An implicational hierarchy for declarative complement clauses

Nominal structure without nominal properties

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Main ideas

1. While an optional nominal (i.e. DP) layer is often proposed for English *that*-clauses, I argue that they **always** come with such layer so that the true non-nominal clauses are COMP-drop clauses.
2. While a one-to-one correspondence between the DP layer and presuppositionality (factivity, givenness, etc.), is often assumed, I argue that there is a **one-way implication** from semantics to syntax
3. Languages differ as to what specific semantic distinctions they must syntactically encode with a nominal layer but there is a **universal implicational hierarachy**.

That-clauses with an (overt) nominal layer

- Russian (but also Greek, Hebrew, Persian, etc.) has *that*-clauses embedded in an **nominal layer** apart from ordinary *that*-clauses
- *That*-clauses with a nominal-layer are often **obligatory** / strongly preferred in specific syntactic positions, e.g. as subjects (topics, etc.)

(1) a. [??(to,) [čto u tebja est' druz'ja]] mnogo značit
that.NOM COMP at you is friends much means
'That you have friends means a lot.'

Russian

b. [*(to) [oti ehis filus]] simeni pola
the.NOM COMP you.have friends.ACC means much
'That you have friends means a lot.'

Greek (Roussou 1991)

See, a.o., Hartman 2012, Roussou 1991, Kastner 2015, Farudi 2007.

Null (definite) DP-layer for English *that*-clauses

- Facts like above suggest that sentential subjects (and possibly other types of sentential arguments) are **universally nominal** (i.e. DP)
- ⇒ English sentential subjects (and topics) are embedded in a **null DP-layer**, e.g. headed by a definite determiner Δ (Kastner 2015)

(2) [$_{\text{DP}}$ Δ [$_{\text{CP}}$ That the building collapsed]] surprised me.

- Kastner (2015) assimilates sentential subjects to discourse-old referents (in the CG), including **presuppositional complements** of:
  - factive/NON-STANCE verbs: *regret*, *know*, *remember*, *realize*, *notice*...
  - RESPONSE-STANCE verbs: *deny*, *accept*, *agree*, *admit*, *confirm*...
  - **but not** VOLUNTEER-STANCE verbs: *think*, *suppose*, *assume*, *claim*...

(3) a. Bill remembers/denies [$_{\text{DP}}$ Δ [$_{\text{CP}}$ that J. stole the cookies]].
b. Bill thinks [$_{\text{CP}}$ that John stole the cookies]].

See also Cattel 1978, Davies and Dubinsky 2009, cf. De Cuba and Ürögdi 2009, Haegeman and Ürögdi 2010, Sheehan and Hinzen 2011.

Problem for Kastner 2015: Restrictions on C-drop clauses

- C-drop (4-a) is **degraded in presuppositional clauses**, cf. subjects (4-b), topics (4-c), emotive factives (4-d), response-stance (4-e)–(4-f)
- NB: possible with semifactives and some emotive factives (*glad*, etc.)

(4)
a. Bill thinks/says (that) John stole the cookies.
b. *(That) John will be re-elected] is very likely.
c. *(That) the results were fantastic, Albert denied/knows *t*.
d. I regret/resent/care/mind *(that) John's late.
e. They accepted/confirmed *(that) John stole the cookies.
f. They deny/doubt/agree ?/??(that) John stole the cookies.

- Problem for Kastner 2015: Nothing blocks C-drop in presuppositional clauses (assuming null C analysis), but unlikely a coincidence

(5) *Bill remembers/denies $[_{\mathrm{DP}}\ \Delta\ [_{\mathrm{CP}}\ \mathrm{C}^0$ John stole the cookies]].

See Hegarty 1992, Doherty 2000, Bošković and Lasnik 2003, Sheehan and Hinzen 2011.

Further problem: C-drop in noun-complement clauses

- C-drop is often taken to be disallowed in noun complements

(6) *I heard about the fact Mary did it. (Bošković and Lasnik 2003)

- But there are systematic exceptions, where N "reanalyzes" with a (light) V into an assertive/non-presuppositional predicate (Dor 2005)

(7) a. We got the message (≈ heard) they were coming.
b. *I lost the message they were coming.

(8) a. They came to the conclusion (≈ decided) they had to act.
b. *They stressed the conclusion they had to act.

