Discourse Inversion and Deletion in As-parentheticals*

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Abstract

In this paper, I investigate the syntax of inverting *as*-parentheticals, a subclass of parenthetical *as*-clause that is anaphorically dependent on a previously uttered predicate that, in addition, exhibits properties of certain kinds of discourse inversion identified by Birner (1994). I argue that these constructions contain deletion, following recent work on predicate *as*-parentheticals (Feria 2010; McCloskey 2011; LaCara 2012a). I go on to show that some of the unusual syntactic properties in inverting *as*-parentheticals are shared with other sorts of discourse inversion constructions (Bresnan 1994; Samko 2012, 2013), and that these properties can be explained if we provide the constructions similar derivations.

Keywords parenthesis, ellipsis, as-parentheticals, discourse inversion, focus

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1 Introduction

This paper focuses on the syntax of inverting *as*-parentheticals—the emphasized constituents in (1) (Potts 2002b).

- (1) a. Harvey will kiss a pig, as will Mary.
 - b. Harvey has bought a farm, as has Mary.

Inverting *as*-parentheticals are a variety of parenthetical expression in which some predicate-denoting phrase goes missing. This phrase may be of any category—verbal, adjectival, nominal, or prepositional. The interpretation of the parenthetical is dependent on material in the immediately preceding clause. In example (1), the verb phrases *kiss a pig* and *buy a farm* serve as antecedents to the missing material.

Very little work has been done on this construction (though see Feria 2010), and much about it is still poorly understood. At first glance, one might think that inverting *as*-parentheticals are the result of subject-auxiliary inversion (SAI), as in English questions, with an application of VP ellipsis:

(2) Harvey will buy a farm. Will Mary t buy a farm?

It turns out that such a straightforward analysis is not possible. Potts (2002b,a) argues convincingly that the gaps in *as*-parentheticals must be derived by movement and that they cannot simply be VP-ellipsis gaps. Furthermore, inverting *as*-parentheticals cannot be derived by typical SAI. Feria (2010) shows that they allow multiple auxiliaries to precede the subject of the *as*-parenthetical. SAI cannot derive this order.

(3) % The US trade deficit could be an issue, as could be [the fact that much of China's economy is still fueled by exports].

In fact, inverting *as*-parentheticals have a number of unusual properties that make them different from typical English clauses. Since the subjects may appear after multiple auxiliaries, the subjects do not appear to be in SpecTP. This is intriguing since we will see that subjects must leave SpecvP and move out of VoiceP.

In this paper, I propose that inverting *as*-parentheticals are derived in a manner similar to the class of inversion structures discussed by Birner (1994) and that, *pace* Potts, *as*-parentheticals do contain deletion, just not VPE (LaCara 2012a). I will claim that logical subjects remain in the middle field, potentially in a focus position, and that the verb phrase moves to SpecTP, analogous to other English discourse inversion structures (Birner 1994; Bresnan 1994; Rezac 2006; Samko 2012, 2013). As in non-inverting *as*-parentheticals, the *v*P continues on into the CP-layer, where it is deleted by comparative deletion (LaCara 2012a).

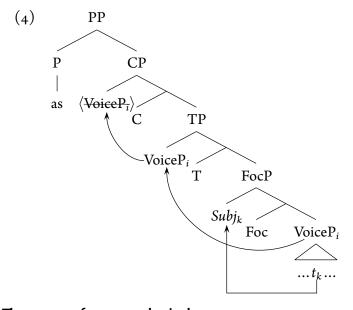
This paper is organized as follows. In §1.1, I will continue by summarizing the technical aspects of the analysis and explain how it will account for the properties we will see below. In §2, I provide an overview of *as*-parentheticals and summarize my general account of

their syntax (LaCara 2012a), which I will assume throughout the paper. I will then provide a detailed discussion of the properties I want to account for in §3. I will then show that subjects move out of their base positions in *as*-parentheticals in §4, arguing that they must therefore move somewhere else. I then turn to the properties of discourse inversion in §5 and use that as the basis of my analysis in §6. Finally, in §7, I conclude and discuss some outstanding problems for the analysis of inverting *as*-parentheticals.

1.1 Overview of the analysis

As we will see in the coming discussion, inverting *as*-parentheticals have a number of unusual properties. Their subjects do not seem to be in SpecTP, appearing instead after modals and auxiliaries. The subjects themselves are apparently focused.

The analysis I propose, sketched in (4), is inspired significantly by Samko's (2012; 2013) proposals for participle preposing, in which a verb phrase fronts to the beginning of a sentence, stranding the logical subject after auxiliary verbs; see Birner (1994). In particular, I propose that the subjects of inverting *as*-parentheticals move to a clause-medial focus position below auxiliaries, allowing multiple auxiliaries to precede the subject as in (3). This on its own, however, would leave SpecTP empty. Consequently, in order to satisfy the EPP, VoiceP moves to SpecTP instead of the subject. From there, VoiceP moves to SpecCP where it deletes (LaCara 2012a). As will be discussed, this analysis departs in several ways from Feria's (2010) while attempting to retain his many insights.



2 The syntax of as-parentheticals

In this section, I provide an overview of the different kinds of *as*-parentheticals, and I review the evidence for movement and deletion in predicate *as*-parentheticals. Potts (2002a,b) demonstrates in his original proposals for *as*-parentheticals that they must contain some sort of movement dependency. He argues that they cannot be derived by verb phrase ellipsis, but more recent work has shown that a deletion operation of some sort plays a role

in the construction (Feria 2010; McCloskey 2011; LaCara 2012a). Ultimately, following the analysis I propose in LaCara (2012a), I adopt a comparative deletion analysis of *as*-parentheticals.

