Semantics and Context–Dependency of Corrective Constituent Coordination

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Contents

1 Introduction

This paper addresses the grammatical realization of correction as an instrument in discourse structure. I am investigating how uttering a sentence as a correction is reflected in the grammar. Corrections are part of different levels of grammar. The present work investigates how corrections are expressed in syntax, semantics, pragmatics. All of these grammatical levels interact with discourse structure, although these interactions are often left unspecified in linguistic research. It is an important goal of my dissertation to make these relations concrete and explicit. One prominent structure expressing correction is presented in (1) below; I will call these structures Corrective Constituent Coordination. This term represents some of the important features of this construction. It is corrective, it involves coordination, and it involves constituent negation. The present work will focus on this construction.

This paper will revolve around issues related to negation, context sensitivity, focus, and coordinations from a multitude of perspectives. I will consider questions such as whether or not negation is context sensitive, whether there are different types of negation, namely constituent and sentential negation, and how focus interacts with coordination and negation. Other questions addressed are the representation of discourse and information structure. All these issues are relevant in explaining the grammatical restrictions of the sentence (1) below.

(1) Sandra ate not a PEAR but a FIG.

Intuitive meaning: I object! It is not true that Sandra ate a pear, in contrast, it is true that she ate a fig.

An interesting property of this sentence is that it combines a specific discourse role with three grammatical features. This sentence cannot be uttered out of the blue, but rather has to appear in a specific discourse. This is captured by the contribution of "I object!" in the transliteration. Also, these three grammatical components are necessarily present in the sentence: (constituent) negation on the object realized in the first conjunct, a pitch accent in each of the conjuncts, which is commonly thought to express focus (prosodic prominence is indicated by the typeset in small caps), and coordination with the adversative conjunction "but". Each of these features is independently a phenomenon of significant interest in linguistic theory. In (1) however, these three components obligatorily cooccur—the sentences in example (2) below show that unacceptability results from omitting any of these features. This is demonstrated for negation in (2a), pitch accent in (2b) (under the assumption that unstressed pronouns cannot bear focus), and coordination in (2c).

(2) a. * Sandra ate a PEAR but a FIG.

b. # Sandra saw not 'im but her friend MARK.

c. * Sandra ate not a PEAR.

The example above shows that in sentences like (1), ungrammaticality results from omitting any of the three components, focus, negation or coordination. When each of these components occurs by itself, however, there is no indication that these factors are otherwise dependent on each other.

For example, in sentences with sentential negation, a coordination need not necessarily be added, and sentential negation can also be realized without focus (see 3a). It is also not the case that the conjunction "but" requires negation: "but" can just as well occur without negation, as can be seen in examples (3b) and (3c). It is also not obvious that "but" necessarily needs to have any kind of narrow focus (see 3c). Furthermore, it is clear that focus can occur without negation and coordination (see 3d).

(3) a. I don't like raisins.

b. The weather is hot but nice.

c. John was planning to go out but it rained.

d. Which movie did you see? I saw the GODFATHER.

(4) a. */? No one ate a pear but a fig.

Intuitive meaning (if acceptable): No person ate a fig instead of a pear.

Cannot be interpreted as: I object! No one ate a pear, and in contrast everyone/someone ate a fig.

b. Sandra ate nothing but a fig.

Intuitive meaning: Sandra ate nothing with the exception of a fig.

Cannot be interpreted as: I object! It is not true that Sandra ate nothing, and in contrast she ate a fig.

In particular, these sentences no longer express the context–dependent meaning component that I described as "I object!" in the transliteration. Sentence (4b) is a well–formed assertion, but it is not dependent on a preceding discourse and may be uttered out of the blue.

The sentences I am interested in can be expressed with sentential negation, and still retain the meaning describe above.

(5) Sandra didn't eat a PEAR but a FIG.

Intuitive meaning: (I object!) It is not true that Sandra ate a pear, and in contrast it is true that she ate a fig.

I will call sentences as in (5) Sentential Corrective Coordination. This sentence can, but need not be uttered in a discourse context where Sandra's fruit eating habits were previously discussed, it may also be uttered out of the blue. In this discussion, I will only provide an in depth analysis for Corrective Constituent Coordinations, which are grammatically more restricted than Sentential Corrective Coordinations.

The grammatical dependencies between context dependency and negation, coordination and pitch are not accounted for by any current run–of–the–mill theory of these phenomena. It has not been argued that any two grammatical components are necessarily dependent on each other. In our current view of negation, there is nothing that indicates dependency on coordination, and in relevant literature (Rooth, 1997), it has been claimed that negation is not focus–sensitive. Coordination is popularly seen as adjunction (Munn, 1993)[1], which is incompatible with a view that coordination is obligatory in any sentence. Linguistic expressions are typically not thought to subcategorize for coordination, which is another way of saying that coordinations are not obligatory. Although focus is commonly described as an important factor in coordination, it is not the case that coordination is viewed to involve focus obligatorily.

At the core of the present work is the question whether the discourse–dependency that is a feature of the sentence in (1) is equally compatible with different representations of information structure. In particular, I will discuss one theory, alternative semantic theory of focus, and I will describe that this theory models the the global discourse dependency facts on a construction–by–construction basis. I will also consider another theory of information structure, which assumes the interpretation of focus/givenness is a presupposition. I will show that this theory, although it can provide a more construction general account, relies on stipulations in other places. This will shed light on whether the obligatory grammatical features of coordination, negation and pitch accent form a construction, or whether they are interpreted strictly compositionally.

In addition to contextual dependency on a preceding sentence, the sentence also contains contextual dependency within. The two objects in (1) cannot be arbitrarily chosen, because they depend on each other. Speakers have the intuition that the two objects, *a fig* and *a pear*, have to correspond to each other, they are in contrast. Consider the unacceptability of the sentences below:

(6) a. # Eryn saw not Joe, but a pen.

[1] Munn (1993, i) states that:

> [This thesis] argues that coordinate structures are asymmetrical, hierarchical structures that conform with X-bar theory. The conjunction head projects a phrase which is adjoined to the first conjunct.

b. # Connor likes not chocolate, but Mary.

This fact is important since in addition to accounting for context dependency on the larger scale between sentences, which I will call global context dependency in this paper, it is also necessary to account for the local contextual relation across the conjuncts. This dependency may be the result of the focus structure of either conjunct, or it may be a restriction on conjunction more generally. Such considerations are also part of the literature on focus, e.g. Rooth (1992); Büring (2014); Constant (2014).

In addition, there is an intuition that the first conjunct of (1) is incomplete without offering an alternative, as the example below shows:

(7) ??? Sandra ate not a PEAR.

To utter this sentence is perceived to be grammatically deviant, if it is left without a continuation. An important question is which level of grammar this deviance originates from. It may be that the first conjunct subcategorizes for the second conjunct, under which assumption the sentence is simply ungrammatical. It may also be that the reason for the unacceptability lies in an implicature, under which assumption the unacceptability is expected to be not as categorical.

In this paper, the major topic are issues related to representing Corrective Constituent Coordinations in grammar and in discourse. The discussion will circulate around these two major topic complexes.

The first topic complex is to determine what the syntactic representation of Corrective Constituent Coordination sentences is, and whether or not there are disparities between the overt structure and the semantic representation. In particular, I will evaluate the hypothesis of a low coordination structure formulated in Toosarvandani (2013), where the entire coordination is the complement of *eat* in example (1). Such a structure assumes that there is no ellipsis involved in the derivation of the sentence. The competing hypothesis is a high coordination structure, where coordination applies at a propositional level, and the phonological form is a result of ellipsis. Although this part of the discussion mostly reviews the literature, it is very important, because it will form the basis of the analysis of the context sensitivity facts.

The other topic complex concerns the origin of the perceived context dependency. I will consider whether context dependency is derivable from general assumptions about the focus structure of the sentence. I will contrast two different representations of focus, a theory that sees the semantic contribution of focus as an existential presupposition on the one hand, and a theory of alternative semantics of focus on the other hand. Ultimately, I will conclude that both approaches have different problems, and need to make stipulations at different

points. At present, I have not yet resolved the empirical question of which analysis makes more accurate predictions.

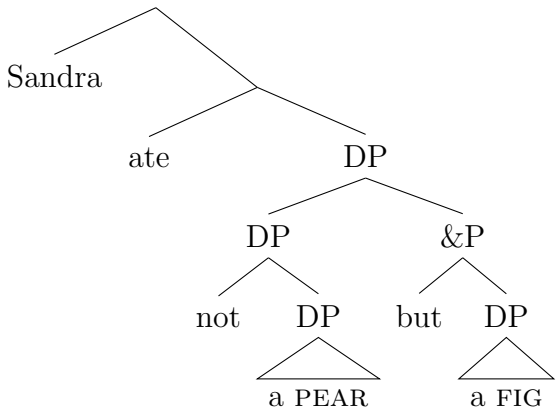
The course of the paper in more detail

In the sections 1.1 and 1.2 below, I will give a coarse–grained, nontechnical summary of the arguments presented in the remainder of the paper.

1.1 Syntactic hypotheses

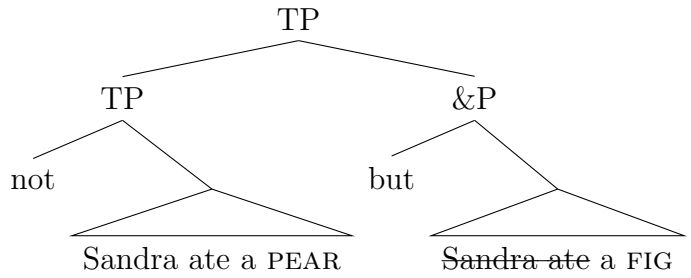
Two kinds of syntactic structures as the representation will be considered for sentences like (1), low–coordination hypotheses, and high–coordination hypotheses. Under a low coordination hypothesis, the whole coordination is the complement of the verb. Such a structure is given in the tree (8) below. In such a parse, negation has to be able to apply to phrases that are at a level lower than propositions. In the example in (1), it looks like negation applies to individuals of type e, like "Sandra", or "the chair". This raises a number of questions about the interpretation of such a negation, as negation is often viewed to apply only to propositions.

(8) Example of a low coordination syntactic structure.



Under a high–coordination hypothesis, the coordination coordinates two propositions. For the purposes of this discussion, I will consider the most powerful version of this hypothesis, which puts the level of coordination at TP. An alternative to this hypothesis that I will not consider is vP coordination, because it raises additional questions about how it can be distinguished from TP–level coordination. With a high coordination parse, the spelled–out form is derived via ellipsis in the second conjunct. A representation is given in (9).

(9) Example of a high coordination structure.



Particular consideration will be given to negation. In the tree in (9), negation takes scope within the first conjunct, but higher than the material in the sentence "Sandra ate a pear", with the phonological form derived by ellipsis. In this representation, quantifier raising of the negation from the object level to the position indicated in the tree is assumed. This quantifier raising is analogous to the quantifier raising assumed for *only* (von Fintel, 1994). Another version of (9) would be to not assume quantifier movement, and let the negation scope at its surface position in the sentence "Sandra ate not a pear". To do this, one has to employ a negation that applies to a non–propositional constituent. It is not clear whether this is possible, so I will mainly discuss the approaches where negation is quantifier–raised.

High and low coordination structures make a number of different predictions. First and foremost, in its role as a coordination, this sentence is predicted to be subject to the Coordinate Structure Constraint. That means unilateral movement from only one of the conjuncts is impossible. In case of a low coordination structure, that results in the prediction that none of the objects can move on their own, the only way movement is possible is if phrases are moved from both of the conjuncts together. In case of a high coordination structure, subjects are not expected to move outside of the coordinates. As a consequence, the low coordination construction predicts for the subject to scope over the coordination.

Another prediction for a low coordination hypothesis depends on the semantic type that will be assigned to the coordination. The coordination can only be interpreted *in situ* in case it has the type of an individual, that is type e. Otherwise, it will have to be subject to quantifier raising in order to be interpretable.

In a high coordination structure, the phonological form is derived via ellipsis. Ellipsis has been argued to be subject to island constraints, thus under the assumption of a high coordination structure, island violations are predicted. In a high coordination structure, the negation as well as the coordinator are also expected to be able to scope over the subject.

Many of these predictions have been tested by Toosarvandani (2013), so my discussion of the syntactic structure will rely heavily on his work. Following him, I will find that a low–coordination analysis is correct for Corrective Constituent Coordinations.

1.2 Context dependencies in different views of information structure

For (1), it was observed that this utterance was thought to follow the sentence "Sandra ate a pear." It was also shown that the two conjuncts, *pear* and *fig*, are contextually related to one another by contrast, because the choice in each of the conjuncts depends on the respective other conjunct. In this paper, hypotheses will be discussed that encode these dependencies in the syntactic and semantic structure of Corrective Constituent Coordinations.

From section 3 on, I will discuss whether the context dependency can fall out from general representations of focus under a low coordination analysis. In particular, I will compare approaches from two theories, a theory that sees the interpretation of focus to be exclusively represented by a presupposition, and an alternative semantics theory of focus.

A different conceptions of focus will be discussed, namely a conception under which focus necessarily introduces a presupposition, can derive the semantics through general assumptions about focus. It will be argued that the predictions of this theory are too strong, and in particular, that they cannot account for multiple focus as is found in Corrective Constituent Coordinations. It will be shown that marking of givenness instead of focus explains the global context dependency facts. However, the concept of alternatives still remains necessary to account for the perception of contrast between the two conjuncts. Ultimately, the data can be derived from general focus principles if a givenness operator is assumed that introduces a presupposition and takes alternatives into account at the same time.

I will also propose a solution for accounting for the context dependency facts in an alternative semantics of focus. Alternative semantics of focus assume the semantic contribution of focus is to highlight that other choices, the alternatives, for a focused constituent are also available. These choices are contextually restricted, and context dependency is expected to be encoded via this contextual restriction. Rooth (1992) assumes that the two types of context dependency are essentially a result of the same mechanism. However, assuming these two mechanisms apply at the same time is not reconcilable with a low coordination syntax. In order to account for this construction, one must assume focus association, which induces a contextual presupposition. An alternative–based theory of focus semantics makes construction–specific assumptions to account for the global context dependency phenomena involved in Corrective Constituent Coordination. On the flip side, the local contrast phenomena are represented more easily in an alternative semantics view than in a givenness view.

At the present stage of my research, I do not have sufficient evidence to decide whether one of the two analyses that can account for the data is superior. I will conclude with some remarks on how to possibly find a solution to this question in my forthcoming dissertation.

Taking a larger perspective, I suggest that Corrective Constituent Coordination is part of a larger discourse function, a function of denial, that I want to develop further in my dissertation. I show that multiple phenomena in English are sensitive to denial.

2 The Syntactic Representation of Corrective Constituent Coordination

In the present section, the question of the syntactic representation of cases of Corrective Constituent Coordinations will be discussed. It is important for a later analysis of the discourse function to know about the syntactic structure of the construction, since the information structure is assumed to be built based on the syntactic representation.