⇒ C-drop is disallowed only in **presuppositional noun complements**
Similar contrasts for Russian *čto*/*to*,*čto*-clauses (Knyazev 2016, 2020)
⇒ ban on C-drop must be related to the presence of a DP-layer

See also de Cuba 2017, Haegeman 2012.

Excursus: "Collocational restriction" on *čto*-clauses

- Knyazev 2016: *Čto*-clause complements of N require a DP-layer unless they occur in "collocational" contexts (e.g. 'have hope' ≈ 'hope')

(9) a. Menja udivljaet tvoja **nadežda** ??(na to), čto oni pobedjat.
me.ACC surprises your hope.NOM on that.ACC COMP they will win
'Your hope that they will win surprises me.'
Presupposition: You hope that they will win. (otherwise #)

b. U menja est' **nadežda** (na to), čto oni pobedjat.
at me.GEN is hope.NOM on that.ACC COMP they will win
'I have hope that they will win.'

- A novel account: N-complement clauses outside collocational contexts are presupposed, hence DPs (⇒ overt *to*)
- Correct prediction: *to* is not required in non-collocational contexts (e.g. predication) as long as the clause is not presupposed

(10) Vsë, čto ostalos', – **nadežda** (na to), čto oni pobedjat.
all COMP left hope.NOM on that.ACC COMP they will win
'All that is left is hope that they will win.'

Proposal: Complementizer *that* realizes the DP-layer

- Basic idea: in English, a DP-layer is realized by a *that*-clause
- Implementation (DM): C is realized as *that* in the context of Δ (after Δ + C Merger). Alternative: *that* realizes the D–C span.
  In languages like Russian, the DP-layer is realized by an overt D

(11) English

a. $C_{[decl]} \leftrightarrow$ *that* / Δ ___
b. $C_{[decl]} \leftrightarrow \varnothing$ (Elsewhere)
c. $\Delta \leftrightarrow \varnothing$

(12) Russian

a. $C_{[decl]} \leftrightarrow$ *čto*
b. $\Delta_{[case]} \leftrightarrow$ *to*$_{[case]}$

⇒ Presuppositional clauses disallow C-drop (null C is blocked by *that*)
⇒ . . . and require an overt DP-layer in languages like Russian

1. Consequence: English *that*-clauses are always embedded in a DP-layer (otherwise the structural condition for insertion of *that* is not met)

(13) Bill thinks [$_{\mathrm{DP}}$ Δ [$_{\mathrm{CP}}$ that John stole the cookies]].

Non-standard *to čto*: evidence for Δ + C Merger?

- In non-standard varieties of Russian *čto*-clauses are systematically "replaced" by the "emerging complementizer" *to čto*.
- not identical to [$_{DP}$ *to*$_{acc/nom}$ [$_{CP}$ *čto*. . .]]: can occur in non-ACC/NOM positions and co-occur with an overt DP-layer

→ *to čto*$_{non\text{-}standard}$ is the result of Δ + C Merger (Lowering)

(14) a. On dumaet to, čto on dolžen stat' lučšim v svoem klasse.
he thinks that.ACC COMP he must become best in his class
'He thinks that he must become best in his class.'
[vk.com/@balnayalatina-kak-povysit-uroven-svoei-latiny]

b. Tak nadejalsja to, čto ja vižu vsë èto v poslednij raz.
so hoped that.ACC COMP I see all this in last time
'I hoped so much that I saw all this last time.'
[on-hit.ru/texts/tekst-pesni-frendzona-v-starshej-shkole/]

c. Oficial'no zajavljaju o tom to, čto my vernulis'.
officially announce about that.LOC that.ACC COMP we returned
'I officially declare that we have come back.'
[hvk.com/wall-178153728_172]

See a.o. Serdobolskaya and Egorova 2019, Knyazev 2019.

Handling potential "Case Filter" problems

- Problem (also for Kastner's analysis of presuppositional clauses): Complements of Vs that disallow contDP/propDP (Elliott 2017)
- Fix: P is realized as zero in the context of Δ (after P + Δ Merger)

(15) a. I complained *(about) something.
b. I complained [$_{\text{PP}}$ P^0 [$_{\text{DP}}$ Δ [$_{\text{CP}}$ that John is always late]]].

(16) a. P ↔ ∅ / ___ Δ b. P ↔ *about*, *for* . . . (Elsewhere)

✓ Also accounts for the *[P CP] constraint (null P will block overt P)

(17) *I complained [$_{\text{PP}}$ about [$_{\text{DP}}$ Δ [$_{\text{CP}}$ that John is always late]]].

