CP Complements of *Er*-Nominalisations in English

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ABSTRACT *Er*-nominalisations which take CP complements are rare in English, but possible. An common construction involving one is *to be a firm believer that....* I propose that the behaviour of these nominalisations results from a tension. On the one hand, they are *Argument Structure Nominals* in the sense of Grimshaw (1990), and they 'inherit' the argument-taking properties of their parent verb. So if the parent verb believe can take a CP argument, the corresponding *er*-nominalisation believer should be able to take a CP argument too. On the other hand, they are nouns. And since Stowell (1981), a long line of work has argued that a noun simply cannot take a CP argument. I argue that this tension is usually fatal, which is why CP-taking *er*-nominalisations sound so bad in argument positions. It's only when they are used as *predicate* nouns that they become acceptable – but even then, the CP does not pattern like a true argument of the noun. I sketch some possible solutions, without coming to a conclusion.

1 INTRODUCTION

Er-nominalisations in English, like *talker* and *opener*, are often thought to contain some amount of event and argument structure (Rappaport Hovav & Levin 1992, Alexiadou & Schäfer 2010, Roy & Soare 2014). In this article I discuss the somewhat rare but fully productive class of *er*-nominalisations which take CP complements, exemplified in (1).[1]

(1) a. Sorry, I'm a frequent forgetter [that sarcasm doesn't translate well].

    b. ɣ I'm a big hoper [that the Universe believes in equality].[2]

    c. ɣ I am a firm believer [that every person, young or old, has at least one good story to tell].[3]

    d. ɣ The police are frequent complainers [that they have better things to do than answer requests under the Freedom of Information Act].[4]

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[1] Following Horn (2011), examples marked with ɣ were found via Google searches. All judgments are my own.

[2] https://www.cinemablend.com/television/So-You-Think-You-Can-Dance-Watch-Top-Three-Final-Performance-Show-26305.html

[3] https://www.goodreads.com/quotes/9665961-i-am-a-firm-believer-that-every-person-young-or

[4] https://www.heraldscotland.com/news/12461068.opening-new-doors-thanks-to-the-publics-right-to-know/

    e. ɣIt is typical of the generosity of the noble Lord's father that he should have been a willing agreer [that a measure of that sort should put forward and agreed to in Parliament] …[5]

I propose that CP-taking *er*-nominalisations sit at a point of tension in the grammar of English. On the one hand, they contain internal event structure and argument structure which they 'inherit' from the verb they are derived from (their 'parent' verb) – that is, they are *Argument Structure Nominals* in the sense of Grimshaw (1990). As a result they need to satisfy the thematic requirements of their parent verb. So if the parent verb can take a CP argument, the *er*-nominalisation of that verb should be able to take a CP argument too. On the other hand, they are nouns. And since Stowell (1981), a long line of work has argued that a noun simply cannot embed a CP argument. Where a noun appears to take a CP argument, the CP is not a 'true' argument of the noun, but instead is an adjunct or modifier in some sense.

In this article, I argue that many of the properties of clause-taking *er*-nominalisations can be understood with reference to this tension. Indeed, this tension is actually not resolvable in most environments, and I will show that CP-taking *er*-nominalisations are generally unacceptable in argument positions. It's only when the nominalisation is used as a predicate nominal, as in the examples in (1), that it can escape from this bind.

In section 2, I summarise some relevant work on *er*-nominalisations and on CP-taking nouns. In section 3, I turn to *er*-nominalisations with CP complements, and I show that they reject true CP arguments and only accept DP arguments – thus their CP must be attached as a non-argument. In section 4, I conclude with some speculation about why CP-taking *er*-nominalisations are licensed when used as predicate nominals.

2 BACKGROUND

In this section I outline some of the main properties of *er*-nominalisations and of clause-taking nouns in general (e.g. *idea*, *belief*).

2.1 Er-nominalisations

Prototypically, *er*-nominalisations are interpreted as individuals who have the thematic role assigned to the subject of their parent verb – so a *worrier* is an individual who worries, an *eater* is an individual who eats, and so on (Rappaport Hovav & Levin 1992). Following much of the literature on nominalisations, I refer to the argument of the parent verb that is picked out by the nominalisation as the R-

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argument.[6] The range of thematic roles that can be assigned to the R-argument in the nominalisation is just the same as the range of roles which the parent verb can typically assign to its subject. So just as the subject of *open* can be an agent or an instrument, as in (2), so too can an *opener* be an agent or an instrument, as in (3). That is, the *er*-nominalisation 'inherits' the argument structure of its parent verb.

(2) a. Mary opened the can.

 b. The new gadget opened the can.

(3) a. I am an expert opener.

 b. This here is an excellent opener.

Some theoretical work has proposed that *er*-nominalisations can have eventive and non-eventive readings (Rappaport Hovav & Levin 1992). In eventive *er*-nominalisations, there is an implication that the nominalised event actually took place, while non-eventive ones lack this implication. This difference is argued to correlate with whether or not a syntactic complement is licensed: eventive *er*-nominalisations license a syntactic complement, as in (4a); non-eventive ones do not license a syntactic complement, as in (4b) – note that the adjoined noun *life* in (4b) is *not* a complement, on which see Borer (2012).

(4) a. a saver of lives   (can only refer to a person that has saved a life)

 b. a life-saver   (has not necessarily saved lives)

This distinction follows the contours of the distinction between *complex event nominals* and *referring nominals* described by Grimshaw (1990) – complex event nominals contain a representation of an event and inherit the argument structure of their parent verb, thus requiring them to project a syntactic complement. In contrast, referring nominals do not contain a representation of an event, and cannot license a syntactic complement.

However, Alexiadou & Schäfer (2008), Alexiadou & Schäfer (2010) argue that the distinction in (4) is not really about the presence vs. absence of an event – they argue instead that all *er*-nominalisations, including those in (4b), contain a representation of an event. Roy & Soare (2014) investigate this claim in more detail and reach a similar conclusion: (some of) those *er*-nominalisations classed as 'non-eventive' *do* contain the representation of an event. Their evidence comes from

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[6] There is a class of *er*-nouns whose R-argument does not appear to be the subject of the parent verb – some examples are given in (I) (from Alexiadou & Schäfer 2010).

