Presuppositionality and syntactic nominalization in finite clausal complements

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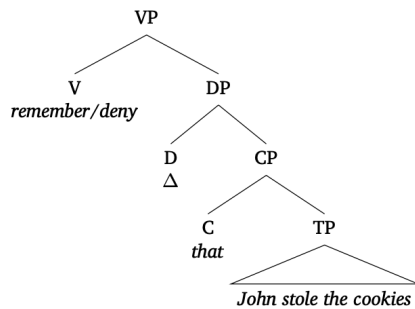UC Berkeley

Introduction

- What syntactic structure is present in finite clausal complements?

- A vanilla approach to complements like English *that*-clauses treats them as CPs, but this has been by no means uncontested.

- One relevant axis of variation: factivity or presuppositionality.

- Kastner (2015): **presuppositional clauses are DPs**, while **nonpresuppositional clauses are CPs**.

- I argue against positing a cross-linguistic bijection between presuppositionality and syntactic nominalization/ DP-hood.

- Cross-linguistically, **syntactic nominalization is neither necessary nor sufficient for a presuppositional interpretation**.
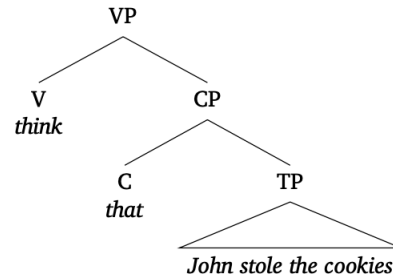

Outline

1. Establishing a bijection

2. What makes a DP?

3. Presuppositionality without nominalization

4. Nominalization without presuppositionality

5. Conclusion

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1   Establishing a bijection

- Additional syntactic structure has been proposed for a while to be present in a subset of *that*-clauses (c.f. the FACT element in Kiparsky and Kiparsky (1970)'s analysis of factive clauses).

- Kastner (2015) [K15] makes a recent and strong claim in this vein.

- K15: there is a syntactically-projected, phonologically null D head Δ in **presuppositional** (and only presuppositional) clauses.

(1)   Presuppositional clauses: complements to presuppositional verbs (factives + response-stance verbs)
    a.   i. FACTIVE: *regret*, *know*, *remember*, *realize*, *notice*, ...
          ii. RESPONSE STANCE: *deny*, *accept*, *agree*, *admit*, *confirm*, *verify*, ...
         iii. VOLUNTEERED-STANCE: *think*, *suppose*, *assume*, *claim*, *suspect*, ...   (K15:7)

- Here, Δ is a definite D head that introduces a presupposition of the complement's presence in the common ground (as a discourse referent).

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        VP
       /  \
      V    DP
remember/deny  /  \
           D    CP
           Δ   /  \
              C    TP
             that   /\
              John stole the cookies

Kastner (2015):14
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      VP
     /  \
    V    CP
  think /  \
       C    TP
      that  /\
       John stole the cookies

Kastner (2015):17
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- How does Kastner argue for the presence of Δ **in English**? → three differences between presuppositional and non-presuppositional *that*-clauses.

1. **Fronting:** no fronting permitted in presuppositional clauses

- Some but not all speakers of English permit fronting in some embedded clauses. (Contrary to claims that fronting is a Main Clause Phenomenon, e.g. Hooper and Thompson (1973)).

- Among speakers who permit fronting, fronting is more acceptable in non-presuppositional complements like (2a) than presuppositional ones like (2b).

(2) a.   John thinks that [this book, Mary read].   (K15:5a)
     b. * John regrets/denies that [this book, Mary read].   (K15:6a)

- This judgment is gradient and not shown by all speakers, but the relative judgment of (2a) > (2b) is reasonably stable among speakers who permis some embedded-clause fronting.

- K15 suggests that the D Δ selects for a complement CP that necessarily lacks Top and Foc nodes (or requires them to be unfilled).

2. **Pro-forms**: presuppositional complements can be referred to using *as* or *which*, non-presuppositional only *as*

(3) a. Americans should get cheap oil , as/which the whole world knows.   (K15:63)
     b. Americans should get cheap oil , as/*which the whole world says/claims.   (K15:65)

- Kastner suggests that *which* is a DP proform, *as* a CP one.