2.1 Kinds of as-parentheticals

As-parentheticals have only recently been subjected to study in the linguistics literature, and, since much of this work is fairly recent, their properties are only beginning to be understood. They are known to occur in English, Danish, German, Thai (Potts 2002b), Irish (McCloskey 2011), Dutch (Kluck & de Vries To Appear), Portuguese (LaCara 2012a), and Hungarian (Bácskai-Atkári, this volume).

In English, there are two major classes of *as*-parentheticals and they are distinguished by what kind of antecedent they take. The *as*-parentheticals in (5) take CP antecedents and contain CP-sized gaps (signified by ___ in the examples). These are propositional *as*-parentheticals. In contrast, the *as*-parentheticals in (6) take verb phrase antecedents, and they contain verb phrase-sized gaps.¹ These are called predicate *as*-parentheticals.

- (5) Propositional as-parentheticals
 - a. Americans should get cheap oil, as the whole world knows .
 - b. *Ames*, as the FBI eventually discovered , was a spy.
- (6) Predicate as-parentheticals
 - a. John has kissed a pig, as I knew he would .
 - b. Sam bought a new car, as Alex also has .

The inverting *as*-parentheticals that I discuss in the remainder of this paper are a subclass of predicate *as*-parentheticals. Propositional *as*-parentheticals in English do not exhibit the inversion to be discussed here, and so I will leave them aside for the remainder of the paper except when they are useful for comparison.

2.2 Movement

English *as*-parentheticals come in two different forms: inverting, as in (7) and non-inverting, as in (8):

- (7) Harvey will kiss a pig, as will Mary. inverting
- (8) Harvey will kiss a pig, as Mary also will. non-inverting

| (| i) | Sam is | auite ar | niable, as | Alex al | lso is |
|---|----|--------|---------------|----------------|------------|--------|
| 1 | -, | | y correct con | ittere te, etc | 111000 000 | |

As a matter of convenience, I will restrict the discussion in this paper to verb phrases; the analysis extends to other cases straightforwardly.

As I mentioned earlier, this is a bit of simplification for discussion's sake. In reality, these *as*-parentheticals can take any predicate as an antecedent and will contain an equivalent gap. For instance, (i) takes an adjective phrase as an antecedent, and an adjective phrase is missing from inside the *as*-parenthetical.

While Potts (2002b:639–640) acknowledges the existence of inverting *as*-parentheticals and refers to them throughout his work, he focuses mostly on the non-inverting cases. I summarize much of the relevant discussion here.

One of Potts' central claims regarding the syntax of *as*-parentheticals is that the gaps inside of *as*-parentheticals must be derived via movement and not by verb phrase ellipsis (VPE). Although the gaps look like VPE gaps—the same material goes missing, stranding an auxiliary verb—Potts demonstrates that there is a movement dependency from the position of the gap.

For example, he shows that as-parentheticals are island-sensitive. Whereas the gap in the as-parenthetical in (9a) cannot be contained inside of an island, a VPE gap can appear in a similarly structured sentence with no as-parenthetical.

- (9) a. * Nina quickly bought two durians, exactly as we met a chef who did . as-paren.
 - b. Nina quickly bought two durians, and we met a chef who also did ___. VPE

Corroborating Pott's claim is the observation that *as*-parentheticals display overt A'-movement complementizers in languages like Irish, glossed C here (McCloskey 2011):

(10) Chuaidh se 'un an aonaigh mar a dubhairt sé a rachadh ___.
went he to the fair as C said he C go.COND ___
'He went to the fair as he had said he would.'

In addition to the positive arguments for movement, it can be shown that the gaps in as-parentheticals have different locality requirements from VPE. For example, the ellipsis in (11) can identify an antecedent both in the immediately preceding clause or farther away in the subject of the preceding sentence.

- (11) The fact that Sue read the map carefully probably means that she stayed on the trails. But we aren't sure whether Chuck did $\langle VP \rangle$.
 - a. $\langle \overline{VP} \rangle$ = stay on the trails
 - b. $\langle \mathbf{VP} \rangle$ = read the map carefully

The locality conditions on *as*-parentheticals are stricter. Like VPE, *as*-parentheticals may find their antecedents in an immediately preceding verb phrase, but as shown in (12), the verb phrase in the complex noun phrase subject is unavailable as an antecedent.