(I) a. scratcher   (a lottery ticket that is scratched)

 b. bestseller   (something that sells well)

 c. reader   (a compilation of literature that reads easily)

One analysis of these is that the R-argument is still the subject, but of the *middle* form of the verb. Support for this kind of analysis comes from their middle-like interpretation (Alexiadou & Schäfer 2010). I set these cases aside in this article, as I don't believe there are any clause-taking *er*-nominalisations whose R-argument is a non-subject.

the availability of *internal* readings of certain classes of adjectives that modify *er*-nominalisations.[7] Some examples are given in (5, 6). As these examples show, the internal reading of the adjective – that is, when it is interpreted as modifying the event contained within the nominalisation – is available both in the presence *and* absence of a syntactic complement. Note that the internal reading of these adjectives should from distinguished from their *adverbial* reading ('we were occasionally met by a dolphin-trainer'), and their *intersective* reading ('a car-dealer who is a big person').

(5)   a.   We were met by an occasional dolphin-trainer.
                             (a person who occasionally trains dolphins)

        b.   We were met by an occasional trainer of military belugas.
                            (a person who occasionally trains military belugas)

(6)   a.   We were met by a big car-dealer.
                                   (a person who sells a lot of cars)

        b.   We were met by a big dealer of classic cars.
                             (a person who sells a lot of classic cars)

On the assumption that the internal (event-related) readings of these adjectives require there to be some representation of an event within the nominalisation, this shows that *er*-nominalisations both with and without complements contain an event representation.

Given this, Alexiadou & Schäfer (2010) argue that the difference between those *er*-nominalisations with 'eventive' interpretations, which license syntactic complements, and those with 'non-eventive' interpretations, which don't license syntactic complements, is actually about what kind of aspectual operator binds the event variable. When an episodic aspectual operator binds the event variable, an 'eventive' interpretation obtains; when a dispositional aspectual operator binds the event variable, a 'non-eventive' interpretation obtains. Crucially, constructions with dispositional, habitual or generic interpretations generally permit object-drop much more freely. (7) exemplifies this using the English habitual

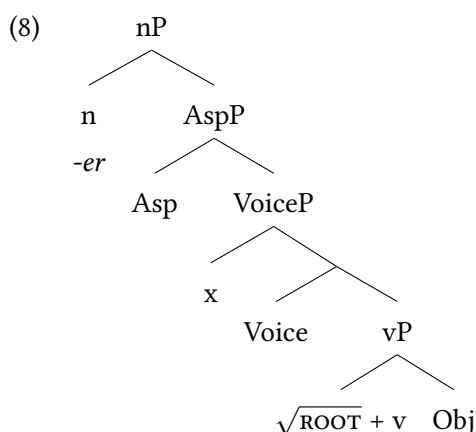(7)   The sewing instructor always cuts Ø in straight lines.

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[7] Borer (2012) and Roy & Soare (2013) note that one common test for the presence of event structure within a nominal – compatibility with Aktionsart-modifying *for*/*in*-PPs – fails with *er*-nominalisations:

(II)   a.   the seller of the dogs (*in five minutes)

        b.   the dog-seller (*in five minutes)

(III)   a.   the trainer of the dolphins (*for years)

         b.   the dolphin-trainer (*for years)

I follow Roy & Soare (2013) in assuming that these are ruled out for independent reasons.

It is the availability of object-drop in dispositional, habitual and generic contexts that leads to the correlation shown in (4), between 'eventivity' (in fact, episodicity) and having a syntactic complement. It's *not* about eventivity.

So, given that prototypical *er*-nominalisations appear to contain a representation of event structure, which they inherit from their base verb, I adopt the basic analysis of Alexiadou & Schäfer (2008), Alexiadou & Schäfer (2010) (similar to the analysis of Roy & Soare 2013, 2014), as shown in (8). *Er*-nominalisations (at least, those of the variety that we are interested in) contain a full AspP, wherein event and argument structure are reified in the functional projections v and Voice. The nominalising head *n* serves to nominalise the structure and bind the R-argument, represented as 'x'.[8]

(8)

