OPEN ACCESS

Concessive *although*-stripping and its theoretical implications*

Seulkee Park ** · **Jong-Bok Kim***
(Kyung Hee University)

Park, Seulkee and Jong-Bok Kim. 2023. Concessive *although*-stripping and its theoretical implications. *Linguistic Research* 40(2): 245-270. This paper investigates concessive *although*-stripping in English, a phenomenon where the so-called Stripping or Bare Argument Ellipsis (BAE) occurs in *although*-clauses. This elliptical construction has at least two sub-patterns: positive and negative *although*-stripping. Departing from the sentential ellipsis analyses that postulate clausal sources for the construction and deletion processes, in the paper we suggest a non-clausal WYSWYG (what you see is what you get) approach that directly projects the construction from a nonsentential fragment. The support for this direction comes from our corpus investigation. The attested data show that the connectivity effects, claimed to support the ellipsis analyses, can often be overridden, and further that contextual cues play key roles in licensing the construction in question. **(Kyung Hee University)**

Keywords   concessive, stripping, context, direct interpretation, ellipsis

1. Introduction

Stripping, also known as Bare Argument Ellipsis (BAE), is an elliptical construction in which all but one constituent are deleted in a clause, as in the following examples (see Ross 1969; Hankamer and Sag 1976; Depiante 2000; Merchant 2004, 2006; among others):

**   First author
*** Corresponding author

(1) a. Lauren can play the guitar, **and Mike**, too.
    b. Lauren can play the guitar, **but not Mike**. (Merchant 2003: 20)

As shown by the examples, stripping has two main types depending on the types of remnant, positive and negative forms.

(2) a. Parallel: A, *and* B *too* ⟨positive stripping⟩
    b. Contrast: A, *but not* B ⟨negative stripping⟩

These two patterns are also observed in the so-called *although*-stripping, as illustrated by the following attested examples.[1]

(3) a. That's p̰o̰s̰s̰ḭb̰l̰ḛ to do, **although tricky**. (COCA 1997 FIC)
    b. They looked l̰o̰s̰t̰, **although not afraid**. (COCA 1995 FIC)

As in other stripping, the remnant in the *although*-stripping induces a sentential interpretation. For example, the (boldfaced) remnant *tricky* in (3a) has a propositional meaning such that ʻalthough that's tricky to doʼ, and the one in (3b) can be understood as ʻthey did not look afraidʼ. The remnant is also contrastively focused with its (wavy underlined) correlate in the antecedent clause.

The challenges are then how we can license the construction while obtaining a propositional meaning from the fragment. One could develop a movement-cum-deletion approach adopting the one proposed for the *if*-stripping that behaves like *although*-stripping. Myers and Yoshida (2018) argue that a subordinate conjunction *if* can have a stripping construction:

(4) a. John likes to drink whiskey. **If scotch**, Iʼll pour him an Islay.
    b. [ForceP If [FocusP scotch [F̶i̶n̶P̶ [T̶P̶ J̶o̶h̶n̶ [V̶P̶ d̶r̶i̶n̶k̶ s̶c̶o̶t̶c̶h̶] ...]]]]

As in the structure of the example in (4b), *if* is a complementizer in the stripped clause, and the remnant *scotch* moves to the specifier position of FocusP in a SplitCP model and *if*-stripping undergoes a clausal ellipsis of lower CP projection, the FinP in the

---

1   COCA (Davies (2008-), Corpus of Contemporary American English)

structure, rather than TP. The analysis may support such a sentential-based deletion analysis, but as we will see in due course, attested data challenge such an analysis. In the paper, we first discuss key grammatical properties of the concessive *although*-stripping and look into real-life uses of the construction, referring to the corpus COCA (Corpus of Contemporary American English). We then try to suggest a non-sentential direct generation approach for such a construction. The sketched WYSWYG (what you see is what you get) approach posits no sentential sources for the proper semantic resolution of *although*-stripping examples.

2. Previous approaches

In the previous analysis, Merchant (2003) and Wurmbrand (2017) argue that *although*-stripping undergoes clausal ellipsis to contribute to the propositional meaning of the remnant, in which the remnant XP combines with *although* in FocP and its complement TP is elided under the domain. Their arguments with a sentential analysis are supported by syntactic connectivity effects such as case-matching, c-selectional lexical requirements, and preposition stranding and semantic connectivity like voice matching.

(5) a. Voice matching: The weight of managing all the needs of all the kids in the orphanage has been <u>relieved</u>, **although not forgotten**.
    b. C-selection: **Although not a Quaker**, he is listed **as** <u>an attendant</u> at the Green Street Meeting House in Philadelphia.

In (5a), the voice of the remnant *forgotten* is identical as that of its correlate *relieved*. Also, in (5b), the remnant NP *a Quaker* can be construed as the prepositional object of the preposition *as* from the putative source based on its antecedent ˈhe is listed as an attendantˈ.

Furthermore, Merchant (2003) argues that the negator in *although*-stripping is obligatory, and it functions as the head Neg which has a lexical specification checked by ˈbut, if, C[Q,wh], orˈ and it selects for an FP with an E (ellipsis) feature. As in the following examples, the distribution with the negator *not* can also apply to a licensor *(al)though* in stripping, but ˈ(al)though Ben tooˈ or ˈ(al)though Benˈ without the negator is not allowed.[2]

(6) a. *Abby speaks passable Dutch, (al)though Ben too.

   b. *Abby speaks passable Dutch, (al)though Ben.

   c. Abby speaks passable Dutch, **(al)though not Ben**. (Merchant 2003: (38))

Along the same line, Wurmbrand (2017) subsequently assumes that *although* is a coordinator like 'but' rather than a subordinator, which requires a contrast between the two conjuncts and shows polarity differences. Consider the following contrast between (7a) and (7b) on one hand and (7c) on the other:

