

Presuppositionality and Syntactic Nominalization in Finite Clausal Complements

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From early descriptions of factivity (e.g. Kiparsky & Kiparsky 1970), it has been suggested that semantic properties of certain finite clausal complements, like factivity or presuppositionality, might be ascribed to nominal syntactic structure. One recent work in this vein is Kastner (2015), which suggests that all and only presuppositional clauses are syntactically nominal: presuppositional embedded clauses are DPs, while non-presuppositional ones are CPs. Here, I argue against positing a strong bijection of this sort between presuppositional interpretation and syntactically-nominal structure. Cross-linguistically, I argue, syntactic nominalization is neither necessary nor sufficient for a presuppositional interpretation.

This paper proceeds as follows. In §1, I overview the system that Kastner posits that strongly links nominalization and presuppositionality. From there, I turn to English in §2, where I argue that, though English has some DP clausal complements, presuppositional *that*-clauses are best analyzed as CPs. I turn in §3 to discuss work on the Bantu language Northern Ndebele by Pietraszko (2019); in this language, all clausal complements are obligatorily nominalized, regardless of presuppositionality. Between English and Ndebele, then, we can doubly dissociate presuppositionality and nominalization. In §4, I suggest that CP presuppositional complements can take on properties like definiteness that are usually associated with nominals. I conclude in §5.

1. Establishing an isomorphism

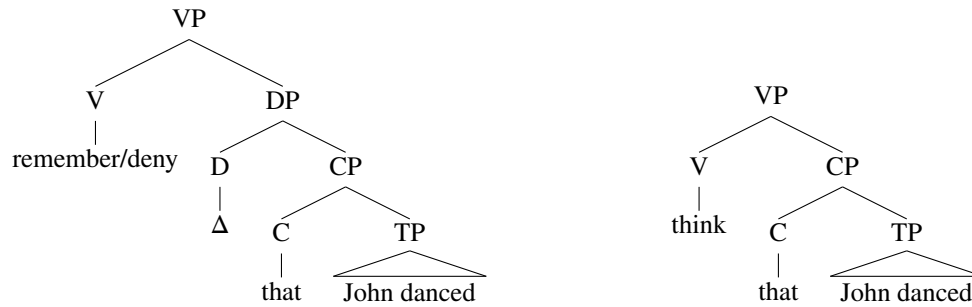
There is a long tradition of proposals that posit hidden syntactic structure above the basic clausal (CP) level in certain subsets of *that*-clauses. Kiparsky & Kiparsky (1970), for instance, include an additional syntactically-projected FACT element in factive but not non-factive complements (though they stop short of associating this to a syntactic-category distinction). Kastner's (2015) implementation of this idea assigns additional structure to presuppositional complements, i.e., complements of factive and response-stance predicates:

- | | | | |
|-----|----|--|----------------------|
| (1) | a. | FACTIVE: <i>regret, know, remember, realize, notice, ...</i> | PRESUPPOSITIONAL |
| | b. | RESPONSE STANCE: <i>deny, accept, agree, admit, confirm, verify, ...</i> | PRESUPPOSITIONAL |
| | | ----- | |
| | c. | VOLUNTEERED-STANCE: <i>think, suppose, assume, claim, suspect, ...</i> | NON-PRESUPPOSITIONAL |
| | | | (Kastner 2015:7) |

On this account, non-presuppositional predicates select directly for CPs, while presuppositional predicates select for DP complements that are headed by a null definite D head Δ (which then selects for a CP). This contrast is illustrated in Figures (1a) and (1b), where *regret* and *deny*, but not *think*, select for a Δ -headed clause.

In this system, the determiner Δ is the key to the presuppositional interpretation of the complements of *regret* and *deny*. Working in a file-change semantics (Heim 1982, 1983), Kastner assumes that Δ introduces a presupposition that its complement CP is a discourse referent in the common ground and, as a definite, refers back to that filecard.

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(a) Δ -headed DP complement to a presuppositional verb. (b) CP complement to a non-presuppositional verb.

Figure 1: Presuppositional and non-presuppositional complements, on the account of Kastner (2015).