- Presuppositional complements have a DP with a phonologically null head and complement CP:

    ○ [DP Δ [CP p]]
    ○ *Which* can replace the whole DP, or *as* can replace just the CP.

- Non-presuppositional complements are just CPs, so *as* is the only possibility.

3. **Weak islandhood**: presuppositional complements are weak islands

- Adjunct and subject extraction is degraded with presuppositional complements:

(4) a.   Why do you think/#remember/#deny [that John stole the cookies t]?   (K15:1c-2c)
     b.   Who do you think/?*remember/?*deny [t stole the cookies]?   (K15:1b-2b)

- Kastner also associates this property with syntactic nominalization.

- Adopting a *semantic* account of weak islandhood from Honcoop (1998), K15 assumes that presupposed, "definite" complements do not permit the right kind of anaphoric relations required for extraction from weak islands.

- Δ is the syntactic piece that incorporates definiteness.

2 What makes a DP?

- Any account that posits multiple syntactic categories of clausal complements presupposes the ability to identify the category of a given complement.

- It is worth noting that the differences that Kastner points out, though empirically real, are not traditional diagnostics for syntactic category.

- As is well-known (since at least Emonds (1972)), there are ways in which English *that*-clauses do not behave like non-clausal DPs for selectional purposes:

1. **Objects of prepositions**

- One hallmark of English non-clausal DPs that is presumably directly associated with case-marking is that they can robustly occur as the objects of prepositions:

(5)   {We talked about/Anna was surprised by} my cat's age.

- In most cases, as has been known since at least Emonds (1972), *that*-clauses cannot occur in these environments.[1]

(6)   {We talked about/Anna was surprised by} *(the fact) that my cat is eighteen years old.

2. ¬ **Noun complements**

- Similarly, it is well-established that English *that*-clauses but not non-clausal DPs may occur as noun complements.

(7)   a. the discovery (*of) that the election had been rigged
        b. the discovery *(of) the rigged election

- Non-clausal DPs require the case-assigning preposition *of*, while (factive) *that*-clauses do not permit it.

- On an account like Moulton (2015), *that*-clauses here are adjuncts to the NP.

3. **Sentential subjects**

- Potentially weaker evidence comes from sentential subjects.

- Lohndal (2014) has proposed that there is substantial interspeaker variation on what position in the clause a subject *that*-clause occupies.

- It can still help motivate the broader point that there are differences between presuppositional *that*-clauses and non-clausal DPs.

- Alrenga (2005) has observed that English *that*-clauses cannot occur following a fronted auxiliary:

(8)   Was [*(the fact) that the moon landing succeeded] surprising to you?

- Alrenga suggests that *that*-clauses are in Spec of a higher TopP (coindexed with a null pronoun in Spec,TP).

- At a minimum, we need some difference between non-clausal DPs and *that*-clauses to explain why, for the speakers who disallow sentences like (8), *that*-clauses do not simply move to Spec,TP.

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[1]I thank a reviewer for mentioning that it is possible to find corpus examples of *talked about that* embedding a *that*-clause:

(1)   You talked about [that the anniversary kicks off a yr's price of epic storytelling]. Contemplating how expansive the sport's world has turn out to be over the previous ten years, what are you able to tease about what that can entail?   (source)

My intuition is that sentences like these are not as natural as ones that contain an overt nominal head, but this may not be the case for all speakers. (I also find uses with prepositions like *by* highly degraded.) I leave explorations of the robustness of this pattern among speakers and with different predicates/prepositions to future work.

- At this point: If we treat English presuppositional *that*-clauses as DPs and non-presuppositional ones as CPs, we lose an easy account for the observed selectional differences.

- Ultimately, I will suggest that the cleanest explanation of the selectional behavior involves treating all English *that*-clauses as CPs.

- Next, we will look more at a broader range of English finite clausal complements.

Where to next?