(7) a. [FocP Abby [TP[-neg] tAbby speaks passable Dutch]] **although**
       *[FocP **Ben** [T̶P̶[̶-̶n̶e̶g̶]̶ ̶ ̶ ̶t̶B̶e̶n̶ ̶s̶p̶e̶a̶k̶s̶ ̶p̶a̶s̶s̶a̶b̶l̶e̶ ̶D̶u̶t̶c̶h̶]̶]   ⟨*polarity⟩

   b. [FocP Abby [TP[-neg] tAbby speaks passable Dutch]] **although**
       *[FocP **Ben** [T̶P̶[̶+̶n̶e̶g̶]̶ ̶ ̶ ̶t̶B̶e̶n̶ ̶d̶o̶e̶s̶n̶'̶t̶ ̶s̶p̶e̶a̶k̶s̶ ̶p̶a̶s̶s̶a̶b̶l̶e̶ ̶D̶u̶t̶c̶h̶]̶]⟨*parallelism⟩

   c. [FocP Abby [TP[-neg] tAbby speaks passable Dutch]] **although**
       [FocP **not Ben** [T̶P̶[̶-̶n̶e̶g̶]̶ ̶ ̶ ̶t̶B̶e̶n̶ ̶s̶p̶e̶a̶k̶s̶ ̶p̶a̶s̶s̶a̶b̶l̶e̶ ̶D̶u̶t̶c̶h̶]̶]

                                   ⟨*polarity, parallelism⟩
                                   (Wurmbrand 2017: (38))

In (7a), even if *although*-clause has a parallel structure with a contrastively focused element, the identical polarity value does not fulfill the conditions. On the contrary, in (7b), despite the fact that *although*-clause has a reversed polarity value with the antecedent clause, it is not acceptable since the underlying TP does not have a parallel structure under the FocP. Consequently, when the underlying TP under the FocP is equivalent to the antecedent clause and the polarity value is reversed by holding a negator 'not' in the Spec-FocP position, fulfilling both polarity and parallelism conditions leads to the ellipsis to be triggered in the stripping domain.

---

2   Merchant (2003) also states that the *(al)though*-stripping without a negator has narrower distribution than its negative counterpart. As observed later in this research, the remnant NP has significantly lower frequency in positive *although*-stripping than in negative one from the extracted corpus data.

3.   Corpus investigation

3.1 Methods and variables

To observe the authentic data, we assembled approximately 350 tokens of randomly selected examples from a web-based corpora COCA (Corpus of Contemporary American English) including spoken and written registers such as fiction, news, academic, etc. This construction has two sub-patterns with a subordinating conjunction *although* according to existence of a negator *not*, as suggested in (8):[3]

(8)   a. *although* [remnant X(P)] (punctuation) [145 tokens]
          (e.g., ALTHOUGH ADJ|NOUN|VERB|* PUNC)
      b. *although not* [remnant X(P)] (punctuation) [205 tokens]
          (e.g., ALTHOUGH NOT ADJ|NOUN|VERB|* PUNC)

For the various forms of the remnants in the search strings, we considered their definiteness, the length of phrases for the grammatical weight, and even lexical elements within the permitted length in the COCA search string.[4] After collecting data, we annotated variables on each example based on their form, function, and usage, considering their syntactic categories or functions and the relations with a remnant's correlate, antecedent, or even context. For example, the remnant and correlate types were tagged such as NP[nom], V[aux], VP[pass], quantifier, etc. In doing so, the remnants' correlates were classified according to overtness as overt or covert. Specifically, the correlate of a remnant can be overtly expressed in the antecedent, whereas it can be covertly represented. If there is no corresponding correlate, the remnant could be

---

3   As pointed out by a reviewer, when adding one * for randomly selecting one remnant in the search string, it brings about a problematic case where an incomplete constituent such as a noun without any determiner occurs as a remnant. To avoid this issue, it is important to try each syntactic category at one time with an appropriate optional element, but as one valid constituent.

4   When searching for the data, other concessive subordinate conjunctions such as *though*, e*ven though*, *while* or *if* were not included to avoid informal usages and ambiguous interpretations, as exemplified in the following cases.

   (i)   a. Sometimes that can be an emotional response, though not always. (COCA 2012 BLOG) [informal use]
         b. Russia is going to get worse if not better. (COCA 2017 SPOK) [conditional/concessive meanings]

reconstructed from an argument in the antecedent clause or recovered with the surrounding context, which of each we marked as a deictic or situational type respectively. More details about variables will be illustrated in the following subsection.

Furthermore, we could figure out their syntactic and semantic identities while recovering the elided parts based on the suggested context. For instance, matching or mismatching relations were identified in terms of tense, category, case, voice, polarity, finiteness, modality, or verb forms, and their connectivity effects such as binding condition, island constraint, and preposition identity from the explicitly or implicitly suggested context. The list of variables in our dataset are briefly summarized, as follows:

Table 1. Variables and their examples in the *although*-stripping dataset

Variables	Values
Remnant type	NP[nom], V[aux], VP[pass], quantifier, ...
Correlate type	NP[nom], V[aux], VP[pass], quantifier, ...
Overtness of the correlate	merger, sprouting, ...
Antecedent type	clausal, NP, situational, ...
Syntactic matchedness	tense, category, case, finiteness, ...
Semantic matchedness	voice, polarity, ...
Syntactic (non-)connectivity	binding condition, island constraint, preposition identity, ...
...	...

