the opportunity to return].

- **Hypothesis (ii): CLHCs are a distinct type of their own.**
Prediction: CLHCs have a different distribution to all other types.
Outcome: similarity in distribution, despite difference in interpretation.

- (32)a. John forgot [**how** Mary had never been to Spain]. [CLHC complement]
 b. John forgot [**what a** lot of time Mary had spent in Spain]. [E-complement]
 c. John forgot [**why** Mary had been to Spain]. [resolutive complement]

- (33)a. * John thought [**how** Mary had never been to Spain]. [*CLHC complement]
 b. * John thought [**what a** lot of time Mary had spent in Spain]. [*E-complement]
 c. * John thought [**why** Mary had been to Spain]. [resolutive complement]

- (34)a. * John asked [**how** Mary had never been to Spain]. [*CLHC complement]
 b. * John asked [**what a** lot of time Mary had spent in Spain]. [*E-complement]
 c. # John asked [**why** Mary had been to Spain]. [#resolutive complement]

- (35)a. Sandra also described/detailed/discussed [**how** they weren't given the opportunity to return]. [CLHC]
 b. Sandra also described/detailed/discussed [**what a** dreadful experience it was]. [E-complement]
 c. Sandra also described/detailed/discussed [**why** Mary had been to Spain]. [resolutive complement]

- (36)a. * I'm happy/glad/sorry [**how** they weren't given the opportunity to return]. [*CLHC]
 b. * I'm happy/glad/sorry [**that** they weren't given the opportunity to return]. [*E-complement]
 c. * I'm happy/glad/sorry [**why** Mary had been to Spain]. [*resolutive complement]

Table 2 - Overview of the distribution of finite clausal complements in English¹²

	predicate classes	non-factive <i>that</i> -clause	factive <i>that</i> -clause	CLHC	exclam.	resolutive	interrog.
1	interrogative predicates ask; wonder	n ¹³	n	n	n	n	y
2	believe; suppose; think; say; be (un)likely	y	n	n	n	n	n
3	be happy; be glad; be surprised; be puzzled; be sorry; bother	n	y	n	n	n	n
4	describe; detail; discuss	n	n	y	y	y	n
5a	factives learn; see; forget;	n	y	y	y	y	n
5b	emotive factives be odd; be strange; be interesting; be amazing; be surprising; be funny; be odd ; resent; regret	n	y	y	y	??y ¹⁴	n
6	tell; report ; communicate	y	?n?	y	y	y	n
7	semi-factives realize; find out; know; discover; recognize; remember	y	y	y	y	y	n
	complement to P	n	n	y	y	y	y

N.B. Classes of matrix predicates determined on the basis of the types of FCCs they can take.

➤ **Summary:**

- **CLHCs and factive *that*-clauses have a distinct distribution despite their interpretive and syntactic similarities.**
- **CLHCs, exclamatives and resolitives have a common distribution despite their interpretive and syntactic differences.**

¹² Previous literature on the distribution of English FCCs includes:

- *that*-clauses: Kiparsky & Kiparsky (1970); Hooper & Thompson (1973)
- exclamatives: Elliott (1971; 1974), Grimshaw (1979).
- overview: Leonarduzzi (2000)

Munsat (1986) notes the similarity in distribution between resolitives and factive *that*-clauses, and Ginzburg & Sag (2000) extends this to include exclamatives. Grimshaw (1979) already observed however that exclamatives cannot occur as the complement to all predicates which select factive *that*-clauses.

¹³ *ask* can take *that*-clause complements, but only in the subjunctive (cf. (i) vs. (ii)). Subjunctive clauses are beyond the scope of my current research.

- (i) He asked that he be excused from jury duty.
- (ii) * He asked that he is/was excused from jury duty.

¹⁴ Huddleston (1993) and Lahiri (2002) provide convincing arguments that the emotive factives do accept resolutive complements, contra Grimshaw (1979) and Munsat (1986). See section 6.2.3 for further discussion.