- *That*-clauses with passive/raising Vs potentially handled by restrictions on the associate of the expletive (McFadden 2004)

(18) a. *It is believed [$_{\text{DP}}$ something].
b. It is believed [$_{\text{DP}}$ Δ [$_{\text{CP}}$ that John is always late]].

Syntax-semantic mismatches (in one direction!)

⇒ While presuppositionality *must* be expressed by a DP-layer (i.e. *that*-clause), DP-layer *need not* express presuppositionality (since English *that*-clauses can be non-presupposional)

	CP	DP
non-presuppositonal clauses	✓	✓(vacuous!)
presuppositonal clauses	✗	✓

- Wurmbrand and Lohninger 2019: similar conclusions for the cross-linguistic realization of different complement types

	VP	TP	CP
Event	✓	✓(vacuous)	✓(vacuous)
Situation	✗	✓	✓(vacuous)
Proposition	✗	✗	✓

2. Syntactic structure does not determine meaning (can be vacuous), but there are minimal structure requirements for semantic concepts.

Conditions for the DP-layer differ across languages

✓ Russian: overt DP-layer is optional in non-presuppositional clauses

(19) On uveren (v tom), čto vyigraet.
he sure in that.LOC COMP will win
'He is certain that he will win.' {*Context*: What about Vasya?}

✗ . . . but not obligatory for emotive factives and response-stance verbs (must be analyzed as CPs, assuming Russian lacks null Δ)

(20) a. Vasya sožaleet (o tom), čto komanda proigrala.
Vasya regrets about that.ACC COMP team lost
'Vasya regrets that his team lost.'

b. Vasya otricaet (to), čto ukral konfetu.
Vasya denies that.ACC COMP stole candy
'Vasya denies that he stole the candy.'

⇒ Languages may differ as to which specific concepts require a DP-layer

Implicational hierarchy for presuppositional clauses

- Different types of presuppositional clauses are ordered s.t. if a given type is realized as DP, then all types above are also realized as DP

	English	Russian
(pre-verbal) subjects	DP/*CP	DP/*CP
topics	DP/*CP	DP/$^{?}$CP
emotive factive complements	DP/$^{*?}$CP	DP/CP
response-stance complements	DP/$^{?}$CP	DP/CP
semi-factive complements	DP/CP	DP/CP
assertive/volunteer-stance complements	DP/CP	DP/CP

Table: A partial/programmatic hierarchy for English and Russian

- Possible motivation: The more a clause resembles a prototypical discourse-old referent, the more likely DP is (required) to be projected

3. No universal requirement for any specific presuppositional clause type to project a DP, but some types are universally more likely to do so

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"Agentivity restriction" on *čto*-clauses (Knyazev 2016)

- In Russian, complements of some (non-agentive) **verbs of demonstration** require an overt DP-layer (Knyazev 2016)

(21) Èto govorit ??(o tom) / namekaet ??(na to), čto on proigral.
this says about that.LOC hints on that.ACC COMP he lost
'This means that he lost. {#But he didn't.}'

- Possible account: Such complements are **veridical** (Anand and Hacquard 2014), and veridicality requires the projection of a DP-layer
- Evidence: English verbs of demonstration disallow C-drop (?)

(22) The bloody gloves demonstrate ??(that) Mary is the murderer.

- Cf. Knyazev's (2016) account: **all** *čto*-clauses are DPa, licensed (in non-Case positions) by P^0, which requires an agent/holder argument

A null DP-layer in the accusative position in Russian?

- Problem: +ACC verbs of demonstration do not require an overt *to*

(23) Èto označaet / dokazyvaet (to), čto on proigral.
this means proves that.ACC COMP he lost
'This means that he lost. {#But he didn't.}'

- Fix: Perhaps a DP-layer may be null, but only in ACC-contexts, where it alternates with overt *to* (NB: only applies to V-assigned ACC)

(24) a. $C_{[decl]} \leftrightarrow$ *čto*
b. $\Delta_{[case]} \leftrightarrow$ *to*$_{[case]}$
c. $\Delta_{[acc]} \leftrightarrow \varnothing$ (preferred) / *to*

(25) Èto označaet / dokazyvaet, [$_{DP}$ Δ [$_{CP}$ čto on proigral]].