- (12) The fact that Sue read the map carefully probably means that she stayed on the trails, as did Chuck $\langle VP \rangle$.
 - a. As-clause gap = stay on the trails
 - b. As-clause gap \neq read the map carefully

Potts takes this locality restriction to be indicative of a movement dependency, similar to relative clauses or comparative deletion. In fact, *as*-parentheticals seem to have the same locality restrictions as comparatives, which are well established as having movement (Kennedy 1997).²

Based on the above evidence, Potts concludes that the gaps in *as*-parentheticals are caused by the movement of a syntactically empty VP *pro*-form and that they cannot be caused by verb phrase ellipsis.³

2.3 Deletion

In ongoing work (LaCara 2012a, In Prep.), I present a number of challenges for Potts' null-operator analysis of *as*-parentheticals. For example, I show that in languages that exhibit verb stranding VPE, such as British and Irish English (Potsdam 1997), Irish (McCloskey 1991, 2011; amongst others), and Brazilian Portuguese (Cyrino & Matos 2002; Costa & Duarte 2001), it is possible to strand verbs in *as*-parentheticals. Following ?, this requires there to be a full verb phrase out of which the verbs move:

- (13) The FAA has a similar duty in the USA, as have equivalent organisations in almost every country throughout the world. British English (BNC CN2 770)
- (14) Chuaidh se 'un an aonaigh mar a dubhairt sé a rachadh.
 went he to the fair as C said he C go.COND
 'He went to the fair as he had said he would.' Irish (McCloskey 2011)
- (15) Obrigado por entrar em minha vida, como disse que entraria.
 thank.you for enter.INF in my life as said that enter.COND

 'Thank you for entering my life, as you said you would.' Portuguese (LaCara 2012a)
 http://www.suaescolha.com/jesus/religioes/divino/

In addition to this evidence, I also show that *as*-parentheticals pattern with deletion

phenomena in other ways. For example, the subjects of *as*-parentheticals are frequently not external arguments. Provided typical assumptions about the syntax of argument structure,

A problem with this account is that *as*-parentheticals can pick up antecedents across utterances (see section 2.3). A reviewer suggests that the locality restriction may be imposed by *as* itself, noting that the locality restriction bears a similarity to German *d*-pronouns (Wiltschko 1998), which have a tendency to pick up the last mentioned DP. I think assimilating *as* with cases such as these is a promising alternative to a movement-based locality restriction. It is known that *as*-parentheticals bear a strong resemblance to parenthetical relatives (Potts 2002a; LaCara 2012b), and, as Wiltschko (1998) notes, *d*-pronouns double as relative pronouns. Further, as I mentioned above, it is not clear how the purely movement-based account would deal with the cross-utterance cases, since an *as*-parenthetical in a separate utterance could not be syntactically adjoined to its antecedent.

A reviewer asks if as could be treated as an extractee. If the analysis of comparative deletion I assume below is correct (Kennedy 2000, 2002), then as cannot be an extractee unless some sort of VP-pronominalization of the sort discussed by Houser et al. (2007) is available. For an analysis of parenthetical relatives that takes this tack, see LaCara 2012b.

the subjects emphasized in (16) should have originated internal to verb phrases that are not pronounced (Schuyler 2001; Aelbrecht 2010:62–63). This indicates that in these cases there is a silent VP out of which the subjects moved.

(16) a. The ship sank, as will the barge.

unaccusative

b. *The ship was sunk, as was the barge.*

passive

c. Mary seems to be happy, as does Bill.

raising

Finally, there are also properties that are specific to deletion dependencies. In particular, predicate *as*-parentheticals require a spoken, linguistic antecedent, like VPE (Hankamer & Sag 1976; Sag & Hankamer 1984).⁴

- (17) Situation: You and your friend walk into a room and all the windows are broken. Your friend says:
 - a. # I can't believe somebody would!
 - b. I can't believe somebody would do this!

They cannot simply pick up an antecedent from the surrounding context, as shown in (18).

- (18) Situation: Sam and Leigh are at a farm. They sees Alex in the pigpen with his lips pressed firmly against those of a pig. Leigh exclaims to Sam:
 - a. # Aha! As did John!
 - b. # Aha! As has Mary!
 - c. # Aha! As might I!

Note further that cross-speaker *as*-parentheticals are generally good. This suggests that the problem with (18) is not that the *as*-parentheticals are dependent on being in the same utterance as the antecedent.

- This has been a contentious diagnostic since Hankamer & Sag (1976) proposed it; Schachter (1977) presents numerous apparent counterexamples, but Hankamer (1978) points out that many of these are plausibly fixed forms. More recently, Merchant (2004:718–723) and Miller & Pullum (2013) argue that ellipsis without spoken antecedents is possible, but the situations under which it occurs are fairly well constrained and it is not generally available. From an empirical point of view, the situations under which antecedentless ellipsis is available are not the same as when deep anaphora are available, and to that end the diagnostic is still useful for distinguishing ellipsis from deep anaphora.
- While as-parentheticals with verb phrase gaps never allow non-linguistic antecedents, propositional asparentheticals, which contain CP gaps, do (Potts 2002b:655). The situation in (18) can be followed up with any of the following:
 - (i) a. Aha! Just as I suspected __!b. Aha! Exactly as you said !

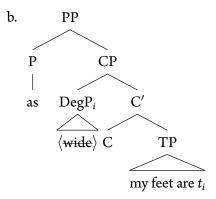
The reason for this split remains mysterious. One hypothesis is that instead of deletion, propositional *as*-parentheticals involve some sort of null complement anaphora (see Depiante 2000), but it is unclear why that should be the case.

- (19) Situation = (18)
 - a. SAM: Look! Alex is kissing a pig!
 - b. Leigh:
 - i. As did John!
 - ii. As has Mary!
 - iii. As might I!

All of this evidence suggests that *as*-parentheticals contain some sort of PF deletion in addition to movement. A null *pro*-form cannot straightforwardly account for any of the extraction facts in (13)–(16), and the data in (18) is expected of deletion anaphora. However, as discussed, this deletion operation cannot be VPE, since this construction has clear evidence of movement.