4. Accounting for the distribution of finite clausal complements in English

- The common distribution of CLHCs, exclamatives and resolutives could still be captured in Grimshaw's/Rizzi's system:
 - EITHER: by stipulating that three types of FCCs (CLHCs, exclamatives and resolutives) just so happen to occur under the same range of predicates.
 - OR: by positing an over-arching type, covering CLHCs, exclamatives and resolutives.
 - However, both of these solutions seem ad hoc and unexplanatory.
 - A more parsimonious approach: **common distribution of CLHCs, exclamatives and resolutives due to properties which they hold in common.**
 - CLHCs, exclamatives and resolutives are all *wh*-clauses, but they are not the only *wh*-clauses (interrogatives).
 - CLHCs, exclamatives and resolutives are all factive clauses, but they are not the only factive clauses (factive *that*-clauses)
 - **CLHCs, exclamatives and resolutives are the only *wh*-factive clauses.**
- **Finite complement clauses characterised in terms of properties [+/-wh, +/- factive].**

Table 3 - Characterisation of English FCCs in terms of their distributionally-relevant properties

Type of complement clause	[+/-wh]	[+/- factive]	[+/-wh, +/- factive]
interrogative	+wh	-factive	[+wh, -factive]
resolutive	+wh	+factive	[+wh, +factive]
exclamative	+wh	+factive	[+wh, +factive]
CLHC	+wh	+factive	[+wh, +factive]
non-factive <i>that</i> -clause	-wh	-factive	[-wh, -factive]
factive <i>that</i> -clause	-wh	+factive	[-wh, +factive]

Table 4 - Characterisation of English predicate classes in terms of the properties of their FCCs

	Class of predicates	Properties of their FCCs
1	interrogative predicates: ask; wonder	[+wh, -factive]
2	believe; suppose; think; say; be (un)likely	[-wh, -factive]
3	be happy; be glad; be surprised; be puzzled; be sorry; bother	[-wh, +factive]
4	describe; detail; discuss	[+wh, +factive]
5a	factives: learn; see; forget	[+factive]
5b	emotive factives: be odd/strange/interesting/amazing; resent; regret	[+factive]
6	tell; communicate; report	[+wh, +factive]; [-wh, -factive]
7	semi-factives: realise; find out; know; discover; recognize; remember	[+factive]; [-wh, -factive]
	complement to P	[+wh]

- CLHCs, resolutive and exclamative complements share the feature specification [+wh, +factive].
- Thus they are able to occur under all and only predicates which select for [+wh, +factive] complements ([+wh, +factive], [+factive], [+wh]).

5. Consequences for selection and beyond

5.1 Consequences for selection

- ❖ **Proposal**
- **The 2 components determining distribution are syntactically encoded in the FCCs themselves:**
 - **+/-wh** (cf. Watanabe 1993)
 - **+/-factive** (cf. Kiparsky & Kiparsky 1971)
- **Matrix predicates select for clausal complements on the basis of these binary features.**
- **Thus selection of FCCs takes place in the syntax.**

5.1.2 Support for the proposal

- **wh as formal syntactic feature contributed by wh-expressions¹⁵**
- no constant semantic correlate, contra Ramchand (1996), Simik (2008):
 - **distributionally:** CLHCs behave like other *wh*-clauses (e.g. complement to P)
 - **semantically:** CLH differs from other (left peripheral) *wh*-expressions:
 - not an operator
 - not quantificational

❖ **If one of the components relevant for selection of an FCC is syntactic, perhaps both are?**

- **Factivity as a syntactic property of the relevant FCCs¹⁶:**
 - that-clauses:
 - null nominal ('the fact'): Kiparsky & Kiparsky (1970).
 - presence of an operator: Melvold (1991); Watanabe (1993) a.o.
 - movement of an operator: Haegeman (2012).
 - CLHCs:
 - DP-layer in syntax: Legate (2010).
 - resolutives:
 - factive complementiser: Munsat (1986).
 - exclamatives:
 - factive operator: Zanuttini & Portner (2003)¹⁷; Ono & Fujii (2006).
- **Presence of an operator is responsible for factivity in all factive FCCs?** (common denominator between accounts of factive *that*-clauses and those given for exclamatives).

¹⁵ As Michal Starke [p.c] points out, it is not correct to term this a morpho-syntactic feature, as not all members of the paradigm are morphologically *wh* (*how* in English, cf. also e.g. *chi* 'who', *che* 'what' vs. *dovè* 'where' in Italian).

