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문학석사 학위논문

# A Construction-based Approach to English Appositives

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# A Construction-based Approach to English Appositives

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이 논문을 문학석사 학위논문으로 제출함

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# **Abstract**

## **A Construction-based Approach to English Appositives**

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The aim of this study is to investigate the syntax and semantics of English appositives within a construction-based Head-Driven Phrase Structure Grammar (HPSG) approach. Unlike previous studies, this study particularly focuses on the possibility that appositives can appear nonadjacent to the anchor noun phrase, either clause-medially or clause-finally. In previous literature, these nonadjacent appositives have been studied under the term *afterthoughts* instead of being subsumed under the appositional construction.

By showing that afterthoughts possess the various properties that have been

attested for appositives, I argue that appositives in the traditional sense (the anchor-adjacent ones) and afterthoughts should be treated a single construction. Therefore, I call appositives that appear adjacent to the anchor *anchor-adjacent appositives* and those that appear nonadjacent to the anchor *afterthought appositives*.

There is no consensus among scholars on the syntactic status of the appositive. Some scholars, including Ott (2014), do not assume any syntactic relationship between the appositive and the host clause. Some others, for example Heringa (2007, 2012a), assimilate appositives to a coordination structure. These analyses are problematic in that they either miss the fact that the anchor and the appositive clearly form a syntactic constituent, or cannot be generalized to account for other parenthetical modifiers.

Therefore, I propose that appositives are syntactically integrated into the host clause as NP-adjuncts. Specifically, I propose a new subtype of the *head-modifier-cx* (*construction*): *head-parenthetical-modifier-cx*. This construction includes various kinds of parenthetical modifiers, including appositives (*head-appositive-cx*). The *head-appositive-cx* has two subtypes: *head-predicative-appositive-cx* and *head-identificational-appositive-cx*.

The nonadjacency between the anchor and the afterthought appositive is also explained through an already existing syntactic mechanism. Specifically, I use the feature EXTRA, which has been employed to account for various extraposition phenomena (Keller, 1995; Bouma, 1996; Van Eynde, 1996; Kay & Sag, 2012). By using this feature, clause-medial afterthought appositives and clause-final

afterthought appositives are both well accounted for.

In terms of semantics, I propose a new semantic dimension to deal with parenthetical elements, inspired by Potts' (2005) work. As a result, SEM now has two subdimensions: M-SEM (matrix semantics) and P-SEM (parenthetical semantics). I provide a detailed account of how such bidimensional semantics works within the HPSG framework, interacting with the constraints on the newly proposed types and the existing semantic principles.

A direct consequence of my account is that the parenthetical properties of appositives are dealt with in semantics, instead of having to assume a non-standard syntactic structure.

**Keywords:** English appositive, English afterthought, parenthetical, HPSG, Construction-based approach

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# 1. Introduction

A typical example of the appositional construction in (1) involves two elements in juxtaposition (*Bill, the guy that I met last week*). Here, the appositive noun phrase (*the guy that I met last week*) immediately follows the anchor noun phrase (*Bill*). Scholars, however, have not frequently noticed that it is also possible for the appositive to appear at the clause-final position, as in (2).

- (1) Bill, *the guy that I met last week*, called me.
- (2) Bill called me, *the guy that I met last week*.

This study is particularly interested in such positional possibilities of appositives, an issue that has not been the center of attention in previous studies.

Actually, phrases like the italicized noun phrase in (2) have been studied under the term *afterthoughts* (Ziv & Grosz, 1994; Ward & Birner, 1996; Grosz & Ziv, 1998; Averintseva-Klisch, 2008, among others) instead of being subsumed under the appositional construction. Afterthoughts are elements that add information about some referent in the sentence, usually at the end of the sentence. However, English afterthoughts have rarely received attention in syntactic literature, and therefore, their syntactic properties have not yet been well defined.

The main contribution of this thesis is establishing that afterthoughts ((2)) share the characteristics of appositives in the traditional sense ((1)), differing only in

linear position. Therefore, they should be analyzed as a single construction: appositives. I call appositives like (1) *anchor-adjacent appositives* and those like (2) *afterthought appositives*.

The strongest motivation for treating afterthoughts as appositives comes from the fact that the second italicized noun phrase<sup>1</sup> in (1) and (2) both contribute a secondary proposition—*Bill is the guy that I met last week*—to the sentence. Such a property was already widely discussed for anchor-adjacent appositives, but not for afterthought appositives (=afterthoughts).

Notably, acknowledging that afterthought appositives contribute a secondary proposition to the sentence serves to disambiguate them from right-dislocation or correction, constructions which have often been confused with afterthoughts in previous literature.

Afterthought appositives share other important characteristics of anchor-adjacent appositives, aside from the presence of a secondary proposition. Most importantly, afterthought appositives display the same parenthetical properties that have been attested for anchor-adjacent appositives: they are prosodically

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<sup>1</sup> In (1) and (2), the appositive is a noun phrase. Traditionally, the term *nominal appositive* has been widely used to differentiate the construction from appositive relative clauses. However, other categories are also possible as appositives, for example, adjective phrases (i). Therefore, in this study, I avoid using the term *nominal appositive*, and use the category-neutral term *appositive*.

(i) John, *very smart*, is from London.

independent<sup>2</sup> from the host clause, are syntactic islands, and are independent from the main clause in terms of scope relations (=are “scopeless”). That is, appositives, regardless of their position, are not embedded under main clause operators such as negation, propositional attitude verbs, conditionals, etc.

This study, then, has the consequence of extending the data set to be treated as parenthetical elements by introducing afterthoughts, which have not received much focus in the study of parentheticals, into the domain of parentheticals.

The analysis that I propose in this thesis adequately accounts for the aforesaid syntactic and semantic properties of appositives: most importantly, their positional variation and semantic properties.

In terms of syntax, I propose that appositives are to be treated as normal NP-adjuncts. In previous literature, appositives, as parenthetical elements, have sometimes been treated as syntactic disjuncts (“orphans”), which are independent from the structure of the host clause. However, this thesis successfully attempts to integrate appositives into the syntactic structure of the host clause by treating them

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<sup>2</sup> The use of the term *appositive* in this study is restricted to the so-called *loose apposition*. *Close appositions*, such as the phrases in (ii), are excluded from the scope of this study. In close apposition, there is no comma between the anchor and the appositive, which means that it is phonologically different from loose apposition.

- (ii) a. my brother Tom  
      b. The color red

Furthermore, the semantic contribution of the appositive is different. It has generally been noted that loose appositions are non-restrictive, while close appositions are restrictive in the sense that the meaning of the entire construction is the intersection of the anchor and the appositive (Heringa, 2012).

as NP-adjuncts. I argue that assuming an adjunction structure is descriptively and explanatorily more adequate than assimilating appositives to coordination structures, as in Heringa (2007, 2012a) or De Vries (2007).

The nonadjacency between the anchor and the afterthought appositive is also explained through an already existing syntactic mechanism. Specifically, I use the feature EXTRA, which has been employed to account for various extraposition phenomena (Keller, 1995; Bouma, 1996; Van Eynde, 1996; Kay & Sag, 2012). By using this feature, clause-medial afterthought appositives and clause-final afterthought appositives are both well accounted for.

In terms of semantics, there are two major semantic properties to account for. First, appositives contribute a secondary proposition to the sentence. Therefore, a sentence that contains an appositive phrase expresses two propositions in one sentence. Second, appositives are not embedded under the scope of matrix clause elements. That is, the appositive always has “wide scope,” or in other words, it is “scopeless.”

To account for such semantic properties, I propose that there are two different dimensions of meaning which are compositionally independent, inspired by Potts’ (2005) bidimensional semantics. Although other scholars (J. B. Kim, 2014, for example) have also implemented such bidimensional semantics into the HPSG framework, the specific inner mechanisms of this innovative semantics have not been discussed in detail.

In this study, I show the detailed compositional processes of the

bidimensional semantics, interacting with the constraints put on each newly proposed type and the existing semantic principles.

My account successfully account for 1) the fact that appositives express propositional meaning, 2) the semantic difference between predicative and identificational appositives, 3) the fact that a sentence containing multiple appositives expresses multiple propositions, and 4) the scopelessness of appositives.

A direct consequence of such an account is that the parenthetical properties of appositives are dealt with in semantics, instead of having to assume a non-standard syntactic structure.

In sum, although appositives seem somewhat independent from the host clause in a number of respects, the present analysis successfully deals with this phenomenon without having to assume any new mechanism or syntactic structure. Rather, the parenthetical properties of appositives are dealt with in semantics by positing a separate dimension of meaning to account for the parenthetical meaning. Although this study focuses on appositives, such an account can be applied to other parenthetical elements as well.

The organization of this paper is as follows. In Chapter 2, I present the syntactic and semantic characteristics of appositives, which are shared by anchor-adjacent appositives and afterthought appositives. Based on these properties, I show that it becomes easier to disambiguate appositives from other superficially similar constructions. In Chapter 3, I critically review three recent studies on appositives. Chapter 4 presents the new analysis of appositives within the HPSG framework.

Chapter 5 concludes the discussion.

## **2. The Appositive Construction: Phenomena**

In this chapter, I explain that the characteristics of anchor-adjacent appositives are actually shared by afterthoughts (=afterthought appositives), thereby arguing that they are subtypes of a single construction (section 2.1).

In previous literature, afterthoughts have been confused with right-dislocation, free adjuncts, or correction. By showing that afterthoughts are actually appositives, these similar constructions are more clearly distinguished from afterthoughts. The differences between afterthought appositives (=afterthoughts) and right-dislocation, free adjunct, correction are discussed in section 2.2.

### **2.1 Properties Shared by Anchor-adjacent Appositives and Afterthought Appositives**

Generally, appositives have been known to follow an adjacency requirement. Potts (2005, p. 104) argues that “[Appositives] must be immediately adjacent to whatever constituent they are dependent upon for their interpretation.” For example, sentences in (3) are ungrammatical.

- (3) a. \*We spoke with *Lance* before the race, *the famous cyclist*, about the weather.  
b. \**Jan* was the fastest on the course, *the famous German sprinter*, yesterday.

- c. \**Lance* has, *the famous cyclist*, taken the lead.

(Potts, 2005, p. 104)

However, the above sentences in (3) become grammatical when the appositive appears at the clause-final position, as in (4).

- (4) a. We spoke with *Lance* before the race about the weather, *the famous cyclist*.  
b. *Jan* was the fastest on the course yesterday, *the famous German sprinter*.  
c. *Lance* has taken the lead, *the famous cyclist*.

Meyer (1992) also provides corpus data of “unjuxtaposed” appositives in his corpus-based volume on appositives, which supports the present claim that there need not be a strict adjacency requirement between the anchor and the appositive. Examples are given in (5).

- (5) a. What is the use of propounding this definition? *Its use* is that of any valid definition: *to enable us to agree what comes into our discussion and what does not*.  
b. *She’s* a shocker you know, *Lizzie*.

(Meyer, 1992, p. 37-39)

Therefore, I argue against Potts’ (2005) claim that there is a linear adjacency

requirement between the anchor and the appositive. The appositive, then, has two major positional possibilities: the anchor-adjacent position and a position nonadjacent to the anchor (usually the right-peripheral position).

This nonadjacent variant of appositives has not received much attention in syntactic literature. Actually, they have been called *afterthoughts*, and scholars (Ward & Birner, 1996; Grosz & Ziv, 1998) have focused on their discourse function, comparing them to right-dislocation. Therefore, not much has been discussed about the syntactic and semantic properties of afterthoughts.

In the following sections, I show that the attested syntactic and semantic characteristics of appositives are also shared by afterthoughts. These will work as arguments for putting the two under a single construction.

It is worth noting that the position of the afterthought appositive is not necessarily tied to the clause-final position. Although the clause-final position is the most typical and readily observable position of the afterthought appositive, it also appears clause-medially, or even across the clause boundary. Such various positional possibilities are due to the fact that the afterthought appositive is a colloquial phenomenon in nature.

Corpus search of spoken data returns a number of clause-medial appositives. I searched the ICE-GB (the British component of the International Corpus of English) corpus, and found the following sentences in (6).

- (6) a. Apart from that he tried to smuggle this girl back *Vera you know* in the train

- com compartment where you 're supposed to shove the luggage (ICE-GB:S1A-014 #168:1:B)
- b. He did do them *Keith Fountain* lower in the high street. (ICE-GB:S1A-027 #044:1:B)
- c. Uhm the American Secretary of State however uhm *Mr Baker* has been touring Europe (ICE-GB:S1B-035 #012:1:B)
- d. Now during the past fourteen days or so that's the sort of information that a lot of people really *journalists* have been asking for because it it it it illustrates the progress of the war. (ICE-GB:S1B-038 #071:1:A)

Also, Ziv and Grosz (1994) note that it is possible for afterthoughts to appear outside of the clause boundary, as in (7).

- (7) Remember they/the two of them were telling us all sorts of stories? Well, [the story that he<sub>i</sub> told us was very interesting,] *Bill<sub>i</sub>*, I mean.

(Ziv & Grosz, 1994, p. 3)

## 2.1.1 Discourse Markers

Both anchor-adjacent appositives and afterthought appositives have been known to be able to host overt discourse markers. The markers that can appear with anchor-adjacent appositives and with afterthought appositives overlap. This is not

particularly surprising since it is a direct consequence of the fact that the discourse function is the same in both positions.

Heringa (2012b) provides a list of appositive markers of Dutch, English and German. The English appositive markers are outlined in (8).

- (8) namely, to wit, viz, and, that is to say, that is, i.e., in other words, in a sense?, or, put (more) simply, differently, in (more) technical/scientific/x terms, technically (speaking), I mean, you know, by the way, as you know

(Heringa, 2012b, p. 56-57)

These markers can equally be used in afterthought appositives. For example, Averintseva-Klisch (2008) notes that afterthoughts, unlike right-dislocation, allow optional markers like *ich meine* ('I mean'), *also* ('that is'), *tatächlich* ('really'), *natürlich* ('of course') etc.

The array of discourse markers that can be used in anchor-adjacent and afterthought appositives shows that the discourse function of this construction is to provide a better term to describe the anchor referent, or to give more information about it, in order to help the hearer better identify or understand the anchor NP.

## 2.1.2 Semantics of Appositives

It has been generally noted for appositives that the relationship between the

anchor and the appositive can be roughly stated as “A (anchor) is B (appositive).” (Quirk et al., 1995; Huddleston & Pullum, 2002; Potts, 2005, 2007; J.-B. Kim, 2012; Heringa, 2012b; Ott, 2014). This somehow “implicit” proposition is an additional (secondary) proposition expressed by the sentence.

The same observation is possible for afterthought appositives. For example, both (9a) and (9b) are not only expressing the proposition (10a), but also (10b). In uttering (9a) or (9b), the speaker is communicating that he met his best friend yesterday, and that that friend is, by the way, John Smith.

- (9) a. I met my best friend, *John Smith*, yesterday. [anchor-adjacent appositive]
- b. I met my best friend yesterday, *John Smith*. [afterthought appositive]
- (10) a. I met my best friend yesterday.
- b. My best friend is John Smith.

Therefore, in both anchor-adjacent appositives and afterthought appositives, there are actually two propositions in a single sentence, and that additional proposition is in the copular form of “A is B.”