1. More detail on English. Ultimate claim: presuppositionality can arise without syntactic nominalization

2. Ndebele: syntactic nominalization without presuppositionality

3   A broader look at English FCCs

- To maintain a DP analysis of presuppositional *that*-clauses, we need some way to explain away the differences in selectional behavior.

  - See e.g. Roussou (2020) for Greek and Knyazev (2016) for Russian.
  - One quite salient potential explanation is that *that*-clauses, being clausal, might bear a feature (for maximum neutrality, say $[+\textsc{clausal}]$) that causes them to be unselectable by prepositions, etc.
  - In this section, I will argue against this proposal.

- Expanding beyond just English *that*-clauses, we will turn to **complementizer-like *how*-clauses (CHCs)**:

(9)   They told me how the tooth fairy doesn't really exist.   (Legate 2010:1)

- *How* is an interrogative word, and (9) has an interrogative interpretation: my interlocutors told me how the world came to be such that there is no tooth fairy (e.g. they told me that magic isn't real).

  - This is a "propositional-*how* question" in the terms of Pak (2017).

- (9) has another interpretation (the CHC interpretation) on which my interlocutors just informed me of the truth of the tooth fairy's nonexistence.

- A limited amount of work on the syntax and semantics of CHCs: Legate (2010); Nye (2013) for syntax and Umbach et al. (2021); Liefke (pear) for semantics.

- General consensus (pace Nye), based on selectional evidence, holds that CHCs are DPs, and that they are factive ($\rightarrow$ presuppositional).

1. **Conjunction with non-clausal DPs**   (Legate 2010)

- Grammatical to conjoin a CHC with a non-clausal DP.

(10)   The drama of [Tan Nguyen] and [how his campaign attempted to scare away Hispanic voters from showing up and voting for his opponent, Loretta Sanchez,] has been unfolding for a few days now.
(Legate 2010:4b)

2. **Objects of prepositions**   (Legate 2010)

- When a predicate can take a PP or *that*-clause complement, CHCs must occur with the preposition.

(11)   I'm embarrassed *(of/by/about) [how I changed seats because he appeared while sleeping to be dangerous, hectic].
(Legate 2010:6d,f)

3. **Sentential subjects**

- Applying the diagnostic from Alrenga (2005), we see that CHCs can occur after fronted auxiliaries.

(12)   Was [how nobody likes these uniforms] discussed at the meeting?

- This suggests that, unlike *that*-clauses (for some speakers), CHCs do occupy Spec,TP when they occur as sentential subjects.

4. **Topic-raising interpretation under *know***

- CHCs and (factive) *that*-clauses can be strongly pulled apart in the complements of rising declaratives with *know* (and *remember*).

- In rising declaratives, *that*-clause complements give rise to an inference of speaker surprise.

(13)   You know that I went to Berlin last year? (Who told you?!)

- Most salient interpretation is that the speaker is legitimately surprised to learn of the addressee's knowledge (as the parenthesized follow-up suggests).

- Ambiguity with non-clausal DPs (with disambiguating prosody): true surprise or topic-raising.

(14)   You know my cousin Rob? (When did you meet him?!/Well, last weekend, he...)

- There is a legitimate-surprise construal.

- There is also an interpretation that could function as, for instance, a story about Rob's exploits.

- CHCs can also (and *very* naturally) be used in rising declaratives. By far the most salient interpretation is the topic-raising one.

(15)   You know how I went to Berlin last year? (Well, when I got back, I...)

- An interrogative interpretation of the *how*-clause does have a salient surprise construal. (*You know that I took the train?! I didn't want anyone to know!*)

- However, the CHC is highly natural to begin some longer story.

- Descriptively, we see CHCs taking on a function that is otherwise available only to non-clausal DPs.[2]

- More broadly, we see CHCs behaving **monotonically more nominally** than *that*-clauses, and in some ways also distinctly from interrogatives.