Crucially, on his account this connection between category and meaning is assumed to be cross-linguistically present. There are, in fact, a number of languages where nominal syntax indeed is broadly associated with presuppositional clauses (Barguzin Buryat, Bondarenko 2019, 2020; Greek, Hebrew, Kastner 2015; Korean, Bogal-Allbritten & Moulton 2018; Washo, Bochnak & Hanink 2021, i.a.).¹ For example, in Barguzin Buryat the predicate *hanaxa* ‘think/remember’ takes on a presuppositional interpretation with nominalized clauses but not non-nominalized ones:

- (2) a. dugar [DP mi:sgəi-n zagaha ədj-ə:f-i:jə-n'] han-a:
 Dugar.NOM cat-GEN fish eat-PART-ACC-3SG think-PST
 ‘Dugar *thought/^{OK}remembered a cat’s eating fish.’ (Bondarenko 2019:2a)
- b. dugar [CP mi:sgəi zagaha ədj-ə: gəžə] han-a:
 Dugar.NOM cat.NOM fish eat-PST COMP think-PST
 ‘Dugar ^{OK}thought/*remembered that a cat ate fish.’ (Bondarenko 2019:1)

Here, overt evidence for the nominal status of the presuppositionally-interpreted clause in (2a) comes from accusative case marking on the participial clause. By contrast, the non-presuppositionally interpreted clause in (2b) has no morphological indication of nominal structure. There are, then, good reasons to assume that presuppositionality and nominalization do correlate in at least some languages.

In English, where no overt nominal structure is present in presuppositional clauses, Kastner offers three pieces of evidence for his proposed syntactic-category distinction between presuppositional and non-presuppositional clauses.

The first piece of evidence comes from patterns of fronting in embedded clauses. Though fronting has been argued to be a Main Clause Phenomenon (Hooper & Thompson 1973), some speakers of English permit fronting in some embedded clauses. Among those who do, fronting is judged to be comparatively more acceptable in non-presuppositional clauses (3a) than in presuppositional ones (3b).

- (3) a. John thinks that [this book, Mary read]. (Kastner 2015:5a)
 b. * John regrets/denies that [this book, Mary read]. (Kastner 2015:6a)

To account for this, Kastner suggests that the D head Δ selects for a CP that necessarily lacks Topic and Focus projections (or requires them to be unfilled). Accordingly, movement to TopP or FocP is unavailable in the complement of *regret/deny*, (3b).

His second piece of evidence comes from proforms. Following Potts (2002), Kastner notes that presuppositional clauses can be referred to using the proforms *as* and *which*, while only *as* is permitted with non-presuppositional clauses.

¹ In some of these languages, the correlation is not perfect. For instance, Bondarenko notes that some Buryat non-presuppositional predicates like *ətigəxə* ‘believe’ and *naidaxa* ‘hope’ take nominal participial-clause complements with no factive inference. Clearly, the overall pattern in Buryat is more complex than a simple ascription of factivity to DP complements.

- (4) a. Americans should get cheap oil, as/which the whole world knows. (Kastner 2015:63)
- b. Americans should get cheap oil, as/*which the whole world says/claims. (K15:65)

To account for this, Kastner suggests that *as* is a CP proform, while *which* is a DP proform. Since presuppositional complements are DPs with a phonologically null D head ([DP Δ [CP ...]]), either proform can be used: *which* can stand in for the entire DP, or *as* can replace just the inner CP. By contrast, non-presuppositional clauses are just CPs, so *as* is the only proform option.

A final piece of evidence for distinctions between presuppositional and non-presuppositional clauses comes from weak islandhood, where presuppositional clauses are known to be weak islands, with degraded adjunct and subject extraction (judgments here are Kastner's):

- (5) a. Why do you think/#remember/#deny [that John stole the cookies *t*]? (K15:1b-1c)
- b. Who do you think/*remember/*deny [*t* stole the cookies]? (Kastner 2015:1b-2b)

Here, too, Kastner ties this behavior to syntactic nominalization. Adopting the semantic account of weak islandhood from Honcoop (1998), he assumes that definite presuppositional complements do not permit the right kind of anaphoric relations required for extraction from weak islands. Fundamentally, the issue here is with the definiteness of the complement, and Δ is the syntactic component that introduces definiteness.

With this, then, Kastner suggests that the presence of a DP level is cross-linguistically universal in presuppositional but not non-presuppositional clausal complements.