Note that this additional proposition is the one to serve the special discourse function noted in section 2.1.1: to help the hearer identify the referent of the anchor NP. This has actually been discussed as the defining property of afterthoughts. Although scholars have focused on this special discourse function of afterthoughts, it has not yet been noted that afterthoughts actually contribute a separate proposition

that serves this discourse function.

Anchor-adjacent appositives and afterthought appositives both come in two major semantic types: the identificational type ((11)) and the predicative (=attributive) type ((12)). Identificational appositives provide an alternative, or a more informative, description of the referent denoted by the anchor NP. Predicative appositives predicate a property of the anchor. This distinction between the identificational type and the predicative (=attributive) type has been widely recognized for anchor-adjacent appositives (Heringa, 2012b; Griffiths, 2014; Ott, 2014) but rarely so for afterthought appositives. To the best of my knowledge, Ott and de Vries (to appear 2015) is the only work to mention predicative afterthoughts.

(11) is an example of the identificational type, and (12) of the predicative type. In identificational appositives such as (11), the appositive is a referential noun phrase, and in predicative appositives such as (12), the appositive is predicative, in this case a predicative NP.

(11) Identificational Appositive

- a. Bill, *the guy that I met last week*, called me. [anchor-adjacent appositive]
- b. Bill called me, *the guy that I met last week*. [afterthought appositive]

(12) Predicative Appositive

- a. And I don't know why but Bill felt the need to wrestle him, *a total stranger*, to the ground. [anchor-adjacent appositive]

- b. And I don't know why but Bill felt the need to wrestle him to the ground, *a total stranger*. [afterthought appositive]

A further semantic distinction among identificational appositives is possible according to 1) the definiteness of the anchor and the appositive noun phrases and 2) whether the anchor or the appositive is more specific. Quirk et al. (1985) provide a good illustration of these subtypes.

In the first subtype, the appositive is more specific than the anchor. Quirk et al. (1985) call this type *appellation*. Here, the anchor noun phrase and the appositive noun phrase are both definite, and the appositive noun phrase is typically a proper noun. In (13) are examples of this type. The anchor-adjacent position ((13a)) and the afterthought position ((13b)) are both possible.

- (13) a. The company commander, that is to say *Captain Madison*, assembled his men and announced their mission.  
b. My best friend was here last night—*Anna*.

(Quirk et. al, 1985, p. 1309)

In the second subtype, which Quirk et al. (1985) call *identification*, the anchor is typically an indefinite noun phrase, and the appositive is more specific. (14) are examples. Both the anchor-adjacent ((14a)) and the afterthought positions ((14b)) are possible.

- (14) a. A company commander, (namely) *Captain Madison*, assembled his men and announced their mission.
- b. An unusual present was given to him for his birthday: *a book on ethics*.

(Quirk et al., 1985, p. 1309)

The third type (*designation*, in Quirk et al.'s (1985) term) also involves two definite noun phrases in juxtaposition. This type is the reverse of the first type in that the appositive is less specific than the anchor. Here, again, not only the anchor-adjacent position ((15a)) but the afterthought position ((15b)) is also possible.

- (15) a. Captain Madison, (that is to say) *the company commander*, assembled his men and announced their mission.
- b. Anna was here last night, *my best friend*.

(Quirk et al., 1985, p. 1310)

### 2.1.3 Parenthetical Properties of Appositives

While appositives are linearly integrated into the host clause, they seem to be autonomous from the matrix clause in a number of respects, just like other parenthetical elements.

First, anchor-adjacent appositives and afterthought appositives are both

prosodically autonomous from the host clause: that is, the so-called *comma intonation* is observed. In writing, they are both separated from the host clause via a comma(,), a dash(—), or a colon(:).

Syntactically, both the anchor-adjacent appositive and the afterthought appositive are inaccessible to movement operations such as extraction. (17) shows that the anchor-adjacent appositive or any material inside it cannot undergo extraction.

- (16) John read something, *a book about syntax*, last semester.
- (17) a. What<sub>i</sub> did John read a book about *t<sub>i</sub>* last semester?
  - b. \*What did John read something, *a book about t<sub>i</sub>*, last semester?
  - c. (i) \*What<sub>i</sub> did John read something *t<sub>i</sub>* last semester?
    - (ii) \*Mary wondered what<sub>i</sub> John read something *t<sub>i</sub>* last semester.

Afterthought appositives ((18)) are equally inaccessible to extraction, as in (19).

- (18) John read something last semester, *a book about syntax*.
- (19) a. \*What did John read something last semester, *a book about t<sub>i</sub>*?
  - b. (i) \*What<sub>i</sub> did John read something last semester, *t<sub>i</sub>*?
    - (ii) \*Mary wondered what<sub>i</sub> John read something last semester, *t<sub>i</sub>*.

Such a restriction was widely noted for other parenthetical elements as well. De Vries (2007) shows that extraction from a parenthetical clause (the italicized part in (20)) or a non-restrictive relative clause (the italicized part in (21)) is impossible.

- (20) a. \*What did the police—*the commissioner suspected Hank stole* \_\_—search his house?
- (21) \*What did John greet Hank, *who carried* \_\_?

Also, appositives seem to be “sentential” in that they can host sentence adverbs and their own illocutionary force<sup>3</sup>. Anchor-adjacent appositives have been known to be able to host their own illocutionary force, separate from the matrix proposition, as in (22). In (22a), the appositive is interrogative, while the host is declarative. In (22b), the appositive is declarative, and the host is interrogative. (22) are examples provided in Dutch by Ott (2014), and the English counterparts are perfect as well.

- (22) a. Peter calls some person, *perhaps his father?*, twice a day.  
b. Is Jane, *the best doctor in town*, already married?  
(Ott, 2014)

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<sup>3</sup> I do not, however, actually assume a “sentential” syntax for appositives. My proposal is that the sentential behavior comes not from an underlying clausal structure, but from propositional semantics. See Chapter 4.

Afterthought appositives, too, can host a different illocutionary force from the matrix clause, as in (23).

- (23) a. Peter calls some person twice a day, *perhaps his father*?  
b. Is Jane already married, *the best doctor in town*?

Also, both the anchor-adjacent appositive and the afterthought appositive can host sentence adverbs such as *presumably*, as in (24).

- (24) a. They arrested a homeless man, *presumably Peter*, near the cathedral.

(Ott, 2014, in Dutch)

- b. They arrested a homeless man near the cathedral, *presumably Peter*.

Another important property of parentheticals is “scopelessness.” It has been noted in the literature that the appositive has “wide scope” or that it is “scopeless,” based on the fact that it escapes the scope of main sentence operators. For example, the appositive does not scope under negation in (25).

- (25) It’s false that Alonzo, *a big-shot executive*, is now behind bars.

(Potts, 2005, p. 114)

(25) is negating the proposition that Alonzo is now behind bars, but it is not negating the proposition that Alonzo is a big-shot executive.

Afterthought appositives do not scope under sentential negation either, as in (26). The meaning of (26) can be paraphrased as “*It’s false that Alonzo is now behind bars, and Alonzo is (, by the way,) a big-shot executive.*”

(26) It’s false that Alonzo is now behind bars, *a big-shot executive.*

Similarly, the appositive meaning is not embedded within propositional attitude verbs like *believe*, as in (27).

(27) John believes that Mary, *a drug addict*, is a perfect schoolteacher.

In (27), it is nowhere in John’s belief that Mary is a drug addict. That is, the appositive meaning does not embed under the propositional attitude verb *believe*.

A similar behavior is observed with conditionals. Appositives project out of conditionals (Asher, 2000). Consider (28a). (28a) does not entail (28b), and the meaning of (28a) can be restated as in (28c).

(28) a. If the party, *an uninteresting social gathering*, is over, then we should find somewhere else to get a drink.  
b. If the party is over and the party is an uninteresting social gathering, then

we should find somewhere else to get a drink.

- c. The party is an uninteresting social gathering. If the party is over, then we should find somewhere else to get a drink.

Afterthought appositives behave the same way with regards to conditionals.

Consider (29). The meaning of (29a) is (29b). Here, too, the italicized phrase is not embedded under the conditional, as in (28a).

- (29) a. If Sally comes by again, *the girl I met last night*, tell her to come by my office.  
b. If Sally come by again, tell her to come by my office. Sally is the girl I met last night.

This “scopeless” property is not a special characteristic of the appositional construction, but holds for other parenthetical elements as well. Take, for example, parenthetical adverbials. They, too, do not scope under sentential illocutionary operators. In (30) and (31) are French data from Bonami and Godard (2007). In (30a), the parenthetical adverb *malheureusement* ‘unfortunately’ does not embed under the conditional. Therefore, the condition under which Marie will be furious remains the same in (30b). The subscript in English has the same “scopeless” interpretation. On the contrary, the integrated adverb in (31a) is embedded under the conditional, and therefore the condition under which Marie will be happy is different in (31a) and

(31b).

- (30) a. Si Paul va, *malheureusement*, voir Marie, elle sera  
If Paul goes unfortunately see-INFMarie, she be-FUT  
furieuse.  
furious  
'If Paul, unfortunately, goes to see Marie, she will be furious.'
- b. Si Paul va voir Marie, elle sera furieuse.  
If Paul goes see-INF Marie, she be-FUT furious  
'If Paul goes to see Marie, she will be furious.'
- (31) a. Si Paul va *souvent* voir Marie, elle sera contente.  
If Paul goes often see-INF Marie she be-FUT happy  
'If Paul often goes to see Marie, she will be happy.'
- b. Si Paul va voir Marie, elle sera contente.  
If Paul goes see-INF Marie she be-FUT happy  
'If Paul goes to see Marie, she will be happy.'

So far, I have shown that anchor-adjacent appositives and afterthought appositives are parentheticals. However, it is worth noting that parentheticals are not a homogenous group. I divide parentheticals into two subtypes: *anchored*

*parentheticals* and *free parentheticals*<sup>4</sup>. Anchored parentheticals are those that have an overt anchor, the element that the parenthetical is semantically related with, in the host clause<sup>5</sup>.

Appositives are related to an element (a noun phrase) of the host clause, that is, the anchor. In this respect, I identify appositives as a type of anchored parentheticals. There are many other types of anchored parentheticals in the natural language, for example appositive (=non-restrictive) relative clauses, parenthetical (sentential) adverbs ((32)), parenthetical adverbial clauses (e.g. *if*-clauses) ((33)), *as*-parentheticals ((34)), free adjuncts ((35)), absolutes ((36)), comment/reporting clauses ((37)), and so on.

- (32) *Frankly*, I don't know what to say about this.

(Kaltenböck, 2007, p. 30)

- (33) I've just received the expected letter, *if that makes you feel any better*.

(Espinal, 1991, p. 726)

- (34) I'm working the night shift, *as you know*.

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<sup>4</sup> This is similar to Blakemore's (2006) distinction between grammatical and discourse parentheticals. Kluck (2012), too, advances a similar idea.

<sup>5</sup> In Chapter 4, I further argue that *anchored parentheticals* are syntactically adjuncts to the anchor.

(Quirk et al., 1985, p. 1112)

- (35) The editor, *angry at the delay*, resigned from the project.

(Huddleston & Pullum, 2002, p. 1359)

- (36) The defendants sat in the dock, *their heads in their hands*.

(Huddleston & Pullum, 2002, p. 1359)

- (37) There were no other applicants, *I believe*, for that job.

(Quirk et al., 1985, p. 1112)

The anchor for appositives is an NP. For appositive relative clauses, it can be an NP, an S, a VP, an AP, etc. The anchor for other anchored parentheticals outlined above is S.

Free parentheticals do not have an overt anchor in the host sentence, and is freer in linearization possibilities. Examples are given in (38) and (39). An in-depth observation into free parentheticals is out of the scope of the present study, and therefore, they will not discussed any further.

- (38) The main point—*why not have a seat?*—is outlined in the middle paragraph.

(Burton-Roberts, 2005, p. 180)

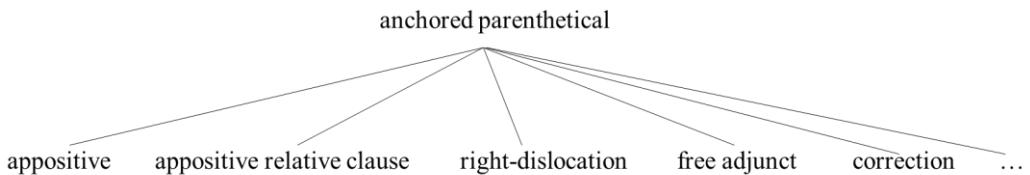
- (39) *Ah*, so you were there after all!

(Huddleston & Pullum, 2002, p. 1360)

## 2.2 Similar but different constructions

In this section, I disambiguate appositives from other constructions that seem superficially similar to appositives: *appositive relatives*, *right-dislocation*, *correction*, and *free adjuncts*. Although appositives and these constructions all belong to the bigger category of *anchored parentheticals* (parentheticals which have an overt anchor in the host clause), they should be treated as independent constructions, as in (40).

(40)



Such disambiguation is possible since I have assimilated afterthoughts to appositives in the last section (section 2.1), thereby clearly identifying their syntactic and semantic properties, which have been understudied in previous literature.

## 2.2.1 Appositive Relatives

Some scholars (Smith, 1964; O'Connor, 2008, etc.) have argued that appositives are derived from appositive relatives, based on examples like (41).

- (41) John, (who was) *a nice man*, greeted us into the mansion.

However, appositive relatives are different from appositives in several respects. First of all, not all appositive relatives can be reduced as in (41). Only those with the verb *be* can be reduced. Compare (42a) with (42b). An appositive relative with the verb *be* can be reduced, but this is not possible with an appositive relative with verbs other than *be*.

- (42) a. John, (who was) *a nice man*, greeted us into the mansion.  
b. John, \*(who has) *a cousin in Paris*, is going to France soon.

Second, while appositives only take NP anchors<sup>6</sup>, appositive relatives are

---

<sup>6</sup> Some might argue that appositives can take anchors that are not nominal, based on examples such as (iii).

- (iii) Kim did well on the test, *aced it*, actually.

However, the above example is not an instance of a true appositive. Rather, it is an instance of correction. More discussion about the difference between appositives and correction is provided in section 2.2.4.

compatible with a wider range of anchors (AP, VP, S, ...), such as in (43).

- (43) a. Kim was [really nice], which I didn't think she would be. (AP)

(Arnold, 2007, p. 274)

- b. Kim [won the race], which I didn't think she could. (VP)

(Arnold, 2007, p. 274)

- c. [Mary told me that she was pregnant], which was a shock to me. (S)

Moreover, only predicative (=attributive) appositives are possible as appositive relatives (Heringa, 2012b). Identificational appositives of (44a) and (45a) are ungrammatical when they appear as appositive relatives ((44b), (45b)).

- (44) a. There was a bird, *a wild swan*, in the air.

- b. \* There was a bird, which was a wild swan, in the air.

(Klein, 1977, p. 62)

- (45) a. My professor, *John*, came to last year's conference.

- b. \*My professor, who is John, came to last year's conference.

Lastly, appositive relatives, but not appositives, are subject to the so-called *Right Roof Constraint*. The Right Roof Constraint is a constraint that bans rightward movement outside of the clause boundary. In (46), the appositive relative, which is subject to the Right Roof Constraint, cannot appear outside of the clause. On the

other hand, appositives, which are not subject to such a constraint, can appear outside of the clause in which the anchor appears, as in (47).

(46) *Appositive relative*

Remember they/the two of them were telling us all sorts of stories?

\* Well, [the story that he told us was very interesting,] *who was wearing a blue suit*, I mean.