'Explain': further evidence for a null DP-layer in Russian

- The *explanandum* complement of 'explain' is taken to refer to a fact/DP (Kastner 2015, Elliott 2017)
- but it does not require *to* in Russian (Bondarenko, this workshop)
- NB: the reading requires a manner/instrumental phrase

(26) Kak ty obj"asniš' (to), čto oni proigrali?
how you explain that.ACC COMP they lost
'How will you explain that they lost?

- Evidence that *explanandum* must be DP: overt *to* disallows *explanans*

	explanandum	*explanans*
complex NP ('the fact that')	✓	✗
overt DP (*to*)	✓	✗
null DP (Δ)	✓	✗
CP (no D)	✗	✓

Dispreference for overt *to* in the accusative position

- Another ACC vs. non-ACC asymmetry: [+ACC] volunteer-stance verbs disprefer *to* in standard Russian
- If DP is freely projected, this is a problem if a DP-layer is **always** overt

(27) a. On **nastaivaet** (na tom), čto ona prava.
he insists on that.LOC COMP she right
'He is certain that she is right.'

b. On **skazal** / **dumaet** (??to), čto ona prava.
he said thinks that.ACC COMP she right
'He said/thinks that she is right.'

- But if $\Delta_{[+ACC]}$ may be null, the dispreference for *to* may apply to the realization of Δ but not to the projection of Δ as such
  $\Rightarrow$ [+ACC] and [–ACC] clauses remain structurally symmetric

(28) a. On {skazal/nastaivaet na} [$_{DP}$ Δ/tom [$_{CP}$ čto ona prava]].
b. On skazal/nastaivaet [$_{CP}$ čto ona prava].

English and Russian C-drop clauses do not match

- English C-drop clauses should be matched by Russian *čto*-clauses rather than C-drop clauses (since both are CP), which seems correct

	English	Russian
clause with a DP-layer	*that*-clauses	*to*,*čto*-clauses
bare CP	C-drop clauses	*čto*-clauses

- Russian C-drop clauses have a more restricted distribution: e.g. no negation, embedding ($\Rightarrow$ parenthesis/parataxis, not complementation)

(29) a. Oni (*ne) govorjat / dumajut, ja durak.
they not say think I fool
'They (don't) say/think I am wrong.'

b. Ona prodolžaet govorit / dumat', ??(čto) ja neprav.
she continues say.INF think.INF COMP I wrong
'She continues to say/think (that) I am wrong.'

c. Ona predpoložila / podozrevala, ??(čto) ja uexal.
she assumed suspected COMP I left
'She assumed/suspected (that) I left.'

But see Serdobolskaya 2017.

DP requirement as a violable constraint

- *Čto*-clauses occassionally occur as subjects in the corpus albeit considerably less frequently than *to,čto*-clauses
- Question: does this falsify the DP requirement on sentential subjects (or perhaps the realization rule $\Delta_{[nom]} \leftrightarrow$ *to*)?

(30) a. Čto u menja dvoe detej, načal'stvu, konečno, **izvestno**.
COMP at me two kids authorities.DAT surely well-known
'That I have two kids is surely well-known to the bosses.'
[N. Baranskaja. Nedelja kak nedelja (1969)]

b. Čto èto tak, **podtverždaet-sja** replik-oj Jakovlev-a...
COMP this so confirms-REFL remark-INS Jakovlev-GEN
'That this is so is confirmed by Jakovlev's remark.'
[A. S. Černjaev. Dnevnik (1985)]

→ DP requirement is a violable constraint, predicting **the probability** (not possibility) **of a structure**, as modeled e.g. by association / interaction btw. structure and context in corpus / experiment

Degree of violability within a language: a mini-corpus study

- DP requirement may be violable to different degrees **depending on the type of presuppositional clause** (e.g. sentential subject)

✓ different frequencies of *čto*-clause in different types of subjects in RNC

	$N_{\text{pred. types}}$	$N_{čto}$ (%)	$N_{to,čto}$ (%)
subjects of V_{prove} class	12	2 (0.02)	108 (0.98)
preverbal subjects of V_{worry} class	16	8 (0.11)	63 (0.89)
subjects of passive of V_{prove} class	8	9 (0.17)	44 (0.83)
topicalized objects of V_{prove} class	11	23 (0.31)	61 (0.73)
preverbal subjects of $A_{correct}$ class	8	21 (0.31)	47 (0.69)

Table: RNC results (texts after 1950)

4. The implicational hierarchy must be restated as a relative likelihood of encoding a concept as DP both across *and within* languages

Thank you!

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