Both Vicente (2010) and Toosarvandani (2013) discuss the syntactic analysis of these sentences extensively. Toosarvandani (2013) argues convincingly for a low coordination parse. In the following, some of his arguments will be presented. Ultimately, I will adopt his proposal for the syntactic representation.

It is a consequence of high coordination structure that it involves ellipsis to derive the phonological form of a sentence. Following Drubig (1994), an argument against ellipsis in Corrective Constituent Coordinations is that sentences with sentential negation trigger island effects, and sentences with constituent negation do not. This is important because ellipses are argued to obey island constrains, therefore finding island violations is an indicator for ellipsis. While Toosarvandani (2013) shows a whole paradigm of different islands, here are just some examples of the paradigm with coordination islands.

(10) a. * Alfonse didn't cook rice and beans, but potatoes. (=. . . but Alfonse cooked [rice and potatoes].)

b. Alfonse cooked rice and not beans but potatoes. (Toosarvandani, 2013, 834)

(11) a. * That Alfonse ate the rice isn't fantastic, but the beans. (= . . . but [~~that Alfonse ate~~ the beans] ~~is fantastic.~~)

b. That Alfonse ate not the rice but the beans is fantastic.

Another one of Toosarvandani's (2013) arguments is that some examples where Corrective Constituent Coordinations occur in clearly moved positions are not derivable under a high coordination analysis. He gives the sentence in (12a) as an example.

(12) It is the tragedy of the not naturally bad but irresponsible and undeveloped nature.

a. It is the tragedy of the not naturally bad nature, but it is the tragedy of the irresponsible and undeveloped nature.

b. [Not naturally bad] [but irresponsible] It is the tragedy of the $t_{\text{not naturally bad}}$ nature, t_{but}it is the tragedy of the $t_{\text{irresponsible and underdeveloped}}$ nature.

c. It is the tragedy of the not naturally bad but irresponsible ~~It is the tragedy of the~~ $t_{\text{not naturally bad}}$ nature, t_{but} ~~it is the tragedy of the~~ $t_{\text{irresponsible and underdeveloped}}$ nature.

In the example, I have illustrated the movement steps that would have to apply to derive this sentence from a sentential coordination. It would be derived from the sentence (12a). As a first step, the modifiers of the object which is embedded in the DP have to move. Granted that the movement by itself does not violate the Coordinate Structure Constraint, which is not obvious, this movement is also an instance of a left branch island violation. At the same time it also violates the complex NP constraint. The subsequent movement, represented in (12c), is movement of a non-constituent, and therefore illicit. (I do not attach any importance to the difference between the copy theory of movement and the traces, they are just illustrating the two separate movement steps.)

The arguments presented above are only a simplified version of the discussion included in Toosarvandani (2013). In the following, I will recap some of his semantic discussion, and expand on it.

Scopal Makeup

It is not controversial to say that truthconditionally, *but* is the same as *and*. Given this assumption, in order to determine the syntactic structure, it is necessary to look at the scopal makeup of the sentence. For a sentence like (1), we are deciding between a high–coordination and a low–coordination structure, as they were shown in the trees (8) and (9) above.

It becomes obvious from this representation that the negation and *but* are assumed on the same syntactic level. This is motivated by the fact that we never encounter negation taking scope over the coordination. If it were to do that, we would predict that either $\neg(P \wedge Q)$, or $\neg P \vee \neg Q$ are possible interpretations. The examples below show that this is clearly not the case.

(13) # Sandra gave a present not to Jill but to Mark, and Mark wasn't given a present.

(14) # Sandra gave a present not to Jill but to Mark, and Jill was given a present by Sandra.

Given the syntax that I was probing for, this is expected for both low and high coordination accounts, and excludes other coordinations, such as asymmetric coordinations. It is a consequence of the coordinate structure constraint applying to corrective coordinations.

Toosarvandani (2013, 838) observes that the subject in corrective coordination constructions can take scope over the coordination using the sentence below:

(15) At most five students drank not the whiskey but the gin.

"There were at most five students who did not drink the whiskey and who drank the gin."

at most five $>$ $\wedge$

This sentence can describe a state of affairs where students a,b,c,d, and e did not drink the whiskey and these five students also drank the gin. It is not true in a state of affairs when of a group of say, 20 students, a,b,c,d and e didn't drink the whiskey, maybe the other 15 students drank whiskey, and students f, g, and h drank the gin, and nobody else drank any gin. Such a result may also be the consequence of coordination at the level of vP. However, the syntactic evidence shows that there is no ellipsis in Corrective Constituent Coordinations. Together, we can take these facts as evidence in favor of a low–coordination analysis of these sentences.

The argumentation above provided evidence for the analysis of the Corrective Constituent Coordination as a low coordination. While such an analysis in syntax may be less controversial, in semantics such a structure raises all sorts of concerns. First and foremost, semanticists may be concerned about the lexical entry of negation, because typically, negation applies to truth values. The question I will focus on in the upcoming discussion is how the syntactic finding in this section relates to the observed context dependency. Intuitively, Corrective Constituent Coordinations are contextually dependent on a previous sentence, and the two conjuncts are also contextually related to one another. In the following sections, it will be discussed whether these two dependencies can be derived under a low coordination analysis.

3 Accounting for Context Dependency as a Presupposition

The question of context dependency is a very prominent issue when it comes to the semantics of focus. Jackendoff's (1972) old idea to capture the contribution of focus is to assume that

focused phrases supply new information, whereas other phrases supply information that is already given in context. Formalizing this idea requires a formalization of reference to context, and what it takes to be context new or context given. Theories of focus differ in how they represent this intuition, and whether they see discourse newness or givenness as a primitive notion.

I am setting out to account for two intuitions about Corrective Constituent Coordination that are both instances of context dependency: The first intuition is that an example sentence like (1), repeated below as (16b), now with syntactic annotation, follows a sentence like (16a). The underline in (16b) marks the parts of the sentence that are perceived as necessarily present in context. The second intuition is that the objects in (16b) are not arbitrarily chosen, but have be related to one another. They are interpreted as contrastive. Contrastivity may also be seen as context dependency, only the contrasted phrases depend on a relatively local constituent, as opposed to a previous utterance in context.

In this part of the paper, my primary goal is to characterize the non–local context dependency between the a Corrective Constituent Coordination and its preceding sentence. I provide evidence for the view that this dependency can be captured as a presupposition.

(16) a. Sandra ate a pear.

b. Sandra ate [$_{\text{DP}}$ not a PEAR but a FIG].

We can see that the phrases that have to be present in context do not form a constituent under a low coordination syntax. Under the assumption that the context dependency is introduced by a component of the Corrective Constituent Coordination, the syntactic structure obscures whether this is caused by single or multiple components. In the coming sections, it will be evaluated whether this is an unsurmountable problem for a low–coordination structure account.

A further implication of this work is to find out whether the contextual dependencies can be described as a consequence of the application of focus in general, or whether they are specific to a construction. In sections 4 and 5, these issues will be discussed from the perspective of two different representations, a presuppositional theory of focus, and a presuppositional theory of givenness. The mechanism that triggers the presupposition is a product of the interpretation in all occurrences of focus. This is less so in case of an analysis of the discourse dependency in terms of focus association, because different types of focus association bring about different types of presuppositions.

The most important finding of this section is that context dependency is a presupposition. In section 4.1, I will relate this finding to claims made in the literature (Geurts and Van der Sandt, 2004), which say that that the unique interpretation of focus is an existential

presupposition. It will be argued that this analysis overgenerates for the sentences at hand. I will make this case using the formalization made in Sauerland (2004). As a reaction, an account for the context dependency by means of marking of givenness, not of focus, will be suggested.

The advantage of such a representation is that no construction–specific processes have to be assumed. However, such a theory does not account for the second kind of context dependency mentioned above, which is the perception that the two constituents are in contrast to one another.

In section 5, I will contrast this view with a view in alternative semantics for focus. In this framework, I will propose a way of accounting for the context dependency patterns. While in an alternative semantics for focus the notion of contrast is built–in, stipulations have to be made to account for the non–local context dependency, which links Corrective Constituent Coordinations to preceding sentences.

I want to preface the discussion by saying that at present, I only have soft evidence for or against each of these two representations, and therefore I am not ready to make a decision about the feasibility of a final framework yet. I intend on formulating and testing pertinent predictions in my forthcoming dissertation.

The Nature of Context Dependency as a Presupposition

In this subsection, I will argue that the perceived context dependency is the result of a presupposition in Corrective Constituent Coordinations. This is consistent with possible accounts that view the semantic contribution of focus as an existential presupposition, which I will discuss in section 4, and also with a focus association account, which I will introduce in section 5.

First, the context requirements will be discussed in more detail. Then, some examples of presuppositions will be given. Criteria for presuppositionhood from Potts (2014) will be introduced. Many of them are inherited from findings in Karttunen (1973).

Before discussing the presupposition tests, Some observations about the perceived context dependency will be spelled out. Specifically, I am exploring the nature of well–formed discourses, and which conclusions about the context dependency this allows.

Speakers perceive the following discourse to be well–formed. In this discourse, the constituent which is negated in the first conjunct of the Corrective Constituent Coordination is part of the preceding sentence, and so is the subject and the verb.

(17) A. Sandra ate a pear.

B. Sandra ate not a PEAR, but a FIG.

In the following paradigm, I am considering objects that are in other semantic relations to the negated constituent.

(18) A. i. # It is raining outside. unrelated
ii. # Sandra went to a fruit tasting. superset object, nonidentical verb
iii. # Sandra went to a pear tasting. identical object, nonidentical verb
iv. # Sandra went to a Williams pear tasting. subset object, nonidentical verb
v. # Sandra ate something. superset object
vi. # Sandra ate fish. contradicting object
vii. # Sandra ate fruit. superset object
viii. Sandra ate a Williams pear. subset object

B. Sandra ate not a PEAR, but a FIG.

While hypothesizing whether the context dependency is a presupposition, of course there always exists the possibility to enrich the context and accommodate that there is an independent contextual relation between the two sentences. For example, in sentence (18A-i), one may imagine that Sandra usually has insatiable cravings for pears when it rains, under which assumption the discourse may be well–formed. For this discussion, I am excluding readings that come about through such accommodations.

Granted this assumption, the examples in (18A-i)–(18A-iv) do not provide a suitable context for the sentence in question. It needs to be stated or at least accommodated that Sandra is eating something for the discourse to be well–formed. [2] (18A-v) and (18A-vi) show that just stating that Sandra ate something or that Sandra ate something unrelated also does not provide a sufficient context. Even to state that Sandra ate something related, namely a superset of the object expressed in the first conjunct, is not sufficiently specific, as example (18A-vii) shows. The only context utterance that does not require further accommodation is given in (18A-viii). In this sentence, the context set contains the statement that "Sandra ate something", and the object in the context proposition is a subset of the DP under negation.

In the example below, I am varying the sentence to consider whether there may be a similar relation between the object expressed in the second conjunct and the antecedent clause. The examples in (19) show that a similar relation does not hold for the second conjunct. Obligatory contextual relations only concern the first conjunct.

(19) A. i. # It is raining outside.

[2] In a recent meeting with Anna Szabolcsi, she proposed that maybe the presupposition is a presupposition with a speech act, as is argued for in the case of "doubt". One cannot say "I doubt Mary stole the pears" out of the blue because first somebody needs to make an accusation that Mary stole the pears. Since this meeting was rather recent, I haven't had time to test for this possibility yet.

ii. # Sandra went to a fruit tasting.

iii. # Sandra went to a pear tasting.

iv. # Sandra went to a Williams pear tasting.

v. # Sandra ate something.

vi. # Sandra ate fish.

vii. # Sandra ate fruit.

viii. # Sandra ate a Williams pear.

B. Sandra ate not STEAK, but a PEAR.

It also needs to be established whether the subject and the verb need to be identical to the context, or whether entailment is sufficient. The data below indicate that the context needs to entail these constituents. The acceptability of the sentences indicates that it is not the exact sentence derived from the Corrective Constituent Coordination that needs to be present in the context, rather, the context needs to entail the the respective statement.

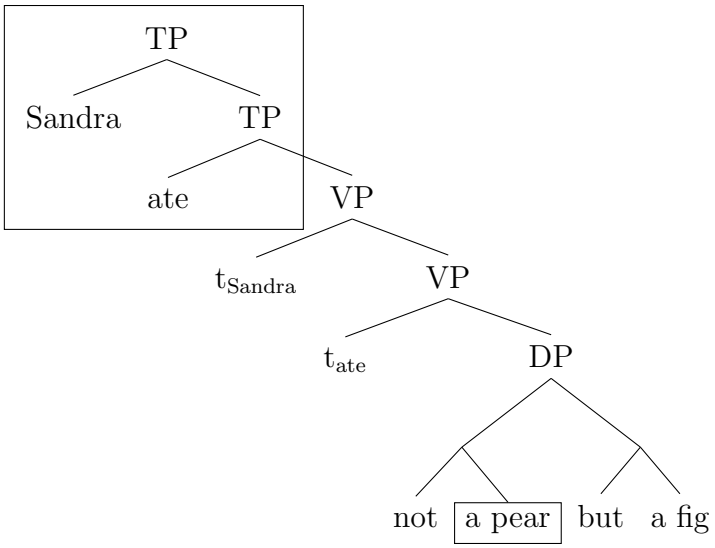
(20) A. Only the first year students came to the party. The first year students all ate pears.

B. The students ate not PEARS, but FIGS.

(21) A. Sandra was sold a pear.

B. Sandra bought not a PEAR, but a FIG.

In summary, a sentence that could be constructed by the constituents that are boxed in the tree below needs to be entailed by the context so as to utter a Corrective Constituent Coordination felicitously and naturally. In the discussion in section 2, I argued for a low coordination structure, which is shown in the tree. However, in a low coordination representation, the entailed components of the sentence do not form a constituent. As a consequence, I will consider them as two separate meaning components.



In a more formalized manner, the meaning components that I am investigating are on the one hand λx.Sandra ate x, and on the other hand *a pear*. Presupposition of an individual may not be possible, or or may not be detectable with standard presupposition tests since these are designed to work on propositional statements. As a consequence, I will also investigate the sentence "Sandra ate a pear" as a presupposition, since even if the origin of these two parts is distinct, they may be perceived as a whole.

In the following discussion, I will test whether either of these meaning components is a presupposition of the Corrective Constituent Coordination.

3.1 What is a Presupposition?

Presuppositions are parts of the linguistic meaning that are not part of the discussion (often called not *at issue*), but that are nevertheless understood. Here are some canonical examples.

(22) a. Eliseo quit smoking. $\rightsquigarrow$ Eliseo used to smoke.

b. I am reading the book you lent me.
$\rightsquigarrow$ There is a contextually unique book you lent me.