(47) *Appositive*

Remember they/the two of them were telling us all sorts of stories?

Well, [the story that he told us was very interesting,] *Bill*, I mean.

Based on these differences between appositives and appositive relatives, I will set aside appositive relatives as a different construction, and focus my discussion on appositives.

## 2.2.2 Right-dislocation

Afterthoughts are very frequently discussed along with a similar construction: right-dislocation (RD). RD also involves an NP at the rightmost position of the clause, which is coindexed with an element (usually a pronoun) in the host clause. English examples are provided in (48).

- (48) a. She<sub>i</sub>'s a smart cookie, *that Diana<sub>i</sub>* (Ward & Birner, 1996)  
 b. I don't like them<sub>i</sub> at all, *the cops<sub>i</sub>*. (Grosz & Ziv, 1998, p. 296)

Right-dislocation (RD) is superficially very similar to identificational afterthought appositives because both constructions involve a right-peripheral NP which is coindexed with an element in the host clause.

Previously, RD has been distinguished from afterthoughts based on discourse functions. There is a general consensus that RD is a topic-marking device (Lambrecht, 2001). An afterthought, on the other hand, is “a repair strategy used to resolve a potentially unclear reference in the host sentence (Averintseva-Klisch, 2008, p. 227).”

Not much has been discussed about the syntactic and semantic differences between RD and afterthoughts. Ziv and Grosz (1994) note that afterthoughts have a freer distribution in the clause than RD<sup>7</sup>. RD is always tied to the clause final position,

<sup>7</sup> Averintseva-Klisch (2008, p. 221) provides similar German data. In German, afterthoughts can appear following the anchor ((iv-b), clause-finally ((iv-a), or clause-medially ((iv-c).

- (iv) a. Ich        habe        ihn        gestern        nur        mit        Mühe  
           I        have        him        yesterday        only        with        effort  
           wiedererkannt,    *ich*        *meine*        *den*        *Peter.*  
           recognized,        I        mean        the        Peter
- b. Ich habe ihn, *ich meine den Peter*, gestern nur mit Mühe wiedererkannt.  
 c. Ich habe ihn gestern *ich meine den Peter*, nur mit Mühe wiedererkannt.  
 ‘I hardly recognized him yesterday, I mean Peter.’

but AT can occur clause-medially, following the anchor pronoun, as in (49).

- (49) I met him, *your brother*, *I mean*, two weeks ago.

It seems that the italicized phrase in (49) is, in fact, an instance of an (anchor-adjacent) appositive. Therefore, the observation that afterthoughts have a freer distribution than RD actually follows from the present claim that appositives and afterthoughts are positional variants of a single construction.

Right-dislocation, on the other hand, is only possible at the clause-final position, as in (50).

- (50) Den Tag, den vergess' ich nicht,  
the day<sub>i</sub> D-PRON<sub>i</sub> forget I not  
'That day, I will never forget it.'
- a. der<sub>i</sub> war viel zu schön, der Tag<sub>i</sub>.  
D-PRON<sub>i</sub> was much too beautiful the day<sub>i</sub>  
(Altmann, 1981, p. 129)
- b. \*der<sub>i</sub>, der Tag<sub>i</sub>, war viel zu schön.  
\*D-PRON<sub>i</sub> the day<sub>i</sub> was much too beautiful  
'It was so beautiful, the day.'

Apart from the positional differences, the syntactic and semantic differences

between RD and afterthoughts in English have not been discussed in depth. Here, I discuss some previously unnoted differences between the two constructions.

A crucial difference that has not been noted in previous works is the absence of a second proposition in right-dislocation. For example, the sentence in (51), containing right-dislocation, only has a single propositional meaning. That is, a proposition such as “*He is that man.*” is not part of the meaning of the sentence in (51).

- (51) There is very little chance that *he<sub>i</sub>* will come by, *that man<sub>i</sub>*.

The reason why right-dislocated elements do not contribute a secondary proposition is linked to the fact that in RD, the anchor noun is already highly presuppositional and activated. There is no need to add information about it or to give an alternative description in order to help the hearer identify its referent. RD merely functions to mark the referent of the anchor as the discourse topic.

Moreover, there are two semantic types of (anchor-adjacent and afterthought) appositives: the identificational type and the predicative type. However, the predicative type does not exist in right-dislocation, since the right-dislocate NP is always a referential NP coreferent with the anchor pronoun.

A possible objection to this claim is Kim and Kim (2014), in which they argue that in right-dislocation, the relation between the anchor and the right-dislocated NP is similar to a copular relation and thus can be equative, specifical, or

predicational.

However, it seems that examples of predicative right-dislocation given in Kim and Kim ((52)) are actually instances of afterthoughts. The second italicized NPs in (52) do not serve to mark the topic of the discourse. Rather, they give extra information about the first italicized noun.

- (52) a. He must appear to them as what he had been since they saw *him* last, *a soldier*. (COCA 1992 FIC)
- b. And I don't know why but Bill felt the need to wrestle *him* to the ground, *a total stranger*. (COCA 2005 SPOK)

Thus, contra Kim and Kim (2014), I argue that RD does not involve a copular relationship between the anchor and the right-dislocate NP. The copular relationship is a property of (anchor-adjacent and afterthought) appositives, and RD only involves an anaphoric relationship between the two NPs.

Finally, since the anchor noun in RD is discourse-old, it is almost always pronominal. In AT, however, other nominal expressions besides pronominals can surface as anchors.

This section showed that a distinction between right-dislocation and afterthoughts becomes clearer under the claim that afterthoughts are actually appositives that appear nonadjacent to the anchor NP.

### 2.2.3 Free Adjuncts

Free adjuncts that appear clause-finally can easily be confused with predicative afterthought appositives. For example, (53) is treated as an appositional construction in Heringa (2012b). However, on a closer observation, it turns out that this sentence is actually a typical example of the free adjunct.

- (53) John knocked at the door, *drunk*.

Free adjuncts are different from appositives because they have various adverbial relations that interact with the main clause (Yoo, 2008). Such adverbial relations are *if-rel*, *though-rel*, *when-rel*, *while-rel*, *because-rel*, etc. However, the proposition expressed by appositives does not have such adverbial relations with the main proposition. Rather, it is additional information that helps clarify the referent of an NP.

There is also a syntactic difference between afterthought appositives and free adjuncts. Afterthought appositives are syntactically right-hand NP-adjuncts, and never appear before the anchor. On the other hand, free adjuncts are S-adjuncts, and can appear sentence-initially, unlike appositives.

### 2.2.4 Correction

Another phenomenon that seems very similar to appositives is correction.

The corpus search for “detached NPs” in the ICE-GB (the British component of the International Corpus of English) actually returns much data of this type. There are two types of correction. The first type is shown in (54), where the speaker corrects his/her previous (erroneous) utterance with an NP that has a different reference.

- (54) He went out with Mary yesterday, Sarah, I mean.

In (55) are examples of correction that have a more specific reference. Quirk et al.’s (1985) *inclusive appositives* are included in this type, in the sense that the speaker realizes that his/her choice of words was too broad or unclear a term and corrects it with a more specific term that has a different (more narrow) reference.

- (55) a. What sort of *activities*, *physical activities*, were available? (ICE-GB: S1A-003 #002:1:A)
- b. I’ve never been *a reader* you know *a reader of novels*. (ICE-GB: S1A-013 #221:1:B)
- c. I do it with *magazines*, *a lot of quality magazines*. (ICE-GB: S1A-013 #185:1:C)
- d. Uhm I think I ’ll do *them* actually by hand *some of them* by hand *some of it*.  
(ICE-GB: S1A-046 #251:1:A)
- e. There’s been *a book*, *several books*, published on the concept. (ICE-GB: S1A-063 #139:1:A)

These examples seem similar to appositives, but do not fit into the identifying properties of appositives because there is no copular relationship of “A is B” between the anchor and the correction (see section 2.1.2 for more discussion about the copular relationship). For example, (55a) does not express the proposition “*Activities are physical activities.*” Rather, the speaker is cancelling his/her former choice of words (*activities*) and is replacing it with another more precise term (*physical activities*). Therefore, I exclude corrections, or *inclusive appositives*, from the scope of appositives.

### **3. Previous Studies on Appositives and Problems**

There are two major lines of research on the syntax of appositives, or more generally, the syntax of parentheticals: the “orphanage” account, in which the appositive is not syntactically integrated into the host clause, and the integration account, in which the parenthetical is integrated into the syntactic structure of the host clause.

In this chapter, I review two recent syntactic approaches to appositives: Ott’s (2014) ellipsis-based account, in which there is no syntactic relationship between the anchor and the appositive (“orphanage” account), and Heringa’s (2012a) integration account, in which appositives are analyzed as coordination.

Potts (2005, 2007) also argues for an integrated syntax, but what is more interesting in his very influential study are his claims about the semantics of appositives. Therefore, I focus on his semantic analysis on appositives. Actually, Potts’ study has a wider scope and includes other supplements such as appositive relative clauses or comment clauses. However, I focus on his analysis of appositives in reviewing his work.

#### **3.1 Potts (2005, 2007)**

Potts’ most central claim is that appositives convey a proposition that is separate from the matrix’s proposition. The proposition that the appositive contributes is a conventional implicature (CI), and is distinguished from at-issue

content. CI content and at-issue content lie on different planes in the interpretation.

CI content is “logically and compositionally independent of what is ‘said (in the favored sense)’”. It is speaker-oriented, and contributes to the meaning in a conventional way, which makes it non-cancellable. It never scopes under at-issue operators (=are “scopeless”).

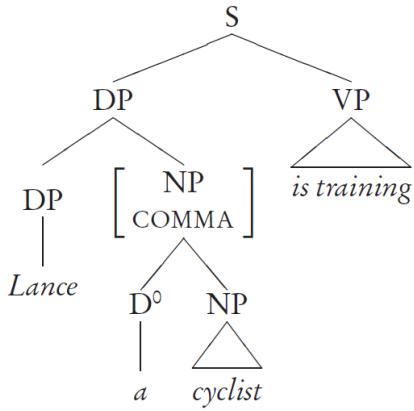
Potts’ semantic framework is type-theoretic. He separates basic at-issue types ( $e^a$ ,  $t^a$ , and  $s^a$ ) from basic CI types ( $e^c$ ,  $t^c$ , and  $s^c$ ). The composition of these types is done as follows:

- (56) a. If  $\tau$  and  $\sigma$  are at-issue types, then  $\langle\tau, \sigma\rangle$  is an at-issue type.
- b. If  $\tau$  is an at-issue type and  $\sigma$  is a CI type, then  $\langle\tau, \sigma\rangle$  is a CI type.
- c. The full set of types is the union of the at-issue and CI types.

(Potts, 2007, p. 16)

Syntactically, Potts treats appositives as adjuncts, as in (57). The syntactic feature COMMA is attached to the appositive. It results in the special intonational characteristics of appositives (*comma intonation*), and more importantly, it shifts at-issue content into CI content.

- (57) Lance, a cyclist, is training.



(Potts, 2005, p. 97)

In order to account for the semantic contribution of certain syntactic features such as COMMA, Potts introduces the following special rule ((58)):

(58) **feature semantics**

$$\begin{array}{c}
 \beta(\alpha) : \tau \\
 | \\
 \alpha : \sigma \\
 \bullet \\
 \boxed{\beta : v^c}
 \end{array} \quad (\text{where } \beta \text{ is a designated feature term of type } \langle \sigma, \tau \rangle)$$

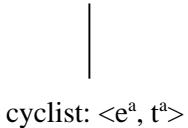
An example is given in (59). The appositive *a cyclist* is of type  $\langle e^a, t^a \rangle$ .

(Potts, 2005, p. 66)

The COMMA feature represents a type shifter of type  $\langle\langle e^a, t^a \rangle, \langle e^a, t^c \rangle\rangle$ .

When the appositive is combined with the feature COMMA, it becomes CI content of type  $\langle e^a, t^c \rangle$ . An example is provided in (59).

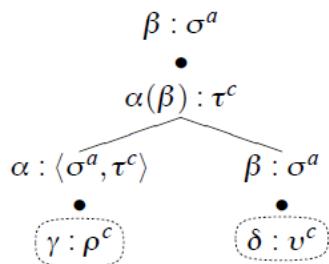
(59)  $\text{comma}(\text{cyclist}): \langle e^a, t^c \rangle$



(Potts, 2007, p. 24)

An additional composition rule is needed to combine at-issue content and CI content: CI application ((60)).

(60) **CI application**

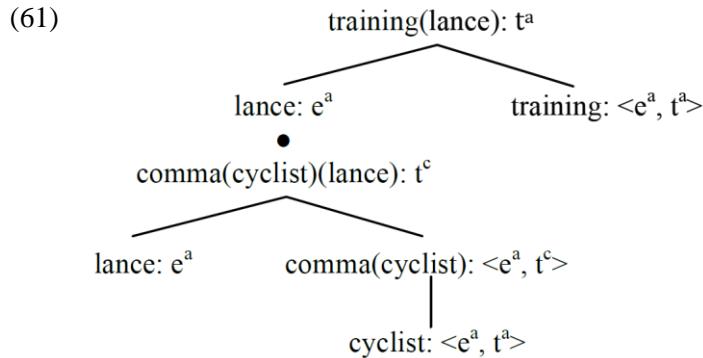


(Potts, 2005, p. 86)

When a CI expression ( $\alpha$ ) and an at-issue expression ( $\beta$ ) are sisters, the CI term is applied to the at-issue term to result in  $\alpha(\beta)$  of type  $\tau^c$  (CI). Then, this material is left in the CI dimension, and the unmodified value of the at-issue term ( $\beta$ ) is passed on to the at-issue dimension to be combined with other at-issue terms. Therefore,

Potts' semantics is not resource-sensitive: that is, the at-issue meaning can be used twice.

Now, the following semantic parsetree ((61)) for (57) is arrived at:



(Potts, 2005, p. 97)

In (61), there are two propositions in a single sentence: the at-issue proposition *Lance is training* and the CI proposition *Lance is a cyclist*. Therefore, in CI logic, one sentence can express two or more propositions, in separate dimensions, with their own truth values. The interpretation of the whole sentence is the set of the interpretations for the separate propositions.

Recently, however, Potts' bidimensional analysis has been criticized, based on data in which appositives do not “project”.

For example, Nouwen (2014) provides an example in which the appositive scopes *under* negation.

- (62) It is not the case that a boxer, *a famous one*, lives in this street.

(Nouwen, 2014: (25))

- (63) a. *It is not the case that [a boxer<sub>i</sub> lives in this street AND he<sub>i</sub> is famous]*

- b. *[It is not the case that a boxer<sub>i</sub> lives in this street] AND [he<sub>#</sub> is famous]*

The meaning of (62) is (63a) where the appositive is interpreted within the scope of negation. (63b) is an infelicitous reading because the indefinite is not accessible to the pronoun.

Also, Wang et al. (2005) present data in which the appositive content does *not* project out of the conditional. (64a) can be paraphrased as (64b).

- (64) a. If a professor, *a famous one*, publishes a book, he will make a lot of money.

- b. If a professor publishes a book and he is famous, he will make a lot of money.

(Wang et al., 2005, p. 13)

Similarly, (65a) receives a restrictive interpretation as in (65b). That is, the appositive content embeds under the propositional attitude verb *believe*.

- (65) a. John believes that a professor, *a quite famous one*, published a new book.