2. English: Presuppositionality without nominalization

Any account that posits a distinction in the syntactic category of different complements presupposes the ability to identify the syntactic category of any specific complement. Accordingly, it is worth mentioning that the differences that Kastner points out for English, though empirically real, are not traditional diagnostics for syntactic category. In fact, as is well-known (since at least Emonds (1970)), there are ways in which English *that*-clauses do not behave like non-clausal DPs for selectional purposes.

For example, one hallmark of English non-clausal DPs that is presumably associated with Case-licensing is the fact that they can robustly occur as the objects of prepositions:

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

In most cases,² as has been known since at least Emonds (1970), *that*-clauses cannot occur in these environments.

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

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

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

² I thank a reviewer for noting that it is possible to find corpus examples in which *talk about* embeds a *that*-clause:

- (i) 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?

This example comes from <https://newstroopp.com/dc-universe-onlines-jack-emmert-breaks-down-the-games-10th-anniversary/>. I do find examples like this degraded; the same holds for other predicates like **surprised by that p*. At this point, it is an open question how consistent these judgments are among speakers.

Here, again, we see a property directly linked to Case: non-clausal DPs require the Case-assigning preposition *of*, while *that*-clauses, regardless of their presuppositional status, do not permit it. (Here, note that the noun *discovery*, like the verb *discover*, requires a factive complement.) On an account like Moulton (2015), this difference is directly attributed to a difference in syntactic category. On this account, the *that*-clause in (8a) treated as a CP that adjoins to the NP, while this option is unavailable to the non-clausal DP in (8b).

A third, potentially weaker diagnostic comes from sentential subjecthood. Alrenga (2005) observes that, at least for some speakers, *that*-clauses cannot occur as sentential subjects following a fronted auxiliary:

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

From this, Alrenga suggests that *that*-clauses occupy the specifier of a higher TopP that is coindexed with a null pronoun in Spec,TP: these *that*-clauses themselves cannot occupy Spec,TP. It is worth noting that there is sizeable interspeaker variation on the acceptability of sentences like (9); Lohndal (2014) suggests that there is interspeaker variation regarding what position in the clause a subject *that*-clause occupies. At a minimum, though, we need some explanation for why, for speakers who disallow sentences like (9), *that*-clauses do not simply move to Spec,TP.

If we assume a syntactic category distinction between different *that*-clauses where some are syntactically DPs, we lose an easy account of these patterns. Ultimately, I will suggest that the cleanest account of this selectional behavior is to treat all English *that*-clauses as CPs and will return to these patterns later. To strengthen this argument, I will now turn to examine a broader range of English finite clausal complements that includes more than just *that*-clauses. Contrasts between different English clausal complements further suggest that *that*-clauses should not be treated as nominal.

2.1. Complementizer-like *how*-clauses

To maintain a DP analysis of presuppositional *that*-clauses, we need some way to explain away the selectional differences that we have observed. (For arguments along these lines in different languages, see Roussou (2020) for Greek *pu* and Knyazev (2016) for Russian *čto*.) One quite salient and fairly simplistic potential explanation is that *that*-clauses, being clausal, might bear some feature (say, [+CLAUSAL], or simply C) that blocks the expected selectional patterns. Here, I argue against such a proposal by turning to another type of English finite clausal complement, a complementizer-like *how*-clause (CHC):

- (10) They told me how the tooth fairy doesn't really exist. (Legate 2010:1)
 ≈ they told me that the tooth fairy doesn't really exist (and she doesn't!)

This sentence is ambiguous between an interrogative interpretation and a CHC one. On the “propositional-*how*” interrogative interpretation (Pak 2017), the interlocutors told the addressee how the world came to be such that there is no tooth fairy in it (e.g., by explaining that magic is not real). There is also, however, a second CHC interpretation on which the interlocutors simply informed the addressee of the truth of the tooth fairy's nonexistence. Here, we focus on this interpretation. This interpretation is a factive one (Legate 2010, Liefke 2021, Jarvis 2021) that presupposes the truth of the complement; consequently, it is presuppositional in the terms of Kastner (2015).