The presupposed meaning in (22a) is that Eliseo used to smoke. This meaning has to be given in context so that the sentence can be uttered felicitously. The entity inducing the presupposition is "quit". In sentence (22b), the presupposed part is that for the speaker and the hearer, there needs to be one contextually salient book that the listener lent to the hearer. This meaning is brought about by the use of the definite article "the". In these examples, the presuppositions are triggered by specific syntactic entities. This need not necessarily be so, as presuppositions are viewed to be the driving factor in context dependency on a more general level.

In Corrective Constituent Coordinations, it is a challenge to pinpoint the relation between the two meaning components identified above and the *at issue* meaning of the sentence, because the suspected presuppositions are also entailed by the sentence. This is a general problem in identifying presuppositions. For example, how to make sure that the assertion "Eliseo used to smoke" in (22a) is not simply entailed? The solution in presupposition research has been to employ tests that are known to affect any entailments of a sentence, but would leave presuppositions unaffected.

For example, consider the sentence "George and Evelyn went to the party". An entailment of this sentence is that "George went to the party", and "Evelyn went to the party". If the original sentence is true, then the entailments must also be true. Now consider what happens when one negates the sentence: "George and Evelyn didn't go to the party". If it is true that George and Evelyn didn't go to the party, then it must also be true that George didn't go to the party, and that Evelyn didn't go to the party. These sentences show that entailments are affected by negation.

However, presuppositions do not conform to the same rules as entailments. Consider the example below:

(23) Eliseo and Mathilde didn't quit smoking. ⇝Eliseo used to smoke.

Due to the negation, and granted that the sentence is true, it must also be the case that "Eliseo didn't quit smoking", and "Mathilde didn't quit smoking". However, the presupposition behaves differently: "Eliseo used to smoke" is unaffected by negation, because one can conclude this sentence from (23) even though the sentence is negated. Like this, presupposition tests like negation separate the entailments from the presuppositions.

This property of presuppositions is called projection. In the context of the discussion of presuppositions, "projection" means that a meaning component is unaffected by certain semantic operations, such as negation. This is described as "projecting past" a semantic operator.

Karttunen (1973) describes that there are certain sentential modifiers that will let the presuppositions project, so–called *presupposition holes*, whereas other operators will not let the presuppositions project; these operators are called *presupposition plugs*.

3.2 Presupposition Holes

One criterion for presuppositionhood is that their validity is not affected by certain modifiers. The modifiers that let the presuppositions project through are called *presupposition holes* since Karttunen (1973). As discussed above, in the sentence "Eliseo didn't quit smoking", the presupposition "Eliseo used to smoke" is preserved. In the examples below, I present

presupposition holes that are listed in Potts (2014), applied to the Corrective Constituent Coordination. To my knowledge, the presuppositionality of this construction has not been studied.

The presupposition holes are sentential negation, embedding under a possibility modal, embedding in the antecedent of a conditional, and embedding in a question. As regards the sentence in (24a), I embed the Corrective Constituent Coordination under the sentence *it is not the case*, assuming that it is semantically equivalent to sentential negation. I do this because two negations in the same sentence (as in "Sandra didn't eat not a PEAR but a FIG") are hard to parse.

(24) a. ? It is not the case that Sandra ate not a PEAR but a FIG.

? I doubt that Sandra ate not a PEAR but a FIG.

⇝ Sandra ate something.

⇝ Sandra ate a pear.[3]

b. ✓ It might be that Sandra ate not a PEAR but a FIG.

⇝ Sandra ate something.

⇝ Sandra ate a pear.

c. ✓ If Sandra ate not a PEAR but a FIG, then she will be grumpy.

⇝ Sandra ate something.

⇝ Sandra ate a pear.

d. ??? Did Sandra eat not a PEAR but a FIG?

⇝ Sandra ate something.

⇝ Sandra ate a pear.

We can see that these tests do not give uniform results. Without a doubt, embedding under a modal as well as embedding in the antecedent of a conditional clearly displays the two hypothesized presuppositions, the presuppositions are less clear when embedded in a question, and when embedded under negation.

I want to comment more extensively on the negation case. Without going into detail on the exact semantics of negation, rationale of the test needs to be made specific. The reason is that the outcome of this test varies depending on one's conception of the semantics of negation and focus. Under the assumption that constituent negation is merely a syntactic phenomenon, embedding the whole sentence, which already contains negation, under yet

[3]It may be that the presupposition is actually the presupposition of a speech act. I will consider this possibility in future work.

another negation, should result in the test sentence having the same truth conditions as a Corrective Constituent Coordination, because the negations should cancel each other out. If on the other hand one believes that negation itself is discourse sensitive, or that constituent negation is truthconditionally different from sentential negation, the truth conditions of the sentence embedded under negation and the truth conditions of the sentence without this embedding should not be equivalent. The following example illustrates the different predictions according to a uniform negation hypothesis, under which there is only one type of negation, or a oligoform[4] negation hypothesis, under which there are different types of negation.

(25) It is not the case that Sandra ate not a PEAR, but a FIG.

a. ¬[¬[Sandra ate a PEAR] & [Sandra ate a FIG]]

¬[¬A] = A ↔ Sandra ate a PEAR & Sandra didn't eat a FIG.

b. ¬ [Sandra ate x [x is **NOT** a pear] & [x is a fig]]

¬[**NOT** A] is not reducible

Ultimately of course the **NOT** will also involve negation and interact with ¬, but as long as one assumes the two are different, one can really not make a clear prediction. Whether or not negation is a suitable presupposition hole to detect the hypothesized presuppositions in Corrective Constituent Coordination hence needs to be subject to a more extensive discussion. On the flip side, one may even take the detectability of a presupposition in example (24a) as an argument for an oligoform negation hypothesis.

However, this does not take away from the fact that a presupposition is detectable with other presupposition holes, such as embedding under a modal, or in the antecedent of an if–clause.

3.3 Presupposition Plugs

A different type of operator that interacts with presuppositions is a so–called *presupposition plug*. While holes let the presupposition project through, plugs block the projection of the presupposition. Many presupposition plugs express subjectiveness in one way or the other. They include non–factive attitude predicates, and verbs of saying. Below are the examples presented in Potts (2014). In these sentences, an attitude predicate "CNN reported" causes the reader to question whether the embedded sentence is objectively true, or only according to CNN. The same holds for the second example.

[4]This name is meant to represent that negation can occur in several related forms, which may not be reducible to a single lexical entry

(26) a. CNN reported that Sam quit smoking. $\not\rightarrow$ Sam used to smoke.

b. Kim believes that Sam quit smoking. $\not\rightarrow$ Sam used to smoke.

Indeed we find that Corrective Constituent Coordinations react to presupposition plugs, as the examples below show. Upon embedding the sentence in question under presupposition plugs, one can no longer be sure whether the meaning component "Sandra ate something" is true.

This argument hinges on the semantics of attitude verbs. By ascribing a non–factive attitude to an individual, a speaker does not make claims about this attitude's objective truth or falsity.

(27) a. CNN reports that Sandra ate not a PEAR but an APPLE.

$\not\rightarrow$ Sandra ate something.

$\not\rightarrow$ Sandra ate a pear.

b. Kim believes that Sandra ate not a PEAR but an APPLE.

$\not\rightarrow$ Sandra ate something.

$\not\rightarrow$ Sandra ate a pear.

Corrective Constituent Coordinations being sensitive to presupposition plugs is an argument in favor of defining the context dependency as an effect of presuppositions.

3.4 Presupposition Filter

It has been noted that presupposition projection is dependent on whether or not the presupposition is entailed elsewhere in the context. The following examples show that in a conditional, a presupposition only projects if it is not entailed. For example if the antecedent of a conditional entails the consequent, presupposition projection is not found, as in (28b)

(28) a. If Sam is smart, then he and Mary quit smoking. $\rightsquigarrow$Sam used to smoke

b. If Sam smoked in the past, then Mary and he quit smoking. $\not\rightarrow$Sam used to smoke

In these sentences, the entailments of the sentence are unaffected: if it is true that if Sam is smart, he and Mary quit smoking, then it is also true that if Sam is smart, Mary quit smoking. Likewise if it is true that if Sam smoked in the past, Mary and he quit smoking, it is also true that if Sam smoked in the past, Mary quit smoking. Here the presuppositions are unaffected.

The same observation is true for the conditionals when applied to Corrective Constituent Coordination.

(29) a. If Sandra is smart, then she ate not one APPLE but one PEAR.

$\not\twoheadrightarrow$ Sandra ate something.

$\not\twoheadrightarrow$ Sandra ate one apple.

b. If Sandra ate something, she ate not one APPLE but one PEAR.

$\not\twoheadrightarrow$ Sandra ate something.

$\not\twoheadrightarrow$ Sandra ate one apple.

It is an entailment of the consequent that if it is true that Sandra ate not one apple but one pear, she also ate not two apples but two pairs. These entailments remain constant independent of whether the presupposition is manipulated.

However, the presupposition filter does not help determine the nature of the hidden meaning in Corrective Constituent Coordinations, as example (29) shows. The reason is that this type of presupposition generally doesn't project from the consequent of a conditional.

Judging from this example, corrective coordinations are not subject to presupposition filters.

3.5 Presuppositionhood

At this point, we see that the meaning component in question shares certain projective behavior with presuppositions, but not all kinds. More scrutiny is required to judge the exact status of the presuppositionhood. Generally one can conclude that the meaning component is a presupposition, because Potts (2014) reports that the tests need not give uniform results for all operators, and we found interference of the test with the Corrective Constituent Coordination, justifying a view of the context dependency as presupposition.

3.6 Representation of Presuppositions

Potts (2014) presents a number of ways to represent presuppositions. Here, only two will be mentioned. On the one hand, presuppositions may be represented as a condition on a partial function, making the entry undefined when the condition is not met, which is the approach that I will choose, because most of the treatments use this representation. Another insightful approach is to think of presuppositions as pronouns, which I will briefly introduce below.

Partial Functions (30) is the lexical entry for the verb *quit*, according to Sauerland (2004). (31) is an alternative writing convention of the same lexical entry. This representation is used in Heim and Kratzer (1998), and is hence very prevalent.

(30) $[\![\textbf{quit}]\!] = \lambda P.\lambda x.\lambda t.\frac{\exists t_0 < t : P(x)(t_0)}{\neg P(x)(t)}$

(31) $[\![\textbf{quit}]\!] = \lambda P.\lambda x.\lambda t.\exists t_0 < t : P(x)(t_0) : \neg P(x)(t)$

The part in the numerator of the fraction expresses the presupposition, and the denominator expresses the at issue content of the lexical entry. The at-issue-content will only be defined if the presupposition in the numerator is true. (31) is an alternative way of writing the same, where the presupposition is expressed before the colon. The lexical entry reads: for a predicate P and an individual x and a time t, given it is true that at a previous time t_0 the predicate P was true of individual x, it is not true of individual x at the present time. This represents the intuition that the predicate "quit smoking" can not be predicated of someone who never smoked.

Pronouns An alternative way of thinking about presuppositions is to think of them as pronouns. I will not go into the formalization, but here is the intuition. Take for example the predicate "quit smoking": there has to be the assertion that the person in question was smoking in the past represented either in the set of context propositions, or in the common ground of the conversation. Crucially, it has to be realized either overtly or covertly before uttering a sentence like "Eliseo quit smoking". A way of representing this intuition is that the sentence "Eliseo quit smoking" contains a pronoun that needs to be bound by the context. Although this formalization will not be employed in this work, it is important to be aware of it, because the notion is very related to the context pronoun that Rooth (1992) introduces. I will expand on the topic in section 5.

Geurts and Van der Sandt (2004) propose that the general semantics of focus should be only to induce existential presuppositions. Under such a view, the analysis of Corrective Constituent Coordination may not need to rely on focus association or another construction specific component to derive its presuppositions, but one would be able to derive these presuppositions as a general consequence of focus semantics, without relying on additional machinery. I will discuss an analysis according to their proposal more extensively in section 4 below. By talking about construction specificity, I do not mean to say that the process of associating with focus is construction–specific; it is not, it happens with a number of focus associating adverbials. What is construction specific is the relation between the lexical material and the type of presuppositions generated. There do exist attempts to characterize the types of propositions further (consider for example ideas by Beaver and Clark, 2009).

4 Focus Introduces Presupposition

Geurts and Van der Sandt (2004) assume that focus obligatorily introduces an existence presupposition, and that is the only function of focus. Concretely, they posit the Background Presupposition Rule:[5]

> The Background-Presupposition Rule (BPR)
> Whenever focusing gives rise to a background $\lambda x.\phi(x)$, there is a presupposition to the effect that $\lambda x.\phi(x)$ holds of some individual. (Geurts and Van der Sandt, 2004, 1)

The authors assume that focus divides a sentence into focus and background. All components that are not focused are backgrounded. The backgrounded parts are assumed to underly an existential presupposition. Consider the example in (32) below:

(32) $[\text{Fred}]_{\text{F}}$ robbed the bank.

In this example, the background is $\lambda x.x$ *robbed the bank*. According to the Background Presupposition rule, there is a presupposition introduced: $\exists x.x$ *robbed the bank*. The authors argue that all semantic effects of focus can be reduced to this process.

While this proposal is beautifully simple, it overgenerates a bit. In particular, it makes too strong predictions with respect to negation. I present some of the arguments in Jäger (2004), but in fact, the whole volume in which Geurts and Van der Sandt (2004) appeared in is dedicated to discussing Geurts and Van der Sandt (2004), so a more extensive discussion can be found there.

Jäger (2004) reports that Rooth (1999) brings the example (33) below. In this example, according to Geurts and Van der Sandt (2004), one would expect that placing focus on *John* commits the speaker to the presupposition that someone borrowed the tennis racket. However, in the same utterance, the speaker claims that she has no knowledge about whether somebody borrowed the racket. As discussed in section 3.2 above, the antecedent of a conditional is a hole for presupposition projection, so the existential presupposition should be able to project from the antecedent. However, this prediction is not borne out.

(33) A: Did someone borrow my badminton racket?
B: I don't know. If $[\text{John}]_{\text{F}}$ borrowed it, you can forget about getting it back in one piece.

[5] At this point in time, I have only cursorily contrasted this approach with the structured meaning approaches proposed by von Stechow (1991) and Krifka (1991). From these readings I know they believe focus to be a quantifier, but I am not sure whether they assume a focus necessarily introduces a presupposition.

Another problem brought up by Jäger (2004) includes paradigms with negation, as in (34) below. This should also be reminiscent of the discussion of presupposition plugs. In this example, the sentence (34a) is expected to have the presupposition in (34b), which is incompatible with the assertion made in (34a)

(34) a. NOBODY shot the sheriff.
b. Somebody shot the sheriff.

Geurts and Van der Sandt (2004) propose to analyze this case as a case of verum focus. However, Jäger (2004) points out that both contrast and question answer coherence indicate that *nobody* is indeed the focus of this sentence. The example below shows this for question–answer coherence.[6]

(35) A: Who shot the sheriff? B: Nobody_{F} shot the sheriff.