(Wang et al., 2005, p. 14)

- b. John believes that a quite famous professor published a new book.

However, Anderbois et al. (2015) treat these examples as “*one*-asides” and argue that they are different from true appositives. I agree with their idea that these “*one*-asides” should be treated as a different construction, namely corrections.

To add support for the idea that *one*-asides are different from true appositives, I show here that they do not add a secondary proposition to the utterance. (62), repeated here as (66), expresses a single proposition (67). It does not express two separate propositions of (68a) and (68b).

- (66) It is not the case that a boxer, *a famous one*, lives in this street.  
(67) It is not the case that a famous boxer lives in this street.  
(68) a. It is not the case that a boxer lives in this street.  
      b. A boxer is a famous one.

Therefore, I side with Potts in that appositives are always scopeless.

## 3.2 Ott (2014)

Ott's (2014) central claim is that appositives are elliptical root clauses. This elliptical root clause is not syntactically integrated to the host clause, but rather, is interpolated discursively.

There are two types of NAPs (non-restrictive nominal appositives): *reformulating* NAPs (rNAPs) and *copular* NAPs (cNAPs).

The proposed derivation for rNAPs is as follows. The host clause ((70a)) and the NAP ((70b-i)) are generated as independent root clauses. These two clauses are truth-functionally and morphosyntactically identical. Under this identity, CP<sub>2</sub> undergoes PF deletion ((70b-ii)). (70b-ii) is then linearly interpolated into the host clause (CP<sub>1</sub>) in discourse, resulting in (69).

(69) I met [an old friend]<sub>i</sub>, [John Smith]<sub>i</sub>, at the pub today.

(70) a. [CP<sub>1</sub> I met [an old friend] at the pub today]

b. (i) [CP<sub>2</sub> I met [John Smith] at the pub today] → deletion

(ii) [CP<sub>2</sub> I met [John Smith] at the pub today]

c. [CP<sub>1</sub> I met [an old friend]

[CP<sub>2</sub> I met [John Smith] at the pub today]

at the pub today]

In the case of copular NAPs, which are always predicative, CP<sub>2</sub> is a predicational copular clause with a free/E-type pronominal subject. (72) is the derivation of the sentence in (71). Ellipsis in this type is not a consequence of parallelism of the two clauses. It is licensed contextually, which Merchant (2005) calls *limited ellipsis*.

(71) I met John Smith, my best friend, at the pub today.

(72) a. [CP<sub>1</sub> I met [John Smith] at the pub today]

b. (i) [CP<sub>2</sub> he is [my best friend]] → deletion

(ii) [CP<sub>2</sub> ~~he~~ is [my best friend]]

c. [CP<sub>1</sub> I met [John Smith]

[CP<sub>2</sub> ~~he~~ is [my best friend]]

at the pub today]

Ott notes that the behavior of these NAPs seems somewhat contradictory.

NAPs, as parentheticals, are syntactically, prosodically, and semantically independent from the host clause. However, they show connectivity into the host clause: case/  $\theta$  connectivity, binding connectivity, and scope connectivity. That is, they behave as if they are integrated into the host clause. This resembles connectivity effects manifested in fragments.

Such connectivity effects are a direct consequence of the ellipsis analysis. Since rNAPs are analyzed as having a parallel structure with the host clause, it is straightforwardly explained that they match their anchors in morphological case and  $\theta$ -role. Also, they show full binding/scope connectivity. On the other hand, cNAPs behave differently in that the connectivity is restricted to the binding potential of the pronominal subject of the elided copular clause.

In this analysis, the NAP and the anchor are in no way structurally connected. The elided sentence fragment is linearly interpolated into the host clause in discourse. This is similar to the analysis of afterthoughts proposed in Ott and de Vries (to appear 2015). The difference between afterthoughts and NAPs is the interpolation site. Afterthoughts are sequentially added to the host clause, while NAPs are intraposed into the host clause.

This idea seems similar to the one proposed in the present study in that it is treating afterthoughts and appositives in the same way. However, the analysis to be given in Chapter 4 has nothing in common with the one proposed in Ott (2014), since there is no ellipsis involved, and the appositive is structurally related to the anchor.

I argue against such an “orphanage” approach to appositives proposed in Ott (2014) because there is sufficient reason to assume that appositives form a constituent with the anchor<sup>8</sup>.

Arnold (2004) argues that non-restrictive relative clauses form a constituent with their antecedents, based on syntactic operations such as topicalization and raising in (73) and (74).

### (73) Topicalization

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<sup>8</sup> Note that the tests for constituency seem to apply only to anchor-adjacent appositives. This is not because afterthought appositives do not form a constituent with the anchor. They are adjuncts to the anchor (therefore a constituent with the anchor), but are extraposed to a rightward position. Such discontinuous constituency is accounted for by the *Head-Extra* schema in section 4.3.

a. Sandy, who I'm sure you remember, I see \_\_ regularly.

b. \*Sandy, I see, \_\_, who I'm sure you remember, regularly.

(Arnold, 2004, p. 39)

(74) Raising

a. Sandy, who I'm sure you remember, always seems \_\_ helpful.

b. \*Sandy always seems \_\_, who I'm sure you remember, helpful.

(Arnold, 2004, p. 39)

Appositives display the same behavior, as in (75) and (76).

(75) Topicalization

a. Phil, my doctor, I see \_\_ regularly.

b. \*Phil, I see, \_\_, my doctor, regularly.

(76) Raising

a. Phil, my doctor, always seems \_\_ helpful.

b. \*Phil always seems, \_\_, my doctor, helpful.

Another support for the syntactic integration of non-restrictive relative clauses came from the position of possessive marking. Possessive 's always comes at the rightmost position of the host NP. For example, see (77).

(77) a. The King of England's mother left early.

- b. \*The King's of England mother left early.

(Arnold, 2004, p. 40)

(78) shows that the possessive marker must attach after the non-restrictive relative clause, and not before it. This adds support to Arnold's (2004) argument that non-restrictive relative clauses are syntactically integrated.

- (78) a. Prince Alphonso, *who ruined the party*'s, mother left early.

- b. \*Prince Alphonso's – *who ruined the party* – mother left early.

(Arnold, 2004, p. 40)

Similarly, the contrast between (79a) and (79b) shows that appositives have a similar structure with the above sentences. That is, the appositive and the anchor form a syntactic constituent.

- (79) a. Jack, *my doctor*'s, wife came to the party.

- b.\* Jack's, *my doctor*, wife came to the party.

Moreover, the non-integration approach to appositives is problematic because there is no adequate way for it to account for the linearization possibilities of appositives. In English, there are only two possible “interpolation” positions: the anchor-adjacent position and the clause-final position. Ott tries to explain the

interpolation possibilities in terms of prosodic factors, which is insufficient to account for English data. A syntactic explanation (an adjunction approach and extraposition: Chapter 4) seems more satisfactory.

In Chapter 4, I show that it is possible to account for the “clausal” characteristics of appositives *without* assuming invisible syntactic structure that is uncalled for.

### 3.3 Heringa (2007, 2012a)

Heringa (2012a) argues that in appositional constructions, the anchor and the appositive are coordinated. The arguments for the coordination analysis are based on the similarities between appositional and coordinate structures.

First, overt appositional markers such as *and* or *or* are used to show the relationship between the anchor and the appositive more explicitly. This implies that the main types of coordination—conjunction and disjunction—are represented. Examples from English and Dutch are provided in (80). (80a-b) are from Quirk et al. (1985, p. 1311-1312).

(80) a. The United States of America, *or America for short...* [English]

b. You could cut the atmosphere with a knife, *and a blunt knife at that.*

c. Piet gaat een auto, en wel een Porsche, kopen. [Dutch]

Piet goes a car and indeed a Porsche buy

‘Piet will buy a car, namely a Porsche.’

- d. Marie leest een boek over lexicale semantiek, oftewel woordbetekenis.

Marie reads a book on lexical semantics or.indeed word.sense

(Heringa, 2012a, p. 555)

Second, this appositive marker and the appositive form a syntactic constituent, as the coordinator and the second conjunct do in coordination structures. Extrapolation data support this claim. When the appositive or the second conjunct is extraposed, the marker has to be extraposed as well, as in (81b) and (81d).

- (81) a. Bill saw a nice butterfly yesterday, *namely a red admiral*.

b. \* Bill say a nice butterfly namely yesterday, a red admiral.

c. Bill saw John yesterday, and Mary.

d. \* Bill saw John and yesterday, Mary.

Also, stacking of more than two appositives is possible, as in (82a). The combination of multiple elements is also possible in coordination, as in (82b).

- (82) a. John, Mary’s boyfriend, a doctor, is a linguistic celebrity.

b. John, Mary, and Pete went to the store.

(Heringa, 2007, p. 70)

Further argument for the coordination analysis comes from case marking facts. In coordination, the first and the second conjuncts are marked in the same case. In appositional constructions in a language like Czech, the anchor and the appositive are also marked in the same case ((83)).

- (83) Pan Novák nakreslil tuto místnost tužkou,  
Mr Novak drew this room:ACC pencil:INSTR  
svým oblíbeným nástrojem.  
His favorite instrument:INSTR.

‘Mr. Novak drew this room with a pencil, his favorite instrument.’

(Heringa, 2012a, p. 556)

Based on these arguments, Heringa treats appositional constructions as coordination phrases, CoP, with the coordinator as head, the first conjunct as specifier and the second conjunct as complement.

However, the semantic relationship between the anchor and the appositive is different from that of conjuncts. The anchor and the appositive are coreferential, and the appositive “says something more about the anchor.” Following De Vries (2006), Heringa calls it *specifying coordination*.

The second main argument of Heringa is that apposition involves predication. Many other authors, especially Potts (2005, 2007), have claimed that the appositive contributes a secondary message to the utterance. Heringa agrees with this

assumption, but further argues that this message is not only present in semantics, but also in syntax as well. Both identificational and attributive appositives function as the predicate of the anchor in a full CP structure with an empty copula that has the meaning of *be*.

This claim is supported by the fact that appositives can host temporal adverbs ((84)), adverbial clauses ((85)), sentential adverbs (including speech act adverbs) ((86)), peripheral subordinators ((87)), and their own illocutionary force ((88)).

- (84) a. Keith, once a drug addict, now leads a rehabilitation centre.
- b. Ten years ago, I didn't know anything about appositions, currently my subject.
- (85) Keith, een junk toen ik hem voor het eerst ontmoette leidt nu  
Keith a junk when I him for the first met leads now  
een afkickkliniek.  
a kick.the.habit.clinic  
'Keith, a junk when I first met him, now leads a rehabilitation clinic.'
- (86) a. His death, probably a suicide, is glossed over and there is no actual diagnosis to back up the pop psychology.
- b. Racial profiling, unfortunately a frequent occurrence in American society, must be stopped.

c. This book, *frankly not my favourite one*, won a prize.

(O'Connor, 2008, p. 96–97)

- (87) a. The road, *though no longer an officially designated route*, has been celebrated in books ('The Grapes of Wrath'), song ('Get Your Kicks on Route 66') and a TV series ('Route 66').

(Los Angeles Times, 26/12/02, p. B2, col. 1)

- b. In allowing that 11th-hour add-on to a \$397 billion spending bill, Republican Congressional leaders handed the nation's real estate brokers an important symbolic victory – *if perhaps a temporary one* – in their concerted push to keep banks at bay.

(New York Times online, 'Business; Brokers to bankers: "No trespassing"', 02/03/03)

(O'Connor, 2008, p. 154-156)

- (88) a. Is Jane, *the best doctor in town*, already married?

- b. Please, say hello to Jane's friend, *Mike*, when you visit her.

(Corazza, 2005, p. 13)

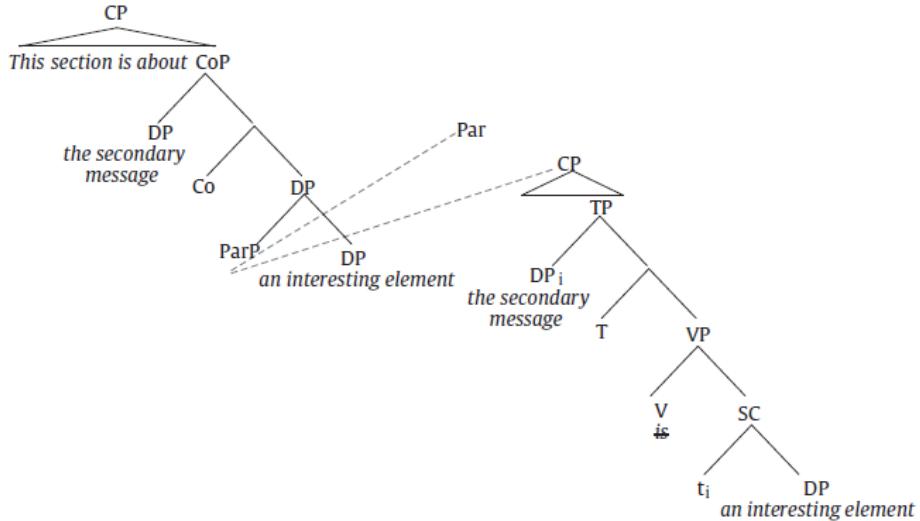
Appositives, like other parenthetical elements, behave independently from the matrix in terms of scope of semantic operators and the behavior with VP-ellipsis. To account for this important property, Heringa adopts de Vries' (2007) idea of

*parenthetical Merge*, in which c-command is blocked.

Such parenthetical construal is realized through a special head that triggers parenthetical merge, *Par*. The Par-head parenthetically merges with the parenthetical structure and projects ParP. The Par-head brings about the non-restrictive semantics of parenthetical material by marking its complement as a secondary message.

The structure that he arrives at is sketched in (89). Par and CP are daughters of ParP, and the dotted lines represent that the elements are combined through parenthetical construal.

- (89) This section is about the secondary message, *an interesting element*.



However, I argue against the coordination approach because treating the appositive structure as coordination faces a number of problems. First, some syntactic properties of the appositive construction do not fit into the standard

characteristics of the coordinate structure. For example, appositives differ from regular coordination in agreement patterns. In English, two conjuncts combined with *and* show plural agreement, as in (90). However, in appositional constructions, it is only the anchor that agrees with the verb, as in (91), where there is singular agreement.

- (90) Jan and Jake *are* coming to the party on Friday.  
(91) Jan, Jack's girlfriend, *is* coming to the party on Friday.

Also, in predicative (attributive) appositives, there appear cases where the anchor is an NP but the appositive is an adjectival phrase, as in (92) from Meyer (1992, p. 34).

- (92) That was *an extremely abstruse talk* in a way, *very highfown*.

The category mismatch is difficult to account for with the coordination analysis, especially when we consider Sag et al.'s (2003) Coordination Rule, where the conjuncts are identical in category.

More problematic is that the coordination account misses to capture the similarities that appositives share with other parenthetical elements. Other parenthetical elements such as comment clauses, parenthetical adverbials, etc. do not have anything in common with coordinate structures. If one were to assume a new

type of phrase or syntactic structure for appositives, it would be less theoretically costly if that new phrase type could account for other parenthetical elements as well.

Moreover, assuming both CoP and ParP seems unnecessary. Other parenthetical elements cannot be analyzed as CoP, and therefore, it seems that assuming CoP is motivated only for the analysis of appositives. It would be better to assume a single phrase type that can account for appositives and other parenthetical elements altogether.