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                nP
              /    \
            n       AspP
           -er     /    \
                 Asp     VoiceP
                        /      \
                       x      /    \
                          Voice     vP
                                   /    \
                              √ROOT + v   Obj
```

In prototypical *er*-nominalisations, the R-argument always corresponds to the external argument of the parent verb, so we can analyse the bound argument ('x') as being in Spec-VoiceP. The Asp head introduces either an episodic or dispositional operator, which binds the event/eventuality variable introduced in v/V, thus giving rise to the distinction that Rappaport Hovav & Levin (1992) identified as [+/−event]. The complement to v is then projected just as it would be outside of nominalisation environments, but crucially, in a dispositional context the null object 'Ø' may fill the slot instead.[9]

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[8] Since Rappaport Hovav & Levin (1992), various authors have remarked on the exceptional status of instrumental *er*-nominalisations. The important and mysterious generalisation is be that the presence of a syntactic (non-incorporated) complement forces a non-instrumental interpretation. So a (*can-*)*opener* can be be an inanimate instrument or a person, but an *opener of cans* can only be a person. However, Alexiadou & Schäfer (2010) challenge the robustness of this empirical generalisation, citing examples like (IV). Given that the focus of this article is on *er*-nominalisations with CP complements, all of which are obligatorily animate and agentive, I set this issue aside.

(IV)   Woks have always been conservers of cooking oil as well as fuel.

[9] Other authors, including Borer (2012) and Baker & Vinokurova (2009), have proposed a more minimal structure for some or all subject *er*-nominalisations, which does away with some of the functional structure in (8). However, what's crucial in this article is that prototypical *er*-nominalisations inherit the 'low' (closer to the root) argument structure of their parent verbs – i.e. the relation between

2.2 Nouns with CP complements

I now turn temporarily away from *er*-nominalisations and discuss nouns that take CP complements, as in (9, 10). Some CP-taking nouns are non-derived, as in (9), and others are derived from verbs, as in (10).[10]

(9) a. I like your idea [that Barry is a vampire].

    b. I don't believe the rumour [that Barry is a vampire].

(10) a. I don't understand the belief [that Barry is a vampire].

    b. I heard her suspicion [that Barry is a vampire].

The claim that nouns cannot take 'true' CP arguments has been made in various forms by various authors (Stowell 1981, Pesetsky & Torrego 2004, Moulton 2009, 2015, Elliott 2020). One common thread is that CP complements combine with their host noun as a *modifier*, rather than as an argument.[11]

An important argument for the non-argumenthood of CP complements to nouns comes from the fact that they are not interpreted, semantically, like arguments of those nouns. Consider the pairs of sentences in (11, 12). They show that the CP complement to a noun like *idea* or *belief* in some sense identifies the *content* of the noun, allowing the noun and CP to be connected by the copula (Higgins 1973, Stowell 1981).

(11) a. the idea [that Barry is a vampire]

    b. The idea is [that Barry is a vampire].

(12) a. the belief [that Barry is a vampire]

    b. The belief was [that Barry is a vampire].

This should be contrasted with true (non-CP) arguments of nouns. As mentioned in the previous section, Grimshaw (1990), and much subsequent work, argues that so-called complex event nominalisations (later referred to as *Argument Structure Nominals*, or ASNs) 'inherit' the full argument structure of their parent verb, and must take the same obligatory arguments that their parent verb takes. Unlike *idea*/*belief*-type nouns, ASNs cannot be connected to their arguments with copula:

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the verb and the internal argument. This is maintained in both Borer's and Baker & Vinokurova's analyses.

[10] There also exist CP-taking deadjectival nouns, such as *sureness* and *certainty*, but I set these aside.

[11] A strong version of the CP-as-modifier analysis holds that CP complements to nouns are relative clauses, with some kind of concealed relativisation site – see Kayne (2009), Arsenijević (2009), Haegeman (2012).

(13) a. the destruction [of the city]

  b. *the destruction was [of the city]

Perhaps it is not surprising that non-derived nominals like *idea* and *rumour* don't take true CP arguments, since they don't have a parent CP-taking verb from which to inherit argument structure. But it *is* surprising for CP-taking nominalisations like *belief* – we might expect these to be able to form ASNs and thus preserve the argument structure of their parent verb, at least in some environments. However, Moulton (2009, 2015) shows that it is a systematic property of CP-taking nominalisations (*belief, suspicion, explanation*, etc) that they just don't form ASNs. By way of evidence, Moulton notes that CP-taking nominalisations are incompatible with Aktionsart-modifying *for/in*-PPs:[12]

(14) a. They observed [that the butler was likely the killer] for several weeks.

  b. their observation [that the butler was likely the killer] (*for several weeks)

(15) a. John claimed for years [that the earth was flat].

  b. John's claim (*for years) [that the earth was flat]

(16) a. I decided [that he was a fraud] in five minutes.

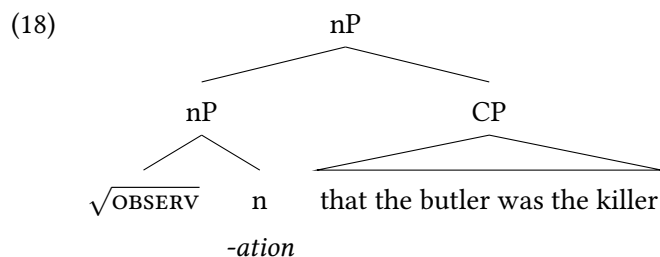 b. my decision [that he was a fraud] (*in five minutes)

ASNs, by contrast, do allow Aktionsart modifiers, as in (17). In fact, Moulton (2015) notes that the same nominalisation (e.g. *observation*) can function as an ASN when it takes an *of*-NP complement (17b), but must be a non-ASN when it takes a CP complement (14b).

(17) a. the destruction [of the city] (in three hours)

  b. Their observation [of the butler] (for several weeks) led to a conviction.

Following Moulton (2015), I assume that CP-taking nouns, both those that are related to verbs and those that are not, have the reduced structure in (18). Unlike the structure for *er*-nominalisations in (8), no event or argument structure, in the form of the verbalising head *v* or the Voice head, is embedded under the nominalising head n. Instead the CP combines with the nP via Predicate Modification (I refer the reader to Moulton's work for a formal semantic analysis).

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[12] In my judgment, the (b) examples in (14 - 16) aren't completely terrible, and I find that it's possible to construct similar examples that approach acceptability. Nonetheless, the contrast between even the *most* acceptable CP-taking ASNs and their equivalent gerunds is fairly striking:

(V) a. Their (?insistence/insisting) for six months that we put them in charge eventually wore us down, and we relented.

  b. Mary's (?acceptance/accepting) that she would pay damages in under five minutes came as a huge relief.

(18)