Due to these and many other arguments in the literature, I conclude that Geurts and Van der Sandt's (2004) theory is too strong. In the next section, I will discuss a theory based on a weaker version of the Background Presupposition Rule, proposed in Sauerland (2004), which will also fail due to the multiple foci in the Corrective Constituent Coordination.

4.1 Presupposition of Focus

In this section, I will evaluate a weaker proposal of a presuppositional focus hypothesis, but I will show that also such an analysis fails. Therefore, I will propose to analyze corrective negation in terms of givenness. I will show that while givenness accounts for the global context dependency nicely, it has to make additional stipulations about local context dependency/contrast.

Sauerland (2004) evaluates a version of presuppositional focus which assumes that the focus feature has an interpretation as given in (36), which gives it a syntactic position comparable to a quantificational determiner. Like Geurts and Van der Sandt (2004), this lexical entry for the focus feature assumes that focus introduces a presupposition that the predicate that applies to the focused phrase is true of another individual. Sauerland (2004) proposes for the sake of the argument that, in the cases where this presupposition is inconsistent, it be interpreted as (36b) instead. This lexical entry differs from the first one by an epistemic

[6] In my meeting with Anna Szabolcsi on 4/6/2015, she told me she felt that the answer "Nobody shot the sheriff" is not really a neutral answer to the question. She expressed that she thought that it was "denying" the question in a way, meaning that something more complex is going on with this sentence. A similar point was also brought up by Roumyana Pancheva in our meetings, so ultimately this argument may be more complex that it is presented here

modal that modifies the presupposition, which weakens the presupposition to "It can be that there is another individual of which the predicate is true". Because of this, he does not need to address the problems that I discussed with respect to Geurts and Van der Sandt's (2004) original proposal above, because he assumes that in these cases the lexical entry (36b) is used.

(36) a. $[\![\mathbf{F}]\!]=\lambda x_{\mathrm{e}}.\lambda P_{\langle \mathrm{e},\mathrm{t}\rangle}.\dfrac{\exists x'.(P(x')=1)}{P(x)}$

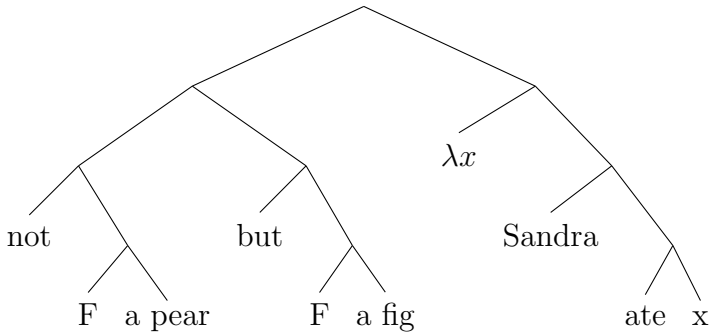
b. $[\![\mathbf{F}]\!]=\lambda x_{\mathrm{e}}.\lambda P_{\langle \mathrm{e},\mathrm{t}\rangle}.\dfrac{\diamond\exists x'.(P(x')=1)}{P(x)}$

Another consequence of this conception is that focused constituents are interpreted as quantifiers, necessitating quantifier raising if such a focus were to occur in object position. The reason for the obligatory quantifier raising is that, unless one assumes a generalized mechanism of type shifting, the focus operator in (36) yields an expression of type $\langle\langle \mathrm{e},\mathrm{t}\rangle,\mathrm{t}\rangle$, while in object positions, only expressions of type e are interpretable. Hence, Sauerland (2004) applies quantifier raising as proposed in Heim and Kratzer (1998) and many other places to generate an interpretable structure.

Sauerland (2004) immediately points out that this conception makes too strong predictions with respect to multiple focus. Here, I show that his argument also holds for Corrective Constituent Coordination.

Consider the following syntactic structure that an example of Corrective Constituent Coordination would be assigned in Sauerland's (2004) analysis.

(37) Possibility for a syntactic structure according to Sauerland (2004)



This structure would require further movement from within each of the conjuncts to move out the focused constituents, because they cannot be interpreted in situ. Even if this movement were not to violate the Coordinate Structure Constraint, which is an independent question, the resulting structure has two presuppositions: one presupposition is of the form "there exists an x such that Sandra ate not x but a fig", and "there exists an x such that Sandra ate not a pear but x" for the second instance.

Even with the weaker lexical entry of the focus operator proposed in (36b) above, where the presupposition is embedded under a modal, the respective presuppositions are still "there possibly exists an x such that Sandra ate not x but a fig", and "there possibly exists an x such that Sandra ate not a pear but x". None of these presuppositions are found in Corrective Constituent Coordination, as was shown in section 3. As a reminder, the presuppositions were "Sandra ate something", and "Sandra ate a pear".

This is the same point that Sauerland shows about multiple focus sentences in his example (38) below: the presupposition is too specific.

(38) This woman saw this man.

Q: Which woman saw which man?

A: Mary-F saw John-F.

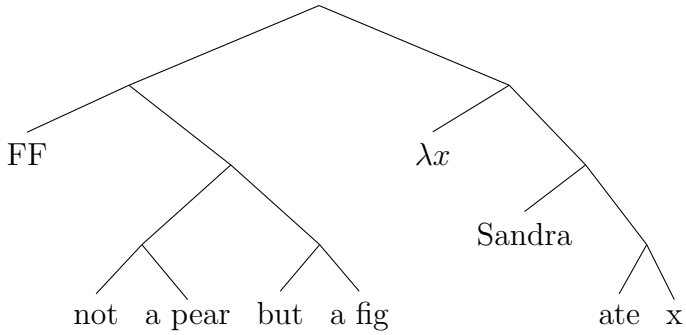
In this sentence, a presuppositional theory of focus would predict a presupposition "There is a person that saw John", and a presupposition "There is a person that Mary saw". However, the observed presupposition is "Somebody saw somebody". The point to be taken away from my and Sauerland's (2004) example is that in multiple focus constructions, the presupposition cannot be evaluated based on each individual realization of focus, but rather needs to be evaluated cumulatively.

As a reaction, he tries another approach where he defines a multiple focus operator as follows. He also finds that this proposal has severe shortcomings.

(39) $[\![\mathbf{FF}]\!]=\lambda x_{\mathrm{e}}.\lambda y_{\mathrm{e}}.\lambda R_{\langle \mathrm{e},\langle \mathrm{e},\mathrm{t}\rangle\rangle}.\dfrac{\exists x',y'.(R(x')(y')=1)}{R(x',y')}$

The presupposition that this operator induces is that there exist two other individuals than the focused individuals such that the relation expressed in the sentence holds of them. Assuming this operator applies to the whole coordination, compositionality aside, this would yield a structure as below.

(40) Example of a structure with a multiple focus feature



Under this assumption, the presupposition would be that there is a pair of individuals other than *a pear* and *a fig*, such that Sandra ate not the first one of the pair, but the second one.

Again, this does not accurately describe the presupposition, because the presupposition is either *Sandra ate a pear*, or *Sandra ate something*, and for sure does not include the negation and coordination.

I agree with Sauerland (2004) in in finding that even if the initial problems with the focus presupposition account are addressed, it cannot be used to describe the Corrective Constituent Coordination data adequately.

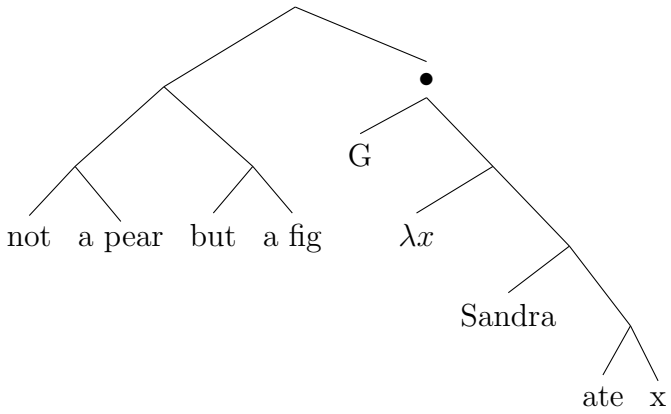
4.2 Presupposition of Givenness

Because the focus analysis has compositional issues, Sauerland (2004) proposes to mark the inverse instead, and mark all the constituents that are not focused. To do this, he proposes the following operator.

(41) $[\![\mathbf{G}]\!] = \lambda f_{\text{et}} \dfrac{\exists x \in D_{\text{e}}.f(x) = 1}{f}$

The only function this operator has is to mark any function with an existence presupposition of this function. This marking does away with the problems of multiple focus. This is illustrated in the tree below, which represents the syntax that Corrective Constituent Coordinations would receive in a proposal like Sauerland's (2004).

(42)



At the node marked with • in the tree, now a presupposition "$\exists x \in D_{\text{e}}$. Sandra ate x" is introduced. As such, it addresses one important property of the context dependency of Corrective Constituent Coordinations, as it gives a partial explanation of why these Coordinations are perceived to follow a specific sentence, composed from the material not contained in the coordination, and the complement of the negation in the first conjunct. The presupposition above explains the dependency on the material not contained in the coordination. As regards the reliance on the content of the first conjunct, the semantics of negation will likely have to be adjusted to cover this particular point.

However, another aspect is not accounted for yet, which is that the two focused objects are interpreted as contrastive with respect to each other, which I described as local context dependency above. This dependency receives a natural account in alternative semantics of focus, which I will discuss in detail in section 5 below. I will presuppose that a notion of alternatives is necessary to account for this issue, leaving the technical details for section 5.

This means that even in a presupposition–based account of the context dependency facts, one can not relinquish the concept of contextual alternatives. In such a system, these alternatives are a necessary stipulation.

This is why another modification to the givenness operator following a proposal by Wagner (2006) needs to be introduced, which will be the topic of the following paragraphs. Just like in Sauerland (2004), in his model, it is no longer the focused constituent that bears a syntactic feature, but rather the non–focused material that is c–commanded by an operator. In addition, this operator makes reference to the focus alternatives, and marks the branch that does not have alternatives as given. In addition this, I will propose that there are two sets of alternatives introduced low in the coordination, which are coindexed with each other employing a process that will be introduced in detail in section 5. The process consists of one of the DPs being coindexed with the respective other DP's focus alternative value, and *vice versa.*

Wagner's (2006) relative givenness operator is defined as follows:

(43) $[\![\mathbf{G_R}]\!] = \lambda x.\lambda y.\exists y' \in Alt(y), y' \neq y, s.t. [\![\mathbf{y'x}]\!]$ *is given:* $[\![\mathbf{yx}]\!]$

This operator takes two constituents as its argument. He does not specify the type of these arguments, it appears that it can be any two phrases as long as they are semantically composable. If one of them has a set of alternatives that is given when combined with the other argument of the operator, one can combine the two constituents. This operator introduces a givenness presupposition which marks one of the branches as more given than the other.

In addition, Wagner (2006) also derives predictions about nuclear stress from this givenness operator; a constituent that is marked as given cannot bear nuclear stress. Here is an example of how this operator applies in a sentence compositionally. Wagner (2006, 299)

(44) Mary praised John. What happened next?
[ANNA [praised John] G_R]

In this case, the givenness operator applies first to "praised John", then to "Anna", marking "praised John" as given. Therefore, the truth conditions are:

(1) $[\![\mathbf{G_R}]\!](\lambda x.\text{x praised John})(Anna)$

(2) $\exists y' Alt(Anna), y' \neq y, s.t. [\![y', \lambda x.\text{x praised John}]\!]\text{is given} : [\![Anna, \lambda x.\text{x praised John}]\!]$

This amounts to saying that there exists a contextual alternative to Anna, for which there exists a presupposition that this contextual alternative praises John. In the given case, likely the contextual alternative is Mary.

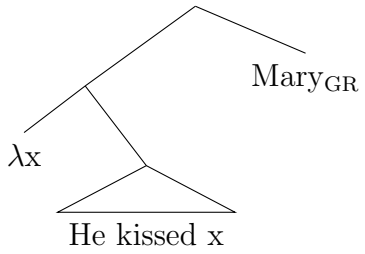
This operator can only mark its sister node as given, and is therefore syntactically rather restricted. Givenness marking with the G_R operator can also proceed after movement occurs. Consider the sentence in the example below (Wagner, 2006, 299). In this example, the object is given in context, and therefore has to be unstressed. However, generally the object is never a sister to the VP, so it is assumed that it moves to a position where it occurs as a sister to a propositional projection.

(45) John was in the kitchen. Mary walked in. What happened next?

a. # John kissed MARY

b. John KISSED Mary.

(46) Givenness applying after object movement



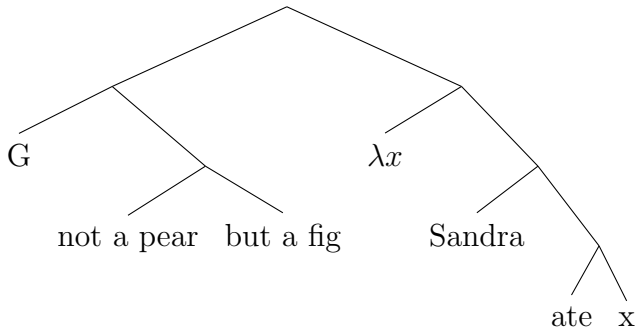
Note that the movement process can also deal with examples such as the ones brought up in Ladd (1980): "Did John read the Slaughterhouse five?—John doesn't READ books". In such an example, movement is also assumed from the object position. Wagner explains that there are no salient alternatives to *read* in this sentence, hence there is no givenness marking *in situ*. When the object, which is given in the context, is moved to a sister position of the VP, as described above, the object is marked more given than the verb, because it was mentioned in context, and nuclear stress on the verb is derived.

In corrective coordination sentences, I will propose that the whole corrective coordination, *not a pear but a fig* in the relevant example, is c–commanded by a givenness operator, the function of which it is to mark one of the constituents it applies to as given. To do so, this operator compares two nodes with respect to whether or not they provide multiple focus alternatives, and marks the respective other branch without focus alternatives as given. I will talk more extensively on the notion of focus alternatives in section 5 below. Wagner (2006) seems to implicitly assume that the givenness operator applies whenever it can. As such,

this strategy can be said to be construction general, and resulting from general principles of givenness interpretation.

In the paragraph below, I demonstrate how Wagner's (2006) operator applies to Corrective Constituent Coordinations. The givenness operator can only reach the given part in case the coordination moves to a position where it is the sister of the proposition λx.Sandra ate x. The resulting syntactic structure is given in the Tree (47) below.