Although CHCs are common in colloquial English, there is a limited amount of work on their syntax and semantics (syntax: Legate 2010, Nye 2013; semantics: Jarvis 2021, Liefke 2021, Umbach et al. 2021). General consensus (*pace* Nye), based mostly on selectional patterns, holds that CHCs are DPs.

2.1.1. Syntactic category of CHCs

Arguments for the DP status of CHCs focus on the fact that, for selectional purposes, CHCs behave like non-clausal DPs. Here, we will trace those arguments and also note that CHCs can additionally be distinguished from interrogatives.

Legate (2010) offers several pieces of evidence for CHCs' DP-hood. For one, CHCs can be conjoined with non-clausal DPs:

- (11) 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)

Further, she notes that, when a predicate can take either a PP or *that*-clause complement, CHCs must occur with the preposition.

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

This suggests that, unlike *that*-clauses, CHCs can (and in fact must) be assigned case by the preposition.

Further, applying the sentential-subjecthood diagnostic from Alrenga (2005), we see that CHCs can occur after fronted auxiliaries.

- (13) 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.

A potential worry at this point comes from the fact that interrogatives are known to, for whatever reason, behave a bit more nominally than *that*-clauses (Ross 1973). Interrogatives, for example, can occur as complements to prepositions and occur as Spec,TP sentential subjects:

- (14) a. I mulled over [who we should invite to the party].
b. Did [who we should invite to the party] come up in the discussion?

We might then worry, as Nye (2013) suggests, that CHCs are not in fact syntactic DPs but rather simply interrogative CPs. (Such a proposal is nontrivial to formalize, especially because it needs to reference conventionally Case-associated properties. I will not attempt a formalization here.) However, CHCs do not distribute exactly like interrogatives. For one, interrogatives can occur under emotive factive predicates like *be surprised* without a preposition:³

- (15) And you might be surprised who made the cut.

On Legate's (2010) characterization, this optionality is not available to CHCs, suggesting that the two are indeed distinct.

Second, if we explain CHC selectional patterns by appealing to interrogativity, we expect CHCs and interrogatives to form a natural class semantically. However, CHCs, interrogatives, and *that*-clauses can be strongly pulled apart in rising declaratives with the matrix predicates *know* and *remember*. In rising declaratives, both *that*-clauses and interrogatives give rise to a strong inference of speaker surprise:

- (16) a. You know that I went to Berlin last year? (Who told you?!)
b. You know why the caged bird sings? (How did you figure it out?!)

The most salient interpretation, as indicated by the parenthesized continuation, of these sentences is that the speaker is legitimately surprised to learn of the addressee's knowledge.

Rising declaratives with non-clausal DP complements, by contrast, have two possible interpretations; prosody serves to disambiguate the two.

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

³ This example occurred in *Showbiz Tonight* in 2010 and was found using COCA (Davies 2008-).

As with *that*-clauses and interrogatives, non-clausal DP complements can have a legitimate-surprise construal. However, there is also a second, salient topic-raising function that could be used to, say, begin a story about Rob's exploits.

With CHC complements, however, only this topic-raising construal is salient:

- (18) You know how_{CHC} I went to Berlin last year? (Well, when I got back, I...)

This rising declarative is highly natural, but no surprise construal is available. With this we see, then, CHCs taking on a function that is otherwise available only to non-clausal DPs, and not to interrogatives or *that*-clauses.⁴

We thus see that CHCs and interrogatives do not form a semantic natural class: in fact, CHCs behave here more like non-clausal DPs than interrogatives do. This casts doubt on a potential account that would explain (11)-(13) by treating CHCs as ordinary interrogatives. Instead, it leaves the syntactic-category account as a viable option.

2.2. Takeaways

We have seen that CHCs, like *that*-clauses, are a variety of finite clausal complement in English. We also observed that CHCs do not distribute like *that*-clauses; rather, CHCs pattern like non-clausal DPs.

Consequently, we cannot use a feature like [+CLAUSAL] to explain why *that*-clauses do not behave like non-clausal DPs for selection. This is because CHCs, too, would presumably bear that feature. Accordingly, if [+CLAUSAL] were crucial for explaining the selection of clausal DPs, and by hypothesis both CHCs and presuppositional *that*-clauses were clausal DPs, we would expect them to distribute identically. At a minimum, we need to appeal to some other principle in explaining the selectional patterns of presuppositional *that*-clauses.