```
                            nP
                  ┌──────────┴──────────┐
                 nP                     CP
              ┌───┴───┐          ┌───────┴────────┐
          √OBSERV      n     that the butler was the killer
            -ation
```

Further evidence for the non-argumenthood of CP complements to nouns, and thus that the structure in (18) is on the right track, comes from the unavailability of the CP pro-form *so*.[13] Moulton (2015) points out that while a great many CP-taking verbs can take *so* – some examples are given in (19) – there is no variation among CP-taking nouns. Nouns uniformly reject *so*-complements; some equivalent examples are given in (20).

(19) a. I believe so.

    b. ɣ Mother India's Cafe: No gluten-free food even if they claimed so.[14]

    c. She would not admit so to DYFS because she feared the consequences. (Moulton 2015: 308)

(20) a. *my belief so

    b. *my claim so

    c. *my admission so

Moulton argues that *so*, unlike full CPs, *does* saturate the argument slot of the verbs that select it. *So* therefore cannot combine with clause-taking nouns, because clause-taking nouns do not have an argument slot that can be saturated.[15]

As an additional interesting point, it appears that nouns' inability to take CP arguments is not just a syntactic restriction, but is in some sense semantic too. The examples in (21, 22) show that *idea/belief*-type nouns cannot take *of*-DP arguments, if those DPs are substitutes for propositions:

(21) a. I don't understand the idea [that Barry is a vampire].

    b. *Barry – a vampire? I don't understand the idea of that.

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[13] With the structure in (18), referring to the CP as the 'complement' of the noun becomes a bit of a misnomer – nonetheless, I continue to do so for terminological consistency.

[14] https://www.tripadvisor.co.uk/ShowUserReviews-g186525-d1545969-r295925603-Mother_India_s_Cafe-Edinburgh_Scotland.html

[15] Moulton (2015) notes that the trace of *as*-extraction patterns similarly to *so*, as in (VIa), and is also less restricted in terms of what verbs it can appear with. However, since *as*-extraction cannot take place out of NPs (shown in VIb), I set it aside here.

(VI) a. Fred is, as no one doubts t_{as}, a wonderful nurse.

    b. *Fred is, as no one has a doubt t_{as}, a wonderful nurse.

(22)   a.   I've never understood the belief [that Barry is a vampire].

        b.   *Barry – a vampire? What causes the belief of/in that?

If the ban on CP arguments was a purely syntactic constraint against elements of category C occupying an argument position, then the above examples should be fine – or at least, (22b) should be fine, since *belief* should be able to form an ASN. But instead, it appears that there is a slightly broader ban, not just on CP arguments but on other arguments with the *meaning* of CPs.

Let's summarise this section. We saw first that *er*-nominalisations contain the representation of an event and inherit argument structure from their parent verbs, although this is sometimes obscured in *dispositional er*-nominalisations, where the dispositional aspectual operator licenses a null object. I adopted Alexiadou & Schäfer's (2010) analysis of *er*-nominalisations, in which the nominalising head *n* merges with an AspP containing argument and event structure, introduced by v and Voice functional heads. We then turned to CP-taking nouns, and saw several arguments that such nouns do not – indeed, *cannot* – accept CP arguments. So either as a reason for this, or as a consequence of it, CP-taking verbs simply don't form ASNs, and instead form nominalisations with a more minimal syntactic structure, as in (18).

In the next section I discuss the intersection of these two topics: *er*-nominalisations with CP complements, exemplified in (1). I argue that several of their properties can be explained as a consequence of a fundamental tension: subject *er*-nominalisations contain argument and event structure, but nominalisation is incompatible with CP arguments.

3 *Er*-Nominalisations with CP Complements

One interesting property of the examples in (1) is that in each case, the CP-taking *er*-nominalisation is the complement of the copula *be*. In fact, it turns out that these nominals sound best when used as *predicates*: as the complement of *be*, the complement of *as*, the complement of a small clause, or as an appositive parenthetical:

(23)   a. ɣ Yet Jackson is a chronic complainer that his privacy is invaded.[16]

        b. ɣ And I say that as a Moore critic and doubter that he can do it again.[17]

        c. ɣ I was never very religious but I would consider myself a believer that there is something after we die.[18]

        d. ɣ You are hearing, in short, a seeker of unfair privilege – a demander that the playing field be tilted against consumers' and society's broad interests and toward its own narrow interests.

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[16] https://journaltimes.com/exclusive-tabloid-editor-talks-slams-celebrities-as-media-manipulators/article_d95887b9-d262-53d1-9b97-c84f81f11061.html

[17] https://webcache.googleusercontent.com/search?q=cache:74UhB_5ZEO0J:https://www.royalsreview.com/2017/12/8/16743252/what-you-need-to-know-about-the-royals-and-next-weeks-winter-meetings

[18] https://www.reddit.com/r/ttcafterloss/comments/j566ew/anyone_else_lost_their_faith_or_spirituality/

This is one of the most striking properties of the distribution of CP-taking *er*-nominalisations: they are, virtually, *only* found in predicate positions. In fact they sound either strange or unacceptable in argument positions. The (a) sentences in (24 - 26) show *believer* with a short CP complement in a few argument positions, all of them being somewhat marginal. I use *believer* since that seems to be by far the most common CP-taking *er*-nominalisation.[19] They also all involve a modal component, since that improves them somewhat too.

(24) a. ?A firm believer [that speeding is deadly] wouldn't be driving like that.

  b. A firm belief [that speeding is deadly] will keep you fairly safe.

(25) a. ?I hope to one day meet a firm believer [that the earth is flat].

  b. I encouraged the belief [that the earth is flat].

(26) a. ?A science seminar should probably not be led by a firm believer [that the earth is flat].

  b. I held the firm belief [that the earth is flat].

If we use an *er*-nominalisation other than *believer*, and without modality, the results are strikingly bad:[20]

(27) a. ??The complainer [that the country had gone to the dogs] did not merit a response.

  b. The complaint [that the country had gone to the dogs] didn't hold much water, in her view.

(28) a. ??I did not respond to the complainer [that the country has gone to the dogs].

  b. I did not respond to the complaint [that the country has gone to the dogs].

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[19] *Believer* may be confounded slightly in that it has an idiomatic interpretation, referring to a believer in some religion or philosophy. Nonetheless I use it here because it's so common.