In LaCara (2012a, In Prep.), I argue for a hybrid analysis involving both A'-movement and deletion.⁶ The resulting derivation is largely identical to comparative deletion as proposed by Kennedy (2000, 2002). It has long been assumed (since at least Bresnan 1973) that comparatives and equatives contain some sort of deletion. Kennedy's approach to comparative deletion involves movement of the compared constituent into the left periphery of the standard clause (that is, the *than* or *as* clause), plus deletion under identity with the head of the comparative.

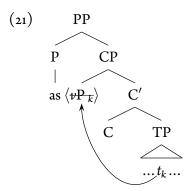
(20) a. Michael's hands are as wide as my feet are.



The analysis I propose follows this derivation very closely. The difference here is that a fully articulated ν P moves into the left periphery of the *as*-parenthetical, where it deletes under identity to the ν P it is adjoined to.⁷

⁶ LaCara (2012a) follows work by Feria (2010) and McCloskey (2011). Feria suggests a deletion analysis for inverting *as*-parentheticals, and McCloskey seems to assume that this is what is happening in Irish *as*-parentheticals, as well. I generalize their assumptions to all cases of *as*-parentheticals.

I treat *as* as a preposition here, following Potts (2002b). However, the evidence for this is not particularly strong; it is entirely plausible that *as* is a complementizer, as argued by Kluck & de Vries (To Appear).



Assimilating the syntax of *as*-parentheticals with that of comparatives and equatives has some ancillary support as well. For example, the locality restrictions on *as*-parentheticals appears to be the same as those on comparatives (as I noted in section 2.2), and comparatives seem to be host to the same sort of inversion discussed in this paper (Potts 2002b:640). Also potentially indicative is the fact that many languages use the word for *as* to introduce both equatives (and comparatives) in addition to *as*-parentheticals. In some intuitive sense, predicate *as*-parentheticals compare (or perhaps equate) predicates, as if to indicate that two kinds of eventuality are of the same type. Indeed, Kluck & de Vries (To Appear) comment on this likelihood, and it seems to me too that the *as* of *as*-parentheticals may be serving the same equative function that it does in equatives.⁸

This is the basic analysis of *as*-parentheticals that I will assume in the coming discussion. I now turn to the specific properties of inverting *as*-parentheticals that I will be interested in accounting for.

3 Properties of inverting as-parentheticals

Inverting *as*-parentheticals have a number of unusual properties that differentiate them from non-inverting *as*-parentheticals and, for that matter, typical English sentences. In this section, I will discuss a cluster of these properties that appear to be related.

One of the more notable properties of inverting as-parentheticals is that their subjects appear after an auxiliary verb, giving them the appearance of having undergone subject-auxiliary inversion (see Potts 2002b:639). However, there are two other unusual properties that are not easily explained given this assumption. It is possible to strand multiple auxiliaries before the subject in as-parentheticals, and it is not possible for there to be expletive subjects (Feria 2010). I will discuss these properties in more detail below; the main goal of the rest of the paper will be to account for this unusual behavior.

3.1 Subject postposing

The salient difference between inverting and non-inverting *as*-parentheticals is that the subjects in non-inverting *as*-parentheticals appear in a typical subject position with auxiliaries following subjects whereas the subjects of inverting *as*-parentheticals appear after

⁸ Unfortunately I know of no research that actually attempts to assimilate the semantics of comparatives of with the semantics of *as*-parentheticals.

auxiliaries.

(22)Harvey kissed a pig, as Mary also did. non-inverting

(23)Harvey kissed a pig, as did Mary. inverting

A fairly straightforward account of these data would involve simple T°-to-C° movement often called subject-auxiliary inversion (SAI)—in inverting as-parentheticals. This is the same movement that derives questions in English, and it results in the same word order shown in (23):

(24)Harvey kissed a pig. Did Mary (kiss a pig)?

However, as we are about to see, this cannot be the case. If the inversion in as-parentheticals were caused by typical subject-auxiliary inversion, then we would expect inverting asparentheticals to exhibit the behavior of SAI all the time. Unfortunately, SAI cannot account for a broader range of data.

3.2 Multiple auxiliary stranding and SAI

One of the strange facts about inverting as-parentheticals is that they permit multiple auxiliaries to precede their logical subjects. Feria (2010) adduces a number of naturally occurring examples, including the following:9

- (25)% The US trade deficit could be an issue, as could be the fact that much of China's economy is still fueled by exports.
- % ... your options have been unconstrained as have been your choices in modifying (26)
- % What this means is that the Celts could well have been a tribe of this copper-skinned (27)peoples, as could have been the early Egyptians.

This is noticeably different from English subject-auxiliary inversion. Since SAI is just head movement, it only permits the movement of one auxiliary above the subject, following from the head movement constraint (Travis 1984). As shown in (28), it never moves more than one auxiliary at a time. 10 Consequently, SAI cannot produce the orders seen in (25)-(27).

- (28)Harvey kissed a pig.
 - a. * Could have Mary (kissed a pig)?

Some speakers reject some examples of multiple auxiliary stranding, while others find it degraded in some cases. Examples of this sort, however, are well-attested.

¹⁰ Some dialects of of the American south that have so-called double modals do permit the movement of multiple modals above the subject; for instance ! Might could you go to the store for me? (Hasty 2012). This feature is regarded as non-standard, but the judgments above reflect those of English speakers who do not have this construction in their dialects. Furthermore, as far as I am aware, only double modals may front; other auxiliaries are not permitted to undergo this movement.

b. Could Mary have (kissed a pig)?