(47) Position of the givenness operator

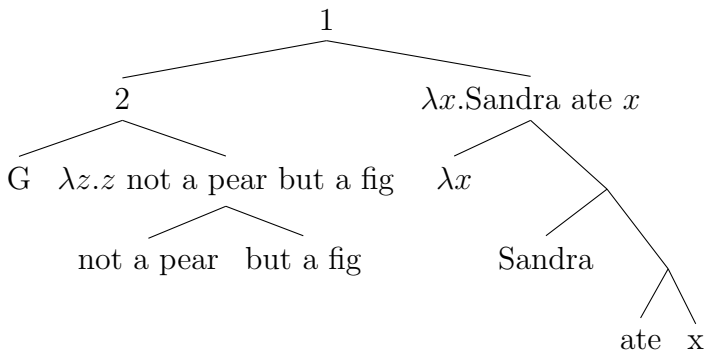


At present, I do not make any assumptions about the semantics of *but* per se, and I will simply assume it has the semantics of 'and' applying to two DPs. I also do not provide a strictly compositional analysis of the coordination *not a pear but a fig.*.

In the following tree, an idea for a semantic analysis is provided. This analysis stipulates at this point that "not a pear but a fig" has a alternative sets which are composed from the alternative sets of *a pear* and *a fig*, so these two phrases can be interpreted in contrast with each other. As I will show below, this part comes naturally in Alternative Semantics of Focus. As I will explain in section 5 in more detail, the location of the contrasting alternative sets needs to be syntactically lower than the negation and coordination.

In addition, I am working under the assumption that the salient alternative y' that the givenness operator picks out is the "pear". As a result of the application of the givenness operator, the proposition "λx.Sandra ate x" is given in the context.

(48) Composition of the Givenness Operator



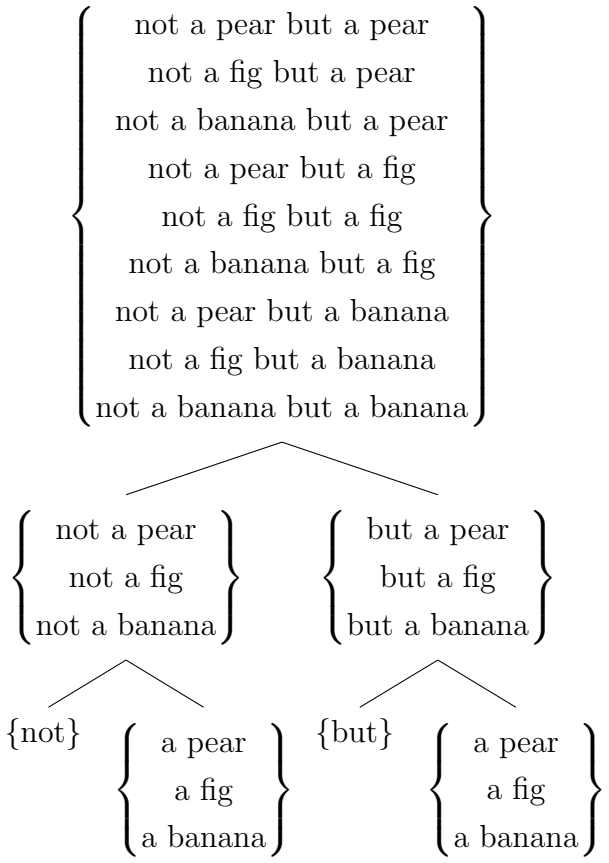
(49) $2 = \lambda x.\exists y' \in Alt(\lambda z.$ z is not a pear but a fig$), y' \neq \lambda z.z$ is not a pear but a fig, $s.t.$ $[\![$**y'x**$]\!]$ is given $: [\![\lambda z.$ is not a pear but a fig$, x]\!]$

(50) $1 = \exists y' \in Alt(\lambda z.$ z is not a pear but a fig$), y' \neq \lambda z.z$ is not a pear but a fig, $s.t.[\![y', \lambda x.$Sandra ate $x]\!]$is given $: [\![\lambda z.$ is not a pear but a fig$, \lambda x.$Sandra ate $x]\!]$

(51) $1 = \exists y' \in Alt(\lambda z.$ z is not a pear but a fig$), y' \neq \lambda z.z$ is not a pear but a fig, $s.t.[\![y', \lambda x.$Sandra ate $x]\!]$is given : Sandra ate not a pear but a fig.

This operator derives the correct presupposition, all at the same time still referring to the alternative structure of the "ungiven" constituent. An additional assumption to account for the contrastive relation is to say that the corrective coordination still makes obligatory reference to alternative sets. I propose that each of the conjuncts contains alternative sets, which are coindexed with the other conjunct. These variables are composed higher up in the structure applying the apparatus provided in Rooth (1985). As I will show in section 5, he envisioned the composition of ordinary focus values with sets of alternatives as the formation of the Cartesian product. The givenness operator applies to the set of alternatives on the very top of the tree. (Yet again, this analysis assumes that both *not* and *but* apply to individuals, which is an independent semantic question.)

(52) Alternative composition of the Corrective Constituent Coordination



In this section, I proposed an analysis of the context dependency of corrective coordination in terms of a givenness operator. I pointed out that such an analysis does not account for the local context dependency facts, that is the interpretation of the conjuncts as contrastive, and requires additional stipulation of alternative sets. In the next section 5, I will evaluate the context dependency phenomena from the perspective of an alternative semantics of focus, at the same time also properly introducing the notions of alternatives that were already referred to in the last paragraphs. I will show that this theory accounts more easily for local context dependency, but needs to make stipulations for the global dependency.

5 Alternative Semantics for Focus

The present section evaluates whether the data can be captured by a theory of alternative semantics for focus. Also the question of whether *not... but* associates with focus in Rooth's (1992) sense will be discussed. It will be shown that association with focus is a possible analysis, and is in fact the only possible way to account for the data in terms of alterna-

tive semantics of focus. A consequence of an association with focus analysis is that the construction obligatorily involves presuppositions as the reason for its context dependency.

In this section, it will also be discussed how to represent the context sensitivity issues using a theory of alternative semantics of focus. While a presuppositional focus theory could account for the global context dependencies, and needed to make stipulations for the local ones, alternative semantics of focus face the inverse situation: it can account for (local) contrast, but it has to make additional assumptions about the global dependencies.

5.1 Alternative Semantics of Focus in a Nutshell

In Rooth's (1992) semantics of focus, focused constituents enter the syntactic derivation marked with a focus feature F. At each syntactic node, an ordinary semantic value, denoted as $[\![]\!]^0$, as well as a focus semantic value, denoted as $[\![]\!]^F$, are calculated. In the calculation of the focus semantic value[7], a set of expressions of the same semantic type as the focus–marked constituent is formed (that is e for individuals, $\langle e, t\rangle$ for unary predicates, etc.) In addition, the focus operator has a pronoun C as its restrictor, which conveys contextually given information. The value of this pronoun is can be assigned via mechanisms that are common to the interpretation of pronouns, that is assignment by an assignment function, binding, or accidental coreference. The technical side of how this value gets assigned will largely be taken for granted. This pronoun is a set of linguistic entities, just like the alternative set. It is one condition on the use of the focus operator that this set C is a subset of the set of alternatives. For this to be possible, these two sets have to contain comparable elements. For example, the focus alternative set of *pear* could be {apple, banana, chair, sleep,...}. This set is not contextually restricted. Also, an ordinary semantic value is formed, which is the denotation as assumed in a Montegovian semantics. In case of a non–focus marked constituent, the focus semantic value is the singleton set of the ordinary semantic value.

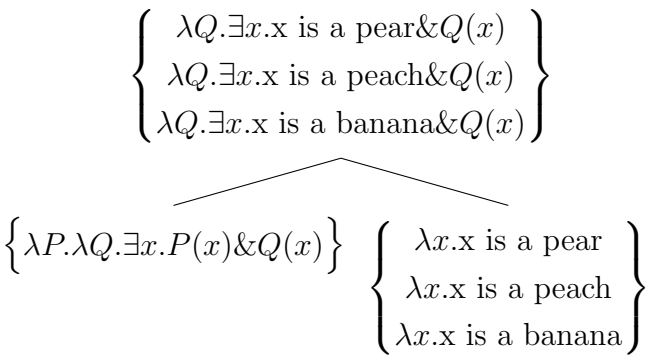
When a focus–marked head and a non–focus marked head are combined, their focus semantic values will be combined via the formation of the Cartesian product of the two. For example, the Cartesian products of two sets {a,b} and {1,2} is $\{\langle a, 1\rangle, \langle a, 2\rangle, \langle b, 1\rangle, \langle b, 2\rangle\}$.

[7] Rooth (1985, 13)

> [The focus semantic value] *a"* can be derived by a recursive definition:
> (19) Recursive definition of presupposition skeleton a" is
>
> 1. a variable matching *a'* in semantic type if a bears the feature *F*
> 2. *a'*, if a is a non-focused non-complex phrase
> 3. obtained by applying the semantic rule for a to b_1"... b_n" where $b_1 \ldots b_n$ are the component phrases of *a*.

In the case of a non–focus marked constituent, the focus semantic value is the singleton set of the ordinary semantic value. Only in case of a focus–marked constituent will the focus semantic value have multiple members. Here is an example of how the composition of the focus semantic values of the unfocused determiner *a* with the focus semantic value of the focused NP $pear_{\mathrm{F}}$ proceeds. The composition of focus–semantic values in the rest of the sentence proceeds in a similar fashion.

(53) Example of the recursive formation of focus values



According to Rooth (1992), a salient part of the interpretation of focus is to introduce a presupposition that relates the focus semantic value of the sister node of the operator $\sim$, defined below, with a context variable C that $\sim$ takes as its argument. It presupposes that the context variable C is a subset of the focus semantic value. In addition, it presupposes that the C contains the ordinary semantic value and at least one additional element. This presupposition is brought about by the operator $\sim$, which relates a syntactic phrase of any kind with a covert context variable C. It is defined as follows in Rooth (1997, 279)

> "Where ϕ is a syntactic phrase and C is a syntactically covert semantic variable, $\phi \sim$C introduces the presupposition that C is a subset of $[[\phi]]^{\mathrm{f}}$ containing $[[\phi]]^{\mathrm{o}}$ and at least one other element."

The squiggle operator is sensitive to syntactic position, because the context variable C can only be a subset of the the focus semantic value of the phrase that $\sim$ adjoins to if the two are formed from elements of the same semantic type. For example, looking back to the tree in (53) above, if a focus operator were to apply at the level of NP in this tree, the context set would have to contain items of the shape λ *x. x is a pear*, so it can interact with the focus semantic value. This syntactic sensitivity does not always play a role, because focus is assumed to apply recursively, and there exists the mechanism of composing focus semantic values that was described above. Therefore, in many cases, applying the $\sim$ operator low or

high in the structure will come out equivalent. There are no principled restrictions about where the squiggle operator and the context set can adjoin.

An example like "Sandra ate a pear$_F$" has at least two places for the $\sim$–operator and the context set to adjoin to, as is shown in (54) below:

(54) a. Sandra ate [[a pear$_F$]$\sim$ C]

b. [Sandra ate a pear$_F$]$\sim$ C

In both parses, the focus semantic value of the whole sentence will be identical, and will contain propositions of the form {Sandra ate a pear, Sandra ate a fig, Sandra ate a banana, Sandra ate a chair...}. What will vary is the shape of the context set. In (54b), it has the shape {Sandra ate a pear, Sandra ate a fig, Sandra ate a banana} or similar. In (54a), it may look like this: {a pear, a fig, a banana}, if the topic of the discussion is what fruit Sandra ate. In the first parse, the context set contains DPs, whereas in the second parse, the context set contains propositions. The two locations where $\sim$ can apply are equivalent for the sentence in (54). As we will see below, in Corrective Constituent Coordination sentences, the syntactic locus of focus interpretation does make a difference.

How are sentences related in alternative semantics of focus? In the preceding paragraphs, an overview was given about what the interpretation of focus is in a framework of alternative semantics of focus. Another question is how different utterances are related to one another in this framework. Rooth (1992) does not go into the question about how declarative sentences are contextually related to one another, but he is very specific about the semantics of question–answer pairs. These pairs interact with focus, because speakers have the intuition that focus in the answer has to be in the position of the wh–pronoun in the question.

In alternative semantics theories of questions, the denotation of a question is a set of all possible answers, which has the same shape as a set of alternatives. Therefore, a sentence is a well–formed answer to a question if the ordinary semantic value of the question is a subset of the focus alternative value of the answer. In the examples below, I give an illustration of this process. This represents the intuition that the syntactic position of the focus in the answer has to correspond to the syntactic position of the wh–pronoun in the question. As a consequence, the discourse (55b-i) is well–formed, whereas (55b-ii) is ungrammatical, because it requires a focus alternative set that is not given in the context, and this set cannot be bound by the question.

(55) a. **Question:** What did Sandra eat?

Ordinary Semantic Value $\left\{\begin{array}{l}\text{Sandra ate an apple,}\\ \text{Sandra ate a pear,}\\ \text{Sandra ate a fig,}\ldots\end{array}\right\}$

b. **Possible Answers**

i. Sandra ate a fig_{F}

Focus alternative value $\left\{\begin{array}{l}\text{Sandra ate an apple,}\\ \text{Sandra ate a pear,}\\ \text{Sandra ate a fig,}\ldots\end{array}\right\}$

ii. * Sandra_{F} ate a fig.

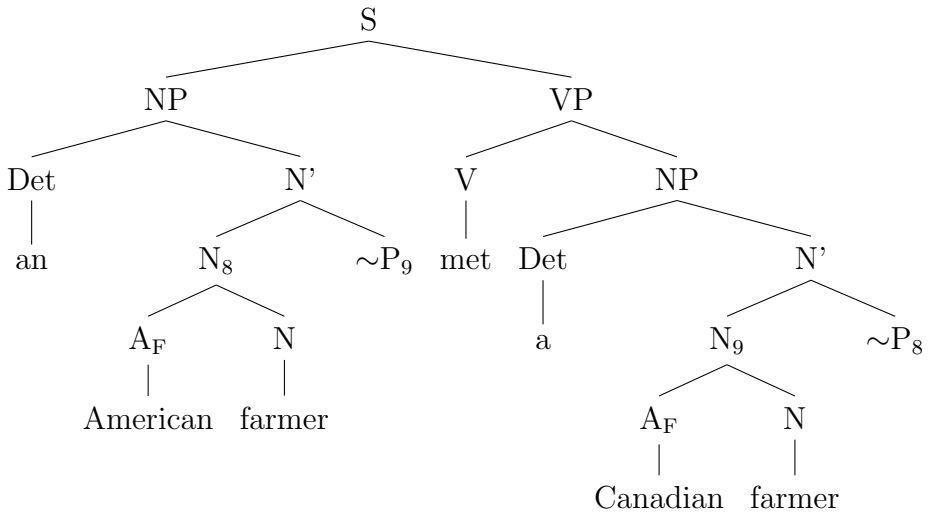
Focus alternative value $\left\{\begin{array}{l}\text{Sandra ate a fig,}\\ \text{Miriam ate a fig,}\\ \text{Evelyn ate a fig,}\ldots\end{array}\right\}$

I propose that the same mechanism applies in Corrective Constituent Coordination cases. A difference between these cases is that the preceding sentence is not a question, and therefore, its ordinary semantic value will not have multiple members, as in the example above, but it will only contain a single proposition. In our example sentence, that would be *Sandra ate a pear*, which would be required to be a subset of $[\![]\!]^{\text{F}}$ at the level where focus is interpreted.