[20] Some determiners, demonstratives and adjectives also improve acceptability:

(VII) a. ?Do you remember that one impassioned insister that only she knew how to fix the bike?

  b. ?Which particularly forceful asserter that the mark scheme was wrong were you eventually convinced by?

Very speculatively, this *could* relate to the presence of a predication-like relation between the determiner and its nominal complement. Demonstratives like *that*, and the *wh*-determiner *which*, can be connected to DPs with the copula:

(VIII) a. That is the right one.

  b. Which is the right one?

See Bennis, Corver & Den Dikken (1997) for discussion and examples of of predication within noun phrases. However, to assert that there is predication in DPs like those in (VII), which don't obviously join two noun phrases, goes somewhat beyond their argument.

(29)   a. ?? The reaction was prompted by a complainer [that the country had gone to the dogs].

   b.   The reaction was prompted by a complaint [that the country had gone to the dogs].

Why should CP-taking *er*-nominalisations be degraded in argument positions? To answer this question, I'm going to flip it around. I'm first going to provide an account for why these nominalisations are ungrammatical *generally*, and then, in the next section, I will provide some speculation about why they are improved in predicative position.

Turning to the question of what makes these nominalisations bad, I believe it results from the tension outlined in the previous section. On the one hand, *er*-nominalisations obligatorily inherit the argument structure of their parent verb (accounted for in the analysis of Alexiadou & Schäfer 2010 by having them share a root, v and Voice with their parent verb). But on the other hand, being nouns, they are unable to license a CP argument (or at least, they have extreme difficulty doing so).

In sum, clause-taking *er*-nominalisations have an argument slot for a CP in which a CP cannot be licensed. For the verb to select a CP, as in (30), results in ungrammaticality.

(30)

$$*$$

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        nP
       /  \
      n    ...
     -er   /  \
        ...    vP
              /  \
         √ROOT + v   CP
                     △
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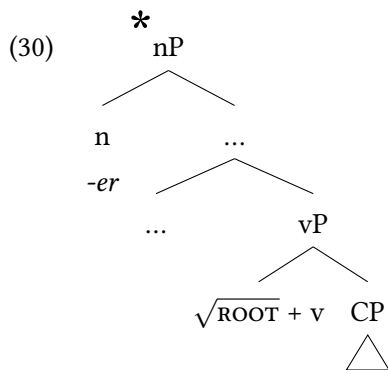
Other kinds of CP-taking nominalisation, like *suspicion* or *belief* as in (10), are not subject to this bind: rather than projecting Voice and v, as ASNs, they instead have a simple, event-free structure like (18), shown schematically in (31).

(31)

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            nP
           /  \
         nP    CP
        /  \   △
    √ROOT   n
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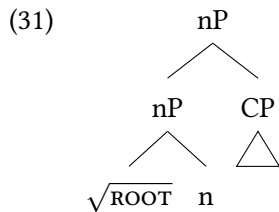
In this structure, there is no CP argument slot that requires saturation, and a CP can instead happily merge as a adjunct at the nP level. However, subject *er*-nominalisations are saddled with the more complex structure in (30): v and Voice are always projected, and so the un-saturable CP argument slot is too. What's more, a CP simply can't be interpreted as a modifier of an *er*-nominalisation. The following contrasts show that the CP complement does *not* specify something about the content of the nominalisation (compare with 11, 12):

(32) a. a firm believer [that Barry is a vampire]

  b. *A firm believer is [that Barry is a vampire].

(33) a. a frequent forgetter [that sarcasm doesn't translate well]

  b. *A frequent forgetter is [that sarcasm doesn't translate well].

CP complements of *er*-nominalisations are clearly *semantic* arguments of the nominalisation, unlike CP complements to non-ASNs like *idea* and *belief*. The result of adding CP complements to *er*-nominalisations is therefore, typically, ungrammaticality: the CP can't merge 'low' as an argument to vP, and it can't merge 'high' as a modifier to nP either.[21]

So, this tells us why CP-taking *er*-nominalisations might be bad generally, but we are still waiting on an explanation for why they are basically fine when used as predicates. I set this question aside for now and return to it in section 4. For the rest of this section, I aim to show that when we *do* see an *er*-nominalisation with a CP complement, that CP is not in an argument position.

In section 3.1, I show that, even when used as predicate nominals, CP-taking *er*-nominalisations don't take their CPs as arguments. Then in section 3.2, I look

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[21] It is hard to find direct evidence that *er*-nominalisations with CP complements have the same amount of argument and event structure as other *er*-nominalisations, as described in section 2.1. The test presented in examples (5, 6), regarding the availability of internal readings of adjectives, cannot be readily applied to *er*-nominalisations with CP complements. This is because these nominalisations can only be used as predicates, and this usage removes the truth-conditional distinction between the internal and external readings of these adjectives (see Roy & Soare 2014 for discussion):

(IX) a. She's a constant denier that anything was ever her fault.

  (= she constantly is a denier of it)

  b. I'm a big hoper that the issue will one day be sorted out.

  (= I am a hoper for it in a big way)

Also note that at first glance it *appears* that *er*-nominalisations with CP complements accept Aktionsart-modifying *for*/*in*-PPs, as in (Xb) and (XIb). However, this would be quite unexpected given that *er*-nominalisations generally reject these modifiers – see footnote 7. I believe that in these cases, the PP is modifying the clause-level predication relation, and the CP complement to the noun has been extraposed across the PP.

(X) a. I believed for years [that he was a fraud].

  b. As a believer for years [that he was a fraud]...

(XI) a. I complained for years [that I should have studied something easier].

  b. As a complainer for years [that I should have studied something easier]...

at what *can* occupy the internal argument position of the *er*-nominalisation. The upshot is that these *er*-nominalisations don't have a blanket ban on arguments: DPs with propositional meanings can happily occupy the argument position. Note that this property differentiates *er*-nominalisations from CP-taking nouns like *idea* and *belief*, which *do* have a blanket ban on arguments with propositional meaning – cf. (21, 22).

3.1 *Er-nominalisations reject CP arguments*

I present four pieces of evidence that *er*-nominalisations reject CP arguments, even when used as predicate nominals. The first two pieces of evidence come from two CP pro-forms: *so* (as discussed in section 2.2) and the null CP pro-form that occupies the complement of the verb in *Null Complement Anaphora* contexts, which I refer to as '$\emptyset_{NCA}$'. I show that both CP pro-forms are unavailable within *er*-nominalisations, and I attribute this to the pro-forms' status as syntactic CPs. The third piece of evidence comes from the fact that the CP doesn't reconstruct for wh-movement. The final piece of evidence is somewhat weaker than these, and comes from the distribution of null complementisers.