Moreover, when an *as*-parenthetical contains more than one auxiliary verb, the order derived by SAI is not permitted in *as*-parentheticals. The subject may not occur in between auxiliaries as it does in questions.

(29) Harvey kissed a pig...

This means two things for the analysis of inverting *as*-parentheticals. First, inverting *as*-parentheticals cannot be derived by SAI. In contexts with more than one auxiliary, SAI cannot produce the correct word order, and the word order that it would produce is ungrammatical. Consequently, there must be some other mechanism that derives the word order.

The second conclusion is somewhat less obvious than the first, but given the data here we must conclude that we do not know where the subjects in inverting *as*-parentheticals are. Making the fairly standard assumption that the highest auxiliary sits in T° in English (unless moved to C° by SAI), we can conclude that subjects are not in SpecTP in *as*-parentheticals. If they were, we would expect either only the SAI pattern to exist in inverting *as*-parentheticals (since this would move only one auxiliary to the left of the subject), or else we would expect inversion to be impossible, since all of the auxiliaries would have to occur to the right of the subject—there would be no mechanism for getting multiple auxiliaries to the right of the subject if they were in that position.

3.3 Expletives and the position of the subject

Another piece of evidence that would seem to corroborate the conclusion that subjects are not in SpecTP is that expletive subjects, as Feria (2010) notes, seem to be completely banned from inverting *as*-parentheticals. He presents this as evidence that subjects are not in SpecTP. The argument is that expletives must occur in SpecTP and that they do not occur in the position where we see subjects in inverting *as*-parentheticals; therefore, the subject position in inverting *as*-parentheticals is not SpecTP.

- (30) a. * There might be a show tomorrow, as might (be) there on Friday.
 - b. * It will rain tonight, as will it tomorrow.

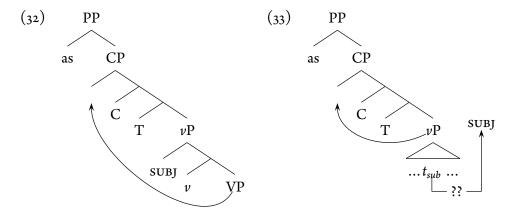
For comparison, while they are not permitted in inverting *as*-parentheticals, expletives are generally good in non-inverted examples:

- (31) a. There might be a show tomorrow, as there might also be on Friday.
 - b. It will rain tonight, as it will tomorrow.

Feria interprets this as meaning that there is no EPP active on T° in inverting as-parentheticals. If there is no EPP, then there is no impetus for anything to appear in SpecTP, and this would explain why expletives do not appear and why subjects never make it to SpecTP. This is just a stipulation, however. There are certainly other possible explanations for the pattern we see here, and we should want to know why the EPP is relaxed in this particular place. As I will discuss section 5, the facts here are better tied to the syntax of inversion in English in general.

Argument structure mismatch and the position of subjects

One possibility is that the subjects of inverting as-parentheticals stay low in the structure of the clause, never making it to SpecTP. The question is how low they stay. One possibility, shown in (32), is that subjects simply remain in SpecvP where they are first merged and that the material that deletes in inverting as-parentheticals is a VP, stranding the subject. However, it is also possible that the subject moves to some other position, just not as far as SpecTP (33). Feria (2010) proposes this latter option, but he does not consider the first possibility since he eschews the distinction between v° and V° .



In this section, I will turn to this question, using constraints over anaphor identity as a guide to figuring out where the subjects must lie in the structure. Following Merchant's (2013) approach to voice mismatches, I will argue that subjects must at least escape VoiceP, a functional phrase dominating vP, meaning that subjects must move out of their firstmerge positions. This corroborates Feria's (2010) original proposal.

4.1 Voice and ellipsis

One of the interesting properties of deletion anaphora is that deletion is sensitive to the argument structure and voice of the antecedent. For example, verb phrase ellipsis (VPE) tolerates mismatch in voice. The antecedent may be active while the clause containing the ellipsis is passive, and vice-versa:11

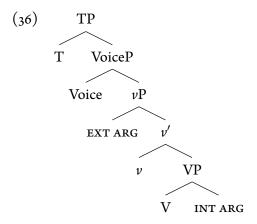
This is not the traditional assumption about voice mismatches. For instance, Sag (1976), among others, argued that voice mismatch was not possible in VPE. However, it has become clear in the years since that this is not so. See Merchant (2013) for discussion.

- (34) a. The janitor must remove the trash whenever it is apparent that it should be.
 - b. The system can be used by anybody who wants to.