3.2 Analyzing data by variables

3.2.1 Remnant types

Looking into more about variables, we first considered general distributions of the remnant. Our data findings show that the remnant is quite restricted to appear as phrasal AP, NP, VP with passive- or *ing*-form, PP or AdvP, as can be found in the distributions both in positive and negative *although*-stripping. In this case, the syntactic category as a variable was tagged on each remnant. After tagging, overall distributions were established as in Figure 1 and 2 where AP and AdvP were the most frequent types:
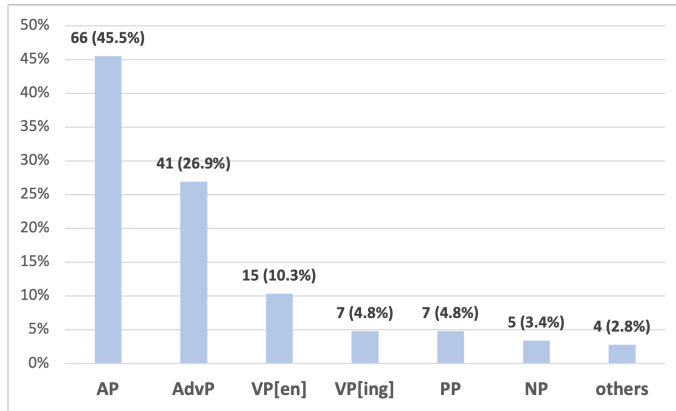
Figure 1. Frequencies of syntactic categories of remnants in positive
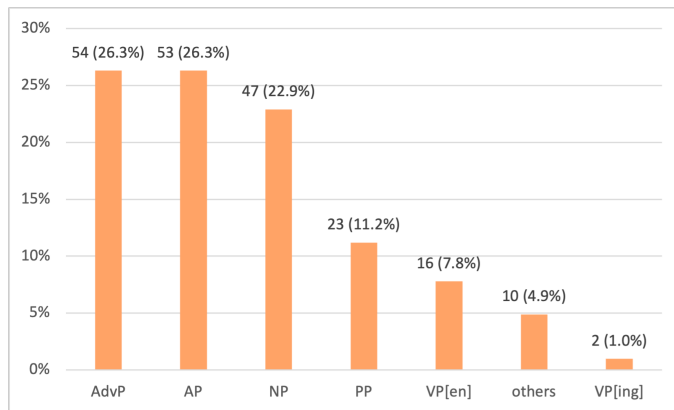*although*-stripping

Figure 2. Frequencies of syntactic categories of remnants in
negative *although*-stripping

In the figures above, the distributions of syntactic categories exhibit disparity between the two patterns. For instance, AdvPs in negative *although*-stripping tend to have a greater frequencies than the ones in *although*-stripping. Also, NP remnants are more likely to appear in negative *although*-stripping than the counterpart. The examples of the phrasal remnants are illustrated in (9) and (10).

(9) a. Although [AP bright], Wes was never really challenged at the Bronx schools he attended. (COCA 2001 MAG)

b. Although [AdvP frankly], the guy could have run away. (COCA 2010 SPOK)

c. The words were in English, although [VP[en] heavily accented]. (COCA 2013 FIC)

d. Things are still a bit shaky, although [VP[ing] getting better]. (COCA 2012 BLOG)

e. The blood was stopped, although [PP with difficulty]. (COCA 2012 WEB)

f. We grew up across the street from each other—same community and comparable income levels, although [NP different schools]. (COCA 2012 BLOG)

(10) a. Mr. Giuliani, the first Republican Mayor in a generation, went further and proposed to cut and restructure government in ways that would effect   virtually every New Yorker, although not [AdvP evenly]. (COCA 2012   WEB)

b. ... an important body has begun to take shape and have started functioning, although not [AP perfect]. (COCA 2012 WEB)

c. Darwin presented data from animals and plants to support his contentions,   and he mentioned consanguineous marriages, although not [NP his own].   (COCA 2012 ACAD)

d. Schmidt eventually moved back to the Volga Basin, although not [PP to Saratov]. (COCA 1993 NEWS)

e. I find the Balcongo, and Loanda—my boy is Loanda—pleasant and peaceful, although not exactly [VP[en] civilized]. (COCA 2015 FIC)

f. This material is generally fine, although not always [VP[ing] compelling]. (COCA 1991 NEWS)

Returning to the figures, we labelled ˙others˙ for classifying lexical remnants such as quantifiers and particles in (11) and (12), which present at substantial frequencies.

(11) a. I eventually produced a decent, although [Adj tentative], paper. (COCA 1993 MAG)

b. The show closed with Naomi Campbell, a model who has managed to

cross many, [Quantifier although not all], racial boundaries. (COCA 1996
FIC)

(12) a. Reliability is also a necessary, although not [Adj sufficient], condition for
validity of the measure. (COCA 2015 ACAD)

b. Inimical to Opposition Earth and many Elementals, although not
[Quantifier all]. (COCA 2019 FIC)

If that is the case, the question arises whether those lexical remnants are indeed assumed
to be Bare Argument Ellipsis which is also known as Stripping.

With the syntactic categories, we also observed the grammatical functions of
remnants. Based on the putative sources as with wavy-underlined correlates in (13)
suggested in the antecedent, the grammatical function of remnants in *although*-stripping
as a variable can be conjectured. We found that the remnant functions as subject, object,
predicate such as XP complement or predicative complement, adjunct, or noun modifier.

(13) a. Most of those seized have been released, although not the Japanese.
(COCA 2004 NEWS) ⟨Subject⟩

b. There has been similar interest in Teach For America, which recruits
new college graduates, although not career-switchers. (COCA 2009
NEWS) ⟨Object⟩

c. The partial anarchy of the international system has only been mitigated,
although not removed. (COCA 1990 ACAD) ⟨VP predicate⟩

d. Both loads are highly effective, although excessively powerful. (COCA
2003 MAG) ⟨Predicative complement⟩

e. Sometimes, although rarely, these visitors are very big rocks—asteroids
or comets. (COCA 1992 MAG) ⟨Adjunct⟩

f. There were a few others, too, although not many. (COCA 2009 BLOG)
⟨Noun modifier⟩

In our data set, most cases function as predicates or adjuncts in both positive and
negative *although*-stripping cases, as found in the following table. A possible explanation
for this result will be accounted for in the subsequent section in which most of the
remnants in *although*-stripping may be classified into an argument or predicational type,
especially when the remnant has lexical or antecedent issues.