- Takeaways.
  - It will be difficult to use a feature like [+CLAUSAL] to account for the distributions of presuppositional *that*-clauses, as CHCs would presumably naturally also bear this feature.
  - CHC behavior cannot quite be reduced to the behavior of other interrogatives (which have often been noted to behave more nominally than *that*-clauses; see e.g. Ross (1973) on "nouniness squish").
  - As a technical solution, it would be possible to stipulate an arrangement of features that would allow for Δ-headed clauses to be DPs but select unlike other DP complements. However, it is at this point unclear how such a stipulation might be motivated.
  - Such an account would also need to explain why presuppositional *that*-clauses behave for selectional purposes quite like non-presuppositional ones.

- At this point, it appears that the simplest way to account for the observed facts is to treat all English *that*-clauses as having a unified syntactic category (i.e. on a standard view, all are CPs).

- → presuppositionality can arise without syntactic nominalization.

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[2]One possible analytical step could exploit the familiarity construal of DP-selecting *know*, though I will leave the details of an account along these lines for future work.

4 Nominalization without presuppositionality

- Briefly, I will also argue that, in some languages, both presuppositional and non-presuppositional FCCs are selected like non-clausal nominals.

- As an example, I will mention Pietraszko (2019)'s characterization of Northern Ndebele (Bantu, Zimbabwe). For similar claims in other languages, see Thomas (2014) for Mbya Guaraní and Caponigro and Polinsky (2011) for Adyghe, among others.

- Pietraszko (2019) has argued that Northern Ndebele clausal complements are all DPs: Embedded clauses in Ndebele are obligatorily contained in a DP shell without a mediating nominal head." (67).

(16)   Ngicabanga [DP u-   [CP kuthi usukile]].
        1SG.thought   15.AUG   COMP 1.left
        'I thought that (s)he left.'   (Pietraszko 2019:1)

- Pietraszko argues that these clauses are DPs that use the productive class 15 D augment *u-*.

- She offers several arguments. In the interest of time, two are below:

1. **D augment can usually be dropped in negative sentences, but not affirmative ones**

- In affirmative sentences, an augment is obligatory with both non-clausal DPs and *ukuthi*-clauses.

- In negative sentences, it is optional in both cases.

(17)   Affirmative sentences
        a. Ngi-funa   [*(i)-sinkwa].
           1SG.SBJ-want 7.AUG-7.bread
           'I want bread.'   (Pietraszko 2019:11b)
        b. Ngi-cabanga [*(u)-kuthi   uSipho u-za-pheka].
           1SG.SBJ-think 15.AUG-15.COMP 1.Sipho 1.SBJ-FUT-cook
           'I think that Sipho will cook.'   (Pietraszko 2019:12b)

(18)   Negative sentences, no dislocated object
        a. A-ngi-funi   [(i)-sinkwa].
           NEG-1SG.SBJ-want (7.AUG)-7.bread
           'I don't want (any) bread.'   (Pietraszko 2019:11a)
        b. A-ngi-cabangi   [(u)-kuthi   uSipho u-za-pheka].
           NEG-1SG.SBJ-think 15.AUG-15.COMP 1.Sipho 1.SBJ-FUT-cook
           'I don't think Sipho will cook.'   (Pietraszko 2019:12a)

- Pietraszko takes this as evidence that the D augment is active in Ndebele, not just a historical relic.

2. **DP-specific coordinator**

- DPs but not TPs are coordinated in Ndebele with the morpheme *la*.

- *Ukuthi*-clauses are also coordinated with *la*.

(19)   a. UJohn u-dle   [isuphu] *(la) [isinkwa]. (>lesinkwa)
           1.John 1.SBJ-ate 9.soup   &   9.bread
           'John ate soup and bread.'   (DP coordination, Pietraszko 2019:15b)
        b. [Wena   u-dlile]   (*la) [mina   ngi-nathile].
           2SG.PRON 2SG.SBJ-ate &   1SG.PRON 1SG.SBJ-drank
           'You ate and I drank.'   (TP(?) coordination, Pietraszko 2019:15a)

    c. Ngizwe   [ukuthi uMary uyahlabela] *(la) [ukuthi uJohn udlala ibhola]. (>lokuthi)
       heard.1SG COMP   Mary sings   &   COMP John plays soccer
       'I heard that Mary sings and that John plays soccer.'   (Pietraszko 2019:18)

- On Pietraszko's characterization, other types of clausal complement are restricted to particular predicates and moods.