However, VPE is sensitive to mismatch in argument structure (Sag 1976). Thus, a causative verb cannot serve as the antecedent to an inchoative or *vice versa*:

- (35) a. * John closed the door, and the window did too. $(\neq$ The window closed.)
 - b. * The water froze. I told you Mary did. $(\neq Mary froze the water.)$

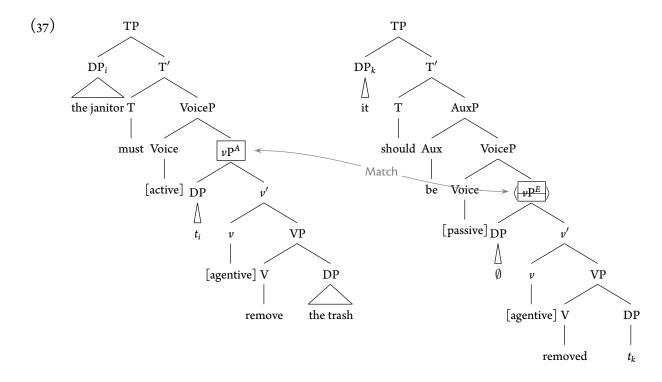
Merchant (2013), following ideas introduced by Collins (2005), uses a split- ν P in order to explain facts like these. ¹² Under this view, the voice and argument structure properties of ν ° are separated from each other, as schematized in (36). ν P is the locus of transitivity, and introduces external arguments. This phrase is dominated by VoiceP, which is responsible for determining the voice of the clause.



VPE permits voice mismatch, but does not permit argument structure mismatches. Since it is insensitive to voice, but it is sensitive to argument structure, Merchant argues that VPE may delete ν P to the exclusion of VoiceP as shown in (37). Although Voice° is different in each clause, both ν P^A and ν P^E match, so the ellipsis is permitted to occur.¹³ If ellipsis targeted VoiceP, however, we would expect voice mismatch to be categorically ungrammatical.

¹² See Frazier (2008) for an alternative approach.

¹³ As always, there are some wrinkles in what we mean by *match*. Merchant assumes that a syntactic identity requirement holds over the antecedent and elided constituent. This requires implicit agents to be syntactically represented. The trouble with that is that implicit agents in passives do not have the same properties as overt arguments, behaving more like PRO_{arb} (Baker et al. 1989:228–229). This may, however, be a broader problem for the identity requirement on ellipsis, and not just Merchant's approach.



A central idea of this approach is that ellipsis processes can vary with respect to the smallest constituent they may delete. ¹⁴ Thus some operations may target VoiceP, others, vP, and others, VP. For example, Merchant argues that pseudogapping targets VoiceP rather than ν P. Pseudogapping is very similar to VPE, with the exception that some ν P-internal element appears to the right of the deletion site—in example (38), this is *Harry*. However, as (39) demonstrates, voice mismatch is not permitted under pseudogapping, though it is allowed with VPE. The conclusion then is that whereas VPE targets vP, pseudogapping targets VoiceP.15

- (38)*Mary hasn't dated Bill, but she has Harry.*
- (39)* Hundertwasser's ideas are respected by scholars more than most people do his actual work.

We can use these restrictions over voice mismatches to determine what material goes missing in an anaphoric construction. In the coming discussion, I will apply this diagnostic to as-parentheticals to show that the phrase in which subjects are introduced gets deleted, meaning that subjects must move out of their first-merge position.

4.2 Mismatches in as-parentheticals

It turns out that, when it comes to voice mismatch, inverting and non-inverting as-parentheticals display different behaviors. Non-inverting as-parentheticals seem to permit voice

See also Aelbrecht (2010) and Baltin (2011) for more recent extensions of this approach.

For an operation that plausibly deletes VP, stranding ν °, see Toosarvandani (2006) on Farsi.

mismatch, much like VPE does. Inverting as-parentheticals, on the other hand, do not, behaving like cases of pseudogapping.¹⁶

- (40) Non-inverting as-parentheticals
 - The janitor should remove those bins, as I told you they should be.
 - b. I haven't implemented the system with a manager, as it will be.
 - It should be noted, as Dennett does, that ... (Sag (1976:75, fn. 2), cited in Potts (2002b))
 - d. The system can be used by anybody, as you clearly have.
- (41)Inverting as-parentheticals
 - * The janitor should remove those bins, as should be the others.
 - * I haven't implemented the system with a manager, as will be it.
 - * It should be noted, as does Dennett, that freshmen are often foolish.
 - d. * The system can be used by anybody, as have you.

In both cases, the argument structure of the antecedent and the missing verb phrase must be the same; argument structure mismatches are ungrammatical in both conditions.

- Non-inverting *as*-parentheticals:
 - a. * Mary froze the water, as the wine also did. $(\neq$ The wine froze.)
 - b. * The water froze, as Mary also did. $(\neq Mary froze the water.)$
- (43)Inverting *as*-parentheticals:
 - a. * John closed the door, as did the window.
 - $(\neq$ The window closed.)
 - b. * The door closed, as did John. $(\neq$ *John closed the door.*)

Following Merchant (2013), we can conclude that non-inverting as-parentheticals target vP since they permit voice mismatch. Inverting as-parentheticals, on the other hand, must match in Voice; and therefore we conclude inverting as-parentheticals target VoiceP, and not just ν P.

- 16 A reviewer points out that the relevant contrast does not always arise:
 - (i) This was pointed out by Peter,
 - a. * ... as John did.
 - b. * ... as did John.

I do not yet know exactly when voice mismatch is permitted in non-inverting as-parentheticals. Kehler (2002) claims that certain discourse requirements must hold for mismatch to happen under VPE. Similar requirements may hold over as-parentheticals as well, but I have not yet investigated this in any detail.

4.3 The subject escapes VoiceP

An important conclusion can be drawn from the above data: Subjects must move from the position where they are originally merged. Given the clausal model introduced in (36), external arguments are introduced in SpecvP. However, in inverting as-parentheticals, a larger piece of the clause moves away, namely VoiceP. If subjects did not move out of their base positions and out of VoiceP, we would expect them to be deleted, too. We have to conclude that the subjects move.