¹⁶ Note that there is debate in the literature about whether factivity is the correct characterisation of the property. It has alternatively been argued to be definiteness (Melvold 1991), familiarity (Hegarty 1992) and referentiality (de Cuba & Ürögdi 2009a,b; Haegeman & Ürögdi 2010a,b; Hinzen & Sheehan 2011). Nothing in my proposal hinges on this property being factivity rather than, for instance, referentiality.

¹⁷ Note that Zanuttini & Portner's (2003) proposal is for matrix exclamatives. They suggest that the factivity of embedded exclamatives comes rather from the (factive) predicates under which they are embedded.

5.1.3 Issues

Concerning implementation:

- How are the +/-*wh* and +/-factive specifications encoded such that both are accessible for (local) selection by a higher predicate?
- Do all the distributional patterns really need to be accounted for in terms of selection, or is the absence of some combinations predictable (Grimshaw 1979)?

More fundamentally:

- Why are these particular combinations of features selected (by these particular classes of predicates), and not others?

5.2 Consequences for 'type'

- What is the status of 'type' under the revised view that it is not relevant for selection?
- Clear that despite their common distribution, CLHCs, resolutives and exclamatives differ in interpretation and syntactic behaviour.
- In principle, FCCs could still be associated with a syntactically-/semantically-encoded type.
- However, tentative extension of idea that selection is not for the type of the FCC:

- **Hypothesis (i):** the reason that there is no selection for type is because there is no 'type', in the sense of a syntactically/semantically encoded primitive.

- Zanuttini & Portner (2003); Isac (2012): independently of the question of selection, put forward the idea that 'force' is not a primitive.
- Zanuttini & Portner (2003) - necessary syntactic components for exclamative interpretation:
 - *wh*-operator-variable configuration
 - factive operator
- Striking similarity to those which I independently concluded were relevant for selection.

- **Hypothesis (ii):** The properties of a FCC relevant for selection by a matrix predicate are (a subset of) those which contribute to determining the type of the FCC.

- If this is the case, the distribution of FCCs isn't entirely divorced from their type.
- Less direct connection than that posited by Grimshaw (1979) and Rizzi (1997), however.
- **What are the properties which differentiate CLHCs, resolutives and exclamatives, and how are these encoded?**

6. Conclusions and issues for further research

6.1 Conclusions

- Fine-grained approach to the types of FCC we posit reveals new distributional patterns:
 - FCCs which we may expect to belong to the same interpretive type show differences in distribution (CLHCs, factive *that*-clauses).

- FCCs of distinct interpretive types (CLHCs, exclamatives, resolutives) show identical distribution.
→ **challenges the view that selection of FCCs involves selection for ‘type’.**
- Distribution rather determined by properties of FCC: [+/-wh; +/-factive].
- Implemented in terms of syntactic selection.
- These same components also contribute to the composition of clausal force?

6.2 Issues for further research

6.2.1 Finite complement clause selection: the full picture

- Focus here on **selectee**. In order to fully understand the selection of FCCs, we also need to ask:
 - **What is the nature of the selector?** Here I have made the simplifying assumption that it is the matrix predicate, but already observed that additional properties of the matrix clause also have an influence on the kinds of FCC permitted: negation, interrogation, modals, differences in tense/aspect... (McCloskey (2006), Turnbull-Sailor (2007)).

- (37)a. * I believe what an idiot he is. [*exclamative]
 b. I can't believe what an idiot he is. [exclamative]

- **What is the relation between the selector and the selectee?** What is the precise mechanism for selection? Agree? Subcategorisation?

6.2.2 The emotive factives

- Emotive factives do not seem to accept all resolute complements:

- (38)a. * It's amazing [why he left].
 b. * It's amazing [whether he left].

- Resolute complements to emotive factives are impossible (contra my generalisation)?
- Huddleston (1993); Lahiri (2002) provide convincing arguments to the contrary, e.g. grammaticality of such clauses when they contain multiple *wh*-expressions:

- (39) It's amazing [who bought what].

- **My position:** emotive factives can in principle select for resolutives. Other factors orthogonal to the issue of selection itself are responsible for the fact that they are not always felicitous.
- The reason for this effect, in this particular context, and in particular why it does not affect other [+wh, +factive] clause complements to the same predicates remains to be investigated.

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