Table 2. The grammatical functions of the remnants

	although	*although not*
Subject	2 (1.4%)	4 (2.1%)
Object	1 (0.7%)	6 (3.1%)
XP complement	15 (10.5%)	8 (4.1%)
Predicative complement	68 (47.6%)	81 (41.5%)
Adjunct	52 (36.4%)	87 (44.6%)
Noun modifier	5 (3.5%)	9 (4.6%)
Total	**143 (100%)**	**195 (100%)**

3.2.2 Correlate types

What we may bring a question from the remnant types is whether some lexical remnants such as attributive adjectives or quantifiers correspond to authentic Bare Argument Ellipsis (BAE). To identify this issue, we have looked into the distributional environment of correlates. Especially, a remnant in *although*-stripping can have its corresponding overt correlate in the antecedent, which is found to be in the contrastive relation. Consider the following examples:

(14) a. Although bright, he was insecure, melancholy, and introverted. (COCA 1994 MAG)

b. I think it's a disgrace that you've taken this stance, although not a surprise. (COCA 1997 SPOK)

The remnant in negative *although*-stripping, however, can be repeated from or coreferential with its overt correlate with a broader spectrum. Consider the following case:

(15) She needs to be careful, although not this careful. (COCA 1993 FIC)

This rather contradictory result may be due to the fact that in terms of its semantic meaning with a negator 'not', the repeated or coreferential correlates of negative *although*-stripping are conclusively in a contrastive relation due to the negator 'not'.[5]

---

5   This contrastive meaning from the repeated constituent can be evidenced by so-called contrastive reduplication construction suggested by Ghomeshi et al. (2004). Consider the following cases:

Therefore, the remnants both in positive and negative *although*-stripping are only allowed to be contrastive with their correlates. In the following observed distributions in Figure 3, however, correlates show a little distinction from their remnants in that they have comparably lower frequencies in AdvP than in remnant distribution. This unanticipated finding of the low frequencies in AdvP may be due to the fact that the remnant can also obtain a covert correlate in the antecedent clause.
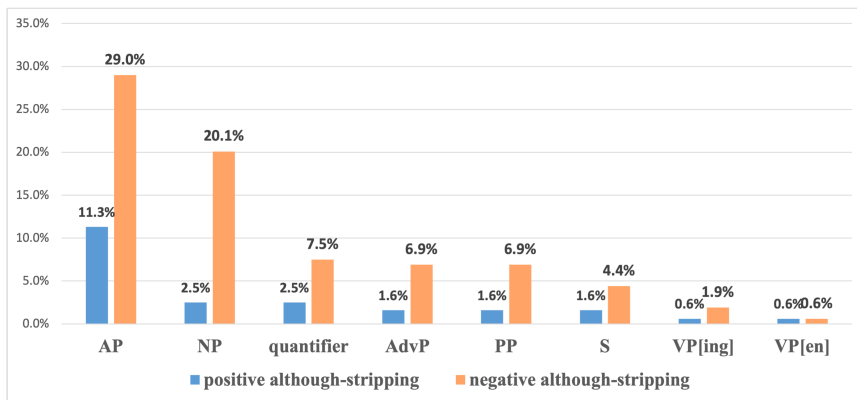

Figure 3. Distributions of overt correlates according to the syntactic categories in positive and negative *although*-stripping

Even though the contrastive correlate is not overtly present in the antecedent clause, the remnants in *although*-stripping may have recovered interpretations. For instance, *although small* in (16a) and *although not consecutive* in (17a) can be understood respectively as 'although they did have a small chapel' and 'although the word absconded does not contain five letters of the alphabet in consecutive order'. But in most cases of covert correlates, the remnant frequently occurs as an adjunct as in (16b) *although later* or as in (17b) *although not publicly* with their readings 'although I realized it later' and

---

(i) a. I'll make the tuna salad, and you make the SALAD-salad.
   b. I'm up, I'm just not UP-up. (Ghomeshi et al. 2005: 308)

In the examples above, the target material is reduplicated or repeated in the same sentence showing a particular contrastive meaning. For example, the noun phrase *the SALAD-salad* in (ia) apparently denotes different salad which would be full of green salad; moreover, the adjective *UP-up* in (ib) denotes specifically exaggerated feeling as opposed to *up* in the first conjunct.

ʻalthough the paternity tests may not be revealed publiclyʼ.

(16) a. They did have a chapel, although small. (COCA 2006 MAG)

b. I realized it too, although later. (COCA 1995 FIC)

(17) a. The word absconded contains five letters of the alphabet, A-B-C-D and E, in order, although not consecutive. (COCA 1996 SPOK)

b. The paternity tests, the DNA tests, may be revealed, although not publicly. (COCA 2007 SPOK)

The remnant and its antecedent in (16a) denote the contrastive propositional meanings between the situation that they just have a chapel without any noun-modifying expression and the one with a small chapel. Also, in (16b), the remnant's propositional meaning including adverbial meaning of *later* shows contrastive relation with the antecedent clause without any adverbial meaning. Negative *although*-stripping with covert correlates also present contrastive meanings: ʻthe five alphabet letters in orderʼ is a contrast to ʻthe five alphabet letters in consecutive orderʼ in (17a), and ʻthe test resultʼ of contrast corresponds to ʻthe publicly revealed test resultʼ in (17b).

The observed correlation between syntactic categories and functions of remnant may explain their structural properties especially in terms of the structural relations in terms of recoverability. With the variables of remnant and its corresponding correlate, we also examined any possible mismatches between antecedents and ellipsis sites, which shows a semantic contrast. For instance, a remnant-correlate pair in (18a) shows a categorial matching relation whereas the one in (18b) involves a mismatching relation in category.

(18) a. It will be difficult for him to lead, although not impossible. AP-AP MATCH (COCA 1998 SPOK)

b. Things are still a bit shaky, although getting better. AP-VP MISMATCH:CATEGORY (COCA 2012 BLOG)

Of the mismatch cases, as in the following table, category mismatch was most frequently found in the dataset, and additionally there were finiteness, voice, tense, and agreement mismatches found.

Table 3. Mismatch types and their examples in *although*-stripping

Mismatch type	Example
category	*Although not a citizen, Membrero was in the U.S. legally.* (COCA 2016 SPOK)
voice	*I suspect Barry Bonds did also, although never proven.* (COCA 2012 BLOG)
tense	*I was a cyclist for many years, although not any longer.* (COCA 2012 WEB)
agreement	*Notable also are the many legal, administrative, and economic texts and private documents such as letters, although not actually literature.* (COCA 2012 WEB)

Our assumption in this research so far, however, is that if a remnant appears with no overt or covert correlate, it would be somewhat distinct in that they have predicational interpretations. A possible explanation for this might be based on our observation that the syntactic categories of those remnants were found to be predicational AP or VP with *ing* or *en* form. It is therefore likely that such distinction can be determined by whether a remnant is predicational or argument type. To look into environmental properties of remnants which do not have corresponding overt or covert correlates, we will inspect antecedent types in the following subsubsection.