The question is: Where? If subjects are not in SpecvP or SpecTP, then they must wind up somewhere else. In the following sections, I will try to answer this question in a way that also accounts for the other properties of inverting *as*-parentheticals we have seen so far.

Discourse inversion 5

So far, we have seen that inverting as-parentheticals display a number of unusual properties.

- Subjects appear after (potentially multiple) auxiliaries (§3.2).
- Subjects do not appear to be in SpecTP (§3.2).
- Expletive subjects are not permitted in inverting *as*-parentheticals (§3.3).
- Subjects must leave SpecvP and move out of VoiceP (§4).

There are other constructions in English that share many of the above properties, namely the various inversion structures discussed by Birner (1994). This includes, for example, participle preposing (44) and locative inversion (45).

- [Standing in the middle of it all]_{VP} is [Jesse Jackson]_{subject}. (44)
- (45)[Out of the barracks]_{PP} marched [fifty soldiers]_{subject}.

Although there are some important differences between the constructions (see §7), I want to suggest that providing them with similar derivations explains the properties of inverting as-parentheticals that we have seen so far. The main comparison here will be between inverting as-parentheticals and participle preposing (Birner 1994; Samko 2012, 2013).

5.1 Similarities between participle preposing and inverting as-parentheticals

There are a few overt similarities that participle preposing and inverting as-parentheticals share that makes providing them with similar derivations appealing. First of all, both require the subject to appear after auxiliaries:

- (46)*Speaking tonight is the Chancellor.* preposing
- (47)*The mayor is speaking tonight, as is the Chancellor.* as-parenthetical

Just as in inverting as-parentheticals, multiple auxiliaries may precede the subject, as shown in (48a). Again, as shown in (49a), typical SAI cannot and does not generate the correct word order. This mirrors the facts we saw for inverting as-parentheticals in $\S 3.2$.

- (48) a. Speaking tonight will be the Chancellor. preposing
 - b. The mayor will be speaking tonight, as will be the Chancellor. as-parenthetical
- (49) a. * Speaking tonight will the Chancellor be. Preposing
 - b. * The mayor will be speaking tonight, as will the Chancellor be. as-parenthetical

Furthermore, the postposed subjects of both as-parentheticals and participle preposing sentences require focal stress. As shown in (50), focusing other material, such as the auxiliary in (50b), is infelicitous. This is not a requirement on non-inverting as-parentheticals as in (50c).

(50) a. Mary kissed a pig, as will YOU.

inverting

b. * Mary wants to kiss a pig, as WILL she.

inverting

c. Mary wants to kiss a pig, as she WILL.

non-inverting

Birner notes that the postposed subjects of participle preposing sentences must be focused. This is in line with line with her observation that the preposed material tends to be or contain topical (*e.g.*, familiar) information whereas the postposed subject is new, focused information.

(51) a. Speaking tonight is THE CHANCELLOR.

part. preposing

b. ?? Speaking tonight is the Chancellor.

part. preposing

Given these similarities, I would like to suggest that these constructions have similar derivations. Before turning back to *as*-parentheticals, I will first discuss one way to derive participle preposing.

5.2 The syntax of participle preposing

The preposed vPs behave as though they are in SpecTP (Samko 2012, 2013).¹⁷ For example, they can undergo raising like normal DP subjects:

- (52) a. [Speaking tonight]_{ν P} happens to be the Chancellor.
 - b. [Standing in the middle of it all]_{vP} seemed to be Jesse Jackson.

Inversion also bleeds tag questions (Samko 2012). This is presumably because the material in the tag has to refer back to the material in SpecTP.

(53) a. * Speaking tonight is the Chancellor, isn't she?

Bresnan (1994) makes a number of the following points for preposed PPs in locative inversion. Indeed, as mentioned above, participle preposing and locative inversion are very similar; see also Postal (1977).

b. The Chancellor is speaking tonight, isn't she?

Finally, the preposed element seems to compete with the same position as the subject. If vP is preposed, the subject must remain to the right of the auxiliaries (Samko 2012).

- * Speaking tonight the Chancellor is. (54)
- (55)* The Chancellor speaking tonight is.

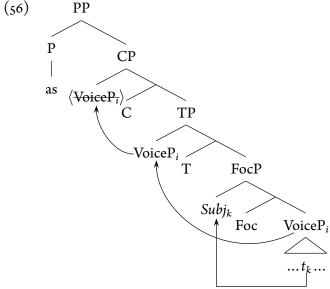
Given this, Samko (2012, 2013) argues that the vP moves through SpecTP, while the subject stays relatively low in a clause-medial position. Given the similarity, I propose to adapt this analysis to explain the facts as they occur in inverting as-parentheticals.

Inversion in as-parentheticals

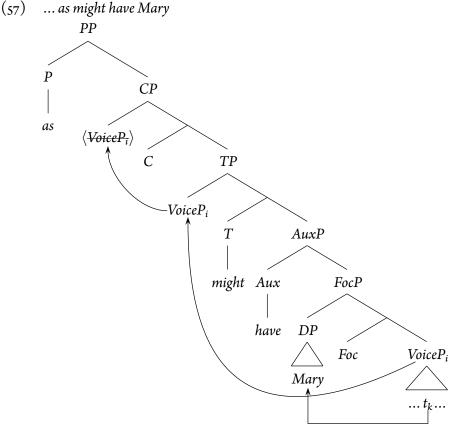
The analysis I give here combines approaches to discourse inversion with the syntax of asparentheticals. Discourse inversion in these parentheticals is, in some sense, independent of the movement of the verb phrase into SpecCP. That is, these are as-parentheticals that just happen to contain inversion.