It is certainly true that one could, as a technical solution, stipulate some constellation of features and/or Case-related principles (cf., Knyazev's (2016) account of Russian *čto*) to permit Δ -headed *that*-clauses to be DPs but distribute differently than other non-clausal DP complements. However, I suggest that we generally be wary of such a solution, for two reasons.

First, it is not clear how one would motivate a stipulation along the lines of what would be required. Second, presuppositional *that*-clauses behave for selectional purposes exactly like non-presuppositional ones. (We will revisit Kastner's distinctions in §4.) The fundamental effect of a maneuver along the lines of what we are discussing is to give rise to a system in which presuppositional *that*-clauses, though DPs, distribute exactly like non-presuppositional CP *that*-clauses. This would miss a generalization.

Instead, it seems 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 the view that we are adopting, all are CPs). If this is the case, then we have found an example of a complement clause in which presuppositionality can arise without syntactic nominalization.

3. Ndebele: Nominalization without presuppositionality

With the example of English *that*-clauses, we have seen that nominalization is not required for a presuppositional interpretation of a complement clause. In this section, I will discuss Pietraszko's (2019) work on Northern Ndebele *ukuthi* embedded clauses:

- (19) Ngicabanga [_{DP} u- [_{CP} kuthi usukile]].
 1SG.thought 15.AUG COMP 1.left
 'I thought that (s)he left.'
(Pietraszko 2019:4)

In Ndebele, Pietraszko (2019) argues that all complement clauses introduced by the complementizer

⁴ A possible analytical step here would be to exploit the acquaintance reading of DP-selecting *know*, though I defer a full account for future work.

ukuthi are obligatorily nominalized DPs.⁵ Thus, in this language, nominalization can arise without leading to a presuppositional interpretation; this shows that not all clausal DPs are presuppositional.

Pietraszko offers several diagnostics for the nominal syntactic category of Ndebele *ukuthi*-clauses, and I refer the reader to her work for a full account. Here, I will summarize three of these diagnostics.

Etymologically, the complementizer *ukuthi* is a nominalization of the verb *thi* ‘say’ with a class prefix *ku-* and nominal augment *u-*:

- (20) *u-* *ku-* *thi*
 15.AUG- 15- say
 ‘saying’/‘to say’ (Pietraszko 2019:8)

This augment, which is standardly treated in Bantu as a determiner (Taraldsen 2010, Visser 2008, i.a.), can also be seen with a non-clausal Class 15 noun like *u-kudla* ‘food’. At least historically, then, *ukuthi*-complements were nominal in nature.

Further, Pietraszko argues that the augment in *ukuthi*-clauses is syntactically active, not just a historical relic. In Ndebele, a D augment can standardly be dropped in negated sentences but is obligatory in affirmative ones:

- (21) a. *Ngi-funa* *[(i)-sinkwa]*.
 1SG.SBJ-want 7.AUG-7.bread
 ‘I want bread.’ (Pietraszko 2019:11b)
 b. *A-ngi-funi* *[(i)-sinkwa]*.
 NEG-1SG.SBJ-want (7.AUG)-7.bread
 ‘I don’t want (any) bread.’ (Pietraszko 2019:11a)

In (21a), we see that the D augment (for Class 7, *i-*) is obligatory, while it is not for the negated sentence (21b). The same pattern holds for *ukuthi*-clauses:

- (22) a. *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)
 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 that Sipho will cook.’ (Pietraszko 2019:12a)

Again, we see optionality only in the negated sentence (22b). Pietraszko takes this as evidence that the D augment *u-* in *ukuthi*-clauses is synchronically active.

Additionally, *ukuthi*-clauses are coordinated with a DP-specific coordinator *la*. In Ndebele, DPs but not matrix clauses can be coordinated with *la*:

- (23) *UJohn u-dle* *[isuphu] *(la) [isinkwa]*. (>lesinkwa)
 1.John 1.SBJ-ate 9.soup & 9.bread
 ‘John ate soup and bread.’ (Pietraszko 2019: 15b)
 (24) *[Wena u-dlile]* **(la) [mina ngi-nathile]*.
 2SG.PRON 2SG.SBJ-ate & 1SG.PRON 1SG.SBJ-drunk
 ‘You ate and I drank.’ (Pietraszko 2019:15a)

Here, we see that the two DPs in (23) are obligatory coordinated with *la*. (*La* and the initial vowel in the following DP then undergo regular processes of vowel coalescence.) By contrast, matrix clauses, which we might analyze as either TPs or CPs, cannot be coordinated with *la*.