3.2.3 Antecedent types

Some of our data findings show some restrictions to find their antecedents since there were some cases where only some part of the antecedent correspond to the source of the ellipsis, which is referring to a noun phrase. In this case, only a noun phrase or a substitutional deictic pronoun can be the source of ellipsis in a copula clause. Consider the following case:

(19) The air was dead calm and [the waves]$_i$, although small, were beautifully
      formed and breaking at regular intervals. (COCA 2000 MAG)

In (19), since the only possible antecedent is the bracketed noun phrase *the waves* from the suggested context, the interpretation of the remnant can be predicational copula clause as 'although the waves are small'. Otherwise, a deictic argument referring to the noun phrase like 'although they$_i$ are small' can be alternatively understood instead of the NP

in interpretation. Another peculiar case appear where a discontinuous or split clause is the candidate for the antecedent, especially when the stripped clause is within the relative clause as follows:

(20) Holden was considered [a rebellious, ungrateful, disrespectful teenager] that, although rare, [is a worldwide epidemic]. (COCA 2010 NEWS)

In (20), the bracketed antecedents are composed of the head NP in a relative clause and its VP occurs in the embedded context under the relative clause. Another unexpected antecedent also occurs when it is extralinguistically given as the situational antecedent. Consider the following situation:

(21) Maybe I'll go with you. Although the shooting. (COCA 1997 TV)

In (21) the possible reading of the remnant may be understood as ʻalthough the shooting happensʼ or ʻalthough we encounter the shootingʼ from its situational context in a TV show.

Based on the variables and reconstructions we established, the structural relations and the overtness of the source (antecedent) can be labelled as overt, covert, or exophoric in the following examples with labels and the distribution graphs in Figure 4:[6]

(22) a. Although not a citizen, Membrero was in the U.S. legally. OVERT
     b. The word absconded contains five letters of the alphabet, A-B-C-D and E, in order, although not consecutive. COVERT
     c. Maybe I'll go with you, although the shooting. EXOPHORIC

---

6   The term ʻexophoricʼ first suggested by Hankamer and Sag (1976) refers to the extra-linguistical context pragmatically controlled by a hearer in the discourse.
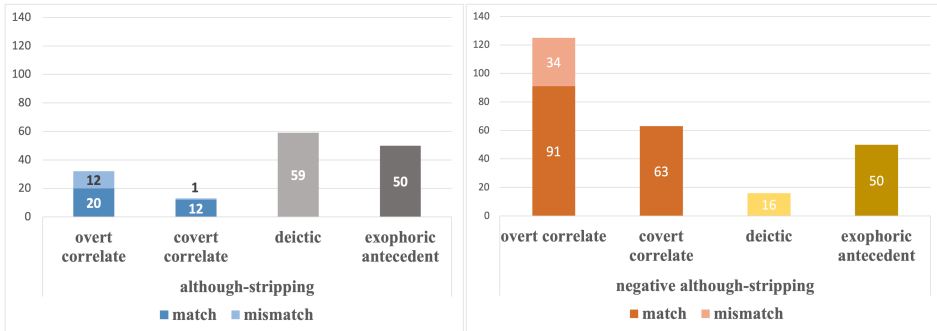
Figure 4. Frequencies of correlates with matchedness and exophoric antecedent

The Figure 4 illustrates that both overt and covert correlates matching with the remnant are mostly found in negative *although*-stripping. One more observation to emerge from the data comparison was that the situationally given exophoric antecedent type appear at a high rate analogously in negative *although*-stripping.

4. Data discussions

4.1 Non-connectivity

Despite the clausal ellipsis analysis from the previous researches, the authentic data we have identified indicate that connectivity effects can often be overridden, leading to syntactic mismatches, locality, and adjacency issues. Observe the following mismatch cases:

(23) a. Category mismatch: 44 years later we're still [NP lovers], **although not [VP[en] star-crossed]**. (COCA 2012 BLOG) (= *although we're not star-crossed*)

b. Tense mismatch: I **was** a cyclist for many years, **although not any longer**. (COCA 2012 WEB) (= *although I am not a cyclist any longer*)

c. Agreement mismatch: Notable also are the many legal, administrative, and economic texts and private documents, **although not actually literature**. (COCA 2012 WEB) (= *although notable is not literature*)

d. Voice mismatch: I suspect[active] Barry Bonds did also, **although never proven**[passive]. (COCA 2012 BLOG) (= *although it was not proven (that) Barry Bonds did also*)

For example, in (23a), the remnant and its correlate show category mismatch with an NP-VP pair. Also, in (23b), the putative source of the elided clause needs to have the present tense based on the meaning of the remnant, differing from its antecedent clause with a past tense. Especially, in (23c), the remnant needs a singular verb in its putative source whereas the suggested antecedent with its corresponding correlate has a plural verb. Furthermore, semantically, the remnant 'never proven' with a passive voice in (23d) is linked to the active voice correlate, which shows voice mismatch. This indicates that those mismatches between putative and target clauses cast doubt on the postulation of the same environment of the sentential source.

4.2 Locality issue

Another potential issue emerges from locality restrictions of remnants in *although*-stripping. As widely assumed in the literature, stripping is sensitive to syntactic islands (Reinhart 1991; Depiante 2000; Kolokonte 2008; Konietzko 2016; Johnson 2019). When the correlate is embedded within a relative or adjunct clause, as in (24), stripping is not acceptable.

(24) a. *John loves [NP a girl who is learning Italian], but not Spanish.
b. *John left [Adjunct because Mary invited David], but not Bill. (Yoshida et al. 2015: 344)

We observed, however, some corpus data seem to be island-insensitive, as follows:

(25) Left Branch Island
a. The size of the federal debt does have [NP a very important, **although indirect**, effect] on interest rates and the health of the economy. (COCA 1995 NEWS)
b. [NP The good works, **although not conspicuous**,] can not be entirely

concealed.