A different type of context dependency that also occurs in Corrective Constituent Coordinations is *Contrast*. In our example, the two objects, *pear* and *fig* are in contrast to one another.

Here is Rooth's (1992) example for contrast from a potential beginning of a joke. Rooth (1992) gives two condition for a contrastive interpretation. On the one hand, states that two phrases α and β are perceived in contrast if the ordinary semantic value $[\![\alpha]\!]^{0}$ is an element of $[\![\beta]\!]^{\text{F}}$. Note that this is the same relation that had to hold also for question–answer coherence. Also, the contrast set for the two phrases has to be identical. This is ensured by the focus semantic value $[\![\alpha]\!]^{\text{F}}$ being coindexed with the context set involved in interpreting the focus on β, and vice versa. In the example below, this indexing is indicated in the tree. The tree below is from Rooth (1992, 94), it doesn't assume a generalized DP analysis, so it leaves some questions about syntactic positioning unanswered. I content myself with demonstrating the general mechanism using this example.

(56) An $\text{American}_{\text{F}}$ farmer meets a $\text{Canadian}_{\text{F}}$ farmer.



In order to analyze the examples of Corrective Constituent Coordination in an alternative semantics of focus, several relations have to hold. On the one hand, these coordinations need to contain the preceding sentence in their focus alternative value, and on the other hand, the context set for the two coordinated phrases need to be coindexed with the focus semantic value of the respective other focused phrase. Also, their ordinary semantic value needs to be a subset of the respective other's focus semantic value.

Corrective Constituent Coordination in alternative semantics of focus In the following paragraphs, an analysis of the Corrective Constituent Coordination in a theory of alternative semantics of focus will be introduced. I will show that given a low coordination hypothesis, this analysis runs into trouble because there are two conflicting demands in terms of context dependency: on the one hand, the context variable needs to depend on a previous proposition, on the other hand, the context variables need to contrast with one another, and therefore contain DP level representations. As such, these demands are not reconcilable with a low coordination syntax that I defended in section 2.

Low coordination does not capture context dependency The two examples below show two possible sites for the context pronoun C, one according to a low coordination hypothesis in (57a), and one according to a high coordination hypothesis in (57b).

(57) a. Sandra ate [[a pear_{F}] [$\sim$ C]].

i. Focus semantic value of the sister of $\sim$: {a pear, a fig, a banana, a sandwich, Erin, a chair, ...}

ii. Ordinary semantic value of the sister of $\sim$: *a pear*

iii. Context set C: {a pear, a fig, a banana}

b. [[Sandra ate a pear$_{\text{F}}$] [$\sim$ C]].

i. Focus semantic value of the sister of $\sim$: {Sandra ate a pear, Sandra ate a fig, Sandra ate a banana, Sandra ate a sandwich, Sandra ate Erin, Sandra ate a chair,. . . }

ii. Ordinary semantic value of the sister of $\sim$: *Sandra ate a pear*

iii. Context set C: {Sandra ate a pear, Sandra ate a fig, Sandra ate a banana}

First, consider example (57a). In this example, the focus semantic value of *a pear* that the operator $\sim$ attaches to could potentially be of the form {a pear, a fig, a banana, a sandwich, Erin, a chair, . . . }, as long as its elements are of type *e*. The ordinary semantic value of the object DP is *a pear*.

Here is a reminder of the semantics of $\sim$, highlighting the relevant points:

> "Where ϕ is a syntactic phrase and 1. C is a syntactically covert semantic variable, ϕ $\sim$C introduces the presupposition that
>
> 2. C is a subset of $[[\phi]]^{\text{F}}$
> 3. containing $[[\phi]]^{0}$
> 4. and at least one other element."

Applied to the example (57a), this is how the focus requirements are fulfilled.

1. The content of the context pronoun C is dependent on the syntactic position of $\sim$. If it adjoins to a DP, the context set C must contain a set of individuals. If it adjoins to a sentence, the context set must contain propositions. In the case described, it adjoins to a DP, so the context set may be {a pear, a fig, a banana}. In the example, that excludes that the sentence is contextually dependent on a previous sentence.

2. The context set needs to be a subset of the focus semantic value. In the example the focus semantic value is {a pear, a fig, a banana, a sandwich, Erin, a chair, . . . }, and the context pronoun is {a pear, a fig, a banana}. Therefore, this condition is fulfilled.

3. The ordinary semantic value of the DP, *a pear* needs to be an element of the focus semantic value of the DP, which is {a pear, a fig, a banana, a sandwich, Erin, a chair, . . . }. This condition is fulfilled in the example.

4. The focus semantic value of the DP must contain an element other than the ordinary semantic value *a pear*. This condition is given in the example, as there are the elements *a fig, a banana* in the set of alternatives.

The above points illustrate that with a DP attachment location of ∼C, the conditions introduced by the semantics of ∼ are given. At the same time, the example sentence was not contextually dependent on any preceding sentence. Now I want to consider what would happen if the sentence above were uttered in a context where it may be construed as depending on a context. Consider the discourse below:

(58) A. Sandra ate a fig_{F} for breakfast.

B. No, Sandra ate a pear_{F}.

Uttering this sentence as denying something in the context relates the sentence to a previous utterance. As I described above, applying the same mechanism as proposed by Rooth (1992) for questions requires that the proposition (58B) it depends on, which is intuitively *Sandra ate a fig*, needs to be present in the focus alternative value. Because the sentences are syntactically identical, the well–formedness conditions listed between 2 and 4 above remain identical. There is a change in condition 1. The context pronoun will still be {*a pear, a fig, a banana*}. In order for the sentences to be interpreted as contextually related the ordinary semantic value of the discourse–earlier sentence needs to be an element in the focus semantic value. However, the focus alternative value does not contain the proposition *Sandra ate a fig.*. As this example shows, capturing context dependency using the mechanism derived from Rooth's (1992) observations about question and answer pairs is problematic.

High coordination can capture context dependency The intuitions about context dependency of the example sentence are better captured when the operator ∼ attaches to a higher syntactic position, like in (57b). Just like before, when the sentence is interpreted out of the blue, the presuppositions that ∼ introduces are all met. This is shown in 1 through 4 below.

1. The context variable is provided by an appropriate mechanism as {Sandra ate a pear, Sandra ate a fig, Sandra ate a banana}.

2. The context set is a subset of the focus semantic value {Sandra ate a pear, Sandra ate a fig, Sandra ate a banana, Sandra ate a sandwich, Sandra ate Erin, Sandra ate a chair,. . . }

3. The ordinary semantic value, *Sandra ate a pear*, is a subset of the focus semantic value.

4. The focus semantic value contains values other than the ordinary semantic value, for example *Sandra ate a fig.*

If the sentence is not construed as context–dependent, just like before, no problem arises.

Thinking of this sentence as part of the context in (58) above, the context dependency can now be handled, because the element in the focus alternative value can be of the form *Sandra ate a fig* and can hence be dependent on such a proposition.

We saw that in the syntactic structure (57a), the focus alternative value only contained DPs, and hence did not contain any information about a preceding proposition, because that would preclude the context set from being a subset of the focus semantic value. The context dependency intuition can only be represented if a proposition can be an focus alternative value, which can be the case in the syntactic structure (57b), but not the syntactic structure (57a).

Contrast and the syntactic position of the focus operator When applying an analysis like the one presented above to Corrective Constituent Coordinations, there is an additional restricting factor. In these constructions, the two conjuncts are perceived to be related to one another, they are interpreted in contrast. Contrast is represented in Rooth (1992) by two conditions: coindexing the context set of a focused constituent with the ordinary semantic value of the constituent it is perceived in contrast with, and vice versa, ensures the context pronoun is identical. The second condition is that the ordinary semantic value of a phrase needs to be a subset of the focus semantic value of the phrase it is perceived in contrast with. Applying his view to the low coordination analysis of the sentence *Sandra ate not a fig$_F$ but a pear$_F$*, where the level of coordination is the DP level, Rooth's (1992) view of contrast requires that the context pronoun, C1, that is used in interpreting the focus on the DP *a fig*, be coindexed with the focus semantic value of *a pear*, and likewise, that the context pronoun C2 used in the interpretation of the DP *a pear* is coindexed with the focus semantic value of *a fig.* Also, the ordinary semantic value of *a fig* needs to be an element in the focus semantic value of *a pear*, and *vice versa.*

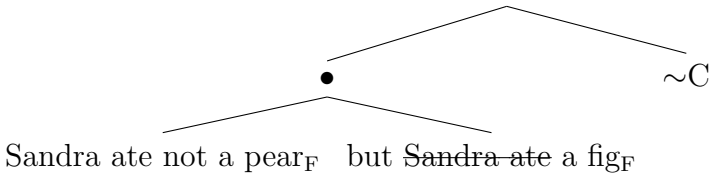
This requirement for the interpretation of contrast is essentially at odds with the requirements introduced by context dependency: Context dependency requires the attachment site of the focus operator to be on a high, propositional level. However, contrast will require the context pronouns to be introduced at a position that is lower than the coordination level, as I will explain in more detail in the following paragraphs. Representing both contrast and context dependency in syntax is a challenge to a low coordination analysis.

The question where the context set is introduced is relevant for both a high and a low coordination analysis. It boils down to the question whether the context pronoun is attached lower or higher than the negation and *but*. As will be shown, the contrastive interpretation requires for the context pronoun to be lower than the negation and *but*. I will explain the

problem for the high coordination analysis first, because compositionality issues need not be addressed. In particular, I need not go into the question how a negation that is not Boolean, and applies to an object, needs to be represented, and the case can just as well be made with a high coordination structure. The question discussed in the following paragraphs is, syntactically, how can it be ensured that the constituents embedded in *not... but* have cross–referenced context sets, and that for each constituent, the ordinary semantic value is a subset of the focus semantic value of the respective other conjunct.

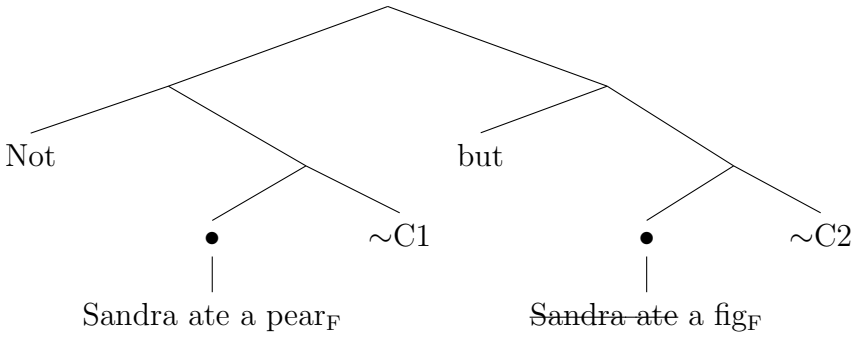
Contrast needs to be evaluated under *not... but* One option of how the context set may be formed is by assuming ∼C is adjoined higher than the coordination. This option is presented in the tree in (59a). Alternatively, the key components of the construction may combine or associate with focus independently. This would require the context variable to be introduced lower than *not* and *but*, and both be bound by a previous context set. This possibility is visualized in (59b). A third possibility, (59c) involves the contrast sets to be formed lower than the coordination, but higher than the negation and *but*.

(59) a.



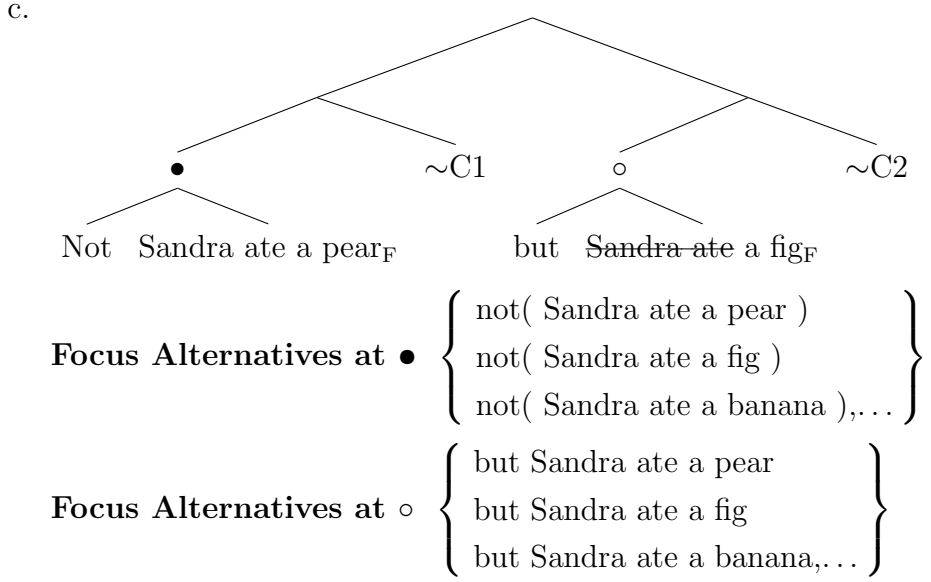
Focus Alternatives at • { Sandra ate not a pear but Sandra ate a fig; Sandra ate not a peach but Sandra ate a banana; Sandra ate not an apple but Sandra ate a strawberry,... }

b.



Focus Alternatives at • { Sandra ate a pear; Sandra ate a fig; Sandra ate a banana,... }

c.



Possibility (59a) is a possible syntactic representation, but it can account for neither the global context dependency effects, nor the contrastive interpretation. The context dependency effect cannot be accounted for because the proposition *Sandra ate a pear* cannot be a subset of the focus semantic value. Also, the contrastive interpretation remains unaccounted for, because the two objects share a context set, therefore their focus alternative value cannot be coreferenced with the respective other context pronoun. Also the ordinary semantic value of either of the conjuncts is not a member of the respective other's focus semantic value. It is an independent question whether the two focus features can be licensed by the same operator ∼, but for the sake of the argument, I am assuming this is possible.

Possibility (59b) provides an explanation for the both the contrastive coherence between the objects and the global context dependency effects. The context sets C1 and C2 are introduced lower than the negation and *but*, which means they can be cross–coreferenced with each other's focus semantic value, because the negation and *but* are not part of the context sets. Also, the ordinary semantic value of *Sandra ate a pear* can be a subset of the focus semantic value of the other conjunct, *Sandra ate a fig*, as is demonstrates in the tree above. etc., meaning that a preceding sentence *Sandra ate a pear* can be among the members of the focus semantic value, and therefore, context dependency is accounted for.