- On this characterization, it does not appear that we would want to draw a syntactic category distinction based on presuppositionality.[3]

- It appears that Ndebele *ukuthi*-clauses can be nominal without being presuppositional.

5 Conclusion: Aspects of nominalization

- I have argued that, cross-linguistically, we can find a double dissociation between presuppositionality and syntactic nominalization.

  ○ In English, presuppositional *that*-clauses do not display expected nominalization, and in languages like Ndebele, all standard clausal complements show nominal properties.

- If we do not adopt a category distinction, can we account for the differences that Kastner (2015) observed between presuppositional and non-presuppositional clauses?

1. **Fronting**: no fronting permitted in presuppositional clauses

(20)   a.   John thinks that [this book, Mary read].   (K15:5a)
        b. * John regrets/denies that [this book, Mary read].   (K15:6a)

- Kastner ascribes this behavior to Δ selecting a CP that lacks Top and Foc nodes. However, there are existing solutions that do not require a category distinction.

- Haegeman (2006) offers a precursor of Kastner's account that involves some verbs selecting for structurally smaller complements, and Haegeman and Ürögdi (2010) account for these phenomena using an operator.

2. **Pro-forms**: presuppositional complements can be referred to using *as* or *which*, non-presuppositional only *as*

(21)   a. Americans should get cheap oil , as/which the whole world knows.   (K15:63)
        b. Americans should get cheap oil , as/*which the whole world says/claims.   (K15:65)

- Kastner's DP/CP story is quite lovely.

- However, we could alternatively fall back to the assumption of Potts (2002) that *which* is used for extraction of **type-e elements**.

- We might pair this with an account like Chierchia (2019) that involves factive but not non-factive complementizers type-shifting their complements to type e (perhaps modifying this to presuppositional complementizers instead).

- Adopting an analysis along these lines would allow a more semantic version of Kastner's account of the variation here (but see Moulton (2015) and others for proposals involving complements of different types, notably properties).

3. **Weak islandhood**

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[3]Note that Pietraszko (2020) asserts that object agreement only occurs with "discourse-given" arguments; Pietraszko offers an entirely syntactic analysis of this.

(22) a. Why do you think/#remember/#deny [that John stole the cookies t]? (K15:1c-2c)
   b. Who do you think/?*remember/?*deny t stole the cookies? (K15:1b-2b)

- Kastner syntactifies the analysis of Honcoop (1998); fundamentally, the issue with weak extraction here is the **definiteness** of the complement.

- One alternative approach would involve using a different approach to weak islandhood, like Abrusán (2011).

- Another approach would be to maintain the original, semantic formulation of Honcoop (1998), where the fundamental issue with weak extraction here is the **definiteness** of the complement.

- As Kastner notes, using Δ lets us ascribe definiteness to the definite determiner, but this is not strictly necessary. (Sheehan and Hinzen (2011) propose using definite CPs for English, and Makri (2017) offers an treatment of Greek *pu*-clauses as definite CPs.)

- Accordingly, by adopting an account with a unified syntactic category of *that*-clauses, we lose the unified nature of Kastner's solutions, but these phenomena do not become intractable.

- At the same time, it does not seem accidental that a substantial number of languages *do* use more nominal syntax for more presuppositional interpretations (Kastner (2015) mentions Greek and Hebrew; see also Korean, Bogal-Allbritten and Moulton (2018); Barguzin Buryat, Bondarenko (2019); Washo, Bochnak and Hanink (2021); i.a.)

  ○ (At this point, I do not know of any language that uses a *more* nominal clause for a *less* presuppositional interpretation. If you do, I would love to know!)

- How might we explain this?

- The picture that we sketched above involves English *that*-clauses not taking on a nominal syntactic category but potentially being endowed with other more semantic trappings of nominalization, like type e and definiteness.

- If these properties that are most typically associated with nominalization are used in at least some languages' presuppositional clauses, it seems not implausible that we would find a fairly strong correlation to "true" syntactic nominalization in many languages.

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