We saw in section 2.2 (example 20) that CP-taking nouns reject the CP pro-form *so*. Moulton (2015) attributes this to the fact that *so* can only saturate an argument slot, but cannot combine with as a modifier. *Er*-nominalisations similarly reject *so*:

(34)   a.   *I am a firm believer so.

      b.   *She is a consistent claimer/claimant so.

      c.   *He is a one-time admitter so.

I follow Moulton in assuming that *so* is a CP pro-form that can only saturate argument slots. And while *er*-nominalisations *do* have an available argument slot for *so* to saturate (unlike other CP-taking nouns), they simply can't license CPs.

I now apply similar reasoning to $\emptyset_{NCA}$, the pro-form that occurs in the complement of those verbs which license Null Complement Anaphora (NCA). First I argue that $\emptyset_{NCA}$ is (at least sometimes) a CP pro-form (following Haynie 2010 and Depiante 2019). Then, I show that $\emptyset_{NCA}$ cannot serve as an argument of *er*-nominalisations, even when the parent verb of the nominalisation lexically selects for NCA. I propose that this is because, as above, *er*-nominalisations can't take CP arguments.

Let's start with some background. The term Null Complement Anaphora (NCA) was introduced by Hankamer & Sag (1976) to describe the phenomenon in (35) (though Shopen 1972 had earlier described the phenomenon as *definite constituent ellipsis*). It's when the complement of certain verbs may be omitted, and recovered anaphorically.

(35)   a.   I told them to take out the trash, but they refused $\emptyset_{NCA}$.

      b.   I didn't tell her that I was going to leave, but she found out $\emptyset_{NCA}$.

Analyses of NCA abound, but some analyses, including Hankamer & Sag (1976), Depiante (2000) and Haynie (2010), hold that a null pro-form (here 'Ø_{NCA}') replaces the complement of certain lexical verbs (e.g. *refuse*, *find out*). Crucially, Haynie argues that the null pro-form may be of several syntactic categories, including CP, but crucially *not* DP.

This is very fortunate for our purposes, because this is just the opposite set of categories from those which are permitted in *er*-nominalisations – recall that *er*-nominalisations *allow of*-DP arguments and *ban* CP arguments. We therefore expect that the ability of a lexical verb to license Ø_{NCA} should disappear when that verb undergoes *er*-nominalisation – Ø_{NCA} is a CP, and CPs aren't licensed in argument positions within the noun. And indeed, this is what we find. In the (b) sentences in (36 - 39), the missing complement can only be interpreted as non-specific (i.e. a forgetter of *things*, a promiser of *things*, etc); it can never be interpreted as anaphoric.[22]

(36)   a.   Sarcasm doesn't translate well? Yes, I frequently forget Ø_{NCA}.

        b.   Sarcasm doesn't translate well? Yes, I'm a frequent forgetter #(of that).

(37)   a.   Will we go see a film tomorrow? Yes, I promise Ø_{NCA}.

        b.   We'll go see a film tomorrow? Yes, I am a chronic promiser #(of that).

(38)   a.   We should rejoin the EU? Yes, I agree Ø_{NCA}.

        b.   We should rejoin the EU? Yes, I've been a consistent agreer #(with that statement) for half a decade now.

(39)   a.   Mary says *she*'s the one who burned down the old house? Yeah, she confessed Ø_{NCA}.

        b.   Mary says *she*'s the one who burned down the old house? Yeah, she's an occasional confessor #(to that), in her more candid moments.

Let's now turn to the final piece of evidence that CP-taking *er*-nominalisations don't take their CPs as arguments: the CPs don't reconstruct. Consider first (40a), adapted from Kuno (2004: 335), in which an R-expression (*John*) is c-commanded by a coindexed pronoun (*he*), creating a Condition C violation. In (40b), the NP containing the R-expression has been *wh*-fronted across the pronoun. Crucially, in

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[22] Other CP-taking nouns are different, in that some do allow NCA. Moulton (2013: 258) shows that NCA is possible with *idea* and *suspicion*, among others:

(XII)   a.   They are going to replace the whole product? I had no idea Ø_{NCA}.

        b.   John's phone was being tapped? Yeah, I had a suspicion Ø_{NCA}.

This indicates that the licensing conditions on Ø_{NCA} are different from those on *so*, which is uniformly banned with nouns (see section 2.2). It could be that Ø_{NCA} can act like other kinds of CPs and can modify, rather than saturate, *belief*/*idea*-type nouns. However, neither *so* nor Ø_{NCA} can escape the ban on CP arguments.

order for (40b) to be grammatical and obviate a Condition C violation, the NP must *not* reconstruct into its base position.[23]

(40) a. *He$_1$ try to get [one psychiatrist's view that John$_1$ was schizophrenic] expunged from the trial records.

b. [Which psychiatrist's view that John$_1$ was schizophrenic]$_i$ did he$_1$ try to get t_i expunged from the trial records?

CP complements to *wh*-fronted nouns can be contrasted with CP complements to *wh*-fronted verbs, as in (41) from Moulton (2009: 63). The relative unacceptability of the coindexation indicated here, compared with that in (40b), indicates that CP complements to *wh*-fronted verbs *do* reconstruct, and thus that *wh*-movement of a clause-taking verb fails to obviate Condition C.[24]

(41) *[Whose loudly claiming that Bob$_1$ is the murderer]$_i$ did he$_1$ not hear t_i ?

Moulton (2009, 2013) argues that the CP complement to a *wh*-fronted noun fails to reconstruct because it is merged *late* – that is, the CP is only merged with its host noun following *wh*-movement (Lebeaux 1988, Fox 2002). And what lets it merge late is the fact that it is *not* an argument of the noun. By contrast, the CP complement to a verb is an argument of it, and so late merge is not an option.

CP complements to *er*-nominalisations pattern in just the same way as CP complements to other nouns. (42) shows that these CP complements do not reconstruct.

(42) a. [Which firm believer that Mary$_1$ wasn't telling the truth]$_i$ was she$_1$ constantly having to contradict t_i?

b. [Which frequent complainer that the police chief$_1$ was corrupt]$_i$ did he$_1$ eventually assassinate t_i?

Thus, by Moulton's reasoning, the CP complement to an *er*-nominalisation can be merged late, indicating that it is *not* a true argument of the nominalised predicate. Note that the examples in (42) require placing CP-taking *er*-nominalisations in *argument* positions, something that is generally not grammatical (24 - 26, 27 - 29). However, as noted in footnote 20, certain determiners, including *which*, do improve the acceptability of CP-taking *er*-nominalisations in argument positions.