In (25), when a lexical remnant of *although*-stripping is embedded within the scope of an NP domain which contains its correlate, *although*-stripping is acceptable. If the stripping results from a sentential source, then the correlate contained within an island violates the left branch constraint. This suggests that movement-cum-deletion operations may not be sufficient to account for the ellipsis of *although*-stripping. Actually, this violation of the left branch island condition can be easily observed especially in stripping examples with contrastively focused relations.

4.3 Adjacency issue

A further complication arises from a lexical remnant when it comes to the adjacency. Generally, the remnant occurs linearly adjacent to its contrastive correlate as follows.

(26) a. The size of the federal debt does have a very important, although indirect, effect on interest rates. (COCA 1995 NEWS)
    b. The Latin translations were all that was subsequently available to European (although not to Islamic) culture from the decline of Rome until the Renaissance. (COCA 2012 WEB)

Distinct from phrasal remnants, however, certain remnants such as an attributive adjective or a quantifier can be cataphoric as in (27a) or quite distant from outside of the scope of the NP as in (27b), even though they are still construed in the same scope of the noun phrase in the putative source.

(27) a. The Burj, **although new**, is an easy way to frame Dubai as a travel destination. (COCA 2012 BLOG)
    b. The democrats expect to win some seats in the legislature China will impose on Hong Kong, **although not many**. (COCA 1997 NEWS)

This also indicates that the deletion operations may not account for the ellipsis site of *although*-stripping.

4.4 Contrast relation with no overt negator

In the previous analysis, as mentioned earlier, Merchant (2003) argues that the negator *not*, which is the head Neg, is required in *although*-stripping and it selects for an FP with an E feature, as follows.

(28) Abby speaks passable Dutch,
    a. *(al)though Ben too.
    b. *(al)though Ben.
    c. (al)though not Ben. (Merchant 2003: (38))

Against his idea, however, we can find from the authentic data that *although*-stripping sufficiently shows a contrast relation between the remnant and its corresponding correlate in spite of no overt negator.

(29) a. Things are still a bit shaky, although **getting better**. (COCA 2012 WEB)
    b. Holden was considered a rebellious, ungrateful, disrespectful teenager that, although **rare**, is a worldwide epidemic. (COCA 2012 WEB)
    c. ... an accomplishment for an agency that, although **improving**, is falling short of benchmarks set by a federal court and the U.S. Department of Justice. (COCA 2009 NEWS)

In the examples, the remnants have contrastive meaning from their corresponding correlates: *better* vs. *shaky*, *rare* vs. *a worldwide epidemic*, and *falling short* vs. *improving*. Even though the negator *not* contributes the contrast negation to the propositional meaning of the stripped clause, the cases in (29) contradict the argument without any obligatory negator in *although*-stripping.

4.5 Exophoric antecedent

As mentioned earlier, some remnants trace an exophoric antecedent which is established from the situational context. Consider the following examples in which their linguistic antecedents do not exist:

(30) a. A: So this much you will pay. We do not get the money into a heap.
      B: It is your problem. Plunder **although the bank**. (COCA 2009 MOV)
      (= *although you deposit your money to the bank* / *the bank can keep your money*)

   b. Maybe I'll go with you. **Although the shooting**. (COCA 1997 TV)
      (= *although the shooting happens* / *although we encounter the shooting*)

   c. Things have already started to go wrong. Steven began to tell lies. My mother found out about it. She was going to kick Steven out. This should   go **although the half-way house**. (COCA 2013 MOV)
      (= *although Steven enters* / *needs the half-way house*)

As you can find out from the corpus sources, they were transcribed from movies or TV shows. In this case, the remnant needs to be understood not only from the suggested texts but also from the situational or surrounding context. Thus, since it is not applicable to be syntactically matched, it rather needs the discourse information, which can be resolved from the extra-linguistic sources (Hankamer and Sag 1976; Miller and Pullum 2013).

5. Theoretical implications

5.1 Predicational and argument remnants

In this paper, we argue that remnants in *although*-stripping have two variants: predicational and argument types. Based on our observation through a corpus dataset, when a remnant in *although*-stripping functions as a predicate or at least a part of predicate in the putative source, the remnant can be interpreted or alternatively reconstructed as a predicational copula clause with a pronominal deictic subject. Consider the following example (31a):

(31) a. **Although** (he_i was) not a philosopher, [the manic comedian Jerry Lewis]$_i$, captured this willing surrender to sensation ... (COCA 2015 ACAD)

   b. Although Jerry Lewis was not a philosopher, ...

   c. Although he was not a philosopher, ...

In (31a), the remnant in *although*-stripping does not have its correlate represented in the matrix clause; however, it does have its antecedent noun phrase which functions as a subject in the remnant's predicational copula reading. Furthermore, the noun phrase antecedent can alternatively be understood as a deictic subject referring to itself. This copula reading also applies even when the remnant is not a phrasal remnant but a lexical one since it corresponds to a predicational predicate.

Supporting this argument, Mikkelsen (2008) points out that, in a copula question and answer pair, only predicational, not specificational, copula clause answer would be felicitous, as exemplified in the following dialogue:

(32) Q: Who/What is Mary?
     A1: Mary is the graduate advisor. ⟨Predicational⟩
     A2: #The graduate advisor is Mary. ⟨Specificational⟩ (Mikkelsen 2008:
       (13))

In other words, only predicational copula construction is permitted to be the suitable answer to the Question-under-Discussion (QUD), while a copula clause with the specificational predicate is not. Taken together, the theoretical implications of these findings indicate that predicational remnants may not qualify for the genuine stripped remnant, that is to say not a bare argument ellipsis.
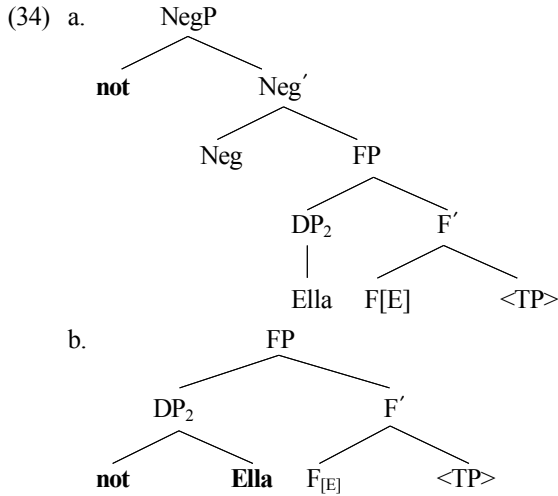
5.2 Contrast relation with no overt negator *not*