Therefore, I propose in Chapter 4 that appositives actually belong to a subtype of adjunct phrase along with other parenthetical elements such as appositive relative clauses, comment clauses, parenthetical adverbials, free adjuncts, etc.

Before I proceed to present my analysis, a brief introduction to the basics of construction-based HPSG is provided in the next chapter.

## 4. Analysis

In this chapter, I propose an adequate syntactic and semantic structure for English appositives. First, in terms of syntax, appositives are integrated into the structure of the host clause. Specifically, I propose that they are to be licensed through the canonical *head-modifier* schema. There is no need to assume a non-standard syntactic relationship (or the absence of a syntactic relationship). Also, the discontinuity between the anchor and the afterthought appositive can be explained by employing the same mechanism that has been used to account for extraposed items, the *head-extra* schema.

Secondly, the attested parenthetical properties of appositives can be handled in semantics, by adding a separate semantic dimension for parentheticals. SEM will now have two subdimensions: M-SEM (matrix semantics) and P-SEM (parenthetical semantics), which are compositionally independent from each other. I present the detailed compositional process within bidimensional semantics, thereby accounting for 1) the fact that appositives express propositional meaning, 2) the semantic difference between predicative and identificational appositives, 3) the fact that a sentence containing multiple appositives expresses multiple propositions, and 4) the scopelessness of appositives.

### 4.1 Theoretical Background

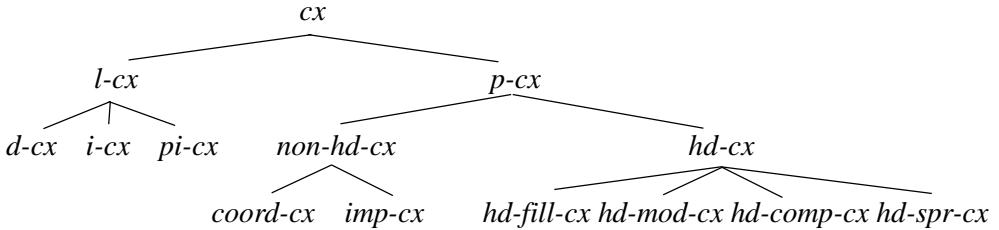
In this section, I explain the basic ideas of construction-based HPSG, as

introduced in Sag et al. (2003).

In this framework, not only words but also phrases are treated as *signs* (association of a form with a meaning, in Saussure's terms). This makes it possible for grammar rules to be put in a hierarchy. Grammar rules are treated as typed feature structures, and each structure is subject to the appropriate type constraints such as the Semantic Compositionality Principle and the Head Feature Principle.

Rules (lexical rules and grammar rules) are treated as constructions. Therefore, the two immediate subtypes of the type *cx* (*construction*) are *lexical-construction* (*l-cx*) and *phrasal-construction* (*p-cx*), as in (93). The appropriate features for *cx* are MOTHER and DTRS (DAUGHTERS).

(93)



What we are interested in for the purposes of the current study is *hd-cx*. The following grammatical principles are constraints on the type *hd-cx*.

(94) Head Feature Principle

$$hd\text{-}cx : \begin{bmatrix} \text{MOTHER} & [\text{SYN } [\text{HEAD } [1]]] \\ \text{HD} - \text{DTR} & [\text{SYN } [\text{HEAD } [1]]] \end{bmatrix}$$

(95) Valence Principle

$$hd\text{-}cx : \begin{bmatrix} \text{MOTHER} & [\text{SYN } [\text{VAL } / [1]]] \\ \text{HD} - \text{DTR} & [\text{SYN } [\text{VAL } / [1]]] \end{bmatrix}$$

There are two major semantic principles at work in Sag et al. (2003): the Semantic Compositionality Principle ((96)) and the Semantic Inheritance Principle ((97)).

(96) Semantic Compositionality Principle

In any well-formed phrase structure, the mother's RESTR value is the sum of the RESTR values of the daughters.

$$cx : \begin{bmatrix} \text{MOTHER} & \left[ \text{SEM} \left[ \text{RESTR } [\text{A1}] \oplus \dots \oplus [\text{An}] \right] \right] \\ \text{DTRS} & < [\text{SEM}[\text{RESTR } [\text{A1}]], \dots, [\text{SEM}[\text{RESTR } [\text{An}]]] > \end{bmatrix}$$

(97) Semantic Inheritance Principle

In any headed phrase, the mother's MODE and INDEX values are identical to those of the head daughter.

$$hd\text{-}cx : \begin{bmatrix} \text{MOTHER} & [\text{SEM} \begin{bmatrix} \text{MODE} & [1] \\ \text{INDEX} & [2] \end{bmatrix}] \\ \text{HD} - \text{DTR} & [\text{SEM} \begin{bmatrix} \text{MODE} & [1] \\ \text{INDEX} & [2] \end{bmatrix}] \end{bmatrix}$$

The present study is concerned with a specific headed construction: *hd-mod-cx* (*head-modifier-construction*). The constraints on this type are sketched in (98):

$$(98) \quad hd\text{-}mod\text{-}cx : \begin{bmatrix} \text{HD} - \text{DTR} & [1] \left[ \text{SYN} \begin{bmatrix} \text{VAL} & [\text{COMPS} < >] \\ \text{STOP} - \text{GAP} & < > \end{bmatrix} \right] \\ \text{DTRS} & < [1], \left[ \text{SYN} \begin{bmatrix} \text{VAL} & [\text{COMPS} < > \\ \text{MOD} & < [1] > \end{bmatrix} \right] > \end{bmatrix}$$

The constraints on the types are inherited to their subtypes. Therefore, *hd-mod-cx* is constrained not only by the constraints in (98), but also the Head Feature Principle ((94)), Valence Principle ((95)), the Semantic Compositionality Principle ((96)), and the Semantic Inheritance Principle ((97)).

## 4.2 The Hierarchy of Constructional Types

In this section, I propose that appositives are to be treated as normal NP adjuncts. They are right-hand adjuncts that modify the noun phrase that they appear adjacent to. In a broader sense, I am opting for the integration approach to appositives, and therefore, arguing *against* the orphanage approach. The current claim is not only applicable to appositives, but can also explain other types of anchored parentheticals.

First, I show that the anchor and the appositive form a syntactic constituent. There is a body of literature that treats parentheticals as some sort of an extra-sentential element, namely the “orphanage” approach (Haegeman, 1988; Espinal, 1991, among others). However, there are a number of reasons to believe that appositives are “integrated” into the syntax of the sentence, in that they form a syntactic constituent with the anchor.

In section 3.2, I have criticized Ott’s (2014) orphanage approach to appositives, based on several constituency tests such as topicalization ((99)) and raising ((100)), and the position of possessive ‘s marking ((101)).

(99) Topicalization

- a. Phil, my doctor, I see \_\_ regularly.
- b. \*Phil, I see, \_\_, my doctor, regularly.

(100) Raising

- a. Phil, my doctor, always seems \_\_ helpful.
- b. \*Phil always seems, \_\_, my doctor, helpful.

(101) Possessive marking

- a. Jack, *my doctor*’s, wife came to the party.
- b.\* Jack’s, *my doctor*, wife came to the party.

If the anchor and the appositive are sisters, what is the relationship between them? One can think of three possible options, all of which have been considered for

the analysis of appositives or of appositive relatives: 1) coordination, 2) some sort of a novel syntactic schema, and 3) adjunction. Here, I argue against the first two options, and opt for the adjunction account.

The first option is the coordination account (de Vries, 2007; Heringa, 2012a; J.-B. Kim & Van Eynde, 2013). In section 3.3, I argued against the coordination account of appositives. Several properties of appositives such as agreement patterns and category mismatches are difficult to reconcile within the coordination account (see section 3.3 for detailed discussion).

Also, the coordination approach cannot be generalized to account for other types of parentheticals. That is, other types of parentheticals have no coordination property. The adjunction approach, on the other hand, can be extended to account for other parenthetical elements such as parenthetical adverbials, appositive relative clauses, *as*-parentheticals, free adjuncts, etc.

Another conceivable, but not preferable, option is to deal with appositives by assuming a novel syntactic schema. For example, Van Eynde (1996) makes reference to the parataxis schema. The need for the parataxis schema was first mentioned in Pollard and Sag (1994, p. 228) for the analysis of relative-correlative constructions. Van Eynde (1996) proposes that properties of one type of parataxis, i.e. apposition, also apply to the phenomenon of *it* extraposition. In the *head-apposition* structure that he proposes, the head daughter's SUBCAT list is empty, and the apposition daughter's index is anchored by another (contextually determined) index, and its value is put in storage. In this respect, the *head-apposition* structure is different from

the *head-adjunct* structure. The semantic contribution of the apposition is not directly passed on to the mother node, but is stored and retrieved by means of standard quantifier scoping devices.

However, I believe that assuming a wholly new schema is unnecessary, given that appositives, along with other anchored parentheticals, can be treated as a sort of *head-modifier* phrase with idiosyncratic semantic properties. It will be shown that it is possible to treat appositional constructions as *head-modifier* phrases under the assumption that parenthetical content belongs to a separate dimension of meaning.

The third option, the one I opt for, is the adjunction account. Many other scholars (Demirdache, 1991; Del Gobbo, 2003; Arnold, 2004; Potts, 2005; Citko, 2008) take the adjunction approach for appositive relatives. I propose that such an account is appropriate for appositives as well. The adjunction account seems plausible, given that the appositive construction is a headed phrase, and that the appositive is an optional element. The possibility of the stacking of appositives can also be handled well under the adjunction approach.

More importantly, the adjunction account can be generalized to explain other types of anchored parentheticals. Other types of anchored parentheticals, including appositives, bear many similarities with regular adjuncts. The only difference between normal adjuncts and anchored parentheticals lies in semantics and prosody (the *comma intonation* of parentheticals).

For example, appositive (=non-restrictive) relative clauses ((102a)) can be treated like adjuncts in just the same way that restrictive relative clauses ((102b)) are

adjuncts. This position is argued for by Arnold (2004).

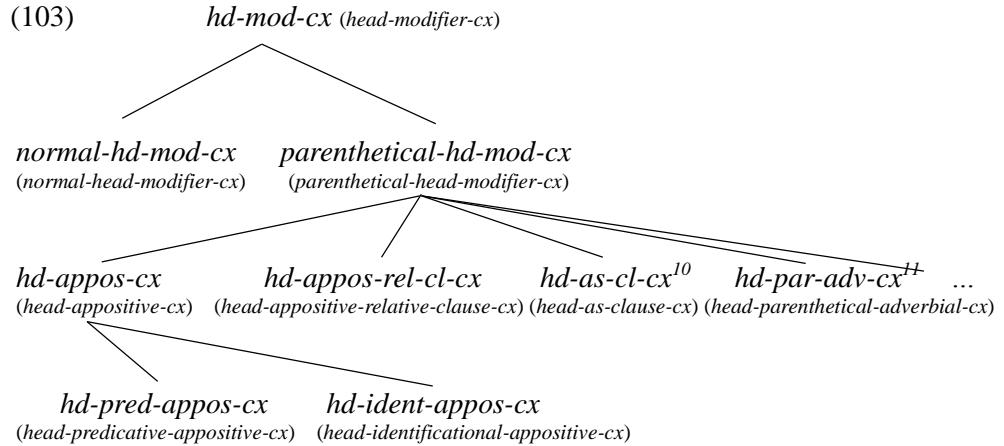
- (102) a. Kim has three pets, which a neighbour looks after. [NRC]  
b. Kim has three pets which a neighbour looks after. [RRC]

(Arnold, 2004, p. 28)

Therefore, appositives are treated as a subtype of the *head-modifier-construction* (*hd-mod-cx*) in my analysis. What follows in (103), now, is the proposed new hierarchy of *hd-mod-cx* types. In the newly proposed hierarchy, there are two subtypes of *hd-mod-cx*: *normal-head-mod-cx* (*normal-head-modifier-construction*) and *parenthetical-head-mod-cx* (*parenthetical-head-modifier-construction*). The former type corresponds to the typical type of adjuncts. I newly introduce the latter type into the hierarchy of *hd-mod-cx*. This type includes the array of anchored parentheticals<sup>9</sup>.

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<sup>9</sup> I am aware that there must be many other types of anchored parentheticals in the English language, apart from those in (103). The identification of all the types, however, is beyond the scope of this study.



Such parentheticals inherit the constraints imposed on *hd-mod-cx* ((98), repeated here as (104)).

$$(104) \text{ } hd\text{-}mod\text{-}cx : \begin{bmatrix} \text{HD} - \text{DTR} & [1] \left[ \text{SYN} \left[ \begin{bmatrix} \text{VAL} & [\text{COMPS } <>] \end{bmatrix} \right] \right. \\ \text{DTRS} & \left. \left[ \text{STOP} - \text{GAP} <> \right] \right] \\ & < [1], \left[ \text{SYN} \left[ \begin{bmatrix} \text{VAL} & [\text{COMPS } <>] \\ \text{MOD} & < [1] > \end{bmatrix} \right] \right] \end{bmatrix} >$$

The additional constraints imposed on *parenthetical-hd-mod-cx* are sketched in (105).

<sup>10</sup> (v) I'm working the night shift, *as you know*. (Quirk et al., 1985, p. 1112)

<sup>11</sup> (vi) Frankly, I don't know what to say about this. (Kaltenböck, 2007, p. 30)

(105) *parenthetical-head-modifier-cx* :

MOTHER	$\left[ \begin{array}{c c} \text{PHON} & \text{COMMA +} \\ \text{SYN} & \text{GAP } <> \\ \text{SEM} & \left[ \begin{array}{c c} \text{M - SEM} & [3] \\ \text{P - SEM} & /< [2] > \end{array} \right] \end{array} \right]$	]
HD - DTR	$[1] \left[ \text{SEM} \left[ \begin{array}{c c} \text{M - SEM} & [3] \\ \text{P - SEM} & <> \end{array} \right] \right]$	
DTRS	$< [1], \left[ \begin{array}{c c} \text{SYN} & \text{GAP } <> \\ \text{SEM} & \left[ \begin{array}{c c} \text{M - SEM} & [2] \\ \text{P - SEM} & <> \end{array} \right] \end{array} \right] >$	

There are phonological, syntactic, and semantic constraints specified for this type. In terms of phonology, these phrases are intonationally independent from the host clause, a property often called *comma intonation*. I add a new feature PHON | COMMA to represent this intonational property. The COMMA feature is specified as – by default, but parenthetical elements (both anchored parentheticals and free parentheticals) are specified as [PHON | COMMA +].

Syntactically, it has been widely noted that it is *impossible* to extract from parenthetical phrases, as in (16)-(17), repeated here as (106)-(107).

(106) John read something, *a book about syntax*, last semester.

(107) a. What<sub>i</sub> did John read a book about *t<sub>i</sub>* last semester?

b. \*What did John read something, *a book about t<sub>i</sub>*, last semester?

c. (i) \*What<sub>i</sub> did John read something *t<sub>i</sub>* last semester?

(ii) \*Mary wondered what<sub>i</sub> John read something *t<sub>i</sub>* last semester.

This restriction is formalized as a syntactic constraint on the type *par-hd-mod-cx* as [SYN | GAP < >].

Lastly, in terms of semantics, notice that the SEM specifications of the above construction look different from what has been suggested in Sag et al. (2003). In section 4.4, I will propose that there should be two separate dimensions of meaning: each for matrix elements and parenthetical elements. M-SEM (matrix semantics) and P-SEM (parenthetical semantics) are the meaning dimensions that I propose. P-SEM is a new dimension of meaning for parenthetical elements, and M-SEM deals with meaning of elements in the matrix clause.