A final, weaker argument for the non-argumenthood of the CP comes from the *alleged* unavailability of the null complementiser. It has been claimed that the null complementiser is only available with the complements to verbs and adjectives, never with the complements to nouns (Stowell 1981, Pesetsky & Torrego 2004). This is illustrated by examples like (43), from Stowell (1981: 398).

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[23] Note that the claim that CP complements to nouns do not reconstruct contradicts an older claim that CP complements *do* reconstruct (see Freidin 1986, Lebeaux 1988) – see Moulton (2013) for discussion.

[24] Compared with his 2009 dissertation, Moulton (2013: 278) is somewhat equivocal about whether there is a real contrast between configurations like (40b) and those like (41). In my judgment there is a contrast. It isn't very strong, but reconstruction judgments rarely are.

(43)   a.   I distrust the claim (*that) Bill had left the party.

       b.   John's belief (*that) he would win the race was misguided.

To the extent that this generalisation holds, CP complements to *er*-nominalisations very clearly pattern with CP complements to other nouns. In my judgment, the CP complements in (44) absolutely require an overt *that*.

(44)   a.   ɣSorry, I'm a frequent forgetter (*that) sarcasm doesn't translate well.

       b.   ɣDavid Brooks, a one-time believer (*that) red and blue America demonstrated 'no fundamental conflict'…

Therefore, if the unavailability of the null complementiser can be derived from these CPs's status as *non*-arguments of their host noun (as Stowell 1981 argues), then we have a further argument that the CP complements of *er*-nominalisations are, similarly, not true arguments of their host noun.

However, Moulton (2015: 318) points out that the empirical picture is not so clear-cut and that counterexamples abound, as in (45).

(45)   a.   …in the belief he was buying a kilo of skunk cannabis. (Moulton 2015: 318)

       b.   Tis the season to be jolly (careful) …With the announcement we 'should' be able to open next week on Thursday 3rd December.[25]

But to the extent that the generalisation holds, we have yet another way in which CP complements to *er*-nominalisations differ from true argumental CPs.

To summarise, we've seen several pieces of evidence that CP-taking *er*-nominalisations reject CP arguments. Whatever the overt CPs in (1) and (23) are, they aren't arguments of the nominalisation. Now let's turn to those syntactic categories that *can* be arguments of the *er*-nominalisation: DPs.

3.2 Er-nominalisations accept DP arguments

We saw in section 2.2 that CP-taking nouns like *idea* and *belief* cannot take DP complements with propositional meaning (21, 22). However, CP-taking *er*-nominalisations *can* take propositional DPs as arguments (provided that they are supplied with Case, via *of* or lexically-selected preposition) – the (b) sentences in (36 - 39)

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[25] https://www.facebook.com/181899598489294/posts/tis-the-season-to-be-jolly-careful-with-the-announcement-we-should-be-able-to-op/3753675814644970/

demonstrated just this.[26] The following pairs of sentences compare *er*-nominalisations with CP-taking non-ASNs like *belief*:

(46)   a.   Eleanor – a werewolf? Yes, I've long been a believer of that.

       b.   *Eleanor – a werewolf? I don't understand the belief of that.

(47)   a.   Eleanor – a werewolf? Yes, I was once a serious claimer of that, and I'm not embarrassed to admit it.

       b.   *Eleanor – a werewolf? I don't understand the claim of that.

The availability of *of*-DP arguments with propositional meanings also helps us to resolve the outstanding issue of whether CP arguments are rejected for syntactic or semantic reasons. The problem with CP complements to *er*-nominalisations does *not* appear to be their interpretation, since propositional DPs are fine in the same position. Rather, their problem is that that they are, syntactically, CPs.

I think it is also best to analyse complement-less *er*-nominalisations as involving a null nominal, rather than a null CP. Recall from section 2.1 that in the presence of a dispositional aspectual operator, the internal argument position of an *er*-nominalisation may be occupied by a null, non-specific element (just as in object-less habitual and generic sentences (e.g. 7). If the internal argument position of the *er*-nominalisation in these cases was occupied by a null CP, we would expect that complementless CP-taking *er*-nominalisations would be acceptable only as predicate nominals. If, on the other hand, the argument position inside the nominalisation is occupied by a null nominal, then complementless CP-taking *er*-nomnalisations should be able to distribute like any other DP, including in argument positions. And indeed, this is what we find: CP-taking *er*-nominalisations with null objects are well-attested in argument positions. Some examples are given in (48).[27]

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[26] Both CP-taking nouns (e.g. *rumour*, *belief*) and CP-taking *er*-nominalisations can take a PP argument headed by *about*, as in (XIII,XIV).

(XIII)   a.   The rumour about Mary that she is a werewolf...

       b.   The belief about John that he is crazy...   (Moulton 2013: 272)

(XIV)   a.   ɣI am a firm believer about the nurture/nature debate, that an adopted child would behave like a biological child because my cousin was adopted form Korea and acts JUST like my aunt and her 2 bio brothers.
(https://community.babycenter.com/post/a25972831/1_biological_and_1_adopted_child)

       b.   ɣI'm a firm believer about oil pressure readings, if they are low and used to be higher, something is wrong.
(adapted from https://www.corvetteforum.com/forums/c6-corvette-zr1-and-z06/3070898-zo6-having-oil-pressure-issues-2.html)

Following Moulton (2013), I assume that this argument is *not* inherited from a parent verb (and indeed, it is possible with non-nominalisations like *rumour*). Rather, it realises the so-called *res* argument of the attitude ascription – the individual that the rumor/belief/idea/etc is *about*.

[27] I have attempted to exclude instrumental and idiomatic *er*-nominalisations, like (*true*) *believer* or *explanainer* (as in a short video or summary).

(48) a. The characteristics of the **knower** will influence the creation of knowledge.[28]

b. Sure, Budget Director Mick Mulvaney defended the numbers by explaining a lot of assumptions, but on the Late Show Stephen Colbert offered another reason for the questionable math. [...] The late-night host also has a word of warning for the budget director — one which many chronic **assumers** have probably heard before, especially if their name is Mick Mulvaney.[29]

c. In your professional and personal life, you will encounter the chronic **explainers** who want to impress you with detailed research and scholarly raison d'être for having arrived at a certain position.[30]

d. For the eternal **doubter** or the person with a refined taste; have someone pick their perfect gift with a gift card.[31]