Moving back to the negation, as argued in kim (2020), a negated fragmental remnant takes the structured meaning from the negator 'not' as a either sentential or constituent operator based on the context, as in (33):

(33) a. A: Who could do such a thing? (2010 FIC)
     b. B: [NP Not [NP Ella]]. ⟨Constituent negation⟩
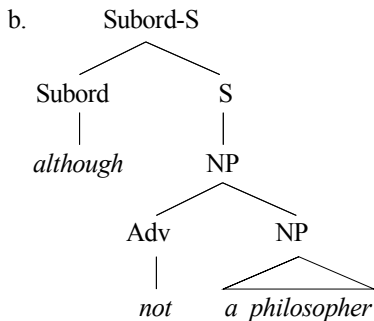   c. B: [NP Not [S [NP Ella]]. ⟨Sentential negation⟩

As such, negative *although*-stripping can take the two ambiguous readings. Merchant (2003) also casts doubt on the status of the negator in the stripped clause whether it is

a sentential adverb, a NegP projected above the FocP in (34a), or a constituent negation in (34b), as follows.

(34) a.

```
          NegP
         /    \
       not    Neg′
             /    \
           Neg    FP
                 /    \
               DP₂    F′
                |    /   \
              Ella F[E]  <TP>
```

b.

```
              FP
            /    \
          DP₂     F′
         /   \   /   \
       not  Ella F[E]  <TP>
```

Especially, when the *although*-stripping context involves a deictic argument or a predicational reading, like 'although not a philosopher', the negator 'not' has a reading with a contrast negation with the constituent operator. Therefore, this would require additional contextual discourse information.

(35) a. **Although not a philosopher**, [the manic comedian Jerry Lewis] captured this willing surrender to sensation ...

b.

```
           Subord-S
          /       \
      Subord       S
        |          |
     although      NP
                 /    \
               Adv     NP
                |       /\
               not  a philosopher
```

On the other hand, despite Merchant's (2003) analysis with an obligatory negator,

although-stripping with no negator shows a contrast relation as suggested earlier in the authentic data:

(36) Things are still a bit shaky, **although getting better**. (COCA 2012 WEB)

In such relations, before projecting contrastively negated meaning, additional contextual information need to fulfill the ellipsis requirement of *although*-stripping based on the Parallelism matching condition suggested by Hardt and Romero's (2004) following generalization:

(37) Parallelism matching condition (Hardt and Romero 2004):
      Ellipsis requires that there be some phrase E containing the ellipsis and some antecedent phrase A in the discourse, such that ⟦A⟧ is or contextually implies a member of F(E).

Adopting Hardt and Romero's (2004) Parallelism matching condition, the context in (36) requires the remnant to be contrastive with the correlate with contrastive negation as in (38), which can be in sufficient condition to fulfill the requirement without any negator.

(38) ⟦[Things are a bit SHAKY]S1]⟧ $\in$ F(¬[Thing are GETTING BETTER]S2)

In (38), since the remnant has a contrast negation reading, the denotation of antecedent can contextually implies negated meaning of the remnant due to ellipsis licensed by *although*.
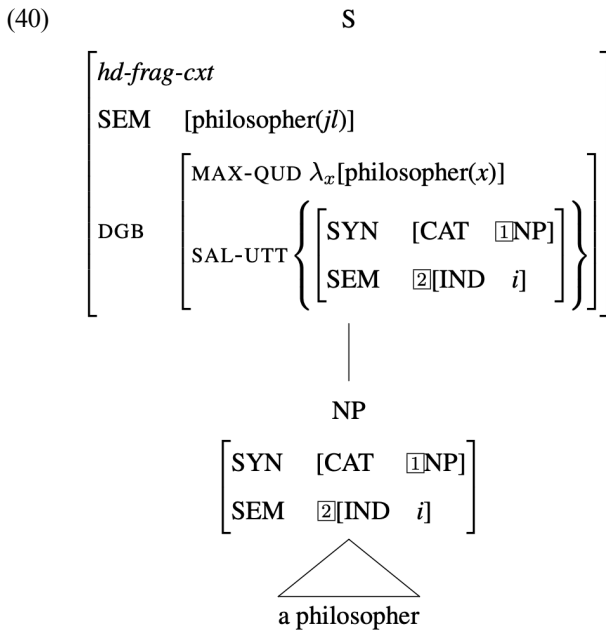
5.3 Contextual discourse information for resolution

Suggesting some theoretical implications, we argue that *although*-stripping is base-generated based on the structure of a head-fragment construction suggested by Kim (2015). Since the remnant needs the contextual discourse information, it may offer a resolution constructing a propositional meaning from the fragmental remnant.

(39) Head-Fragment Construction (Kim 2015):

  Any category can be projected into a NSU (non-sentential utterance) when
  it functions as a salient utterance (SAL-UTT).

Whether either the remnant of *although*-stripping is lexical or its antecedent is not overtly present in the context, a Head-Fragment Construction rule enables the remnant to have a focus-establishing constituent (FEC) and to be qualified to function as a salient utterance (SAL-UTT). Distinct from the derivational view, in other words, this approach can account for how a remnant in *although*-stripping can be mapped into the non-sentential utterance, and it leads to a sentential interpretation directly instantiated from the Head-Fragment Construction, as in the following structure.