All lexical items only have M-SEM specifications, and have an empty P-SEM list. However, the P-SEM list becomes non-empty in *parenthetical-head-modifier-cx*. In this construction, the M-SEM value of the nonhead daughter is identified with the element of the mother's P-SEM list by default. The M-SEM value of the head daughter and of the mother are identical. As a result, the mother of the *parenthetical-head-modifier-cx* is specified for both M-SEM and P-SEM, M-SEM specifications coming from the head daughter, and P-SEM specifications coming from the nonhead (modifier) daughter.

I have identified several subtypes of the *par-hd-mod-cx*: *hd-appositive-cx*, *hd-appositive-relative-clause-cx*, *hd-as-clause-cx*, *hd-parenthetical-adv-cx*, etc. Among these subtypes, we are interested in the constraints imposed on the *head-appositive-cx*. The constraints on this type follow in (108).

$$(108) \text{ head-appos-cx: } \left[ \begin{array}{ll} \text{MOTHER} & [\text{SYN} \mid \text{HEAD } \textit{noun}] \\ \text{HD} - \text{DTR} & [1] \left[ \begin{array}{ll} \text{SEM} & [\text{M} - \text{SEM} \quad \left[ \begin{array}{ll} \text{MODE} & \textit{ref} \\ \text{INDEX} & i \end{array} \right]] \end{array} \right] \end{array} \right]$$

The constraints in (108) reflect the fact that the anchor is always a referential noun phrase, with the index value  $i$ .

Moreover, there are two subtypes of appositives: the predicative type and the identificational type. These two types are semantically different. The predicative type is specified as [PRED +], and the identificational type as [PRED -]. The appositive phrase in predicative appositives does not refer, and therefore cannot be coindexed with the anchor. Like other predicative NPs, it takes a specifier argument. In this case, the anchor NP will be coindexed with the specifier of the predicative appositive.

$$(109) \text{ head-pred-appos-cx: } :$$

$$\left[ \text{DTRS} < [1], \left[ \begin{array}{ll} \text{SYN} & \left[ \begin{array}{ll} \text{HEAD} & [\text{PRED} +] \\ \text{VAL} & [\text{SPR} < [1] >] \end{array} \right] \\ \text{SEM} & [\text{M} - \text{SEM} \quad [\text{MODE} \quad \textit{prop}]] \end{array} \right] > \right]$$

Unlike in predicative appositives, the nonhead daughter of the identificational appositive phrase is specified as [PRED -]. Therefore, it is a referential noun phrase ([MODE  $\textit{ref}$ ]).

Although the nonhead daughter by itself is a referential noun phrase, the appositional phrase as a whole expresses a propositional meaning. To account for

this fact, the default constraint on *parenthetical-head-mod-cx* is violated here. That is, the M-SEM value of the nonhead daughter is *not* identical to the mother's only P-SEM element.

Specifically, the MODE value of mother's P-SEM element is *proposition*. This naturally accounts for the “sentential” behavior of appositives outlined in section 2.1.3 without having to assume an invisible clausal syntax. The RESTR list on the mother's P-SEM ensures that the meaning of this proposition links the anchor noun phrase and the appositive noun phrase as coreferential.

(110) *head-ident-appos-cx*:

$$\begin{array}{c}
 \left[ \text{MOTHER} \left[ \text{SEM} \left[ \text{P-SEM} < \left[ \begin{array}{cc} \text{MODE} & \textit{prop} \\ \text{INDEX} & s \\ \text{RESTR} & < \left[ \begin{array}{cc} \text{RELN} & \textit{identified} \\ \text{ARG1} & i \\ \text{ARG2} & j \end{array} \right] > \right] \right] \right] \\
 \left[ \text{DTRS} < \text{NP}_i, \left[ \begin{array}{cc} \text{SYN} | \text{HEAD} & [\text{PRED} -] \\ \text{SEM} & \left[ \text{M-SEM} \left[ \begin{array}{cc} \text{MODE} & \textit{ref} \\ \text{INDEX} & j \end{array} \right] \right] \end{array} \right] \right]
 \end{array}$$

Shortly in section 4.3, I explain the motivations for such bidimensional semantics. Then, I will illustrate the compositional process of meaning in sentences containing appositives, showing how the abovementioned constraints interact with the semantic principles (the Semantic Inheritance Principle and the Semantic Compositionality Principle) and the P-SEM List Addition Rule that I propose.

## 4.3 Positional Possibilities of the Afterthought Appositive

A further task in syntax is to account for the discontinuity between the anchor and the afterthought appositive. I have argued in section 2.1 that the only difference between the anchor-adjacent appositive and the afterthought appositive is linear position. The anchor and the appositive form a constituent. However, in case of the afterthought appositive, we have to account for the discontinuous constituency.

To account for this, I employ the feature EXTRA. The feature EXTRA is a nonlocal, list-valued feature (Keller, 1995; Bouma, 1996; Van Eynde, 1996; Kay & Sag, 2012). It serves as the mechanism for explaining various extraposition phenomena. The range of data that can be covered by the EXTRA feature is introduced in (111).

- (111) a. *It seems that your hair is burning.* (extraposition from subject)
- b. They regret *it* very much *that we could not hire Mosconi.* (extraposition from object)
- c. I am *unwilling* when sober *to sign any such petition.* (extraposition of VP complement)
- d. He *lowered* the nitro bottle *onto the floor.* (extraposition of PP complement)
- e. *An article* appeared yesterday *about the situation in Kazakhstan.* (extraposition of PP modifier)

f. *A man walked in who was wearing striped suspenders.* (extraposition of relative clause)

(Kay & Sag, 2012, p. 222)

The mechanism of the EXTRA feature is very similar to that of the nonlocal feature SLASH (GAP). At some point in a tree, a sign specifies an item on its EXTRA list. When this sign becomes a daughter of a phrase, the non-empty EXTRA specification is passed onto the mother's EXTRA list. This inheritance is continued until a higher *head-extrposition-construction* (*head-extra-cx*) realizes the extraposed item, and the extraposed item gets off of the mother's EXTRA list.

The *head-extra-cx* realizes extraposed elements, as formulated in (112). The first element of the head daughter's EXTRA list (X) is realized as the second daughter, and the mother's EXTRA list is the EXTRA list of the head *minus* X.

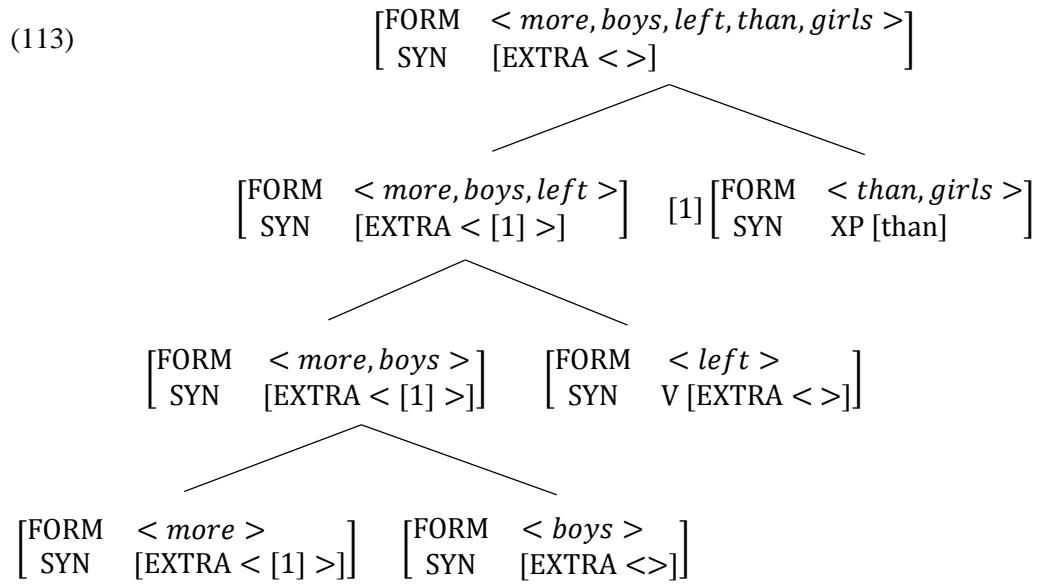
(112) Head-Extraposition Construction:

$$\textit{head-extra-cx} \rightarrow \left[ \begin{array}{ll} \text{MTR} & \left[ \text{SYN} \quad \left[ \begin{array}{cc} \text{VAL} & L1 \\ \text{EXTRA} & L2 \end{array} \right] \right] \\ \text{DTRS} & < H: \left[ \text{SYN} \quad \left[ \begin{array}{cc} \text{VAL} & L1 \\ \text{EXTRA} & < X > \oplus L2 \end{array} \right] \right], X \end{array} \right]$$

(Kay & Sag, 2012, p. 229)

In Kay and Sag (2012), the construct combining *more boys left* and *than girls* is licensed by the *head-extra-cx*, as in (113). This construction realizes the only

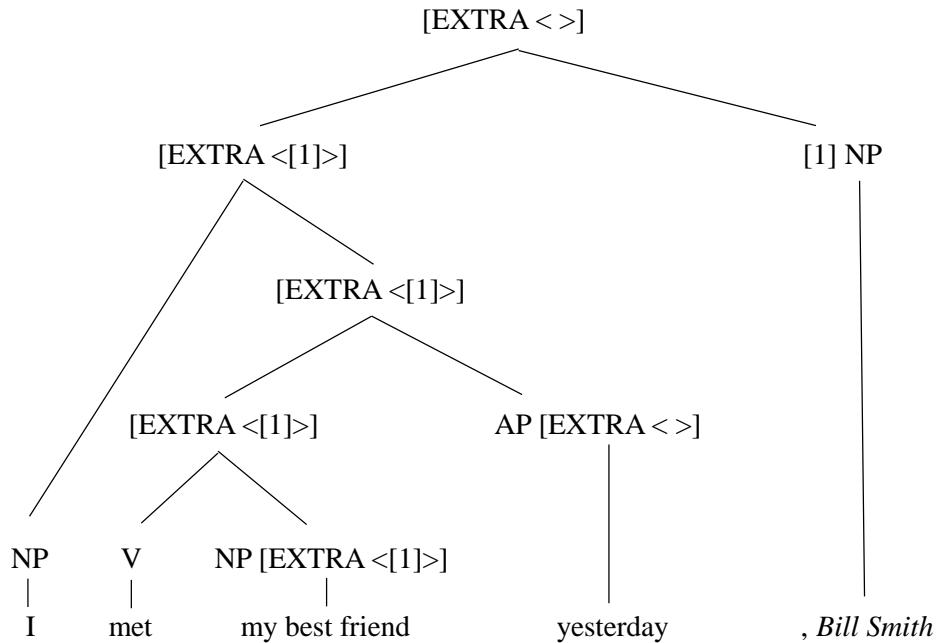
member of the head's EXTRA list (XP [than]) as the non-head daughter. The mother's EXTRA list is empty.



(Kay & Sag, 2012, p. 230)

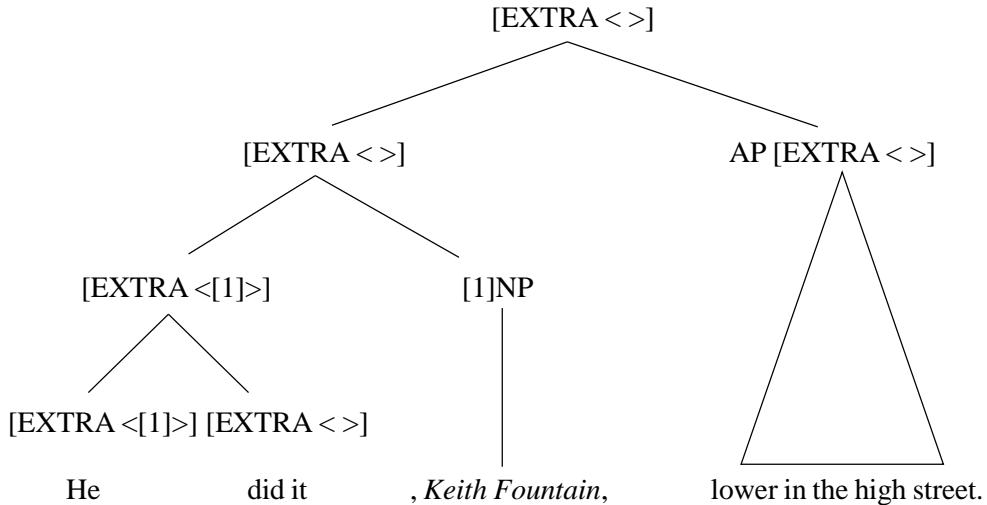
In the same way, when the non-head daughter of the *head-appos-cx* is not realized in the local tree, it becomes specified on the EXTRA list of the head-daughter. That is, the *head-extra-cx* licenses the afterthought appositive as its second daughter. See (114).

- (114) I met my best friend yesterday, *Bill Smith*.



Afterthought appositives that appear at a clause-medial position can also be analyzed in the same fashion, as in (115).

- (115) He did it, *Keith Fountain*, lower in the high street.



Note, however, that although I am using the feature EXTRA, afterthought appositives are different from regular extraposition phenomena. The positional constraints of afterthought appositives are different from those of regular extrapolated items. Most importantly, afterthought appositives are not subject to the so-called “Right Roof Constraint (Ross, 1986),” which is a formalization of the observation that (right-)extraposition cannot cross clausal boundaries (i.e. extraposition is “clause-bounded.”).

However, in appositional constructions, the appositive can appear beyond the clausal boundary, as in (116).

- (116) Remember they/the two of them were telling us all sorts of stories? Well, [the story that  $he_i$  told us was very interesting,] *Bill<sub>i</sub>*, I mean.

(Ziv & Grosz, 1994, p. 3)

Therefore, there is no need to posit an additional constraint on the root node in order to account for the clause-boundedness.

## 4.4 Parenthetical Semantics

In Section 3, we saw that both Heringa (2012a) and Ott (2014) assume a clausal structure for appositives. This claim is supported by the fact that appositives can host temporal adverbs ((117a)), sentential adverbs (including speech act adverbs) ((117b-c)), and their own illocutionary force ((117d)) (See section 3.3 for more data).

- (117) a. Keith, *once a drug addict*, now leads a rehabilitation centre.  
b. His death, *probably a suicide*, is glossed over and there is no actual diagnosis to back up the pop psychology.  
c. This book, *frankly not my favourite one*, won a prize.  
d. Is Jane, *the best doctor in town*, already married?

In a surface-oriented framework like HPSG, such “clausal” behavior of appositives can be explained *without* assuming that their syntax is clausal. An adequate explanation can be reached at by specifying the semantic type of the appositional construction as *proposition*.

Therefore, a sentence containing an appositive expresses two different propositions, as was explained in section 2.1.2. This proposition is independent from the matrix proposition in several respects. In the present analysis, I propose that the proposition expressed by the appositive (and other parenthetical elements) belongs to a separate dimension of meaning that is independent from the meaning expressed by the host clause.

There are several motivations for positing such two independent dimensions of meaning. Most importantly, parenthetical elements, including appositives, do not participate in scope relations with the host clause. For example, Potts (2005) notes that appositives are not embedded under propositional attitude verbs. In (118), Sheila thinks that Chuck is fit to watch the kids, but not that the Chuck is a confirmed psychopath.