This contrasts with what we see for *er*-nominalisations with overt CP complements –I have argued that these are only (or overwhelmingly) found in predicate position, and that the CP is not a true internal argument of the nominalisation. In the next section, I conclude, and I speculate about what's so special about predicate position.

4 Conclusion

In this article we have seen that *er*-nominalisations with CP complements sit at a point of tension in the grammar. On the one hand, subject *er*-nominalisations preserve the event structure and argument structure of their parent verb, and where the parent verb can take a syntactic CP argument, so too can the derived *er*-nominalisation. On the other hand, nouns can't license CP arguments. This turns out to be true not just of non-ASNs like *idea* and *belief*, but also of *er*-nominalisations, which do contain argument structure.

The consequence of this tension is that, in general, *er*-nominalisations can't take CP complements. The mysterious exception to this comes when the *er*-nominalisation is used as a predicate nominal. In such cases, the *er*-nominalisation *can* take a CP complement, which, at first, appears to be its argument. But as we showed in section 3.1, the CP is probably not an argument.

It seems then, that there are at least two connected outstanding mysteries: what *is* the CP, if it's not an argument of the nominalisation? And why is it licensed only when the nominalisation is used as a predicate? One possibility is that the CP *is* an argument of the *er*-nominalisation, and it is exceptionally licensed by the functional structure that exists only in predications. This exceptional structure could internal to the predicate nominal itself, as in Holmberg's (1993)'s study of syntactic differences between argument and predicate nominals; or it could be the functional

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[28] https://www.sagepub.com/sites/default/files/upm-binaries/29985_Chapter1.pdf

[29] https://www.vulture.com/2017/05/colbert-explains-usd2-trillion-math-error-in-trumps-budget.html

[30] https://books.google.co.uk/books?id=T1ojhyTJ2PMC

[31] https://www.facebook.com/bloomonUK/videos/for-the-eternal-doubter-or-the-person-with-a-refined-taste-have-someone-pick-the/455149365890380/

structure that embeds the predicate nominal, such as 'PredP', proposed by Bowers (1993). However, any such proposal would have to contend with the facts outlined in section 3.1, which show that the CP just does not pattern like an argument. An alternative possibility is that the CP is adjoined to the predication (perhaps the PredP) rather than to the nominalisation. It is then related to the empty argument position within the *er*-nominalisation, by some special semantic mechanism that is only available in predication structures. Such an approach obviously faces the challenge of what this mechanism is and how it can be constrained. I don't have a solution yet (and this study has of course been narrowly focused on English), but these seem like avenues worth investigating.

References

Alexiadou, A. & F. Schäfer. 2008. Instrumental-er Nominals Revisited. In K. Ryan (ed.), *Online Proceedings of WCCFL 27 Poster Session. UCLA*, Citeseer.

Alexiadou, A. & F. Schäfer. 2010. On the Syntax of Episodic vs. Dispositional-er Nominals. In A. Alexiadou & M. Rathert (eds.), *The Syntax of Nominalizations across Languages and Frameworks* Interface Explorations, 9–38. Berlin: De Gruyter Mouton.

Arsenijević, B. 2009. Clausal Complementation as Relativization. *Lingua* 119(1). 39–50.

Baker, M. C. & N. Vinokurova. 2009. On Agent Nominalizations and Why They are not Like Event Nominalizations. *Language* 85(3). 517–556.

Bennis, H., N. Corver & M. Den Dikken. 1997. Predication in Nominal Phrases. *The Journal of Comparative Germanic Linguistics* 1(2). 85–117.

Borer, H. 2012. In the Event of a Nominal. In M. Everaert, M. Marelj & T. Siloni (eds.), *The Theta system: Argument structure at the interface*, 103–150. Oxford: Oxford University Press.

Bowers, J. 1993. The Syntax of Predication. *Linguistic inquiry* 24(4). 591–656.

Depiante, M. 2000. *The syntax of Deep and Surface Anaphora: A study of null complement anaphora and stripping/bare argument ellipsis*: University of Connecticut dissertation.

Depiante, M. 2019. Null Complement Anaphora. In J. Van Craenenbroeck & T. Temmerman (eds.), *The Oxford Handbook of Ellipsis*, 657–680. Oxford: Oxford University Press.

Elliott, P. D. 2020. *Elements of Clausal Embedding*: UCL (University College London) dissertation.

Fox, D. 2002. Antecedent-Contained Deletion and the Copy Theory of Movement. *Linguistic Inquiry* 33(1). 63–96.

Freidin, R. 1986. Fundamental Issues in the Theory of Binding. In B. Lust (ed.), *Studies in the Acquisition of Anaphora*, vol. 2, 151–188. Dordrecht: Springer.

Grimshaw, J. 1990. *Argument Structure*. Cambridge, MA: MIT Press.

Haegeman, L. 2012. *Adverbial Clauses, Main Clause Phenomena, and Composition of the Left Periphery*. Oxford: Oxford University Press.

Hankamer, J. & I. Sag. 1976. Deep and Surface Anaphora. *Linguistic Inquiry* 7(3). 391–428.

Haynie, H. 2010. *What is Null Complement Anaphora? A syntactic account can explain.* University of California at Berkeley MA thesis.

Higgins, F. R. 1973. *The Pseudo-Cleft Construction in English*: Massachusetts Institute of Technology dissertation.

Holmberg, A. 1993. On the Structure of Predicate NP. *Studia Linguistica* 47(2). 126–138.

Horn, L. R. 2011. *Etymythology and Taboo.* Yale University MA thesis.

Kayne, R. 2009. Antisymmetry and the Lexicon. *Linguistic Variation Yearbook* 8(1). 1–31.

Kuno, S. 2004. Empathy and Direct Discourse Perspectives. In L. Horn & G. Ward (eds.), *The Handbook of Pragmatics*, 315–343. Oxford: Blackwell.

Lebeaux, D. 1988. *Language Acquisition and the Form of the Grammar*: University of Massachusetts, Amherst dissertation.

Moulton, K. 2009. *Natural Selection and the Syntax of Clausal Complementation*: UMass Amherst dissertation.

Moulton, K. 2013. Not Moving Clauses: Connectivity in clausal arguments. *Syntax* 16(3). 250–291.

Moulton, K. 2015. CPs: Copies and compositionality. *Linguistic Inquiry* 46(2). 305–342.

Pesetsky, D. & E. Torrego. 2004. Tense, Case, and the Nature of Syntactic Categories. In J. Guéron & J. Lecann (eds.), *The Syntax of Time*, Cambridge, MA: MIT Press.

Rappaport Hovav, M. & B. Levin. 1992. -er Nominals: implications for the theory of argument structure. In T. Stowell & E. Wehrli (eds.), *Syntax and Semantics 26: Syntax and the lexicon*, 127–153. Brill.

Roy, I. & E. Soare. 2013. Event-Related Nominals. In G. Iordăchioaia, I. Roy & K. Takamine (eds.), *Categorization and Category-Change*, Newcastle upon Tyne: Cambridge Scholars Publishing.

Roy, I. & E. Soare. 2014. On the Internal Eventive Properties of -er Nominals. *Lingua* 141. 139–156.

Shopen, T. 1972. *A Generative Theory of Ellipsis*: UCLA dissertation.

Stowell, T. 1981. *Origins of Phrase Structure*: Massachusetts Institute of Technology dissertation.

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