Turning now to *ukuthi*-clauses, they also must be coordinated with *la*:

⁵ All data that I discuss here comes from non-presuppositional clauses in Ndebele (Asia Pietraszko p.c.).

- (25) 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)

The obligatory use of the DP-specific coordinator *la* further suggests that *ukuthi*-clauses are nominal (DP) in nature.

Based on these and other diagnostics, Pietraszko concludes that (non-presuppositional) *ukuthi*-clauses are obligatorily syntactically nominal. Thus, Ndebele exemplifies a language that has nominalized clausal complements that are not interpreted presuppositionally.

4. Facets of nominalization

Our exploration of Ndebele, following Pietraszko (2019), shows that syntactic nominalization is not sufficient for a presuppositional interpretation of an embedded clause. Earlier, with English, we saw that nominalization is not necessary for presuppositionality. With Ndebele and English, then, we have doubly dissociated the two: contrary to the cross-linguistic isomorphism that Kastner (2015) posits, DP syntactic structure is neither necessary nor sufficient for a presuppositionally-interpreted clause.

In our earlier discussion of English, we concluded that *that*-clauses are best analyzed as CPs. However, by doing so, we lose Kastner's explanations of the differences that he notes between presuppositional and non-presuppositional *that*-clauses. Here, we return to each of them and suggest alternative analyses that do not rely on a syntactic-category distinction.

Kastner's first difference comes from fronting, where fronting is permitted only (for some speakers) in non-presuppositional clauses:

- (26) a. John thinks that [this book, Mary read]. (Kastner 2015:5a)
 b. * John regrets/denies that [this book, Mary read]. (Kastner 2015:6a)

Recall that Kastner's account of this involved Δ selecting for a CP that lacks Topic and Focus projections. It would be fully equivalent for presuppositional verbs to directly select for a CP of this sort, bypassing the contribution of Δ . Haegeman (2006) offers a precursor of Kastner's account along these lines, and Haegeman & Ürögdi (2010) present an account that uses an operator to similar effect.

Kastner's second distinction comes from proforms, where the pro-form *which* can only be used with presuppositional complements:

- (27) a. Americans should get cheap oil, as/which the whole world knows. (Kastner 2015:63)
 b. Americans should get cheap oil, as/*which the whole world says/claims. (K15:65)

To account for this, Kastner assumes that the difference between *as* and *which* is that the former is a CP proform, the latter a DP one. However, another way to account for this would be to return to the account of Potts (2002), on which the difference is not one of syntactic category but rather of semantic type. Specifically, he argues that *which* is used for the extraction of type-*e* elements. We might pair this with a modified version of Chierchia's (2019) approach to factive *that*-clauses, where factive complementizers type-shift their complement to type *e*. This type of approach, combined with Potts' assumption that *as* can only replace CPs, permits an analogous semantic parallel of Kastner's approach, on which *which* can only stand in for complements that are usually of type *e*.

The third distinction comes from weak islandhood:

- (28) a. Why do you think/#remember/#deny [that John stole the cookies *t*]? (K15:1b-1c)
 b. Who do you think/?*remember/?*deny [*t* stole the cookies]? (Kastner 2015:1b-2b)

Kastner adopts the account of weak islandhood that Honcoop (1998) gives, on which the fundamental feature of presuppositional complements that interferes with extraction is definiteness. While Kastner ascribes definiteness to the D head Δ , this is not strictly necessary. In fact, Sheehan & Hinzen

(2011) propose using definite CPs for English, and Melvold (1991) proposes an analysis of these clauses with a definite *i*-operator in Spec,CP; see also Adger & Quer (2001) for a similarly-inspired application to other types of embedded clauses. Permitting CPs to be definite allows us to adopt Honcoop's analysis without assuming DP syntax. (Alternatively, one could adopt a wholly different analysis of weak islands, such as Abrusán (2011).)