- (118) Sheila thinks that Chuck, *a confirmed psychopath*, is fit to watch the kids.

Appositives are also not under the scope of negation, either. (119a) is negating only the main proposition, but not the proposition conveyed by the appositive ((119b)).

- (119) a. John did not marry Grace, *the love of his life*.

- b. Grace is the love of John's life.

This is not only the case for appositives. Other parenthetical elements display the same scopelessness. For example, as discussed in section 2.2.3, parenthetical adverbials do not scope under sentential illocutionary operators, either. In (120), the parenthetical adverb *malheureusement* ‘unfortunately’ does not embed under the conditional.

- (120) Si Paul va, *malheureusement*, voir Marie, elle sera  
If Paul goes unfortunately see-INFMarie, she be-FUT  
furieuse.  
furious

‘If Paul, unfortunately, goes to see Marie, she will be furious.’

(Bonami & Godard, 2007, p. 2)

Appositive relative clauses are also well-known to be scopeless. In (121), the appositive relative clause *who use the IPA* does not scope under Kim’s belief set (Arnold & Sadler, 2010).

- (121) Kim believes that linguists, *who use the IPA*, are clever.

(Arnold & Sadler, 2010, p. 46)

The same behavior is observed with French reportive *comme*-clauses, too, which are analyzed as parenthetical adjuncts in Desmets and Roussarie (2001). In

(122), the *comme*-clause is outside the scope negation ((122a)) and outside the scope of the interrogative operator ((122b)).

- (122) a. La bourse ne s'est pas effondrée, *comme l'avait prévu le NY Times.*

The Stock Market didn't crash, as the NY Times predicted.

- b. La bourse s'est-elle effondrée, *comme l'avait prévu le NY Times?*

Did the Stock Market crash, as the NY Times predicted?

(Desmets & Roussarie, 2001, p. 51)

Moreover, the truth value of the matrix proposition and of the proposition expressed by the appositive are independent of each other. (123) shows that the truth value of the matrix proposition and that of the appositive proposition can differ.

- (123) A: Does Dr. Kim, *your former semantics teacher*, still work at Seoul National University?

B: Yes, he does, but he wasn't my semantics teacher. He was my syntax teacher.

Similarly, suppression of the French *comme*-clause does not alter the truth conditions of the sentence, but only the felicity conditions (Desmets & Roussarie, 2001), as in (124).

(124) a. La bourse s'est effondrée, *comme l'avait prévu le NY Times*.

The Stock Market didn't crash, as the NY Times predicted.

b. La bourse s'est effondrée.

The Stock Market didn't crash.

Further motivation for positing a separate dimension of meaning comes from the observation that the nature of the meaning of appositives is distinctive from that of the matrix clause. First of all, their meaning is not deniable (Potts, 2005), as in (125).

(125) Edna, *a fearless leader*, started the descent. #Edna is not a fearless leader.

(Potts, 2005, p. 111)

Another property of the appositive meaning is that it introduces new information. Appositives, therefore, cannot be backgrounded information, as in (126).

(126) Lance Armstrong survived cancer. #When reporters interview Lance, *a cancer survivor*, he often talks about the disease.

(Potts, 2005, p. 112)

The fact that parenthetical content is independent from matrix content and

that its meaning type is distinctive was adequately treated under Potts' (2005) multidimensional semantics (section 3.1). In this section, I incorporate Potts' multidimensional semantics into HPSG<sup>12</sup>.

J.-B. Kim (2012, 2014) also posits two different dimensions of content (at-issue and CI content) in his account of appositives. However, the exact compositional mechanisms of the innovative semantics are not discussed in detail in his work.

Here, I specifically present 1) how the appositive comes to express propositional meaning and 2) how this propositional meaning expressed by the appositive belongs to a separate dimension of semantics. The details of the compositional process are different for predicative and identificational appositives. Moreover, multiple appositives and the scopeless behavior of appositives is successfully explained within my analysis.

I propose that the representation of meaning be partitioned into two dimensions: M-SEM (matrix semantics) and P-SEM (parenthetical semantics). The meaning of the host clause is represented in M-SEM, and the meaning of parenthetical elements is represented in P-SEM. M-SEM and P-SEM are compositionally independent from each other.

The relationship between M-SEM and P-SEM is that P-SEM is the speaker's

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<sup>12</sup> Multidimensional semantics is not a stipulative mechanism designed to solely account for parentheticals. For other studies implementing multidimensional semantics into HPSG, see, for example, Hasegawa & Koenig's (2011) account in the framework of HPSG and Lexical Resource Semantics (Richter & Sailer, 2004), in which the Japanese exclusive particle *shika* 'only' is treated as contributing to the sentence's secondary meaning in the sense of Bach (1999) and Potts (2005).

comment on M-SEM. The meaning of the entire sentence is the sum of M-SEM and that (or those) of P-SEM.

The difference between M-SEM and P-SEM is that P-SEM is a list-valued feature. This is motivated by the fact that a sentence can contain multiple parenthetical elements, as in (127), which contains two appositive phrases.

- (127) John, *my neighbor*, likes Mary, *my sister*.

Therefore, P-SEM is a list that can contain multiple elements. Besides that, P-SEM has the same specifications as M-SEM: MODE, INDEX, and a set of RESTR (restrictions). The semantic structure that I propose looks like (128).

- (128) The Semantic Structure

$$\begin{array}{c} \lceil sem - cat \\ SEM \\ \left[ \begin{array}{ll} M - SEM & \left[ \begin{array}{ll} MODE & \{prop, ques, dir, ref, none\} \\ INDEX & \{i, j, k, \dots s1, s2, \dots\} \\ RESTR & < \dots > \end{array} \right] \\ P - SEM & < \left( \begin{array}{ll} MODE & \{prop, ques, dir, ref, none\} \\ INDEX & \{i, j, k, \dots s1, s2, \dots\} \\ RESTR & < \dots > \end{array} \right), \dots > \end{array} \right] \end{array}$$

Since P-SEM is a list, we need a rule that appends one list to the other so that the P-SEM value of the root node contains the meaning of all parenthetical expressions in the sentence. This is formalized through a newly proposed rule: the P-SEM List Addition Rule ((129)). The composition of P-SEM, then, works like that of RESTR:

the specifications from all the daughters are combined in the mother.

### (129) P-SEM List Addition Rule

A mother's P-SEM value is the sum ( $\oplus$ ) of the P-SEM values of the daughters.

The meaning of all lexical items are specified under M-SEM by default.

Therefore, every leaf node has an empty P-SEM list. P-SEM comes to be a nonempty list at the mother node of the *head-parenthetical-modifier-cx*, repeated here in (130).

### (130) *parenthetical-head-modifier-cx* :

MOTHER	$\left[ \begin{array}{l} \text{PHON} \quad   \text{COMMA} + \\ \text{SYN} \quad   \text{GAP} <> \\ \text{SEM} \quad \left[ \begin{array}{ll} \text{M - SEM} & [1] \\ \text{P - SEM} & < [2] > \end{array} \right] \end{array} \right]$	
HD - DTR	$[1] \left[ \text{SEM} \quad \left[ \begin{array}{ll} \text{M - SEM} & [1] \\ \text{P - SEM} & < > \end{array} \right] \right]$	
DTRS	$< [1], \left[ \begin{array}{l} \text{SYN} \quad   \text{GAP} <> \\ \text{SEM} \quad \left[ \begin{array}{ll} \text{M - SEM} & [2] \\ \text{P - SEM} & < > \end{array} \right] \end{array} \right] >$	

The major semantic principles: the Semantic Compositionality Principle (SCP) ((131)) and the Semantic Inheritance Principle (SIP) ((132)) work normally. That is, these major semantic principles do not have to be revised in the newly proposed semantics.

(131) Semantic Compositionality Principle (SCP)

In any well-formed phrase structure, the mother's RESTR value is the sum of the RESTR values of the daughters.

The Semantic Compositional Principle concerns the RESTR values. This principle only interacts with the RESTR values of M-SEM. This is because the value of P-SEM is a list, and therefore, P-SEM elements are only added to the mother's list. As a result, the RESTR values of parenthetical elements never appear on the same list as the RESTR values of matrix elements, ensuring that they are compositionally independent.

The Semantic Inheritance Principle (SIP) ensures that the mother's MODE and INDEX values are passed up from the head daughter ((132)). This principle also works normally.

(132) Semantic Inheritance Principle (SIP)

In any headed phrase, the mother's MODE and INDEX values are identical to those of the head daughter.

In section 4.2, I have proposed that there are two subtypes of the *head-appositive-cx*: *head-predicative-appositive-cx* and *head-identificational-appositive-cx*, repeated here as (133) and (134), respectively.

(133) *head-pred-appos-cx*:

$$\left[ \text{DTRS} < [1], \begin{bmatrix} \text{SYN} & \begin{bmatrix} \text{HEAD} & [\text{PRED } +] \\ \text{VAL} & [\text{SPR} < [1] >] \end{bmatrix} \\ \text{SEM} & [\text{M} - \text{SEM} & [\text{MODE } \textit{prop}]] \end{bmatrix} \right] >$$

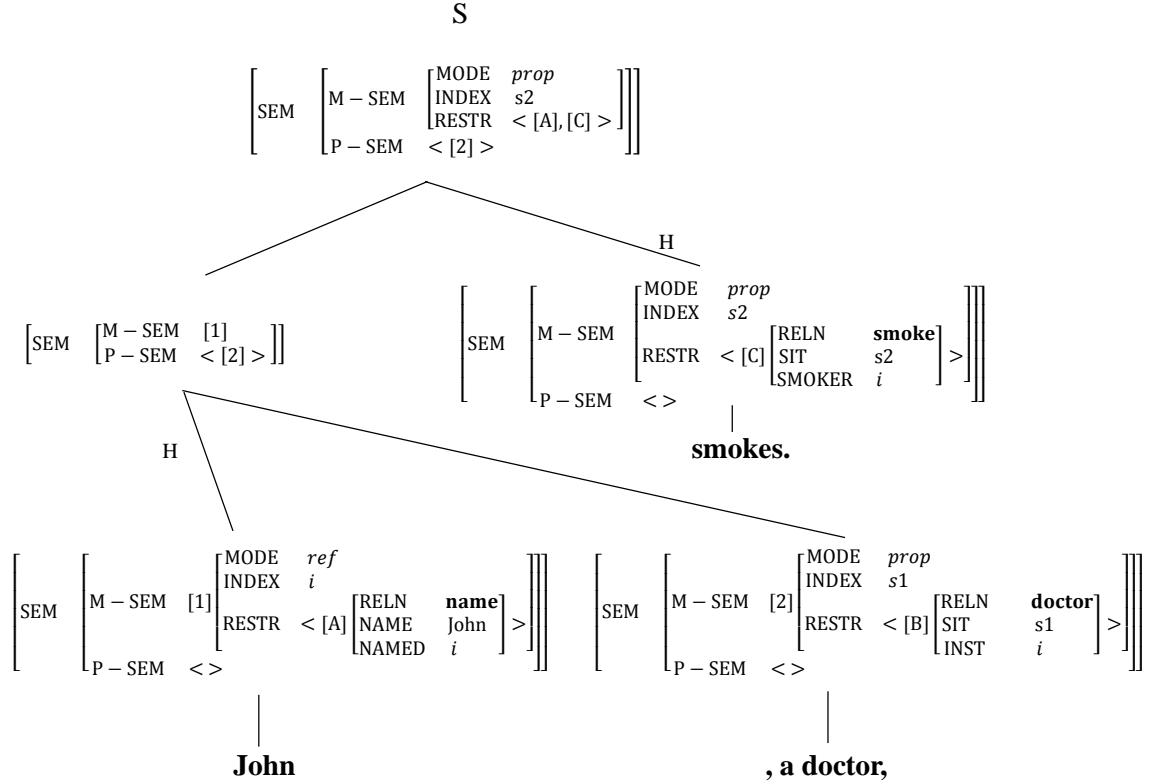
(134) *head-ident-appos-cx*:

$$\left[ \begin{array}{l} \text{MOTHER} \quad \left[ \begin{array}{l} \text{SEM} \quad \left[ \begin{array}{l} \text{P} - \text{SEM} \quad < \begin{bmatrix} \text{MODE} & \textit{prop} \\ \text{INDEX} & s \end{bmatrix} \\ \text{RESTR} \quad < \begin{bmatrix} \text{RELN} & \textit{identified} \\ \text{ARG1} & i \\ \text{ARG2} & j \end{bmatrix} \end{array} \right] > \right] \\ \text{DTRS} \quad < \text{NP}_i, \begin{bmatrix} \text{SYN} \mid \text{HEAD} & [\text{PRED } -] \\ \text{SEM} & \left[ \begin{array}{l} \text{M} - \text{SEM} \quad [\text{MODE } \textit{ref}] \\ \text{INDEX} & j \end{array} \right] \end{bmatrix} \end{array} \right]$$

The semantic constraints on each type differ. While the MODE value of the predicative appositive is specified as *prop*, that of the identificational appositive is specified as *ref*. Yet, both of these types are specified as [P-SEM | MODE *prop*] on the mother node.

I will show examples for each type to illustrate how this difference is accounted for in the compositional process. First, consider the following simple sentence ((135)) containing a predicative appositive.

(135) John, *a doctor*, smokes.

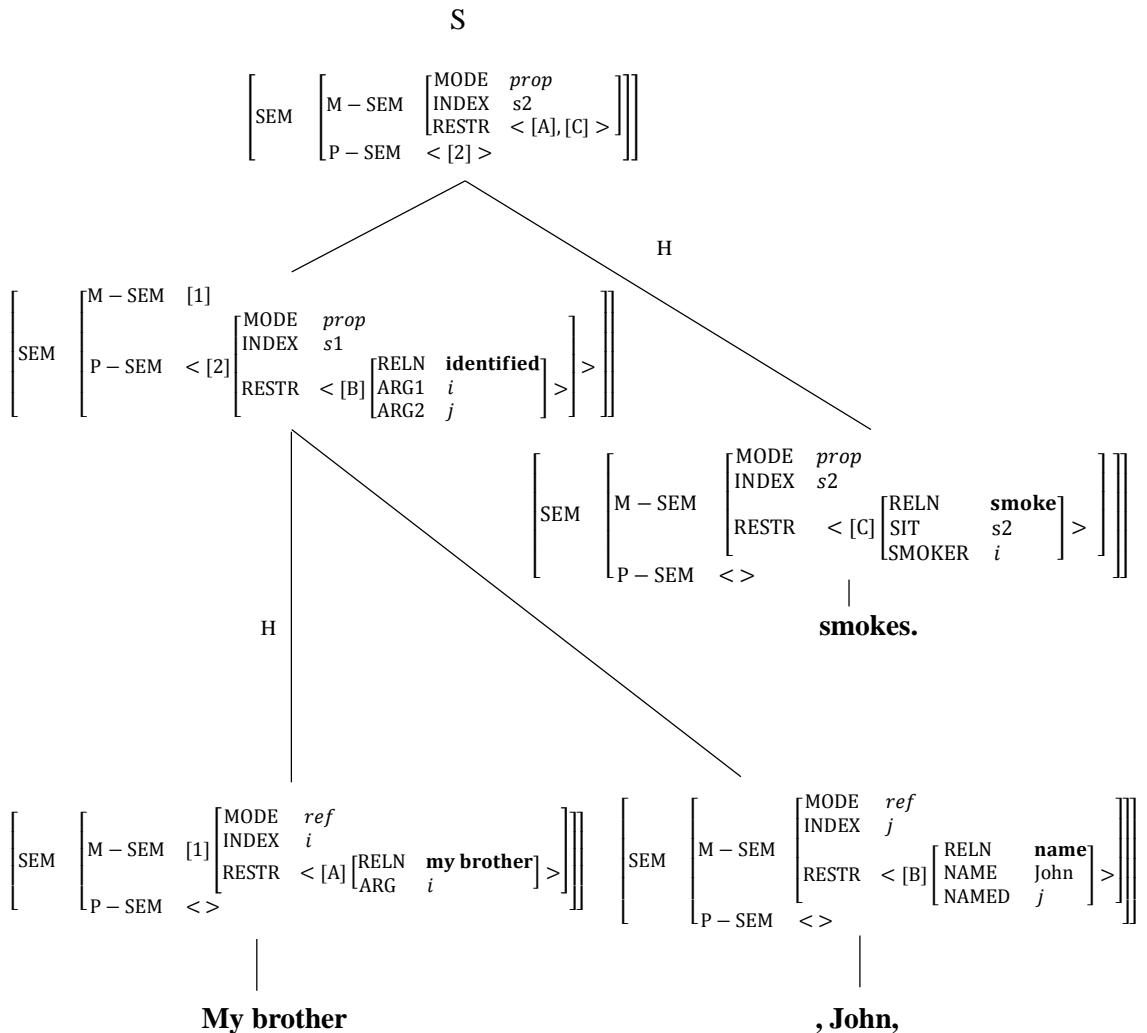


First, each leaf node is specified with M-SEM content. Note especially that the appositive *a doctor* is specified for M-SEM content. Under the default semantic constraint on the *parenthetical-head-modifier-cx*, this specification ([2]) is identified with the element of the mother's P-SEM list.