(40)

$$
\text{S}
$$

$$
\begin{bmatrix}
\textit{hd-frag-cxt} \\
\text{SEM} \quad [\text{philosopher}(jl)] \\
\text{DGB} \begin{bmatrix}
\text{MAX-QUD } \lambda_x[\text{philosopher}(x)] \\
\text{SAL-UTT} \left\{ \begin{bmatrix}
\text{SYN} \quad [\text{CAT} \quad \boxed{1}\text{NP}] \\
\text{SEM} \quad \boxed{2}[\text{IND} \quad i]
\end{bmatrix} \right\}
\end{bmatrix}
\end{bmatrix}
$$

$$
\text{NP}
$$

$$
\begin{bmatrix}
\text{SYN} \quad [\text{CAT} \quad \boxed{1}\text{NP}] \\
\text{SEM} \quad \boxed{2}[\text{IND} \quad i]
\end{bmatrix}
$$

a philosopher

In the tree structure, the fragmental remnant NP 'a philosopher' is the only daughter node of an S-node which would have a propositional meaning with *although*, thereby formalizing the contextual discourse information in the remnant site. More specifically, the remnant can be projected into a head-fragment construct together with the relevant

discourse information such as DGB (dialogue-game-board) and MAX-QUD (maximal question-under-discussion), in which the semantic propositional meaning can be an answer to the MAX-QUD.

Consequently, when the semantic content is applied in *although*-stripping, its semantic meaning with the contextual information sufficiently fulfills the ellipsis requirement with a constituent or contrast negation reading, despite no overt negator.

6. Conclusion

In the paper, we have discussed that subordinating conjunction *although* can license stripping with a concessive meaning. The observed connectivity effects in *although*-stripping seem to support sentential approaches, but we have observed that there are attested data that override these connectivities. The corpus data licensing exophoric antecedents and predicational remnants provide support for the base-generation account of *although*-stripping. We identified several idiosyncratic remnant patterns distinct where the remnants behave differently in two different patterns: predicational and argument types. The argument type shows similar behaviors with positive stripping in coordinate structure, but the predicational type, with no corresponding correlates, differs from genuine stripping as well as from bare argument ellipsis. The findings imply that *although*-stripping is also tied with the predicational copula construction and refers to the discourse structure for proper semantic resolution.

References

Davies, Mark. 2008-. *The Corpus of Contemporary American English (COCA)*. https://www.eng-ish-corpora.org/coca/.

Depiante, Marcela Andrea. 2000. *The syntax of deep and surface anaphora: A study of null comple-ment anaphora and stripping/bare argument ellipsis*. PhD Dissertation. Storrs, CT: University of Connecticut.

Ghomeshi, Jila, Ray Jackendoff, Nicole Rosen, and Kevin Russell. 2004. Contrastive focus reduplica-tion in English (the salad-salad paper). *Natural Language and Linguistic Theory* 22: 307-357.

Hankamer, Jorge and Ivan A Sag. 1976. Deep and surface anaphora. *Linguistic Inquiry* 7(3): 391-426.

Hardt, Daniel and Maribel Romero. 2004. Ellipsis and the structure of discourse. *Journal of*

Semantics 21(4): 375-414.

Johnson, Kyle. 2019. Gapping and stripping. In Jeroen van Craenenbroeck and Tanja Temmerman (eds.), *The Oxford handbook of ellipsis*, 562-604. Oxford: Oxford University Press.

Kim, Jong-Bok. 2015. Syntactic and semantic identity in Korean sluicing: A direct interpretation approach. *Lingua* 166(Part B): 260-293.

Kim, Jong-Bok. 2020. Negated fragments: A direct interpretation approach. *Korean Journal of English Language and Linguistics* 20: 427-449.

Kolokonte, Marina. 2008. *Bare argument ellipsis and information structure*. PhD Dissertation. Newcastle Upon Tyne, UK: Newcastle University.

Konietzko, Andreas. 2016. *Bare argument ellipsis and focus*. Amsterdam; Philadelphia: John Benjamins Publishing Company.

Merchant, Jason. 2003. *Remarks on stripping*. Manuscript. University of Chicago.

Merchant, Jason. 2004. Fragments and ellipsis. *Linguistics and Philosophy* 27(6): 661-738.

Merchant, Jason. 2006. Why no(t)? *Style* 40(1): 20-23.

Mikkelsen, Line. 2008. Specification under discussion. *Proceedings of the Thirty-fourth Annual Meeting of the Berkeley Linguistics Society*, 473-482. University of California, Berkeley. February 8-10.

Miller, Philip and Geoffrey K Pullum. 2013. Exophoric VP ellipsis. In Philip Hofmeister and Elisabeth Norcliffe (eds.), *The core and the periphery: Data-driven perspectives on syntax inspired by Ivan A. Sag*, 5-32. Chicago, IL: The University of Chicago Press.

Myers, Ethan and Masaya Yoshida. 2018. What can *if*-stripping tell us about ellipsis? A handout from *the 49th Annual Meeting of North East Linguistics Society (NELS 49)*. Ithaca, NY: Cornell University. October 5-7.

Park, Seulkee. 2022. *Subordinate stripping in English: A construction-based analysis*. PhD Dissertation. Kyung Hee University, Seoul.

Park, Seulkee and Jong-Bok Kim. 2023. A discourse-based approach to concessive *although*-stripping in English. *Proceedings of the Linguistic Society of America* 8(1): 5453.

Reinhart, Tanya. 1991. Elliptic conjunctions-non-quantificational LF. In Asa Kasher (ed.), *The Chomskyan turn*, 360-384. Oxford: Blackwell.

Ross, John R. 1969. Guess who. *Proceedings of the Fifth Annual Meeting of the Chicago Linguistic Society*, 252-286. The University of Chicago. April 18-19.

Wurmbrand, Susi. 2017. Stripping and topless complements. *Linguistic Inquiry* 48(2): 341-366.

Yoshida, Masaya, Chizuru Nakao, and Iván Ortega-Santos. 2015. The syntax of *why*-stripping. *Natural Language and Linguistic Theory* 33(1): 323-370.

Seulkee Park
Visiting Professor

Institute for the Study of Language and Information
Kyung Hee University
26 Kyungheedae-ro, Dongdaemun-gu,
Seoul, 02447 Korea
E-mail: seulkeepark@khu.ac.kr

Jong-Bok Kim
Professor
Department of English Language and Literature
Kyung Hee University
26 Kyungheedae-ro, Dongdaemun-gu,
Seoul, 02447 Korea
E-mail: jongbok@khu.ac.kr