We thus see that it is possible to account for the differences that Kastner (2015) notes between presuppositional and non-presuppositional English *that*-clauses without appealing to DP syntax.

On this view, presuppositional *that*-clauses are not syntactically nominal. However, they do have properties usually associated with nominals, like semantic type *e* and definiteness.⁶ This might help to explain why, as noted earlier, there are certainly many languages in which nominalization and presuppositionality do correlate (Barguzin Buryat, Greek, Hebrew, Korean, Washo, etc.). If presuppositional clauses, at least in some languages like English, are endowed with more semantic properties that are usually associated with nominalization, it is not implausible that many languages might wholly embrace a nominal syntactic category for this type of complement.

5. Conclusion

In this paper, I have argued against positing a cross-linguistic bijection between nominal syntactic category of a clausal complement and presuppositional interpretation of that complement, as Kastner (2015) has proposed. While a number of languages do pattern in this direction, where more presuppositional complements have more nominal syntax, I use two case studies to argue that this correlation is not absolute.

In English, I argue that presuppositional *that*-clauses are best analyzed as CPs. Especially in comparison with complementizer-like *how*-clauses, another type of English finite clausal complement, it is difficult to account for the selectional behavior of *that*-clauses if they are analyzed as DPs. Thus in English, we have seen an example of presuppositional interpretations without nominal syntax.

We then turned to Northern Ndebele, which Pietraszko (2019) analyzes as having clausal complements that are obligatorily nominalized. Here, we saw examples of clauses that are syntactically nominal but are not presuppositionally interpreted. This allows us to doubly dissociate presuppositionality and nominal syntactic category.

To close, we returned to English and saw that we could account for the differences that Kastner observes between presuppositional and non-presuppositional *that*-clauses without necessarily appealing to nominal syntax in the former type of clause. However, the picture that emerged was one on which *that*-clauses, though not taking on a nominal syntactic category, do take on semantic trappings that usually accompany nominal structure. If presuppositional complements generally take on these sorts of properties, this might help to explain why presuppositional complements often appear more nominal than non-presuppositional ones.

References

- Abrusán, Márta. 2011. Presuppositional and negative islands: a semantic account. *Natural Language Semantics* 19. 257–321.
- Adger, David & Josep Quer. 2001. The syntax and semantics of unselected embedded questions. *Language* 77(1). 107–133.
- Alrenga, Peter. 2005. A sentential subject asymmetry in English and its implications for complement selection. *Syntax* 8(3). 175–207.
- Bochnak, Ryan & Emily Hanink. 2021. Clausal embedding in Washo: complementation vs. modification. *lingbuzz*/005479.
- Bogal-Allbritten, Elizabeth & Keir Moulton. 2018. Nominalized clauses and reference to propositional content. In Robert Truswell, Chris Cummins, Caroline Heycock, Brian Rabern & Hannah Rohde (eds.), *Proceedings of Sinn und Bedeutung* 21, 215–232.

⁶ Presuppositionality/factivity of embedded clauses may well not be reducible to any particular one of these properties; for instance, see Coppock & Beaver (2015), which argues that definiteness *per se* does not give rise to existence presuppositions.