Also, since *a doctor* in the above sentence is a predicative appositive, its MODE is *proposition*. This naturally explains how the appositive expresses propositional meaning. Therefore, on the root node, there are two propositions: one (*John smokes*) in M-SEM, and the other (*John is a doctor*) on the P-SEM list.

Next, consider the following example of the identificational appositive: (136).

(136) My brother, *John*, smokes.

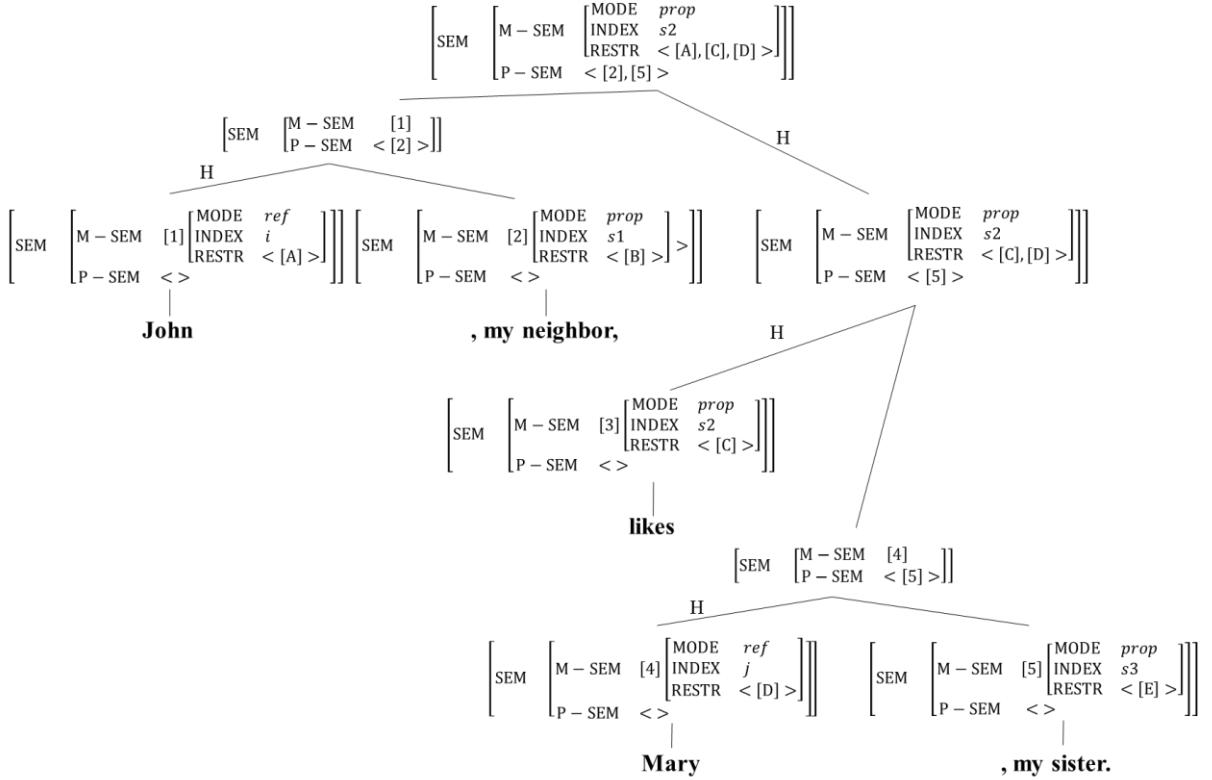


The crucial difference between predicative appositives and identificational appositives is that identificational appositives have referential meaning when they

stand alone by themselves. However, when they combine with the anchor to form an appositional construction, the construction as a whole expresses propositional meaning. This is captured by having the MODE value of *John* be specified as *ref*. However, the constraints on *head-ident-appos-cx* ensures that the MODE of the mother is *prop*. Therefore, identificational appositives, too, express propositional meaning.

I have proposed that P-SEM should be a list-valued feature, motivated by the fact that a sentence can contain multiple parenthetical elements, for example, multiple appositives. (137) illustrates a sentence that contains multiple appositives.

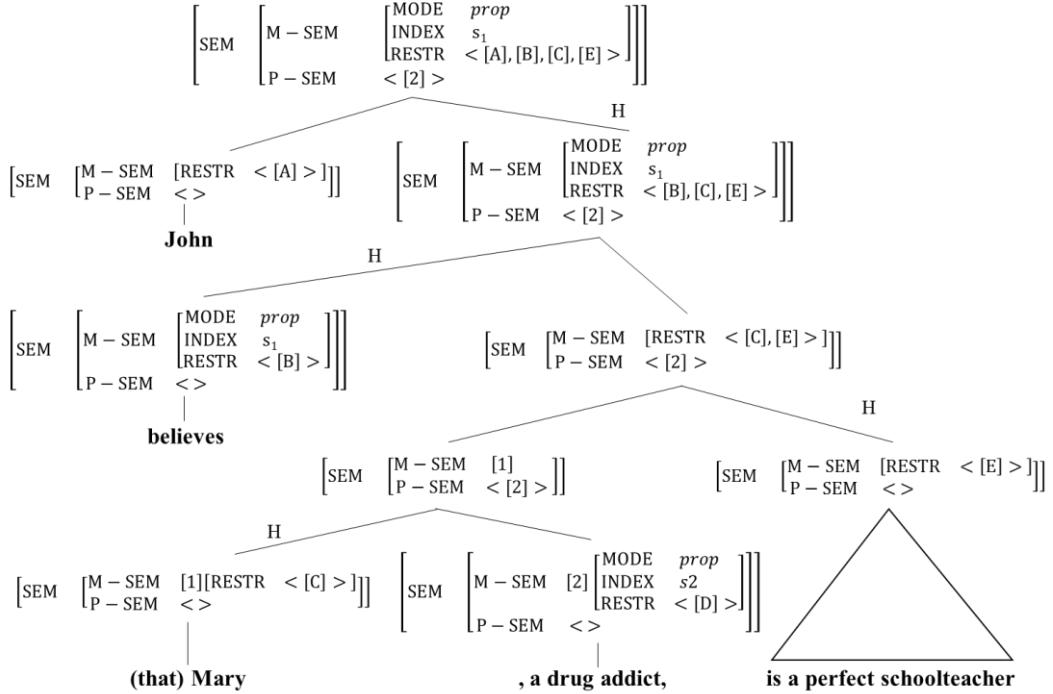
(137) John, *my neighbor*, likes Mary, *my sister*.



(137) expresses three separate propositions: *John likes Mary*, *John is my neighbor*, and *Mary is my sister*. The representation of this is made possible because P-SEM is a list-valued feature, and the P-SEM List Addition Rule is at work.

Lastly, we will turn to the important characteristic of appositives: that they display scopelessness (i.e. appositives do not interact with matrix elements in terms of scope). The new semantics that I propose in this study successfully accounts for such behavior.

(138) John believes that Mary, *a drug addict*, is a perfect schoolteacher.



As desired, dividing SEM into M-SEM and P-SEM successfully explains the “scopelessness” of appositives. In (138), it is not in John’s belief that Mary is a drug addict. This is represented above on the root node in that the restrictions (RESTR) on P-SEM are not on the same list as the restrictions on M-SEM. On the root node, it is shown that the two propositions are independent, thereby resulting in the parenthetical proposition not being embedded into the propositional attitude verb *believe*.

## 5. Conclusion

In this thesis, I investigated the syntactic and semantic characteristics of English appositives, focusing on their two positional variants.

I have shown that what has traditionally been called *afterthoughts* in the literature are actually appositives. This was achieved by revealing that afterthoughts possess the syntactic and semantic properties that have been attested for appositives, the most important property being that appositives and afterthoughts both express a secondary proposition in the sentence. Based on such observations, I have classified appositives into two positional varieties: the *anchor-adjacent appositive* and the *afterthought appositive*.

The syntactic and semantic analysis of this phenomenon is couched in the framework of Head-Driven Phrase Structure Grammar (HPSG). In terms of syntax, I have argued *against* the orphanage approach to appositives and successfully integrated appositives into the syntactic structure by treating them as adjuncts. I have also argued against the coordination approach to appositives, which has been opted for by many scholars. The adjunction approach is beneficial not only descriptively, but also explanatorily, in that it can account for a wider range of parenthetical expressions which I call *anchored parentheticals*. Afterthought appositives, too, can be explained via a normal syntactic mechanism: the feature EXTRA.

In terms of semantics, I have adopted the basic idea of Potts (2005) in assuming that semantics is bidimensional. This allows a natural account of the fact

that appositives express a secondary proposition that is independent of the matrix proposition, and the scopeless behavior of appositives. In HPSG, such a bidimensional semantics account is achieved by dividing SEM into M-SEM (matrix semantics) and P-SEM (parenthetical semantics). Notably, the detailed inner workings of this mechanism are provided to explain predicative appositives, identificational appositives, multiple appositives, and the scopelessness of appositives.

This study is significant for the following reasons. First, the syntactic and semantic properties of English afterthoughts were analyzed in detail, which has not been achieved in previous studies. Afterthoughts, like appositives, express a secondary proposition, and can be classified into two semantic types. I have further argued that afterthoughts belong to anchored parentheticals, and that they deserve a place in standard grammar.

I have then adequately analyzed the syntax of both positional variants of appositives without assuming a non-standard syntactic schema or mechanism or resorting to the coordination structure. My analysis is especially advantageous in treating other types of anchored parentheticals in a unified way, through the *parenthetical-head-mod-cx*.

The parenthetical properties of appositives are well explained without having to stipulate that appositives contain more structure than meets the eye. Many of the appositives' "clausal" properties are explained by making the MODE of the appositive construction as *proposition*. Also, a bidimensional semantics that I

propose is not only well-motivated but can well explain the semantics of the scopelessness of appositives and of sentences containing predicative appositives, identificational appositives, and multiple appositives.

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## 국문 초록

### 영어 동격 구문에 대한 구문 기반 접근

본 논문의 목적은 영어 동격어구의 통사의미적 특성을 살펴 구문 기반 핵어중심 구구조 문법이론 (Head-Driven Phrase Structure Grammar)로 나타내는 것이다. 이전 연구들과는 달리 본 논문은 동격어구가 절의 중간 또는 끝에서 선행 명사구에 인접하지 않게 나타날 수 있는 가능성에 특히 집중하고 있다. 기존 연구에서 이와 같은 구문들은 동격 구문에 포함되지 않고 후보충 구문 (afterthought)이라고 불려 왔다.

본 저자는 후보충 구문이 동격 구문의 특징적인 속성들을 가진다는 점을 보임으로써, 좁은 의미의 동격 구문 (선행사와 동격어구가 인접한 경우)과 후보충 구문을 동일한 구문으로 다뤄야 한다고 주장한다. 그리하여 본 연구에서 선행사와 동격 어구가 인접한 경우는 선행사-인접 동격어구 (anchor-adjacent appositive)라고 지칭하고, 그렇지 않은 경우는 후보충 동격어구 (afterthought appositive)라고 지칭한다.

학자들은 동격어구의 통사적 지위에 대한 다양한 의견을 제시한다. Ott (2014) 등의 학자들은 동격어구와 주절 사이에 통사적 관계가 없다

고 가정하고 있다. Heringa (2007, 2012a) 등의 다른 학자들은 동격어 구를 병렬 구문 (coordination structure)으로 다루고 있다. 이와 같은 분석들은 선행사과 동격어구가 분명히 통사적인 성분 (constituent)를 이룬다는 사실을 간과하고 있거나, 다른 삽입 수식어들에까지 확장되기 어려운 종류의 분석이라는 단점이 있다.

본 저자는 동격어구가 명사구 (NP)의 부가어로서 주절의 통사구 조 내에 통합된다고 제안한다. 구체적으로는, *head-modifier-cx*의 새로운 하위 유형 (type)으로 *head-parenthetical-modifier-cx*를 제안한다. 이 구문은 동격 구문 (*head-appositive-cx*) 외에 다양한 삽입 수식어들을 포함한다. *head-appositive-cx*은 또 다시 두 개의 하위 유형 (*head-predicative-appositive-cx*와 *head-identificational-appositive-cx*)로 나뉜다.

선행사와 후보충 동격어구가 인접한 위치에 나타나지 않는다는 점 역시 기존의 통사 기제로 설명한다. 구체적으로는, 기존에 다양한 외치 (extraposition) 현상을 설명하기 위해 사용되어 왔던 자질인 EXTRA (Keller, 1995; Bouma, 1996; Van Eynde, 1996; Kay & Sag, 2012)를 도입한다. 이 자질을 도입함으로써, 절의 다양한 위치에서 후보충 동격 어구가 나타나는 현상을 설명할 수 있다.

의미와 관련해서는, Potts (2005)의 연구에 기초하여 삽입표현의

의미를 다루는 새로운 의미 영역을 제안한다. 그리하여 의미부 (SEM)는 두 개의 하위 차원 (M-SEM (주 의미부)과 P-SEM (삽입 의미부))을 가지게 된다. 본 논문에서는 이와 같은 이차원적인 의미부가 HPSG를 내에서 새롭게 제시된 제약들, 그리고 기존의 의미 원리들과 어떻게 상호작용하면서 작동하는지에 대한 상세한 분석을 제시한다.

본 연구의 이와 같은 분석은 비표준적인 통사 구조를 가정하지 않고, 동격어구의 삽입표현적인 특징을 의미부 내에서 해결할 수 있다는 장점을 지닌다.

**주요어:** 영어 동격구문, 영어 후보충구문, 삽입구문, 핵어중심 구구조 문법이론, 구문 기반 접근법

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