Possibility (59c) again can account neither for the contrastive interpretation, nor the global context dependency. The contrastive interpretation is precluded because the context sets are not identical and can consequently not be cross–coreferenced. Also the ordinary semantic value of *not (Sandra ate a pear)* cannot be a subset of the focus semantic value of *but Sandra ate a fig*. The context dependency cannot be accounted for, because the

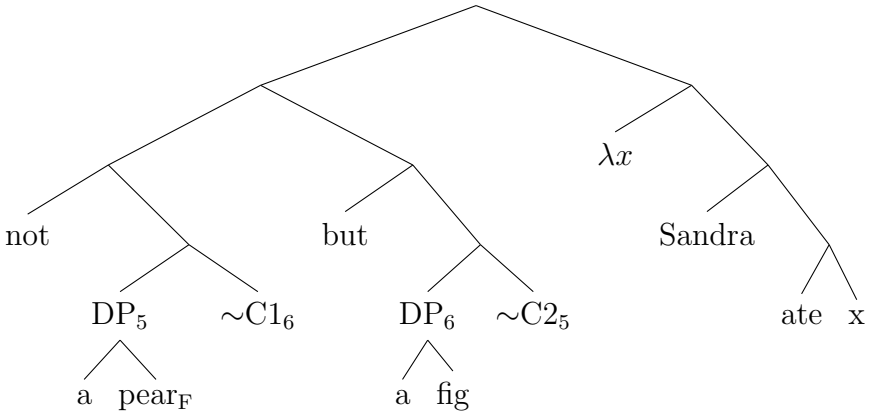
sentence *Sandra ate a pear* cannot be a member of the focus alternative value of either of the conjuncts.

However, in section 2, I argued that high coordination does not provide the correct syntax for the corrective negation structures, so while this discussion showed that the context sets need to be introduced into the structure lower than *not* and *but* to account for the contrastive interpretation, the proposal in (59b) is not yet the final answer.

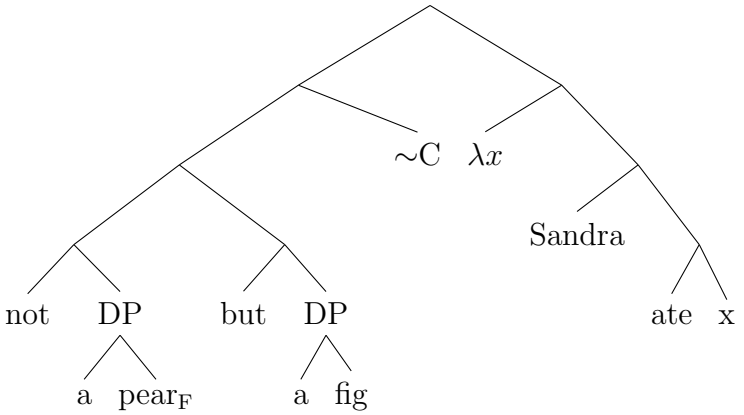
These last few paragraphs argued that low coordination combined with an alternative semantics analysis of focus does not capture the data accurately, because it can not account for context dependency and contrastive interpretation at the same time.

Movement in a low coordination structure? Another possibility that may save the day under the assumption of a low coordination structure is either focus movement or quantifier raising of the whole coordination, i.e. [$_{\text{DP}}$*not a pear but a fig*]. Again, there are several possible structures. In the structure (60a), the context set and alternatives are introduced lower than *not... but*, whereas in the structure (60b), they are introduced higher than the coordination, but lower than the subject and verb of the sentence. In (60c), alternatives are formed at a level higher than the whole sentence.

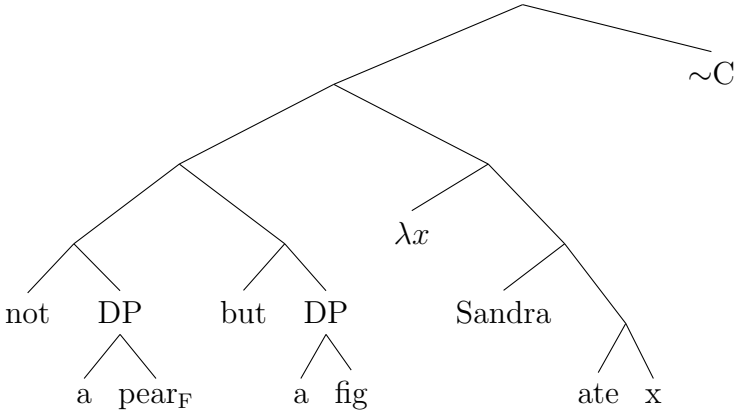
(60) a. Alternatives lower than *neg... but* are considered
Alternative shape: {a pear, a fig, ...}



b. Alternatives are considered at the level of coordination
Alternative shape {not X but Y}



c. Alternatives are considered at sentence level
Alternative shape {Not X but Y λ x. Sandra ate x}



Again, like in the high coordination structures, in principle all structures where the context set does not occur as a sister of constituents at least as deeply embedded in the structure as A and B should be excluded, because otherwise, the representation does not capture the contrast relation between the conjuncts. In addition, (60a) is excluded because the context set will not contain any propositional material, in which case the context dependency facts are unaccounted for. The same holds true for (60b). (60a) can account for the contrastive interpretation. It is possible that the focus alternative set of *a pear*, hypothesized as {a pear, a fig, ...} be cross–coindexed with the respective other context pronoun, and it is also possible that the ordinary semantic value of *a pear* be an element in the focus semantic value of *a fig*. The only option where the context sets do contain propositional material is (60c), but this option has the problem that it does not relate the conjuncts and therefore does not account for contrast.

In a low coordination structure, it is problematic to account for both context dependency and contrast at the same time, as context dependency requires there to be propositional material in the context pronoun, and contrast requires the alternative sets and context pronoun to be formed at a position lower than the negation and *but*. Another possibility that needs to be considered is association with focus. The next subsection will expand on this point.

5.2 Association with Focus

In the the preceding section 5.1 of this paper, it was argued that a vanilla theory of alternative semantics of focus is incapable of accounting for the data. Under a low coordination analysis, the global context dependency which is encountered in Corrective Constituent Coordinations is not accounted for, whereas a high coordination analysis, which could derive the dependency, is irreconcilable with the syntactic data.

In this subsection, another tool proposed by Rooth (1985, 1992), namely association with focus will be investigated. Association with focus means that the lexical entry of a given constituent makes obligatory reference to a context set, which is necessarily identified with the context set that an operator $\sim$ applies to. I will discuss the properties of association with focus employing the example of *only*, and then I will investigate whether Corrective Constituent Coordination associates with focus.

What is association with focus? Association with focus has been proposed for certain adverbs like *only*. Rooth (1985) argued that *only* makes reference to a context set in its lexical semantics. In addition, *only* also induces certain presuppositional relations between some semantic components that are involved. As of now, I am unsure whether these presuppositional relations are an idiosyncratic property of *only*, or a necessary component of focus association in general. In previous work I argued that there are certain parallels between the Sentential Contrastive Coordination and *only*, which would point to these structures being specific to associating adverbials that are semantically related to *only*.

Here is an illustration of the mechanics of *only*. Association with focus is necessary due to examples like (61) below. In this example, the focused constituent appears in a position that is non–adjacent to *only*, but at the same time, the interpretation of *only* relies on this component.

(61) Sandra only eats a pear_{F}.

The interpretation of this sentence is approximately: among all relevant choices of things that Sandra could eat, she eats a pear. Applied to the sentence in (61), Rooth (1992) proposes the semantics in (62)[8]

(62) $\forall P[[P \in C \wedge P(Sandra) \rightarrow P = \lambda x.x \text{ eats a pear}]]$

This reads: for all predicates P that are a member of the context pronoun C, and applied to *Sandra*, it follows that these predicated are $\lambda x.x$ eats a pear. These semantics have the consequence that *only* introduces different semantic relations with two propositions. On the one hand, *only* has been argued independently to entail its antecedent, that is *Sandra eats a pear* in (62). On the other hand, it is related to a proposition is that *Sandra ate nothing else but a pear.* The semantic relation between (61) and *Sandra ate nothing else but a pear* is discussed extensively in the literature, but there is no consensus found. The discussion leaves open the possibility that this second proposition is a presupposition, an implicature, or something else entirely with respect to (61).

Furthermore, Rooth (1992) provides more details with respect to how precisely the individual sets are related. As mentioned above, each semantic node has an ordinary semantic value, $[\![\alpha]\!]^0$, and a focus semantic value, $[\![\alpha]\!]^{\mathrm{F}}$. In addition, focus is interpreted against a context variable C. This variable is potentially free, but is subject to possible presuppositions and implicatures that are given in the context. For example, the sentence

(63) Mary only read_{F} the Tractatus Logico-Philosophicus

may be understood as meaning she did not understand it. In such circumstances, the context set is reduced to {read the Tractatus Logico-Philosophicus, understand the Tractatus Logico-Philosophicus}, to account for the scalar implicature that to say "only read" implies "not understand".

The context variable, which is necessary for interpretation of focus in alternative semantics, is, in Rooth's (1992) terminology, "identified as" the context set in the interpretation of *only.* In particular, this results in the coordination of an existential quantifier, asserting the existence of the context set, with the other universal quantifier that is part of the semantics of *only.* To "identify as" a context set means to introduce an existence statement of a context set as a coordination of the lexically given truth conditions. With respect to the example (63), this results in the representation below.

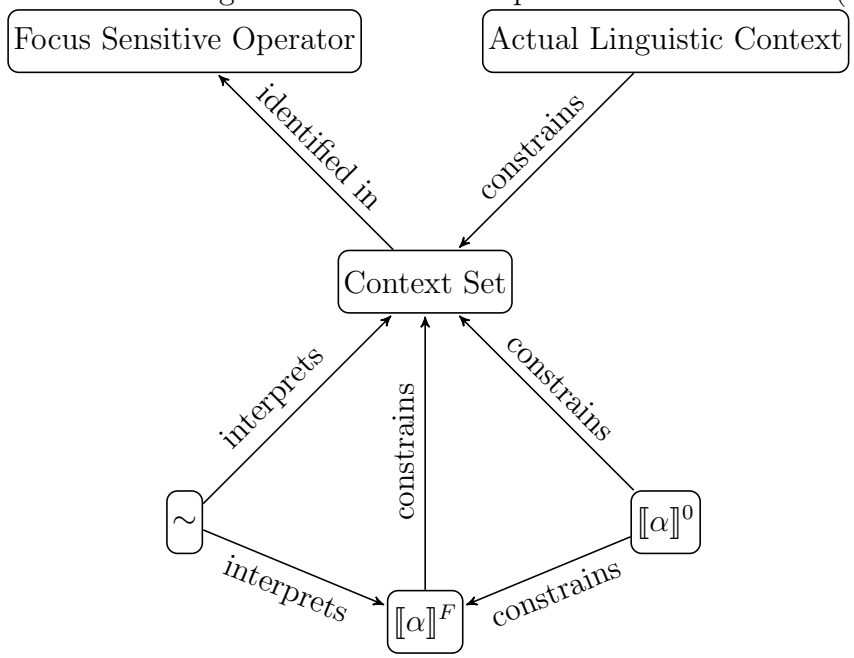
(64) $\exists C[C = \{read(TLP), understand(TLP)\}] \wedge \forall P[[P \in C \wedge P(Sandra) \rightarrow P = read(TLP)]]$

[8]This is the version in Rooth (1992), which is formulated in extensional semantics. Rooth (1985) formulates a version coherent with intensional semantics.

As mentioned above, I follow Rooth's (1992) analysis for question–answer coherence, and take a sentence to be contextually dependent on a previously uttered proposition iff. that proposition is a subset of the focus semantic value of the following dependent utterance.

In (65) below, I provide a visualization of which components in the theory of alternative semantics have which relations to which components.

(65) Relations among different levels of representations in Rooth (1992)



Predictions: what would it mean to associate with focus? With the above framework in place, I will evaluate what it would mean for Corrective Constituent Coordinations to associate with focus. All associations with focus will have in common that they have to involve focus obligatorily, and that their truth conditions or implicatures need to be affected by focus placement.

In particular, I will evaluate two possibilities. On the one hand, I will consider whether there is focus association by only the negation, whereas on the other hand, I will evaluate whether focus association may proceed by a complex constituent.

Predictions for associations with negation As discussed, focus in Corrective Constituent Coordinations is interpreted below negation, with the focus operator $\sim$ and the context pronoun C adjoining at the level of DP. This is so the contrastive interpretation of the sentence is accounted for. The individual *a pear* needs to be an element in the context pronoun for our example sentence (1), so the sentence can be interpreted as contextually dependent on *a pear* in discourse. The context pronoun also needs to consist of individuals.

Furthermore, given Rooth's (1992) mechanism of "identifying" with the context set that the negation refers to, the representation in (66) is derived. Clearly, negation here does not apply to a truth value, and I am remaining unspecific about its precise interpretation in this context. I am assuming that negation applied to an individual is defined. Ultimately, I may follow Kratzer's (1989) proposal, in which she proposes that negation combined with focus is a negative quantifier. Under such an assumption, the structure below would have to apply to another constituent of type e, and would yield an individual. These semantics are almost certainly not right in this version, and serve more the purpose of illustration of the association mechanism.

(66) $[\![\textbf{not a pear}]\!] = \lambda P_{\langle \mathrm{e,t} \rangle}.\exists C[C = \{\textbf{a pear, an apple, a fig}\}] \wedge \forall x[x \in C \wedge \mathrm{x \text{ is a pear}} \rightarrow \neg P(x)]$

According to this formalization, *not a pear* is interpreted as: there is a context variable consisting of *a pear, a fig, a banana*, and for all x that are members of this context variable, and that are a pear, the predicate P is not true of this x. Note that this equates the semantics of *not a pear* to a quantifier with the restrictor argument filled. It also means that this phrase can not be interpreted *in situ*, as it is of type $\langle \langle \mathrm{e,t} \rangle, \mathrm{t} \rangle$, and not of type e, as an object would be.

It is immediately visible that one part of the context dependency, namely that "Sandra eats x", cannot be derived from assuming that negation associates with focus in this way. The reason is that contextual dependency is captured by the proposition of a contextually given sentence being part of the focus semantic value of the sentence, but in the formula above, this value consists only of individuals, and no proposition can be part if it.

Therefore, I will explore another possibility. It is possible that contextual dependency is not modeled in the way it is proposed above, but rather as a presupposition. In section 3, I showed that there is good evidence to consider the meaning component that relates Corrective Constituent Coordinations to the context to be presuppositional. This assumption adds apparatus to Rooth's (1992) system. Before, contextual information was introduced via the context set, but in this case, we rely on the context set for introducing contrast, and presuppositions to introduce global context dependency.

With this in mind, consider the representation in (67) below:

(67) $[\![\textbf{not a pear}]\!] = \lambda P_{\langle \mathrm{e,t} \rangle}.\exists C[C = \{\textbf{a pear, an apple, a fig}\}] \wedge \exists y[y \in C \wedge P(y) = 1] \wedge \forall x[x \in C \wedge \mathrm{x \text{ is a pear}} \rightarrow \neg P(x)$

The only difference between this sentence and the sentence above is that the predicate λP now has a presupposition that there exists an individual in the context variable such that the

nucleus predicate is true of it. Just like before, this semantic representation works under the assumption that the negation quantifier–raises to a position c–commanding the sentence.