- Bondarenko, Tatiana. 2019. From *think* to *remember*: how CPs and NPs combine with attitudes in Buryat. In *Proceedings of SALT XXIX*, 509–528.
- Bondarenko, Tatiana. 2020. Factivity from pre-existence: evidence from Barguzin Buryat. *Glossa* 5(1). 109.
- Chierchia, Gennaro. 2019. Factivity meets polarity: on two differences between Italian vs. English factives. In Daniel Altshuler & Jessica Rett (eds.), *The semantics of focus, degrees and times: essays in honor of Roger Schwarzschild*, 111–134. Springer.
- Coppock, Elizabeth & David Beaver. 2015. Definiteness and determinacy. *Linguistics and Philosophy* 38. 377–435.
- Davies, Mark. 2008-. The corpus of Contemporary American English. Available online at <https://www.english-corpora.org/coca/>.
- Emonds, Joseph. 1970. *Root and structure-preserving transformations*. Massachusetts Institute of Technology dissertation.
- Haegeman, Liliane. 2006. Argument fronting in English, Romance CLLD, and the left periphery. In Rafaella Zanuttini, Héctor Campos, Elena Herburger & Paul H. Portner (eds.), *Crosslinguistic research in syntax and semantics. negation, tense and clausal architecture*, 27–52. Georgetown University Press.
- Haegeman, Liliane & Barbara Ürögdi. 2010. Referential CPs and DPs: an operator movement account. *Theoretical Linguistics* 36(2/3). 111–152.
- Heim, Irene. 1982. *The semantics of definite and indefinite Noun Phrases*. University of Massachusetts, Amherst dissertation.
- Heim, Irene. 1983. On the projection problem for presuppositions. In Daniel P. Flickinger (ed.), *Proceedings of WCCFL 2*, 114–125. Stanford University, Stanford, California: CSLI Publications.
- Honcoop, Martin. 1998. *Dynamic excursions on weak islands*. University of Leiden dissertation.
- Hooper, Joan B. & Sandra A. Thompson. 1973. On the applicability of root transformations. *Linguistic Inquiry* 4. 465–499.
- Jarvis, Rebecca. 2021. English non-manner *how*-clauses as answers to deficient questions. In *Proceedings of SALT XXXI*.
- Kastner, Itamar. 2015. Factivity mirrors interpretation: the selectional requirements of presuppositional verbs. *Lingua* 164. 156–188.
- Kiparsky, Paul & Carol Kiparsky. 1970. Fact. In Manfred Bierwisch & Karl E. Heidolph (eds.), *Progress in linguistics*.
- Knyazev, Mikhail. 2016. *Licensing clausal complements: the case of Russian čto-clauses*. Utrecht University dissertation.
- Legate, Julie Anne. 2010. On how *how* is used instead of *that*. *Natural Language and Linguistic Theory* 28(1). 121–134.
- Liefke, Kristina. 2021. Non-manner *how*-complements in English and German. In *Proceedings of Sinn und Bedeutung 25*. London.
- Lohndal, Terje. 2014. Sentential subjects in English and Norwegian. *Syntaxe & Sémantique* 14. 81–113.
- Melvold, Janis. 1991. Factivity and definiteness. In Lisa Lai Shen Cheng & Hamida Demirdache (eds.), *More papers on wh-movement*, vol. 15 (MIT Working Papers in Linguistics), 97–117. MIT.
- Moulton, Keir. 2015. CPs: copies and compositionality. *Linguistic Inquiry* 46(2). 305–342.
- Nye, Rachel. 2013. *How complement clauses distribute: complementiser-how and the case against clause type*. Universiteit Gent dissertation.
- Pak, Marjorie. 2017. Propositional *how* questions and negation. In Aaron Kaplan (ed.), *Proceedings of WCCFL 34*, 423–430. Somerville, MA: Cascadia Proceedings Project.
- Pietraszko, Asia. 2019. Obligatory CP nominalization in Ndebele. *Syntax* 22(1). 66–111.
- Potts, Christopher. 2002. The syntax and semantics of as-parentheticals. *Natural Language and Linguistic Theory* 20(3). 623–689.
- Ross, John. 1973. Nouniness. In Osamu Fujimura (ed.), *Three dimensions of linguistic theory*, 137–257. Tokyo: TEC Corporation.
- Roussou, Anna. 2020. Complement clauses: case and argumenthood. In Ludovico Franco & Paolo Lorusso (eds.), *Linguistic variation: structure and interpretation. Studies in honor of M. Rita Manzini*, vol. 132 (Studies in Generative Grammar), 609–632. Berlin: Mouton de Gruyter.
- Sheehan, Michelle & Wolfram Hinzen. 2011. Moving toward the edge. *Linguistic Analysis* 37(3-4). 405–458.
- Taraldsen, Knut Tarald. 2010. The nanosyntax of Nguni noun class prefixes and concords. *Lingua* 120. 1522–1548.
- Umbach, Carla, Stefan Hinterwimmer & Helmar Gust. 2021. German *wie*-complements: manners, methods, and events in progress. *Natural Language and Linguistic Theory*.
- Visser, Marianna. 2008. Definiteness and specificity in the isiXhosa determiner phrase. *South African Journal of African Languages* 28. 11–29.