On this account, as-parentheticals contain discourse inversion of the regular sort. VoiceP moves through SpecTP in order to satisfy the EPP, following typical analyses of inversion, and the subject remains in some clause-medial position, blocking them from moving to SpecTP (Bresnan 1994; Samko 2012).

However, following my analysis of as-parentheticals discussed in §2 (LaCara 2012a), even when this inversion occurs, as-parentheticals still require some verbal element to move to SpecCP where it deletes. This movement into the left periphery is a requirement on as-parentheticals in general (Potts 2002b), so once VoiceP moves to SpecTP, it must continue on to SpecCP.



This analysis draws from a few places. I follow Merchant (2013) in assuming that there is an optional clause-medial focus position where elements can land. This FocP occurs below auxiliaries but above VoiceP.¹⁸ For him, this is the where pseudogapping remnants appear.¹⁹ This straightforwardly accounts for the word order of the clause, including the multiple auxiliaries.



As shown here, based on Samko's (2012; 2013) account of participle preposing, VoiceP moves through SpecTP to satisfy the EPP on T°. This explains the lack of expletives in SpecTP. A trace of VoiceP occupies this position, preventing other material from occurring there. We need not stipulate, as Feria (2010) does, that there is no EPP active on T°.²⁰

Finally, as discussed in §2, the VoiceP passes into the CP layer, where it deletes, unifying the construction with other *as*-parentheticals. Intriguingly, Samko (2013) has recently

¹⁸ Nothing rides particularly on this projection being a FocP. If we assume that movement of the subject must be leftward, it could move to some other clause medial position between auxiliaries and VoiceP. For example, Samko (2012) argues that the logical subjects of participle preposing clauses are actually sitting in the specifier of a PredP (Bowers 1993) and that the fronted vPs are moved to SpecTP due to requirements on topical elements. If we admit rightward movement, the subject could also right-adjoin to the tree; indeed, Feria (2010) proposes such an analysis. I follow Merchant (2013) here mainly for concreteness.

This is a bit of a departure from the traditional approach, where some element moves rightward out of the VP before it is deleted (Jayaseelan 1990; Johnson 2009).

²⁰ A reviewer asks why VoiceP couldn't simply skip SpecTP, leaving it open for an expletive. As I hinted above, it seems to be a property of inversion that requires VoiceP to move through SpecTP. Expletives are not possible in VP preposing either:

^{(1) *} Speaking tonight, it will be the chancellor.

claimed that this is a necessary part of the derivation of participle preposing. A'-extraction to the left edge in clauses containing participle preposing is impossible:

(58)* Why is speaking today the Chancellor?

Samko argues, following Rezac's (2006) analysis of locative inversion, that participle preposing must be derived by at least two movements of νP . First the νP moves to SpecTP, deriving the properties seen in §5.2. After that, it moves to SpecCP, explaining why participle preposing blocks A' extraction.

Conclusion and prospects

In this paper, I have argued that cases of inversion in as-parentheticals should be handled in a similar fashion to various kinds of discourse inversion in English, namely participle preposing. The surface word order of these constructions are uncannily similar, and consequently, it seems that they should receive similar analyses. Assimilating inverting as-parentheticals to other inversion structures in English gives us a way of understanding various odd properties that the construction has. It permits us to understand why subjects may follow more than one auxiliary and why the construction lacks expletive subjects, as well as giving us insights into the discourse properties that the construction has.

Although the analysis proposed here accounts for the various properties discussed, it is worth noting that this construction is still poorly understood and that more work needs to be done. While providing participle preposing and inverting as-parentheticals a similar derivation is, I believe, a step in the right direction, there are numerous problems that prevent a complete assimilation of both constructions. For example, participle preposing only fronts verb phrases containing present and passive participles (Samko 2012), but any verb phrase is eligible to be deleted in inverting as-parentheticals.

- (59)* Examined Mary today has the doctor. preposing
 - b. * Examine Mary today will the doctor. preposing
 - The nurse has examined Mary today, as has the doctor. c. as-parenthetical
 - d. The nurse will examine Mary today, as will the doctor. as-parenthetical

Furthermore, although the fronted verb phrases may undergo raising in participle preposing (as discussed in §5.2), raising does not seem to be possible in inverting as-parentheticals:

- (60)Speaking tonight happens to be Noam Chomsky. preposing
 - b. *? Morris Halle is speaking tonight, as happens to be Noam Chomsky. as-parenthetical

Samko (2012) argues that there is an uninterpretable [TOPIC] feature on T° that drives movement of ν P to SpecTP in participle preposing. Under this account, expletives do not occur in SpecTP because they are not topical elements. A similar analysis may be workable for inversion in as-parentheticals, but I have not worked out the full implications of such an approach.

As far as I am aware, there is no explanation for these differences. The hope is that they may be tied to other independent facts about each of these constructions, but since so little is known about their syntaxes it is difficult to say what these might be.

In conclusion, although a lot of work remains to be done on the syntax of inverting asparentheticals, assimilating it to other constructions that share similar syntactic properties appears to be a promising path toward understanding the more unusual properties of this construction.

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