The representation above now fulfills all the empirical requirements for the sentence. The set of alternatives for the first object can be formed lower than the negation, and therefore, a contrastive interpretation is possible. It changes gears in its assumption that the contextual proposition that Corrective Constituent Coordinations depend on needs to be part of the set of alternatives, but it marks parts of the sentence as presupposed. This is very related to the givenness operator in Wagner (2006), which I have introduced in section 4.1.

What is problematic about this example is that it assumes that the constituent "Not a pear" moves by itself, which is a violation of the Coordinate Structure Constraint. Because of this, in the next paragraphs I will investigate a proposal that assumes that the complex adverbial *not+but* associates with two foci.

Predictions for association by negation+but Below, I present a proposal that assumes that the complex constituent *not+but* associates with focus. Again, this proposal will assume that the complex constituent *not X but Y* moves to a position where it c–commands the rest of the sentence.

(68) $[\![\textbf{not a pear but a fig}]\!]=\lambda P_{\langle \mathrm{e,t}\rangle}.$
$\exists C1, C2[C1, C2 = \{\text{a pear, an apple, a fig}\}] \wedge \exists z.[z \in C1 \wedge z \in C2 \wedge P(y) = 1]$
$\wedge \forall x, y.x \text{ is a pear} \in C1, y \text{ is a fig} \in C2 : \neg P(x) \& P(y)$

Under this conception, contrast happens independently of focus, because the context sets C1, C2 will be cross–coindexed with constituents in the respective other conjunct, and their ordinary semantic value will be a subset of the focus semantic value of the respective other conjunct. The context dependency is represented by the complex adverbial introducing a presupposition that its sister is given in context.

Ultimately, one may want to also assume that the negated object is also presupposed. The reason is that the sentence is intuitively dependent on the whole proposition "Sandra ate a pear.", as I have described in more detail in section 3 above. However, because *a pear* and *Sandra ate x* are not adjacent constituents, it can be that these are two presupposition that are due to to different presupposition triggers, where *but* may presuppose *Sandra ate x*, and the negation may presuppose *a pear*. Ultimately, the sentence "Sandra ate x" and a presupposition of the negated object may work together in constructing the impression that is has to be the whole sentence "Sandra eats a pear", and not just "Sandra eats something", that needs to be given in context. However, whether or not negation involves a presupposition is a much larger question that I can not answer here.

Is focus obligatory One of the ways of distinguishing focus association from other types of interaction with focus is that in association, focus needs to occur obligatorily, because the association requires a context set that it is identified with. Several criteria have been proposed to show whether focus is obligatory in a certain position. One of them is using unstressed pronouns in English. Corrective Constituent Coordination sentences with unstressed pronouns are indeed quite unacceptable in English. Stressed pronouns that are presumably interpreted deictically are acceptable in the same position. This may be true with the exception of second occurrence focus, which is not present in the examples given.

(69) ? Mary saw not HIM but HER.

(70) * Mary saw not'im but'er

Does focus interact with the meaning The placement of focus does has influence on the truth conditions of the sentence. Consider the pair of sentences below. They differ by whether focus was placed on the direct object or the indirect object of the event noun *donation*. This shift of focus changes what the contrasted phrase is: both in example (71a) and (71b), Nicole sees Geraldine donating sweaters to the Salvation Army. In example (71a), the question discussed in the sentence is who Geraldine donates to, whereas in (71b), it is what she donates.

(71) a. Nicole saw not Geraldine's donation of pants to GOODWILL, but her donation of sweaters to the SALVATION ARMY.

b. Nicole saw not Geraldine's donation of PANTS to Goodwill, but her donation of SWEATERS to the Salvation Army.

These examples demonstrate that focus affects the interpretation of Corrective Constituent Coordination sentences. However, the demonstrated difference may not be a truth conditional difference, but rather an implicature, as a scenario that makes the one reading true and the other false does not come to mind.

The discussion above showed that focus association is a possible analysis for Corrective Constituent Coordination. Just like the givenness analysis, it also needs to make stipulations, namely,it assumes that the global context dependency is represented as a presupposition in the lexical entry.

6 Can one Decide between the two Analyses?

In the preceding sections, I have proposed to account for the phenomena in Corrective Constituent Coordination in one of two ways: either by assuming association with focus, or

by assuming a givenness operator. It is hard to decide whether either of these two analyses is superior to the other.

If assuming the semantic proposal I made for the complex component *not... but* in a framework of focus association, one of the consequences is that the $\lambda x.Sandra\ ate\ x$ is presupposed in context. I have shown in the previous section 4 that there is good evidence for such an analysis. In a focus association account, this presupposition is specific to the construction at hand, and is not derived from a theory of alternative semantics of focus in general, which may be viewed as a drawback of this account.

The givenness approach had to make some stipulations about assuming alternative sets and therefore the local context dependency, i.e. contrast. In a theory of alternative semantics of focus this dependency arises naturally. The necessity of this stipulation may be a weakness of the givenness account. An advantage of the givenness theory is that the mechanism of presupposition introduction is not construction–specific, but is assumed to apply across the board in all sentences. In addition, one may argue that marking of givenness is cognitively more realistic, because it involves an implicit comparison with material that was realized in the past, that the conversation participants should have access to, whereas alternative semantics requires alternatives as abstract entities.

A potential advantage of a focus association approach is that under the present view, the semantics of Corrective Constituent Coordinations is essentially a two–place quantifier. This view accounts for one of the central facts we observed about these coordinations, namely that they are not optional. Under this view, the relation between *not... but* and the conjuncts is characterized as a predicate–argument relation.

I showed that both of these analyses can account for the same set of data: they account for contrast by a mechanism of coindexing of alternatives and manipulations with the ordinary semantic value and the focus alternatives, and they account for global context dependency in terms of presuppositions. At present, I have not yet collected enough evidence in favor or against each of these proposals. I will do so in my forthcoming dissertation.

7 Is Context Dependency enough?

In my dissertation, I would like to develop Corrective Constituent Coordination as an instance of a discursive operator that necessarily applies across propositions, and refers back to propositions in context. I want to propose the discourse action of *Denial* as an operator that necessarily has to refer back in discourse. Under such a conception, what I called "global context dependency" is a result of this discourse function. I will argue that assuming

denial as a discourse operation is necessary because in addition to Corrective Constituent Coordination, there are other grammatical processes sensitive to it.

7.1 Denial

Van der Sandt (1991) proposes that Denial is a discourse function that is independent of negation. Consider the following examples below. In all of these sentences, a proposition that is expressed in the first utterance does not hold up on a contextual level larger than the discourse level, and is *denied*, which is different from being *negated*. Proper negation of these propositions is not part of the examples, and is not needed to express that a previous utterance is inaccurate. The relevant constructions in the examples are assertion of an originally negated proposition and a sequence of contrastively focused predicates. Also, sentence (74a) shows that it is not the case that everywhere we encounter negation, we necessarily encounter denial.

(72) a. Martine didn't get home on time yesterday.
b. Yes, Martine got home on time.

(73) a. This dress is white and gold.
b. This dress is blue and black.

(74) a. Not long ago, I saw a coyote on the side of the street.

Grammatically, Van der Sandt (1991) analyzes denial as a flexible operator, which can apply to all sorts of utterance levels, it may apply to presuppositions, phrases or other components of the utterance.

The following examples in (75) and (76) show that Corrective Constituent Coordination of the kind that are the topic of this work have a more restricted discursive function compared to their closely related counterpart, Sentential Corrective Coordination. While (75) shows that both constructions can be interpreted as denials when the final utterance contradicts the original statement, (76) shows that when the corrective sentences are an elaboration of the original statement, and do not contradict it, only using Sentential Corrective Coordination is felicitous, Corrective Constituent Coordination is not.

(75) Sandra ate a pear.
a. She didn't eat a fruit, but a vegetable.
b. She ate not a fruit, but a vegetable.

(76) Sandra ate a fruit.
a. She didn't eat a pear, but a fig.

b. # She ate not a pear, but a fig.

From this paradigm, I conclude that corrective coordination expressed with sentential negation can express denial, but need not necessarily do so. The construction with constituent negation necessarily expresses denial. Note that all the sentences in (72) above could also grammatically be uttered when preceded by *no*.

I propose the interjection *no* as a marker of denial. *No* may be more accurately captured as denial, as opposed to negation, because it can constitute an objection to different grammatical levels that occur in the sentence. Consider these three possible objections employing *no*. None of them contains negation, but 'no' cooccurs with all these different denials.

(77) A. Angela went to the store with Mark.

B. i. No, she went to the movies.

ii. No, she went to the store with Gary.

iii. No, she works at the store with Mark.

From these examples, it is also apparent that these denials are focus sensitive: the item that is denied needs to be focused. Intuitively, the function of denial in these construction is to pick an utterance in discourse, and state that one of its participants or constituents is not correctly represented, and that the same slot should be filled with another choice. Note that without *no*, the sentences in the discourse above do not exclude each other.

Denial may also be a component in the semantics of *but* more generally. For example, Toosarvandani (2010) reports that English does not allow *but* to occur by itself, but he also observes that if the first conjunct is left empty, it has to be preceded by *no*. Taking seriously the proposal I made above, that means, the first conjunct can be filled with a marker of *denial*, and need not necessarily contain a negation. *No* here is in fact not a marker of negation, but of denial, so there exists a grammatical dependency between it and *but*.

(78) A: Does Oswald play violin in the orchestra?
B: *(No,) but $[\text{Oboe}]_{\text{F}}$. (Toosarvandani, 2010, 13)

However, in instances where the coordination applies at a higher level than the DP level, that dependency is not found any more:

(79) A: Should we go?
B: (*No,) but Natalie never made it here!

This example shows that there exist differences in the grammatical dependency on denial operators.

This short outline showed that in English alone, there are a number of constructions sensitive to the discourse action of denial. Therefore, in my dissertation, I want to develop this

notion further, and consider Corrective Constituent Coordinations as one way of expressing denial, and continue researching the potential grammatical representation of discourse relations.

7.2 Further Implications, Routes for the Dissertation

Clearly, the present work can only give exhaustive answers to very few questions that correction as realized in Corrective Constituent Coordination brings up. In my forthcoming dissertation, I plan to address the wider implications that the current research has with other areas of linguistics and information theory.

7.2.1 A more General View on Focus Association

The present research showed that a representation of focus as dealt with alternative semantics, focus association is necessary when the modifier that associates with occurs low in the structure. These findings also apply to other focus–associating particles, such as *only*. Consider the following sentences:

(80) Erica talked only to Ben.

Also with *only*, it is argued in the literature that certain sentence–level presuppositions occur. For example, the sentence in (80) triggers the presupposition that Erica talked to Ben. Just like with Corrective Constituent Coordinations, it is unclear how this presupposition arises compositionally. In my thesis, I will investigate the implications the present research has on the analysis of other focus–associating particles.

7.2.2 A more General View on Focus Sensitive Coordination

In the present work, I investigated the particular nature of the relation between the negation and *but*. I also showed in more detail that neither the negation c–commands *but* nor *vice versa*. In my dissertation, I will discuss in more detail the relation between these two components. In particular, I will investigate whether they form a natural class with other coordinators, such as *either. . . or*, because they share certain properties. For example, *either. . . or* also relies on focus in its conjuncts, and it appears neither of the conjuncts c–commands the respective other. Also, both conjuncts are obligatorily present.

7.2.3 A more General View of *but*

My analysis will be relevant to the semantics of *but* on a more general level. In this paper, I provided an analysis for sentences involving Corrective Constituent Coordination. *But* occurs

in many other constructions, which have been analyzed as syntactically and semantically distinct. Sentences like (81c), termed counterexpectational in the literature, do not need to cooccur with negation, and they do not necessarily rely on narrow focus. They have been argued to differ syntactically and semantically from sentences like Corrective Constituent Coordinations (Toosarvandani, 2014). In my dissertation, I will widen the findings made in the present work to these different constructions.

(81) a. Sandra ate not an apple, but a pear.

b. Sandra didn't eat an apple, but a pear.

c. Sandra ate apples, but only reluctantly.

In general, while the sentences in (81) may not have the same lexical entry for *but*, it is expected that the semantics of the coordinator are at least related. In my dissertation, I will widen the findings that I made here for *but* in Corrective Constituent Coordination to other uses of the coordinator.

7.2.4 Information Theory and Givenness/Focus

The notions of focus and givenness have deep relations to predictions about the general structure of discourse. Taken seriously, they seem to imply that new information only tends to occur in certain places in a sentence, and that informativity across an utterance is not uniformly distributed, but rather that it tends to build up towards the end of the sentence. This is interesting from several perspectives. On the one hand, it is worthwhile to contextualize these findings in terms of Information Theory. On the other hand, it appears to be at odds with the Uniformity of Information Density Hypothesis in Jaeger and Levy (2006), which claims that speakers tend to organize utterances such that the information is uniformly distributed across utterances. A theory of givenness will lend itself especially well to investigating this issue in a corpus. Note that an alternative semantics theory of focus has to rely on very abstract entities, such as alternative sets, which may not be as well suited for corpus analysis. A theory of givenness however allows to derive the context relations from the discourse. In my dissertation I want to investigate these questions of information structure using corpus–based methods.

8 Conclusion

In this paper, I argued that the correct syntactic analysis of Corrective Constituent Coordination is a low–coordination analysis. The semantic representation of the focus structure

of such a complex construction involving coordination, focus, and contrast, proved to be a challenge while assuming a low coordination structure.

I showed that in terms of alternative semantics of focus, the structure is only analyzable if association with focus takes place, essentially giving the discourse requirements a lexical specification. This account had to make stipulations concerning the nature of "global" context dependency, that is contextual reliance on a previous utterance.

Another analysis that also accounts for the data involves presuppositions of givenness, in combination with alternative sets. At this point in time, it is an empirical as well as conceptual question which analysis is superior to the other.

To conclude, I want to review how these analyses relate to the three grammatical components that I introduced in the beginning of the paper.

As regards the requirement for constituent negation, I proposed that in fact, this requirement is not about the negation itself, but rather about expressing the discourse function of denial, and it appears that the conjunct *but* is dependent on an operator of denial.

This also sheds light on the requirement that there be obligatory coordination. I showed that if one represents the construction as a focus associating construction that takes two context pronouns as its argument, an account is given for the obligatoriness of the second conjunct. However, a grammatical notion of denial may be an alternative to this conception. In such a theory, *but* may be construed as grammatically dependent on denial.

The pitch accents that are necessarily realized within the conjuncts are a consequence of the contrastive interpretation of the conjuncts. We observed that in a theory formulated in terms of focus association, these facts are derived without additional assumptions.

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