

The Syntactic Side of Conditional Conjunction

Philipp Weisser*
Universität Leipzig
Institut für Linguistik
Beethovenstr. 15
04107 Leipzig - Germany

Abstract In Culicover and Jackendoff (1997), the Conditional Conjunction construction is cited as one example of a literal mismatch between syntax and semantics because it seems to exhibit syntactic properties of coordinate structures and semantic properties of subordinate structures at the same time. Hence, as they conclude, this construction cannot be derived in frameworks such as Minimalism where the semantics is derived from some syntactic level of representation such as LF. I want to argue that it is possible to derive the specific properties of this construction under Minimalist assumptions if one adheres to a strictly derivational model of Minimalism and subscribes to the assumption that a clause can be base-generated as an adjunct low in the tree and then be moved to the specifier of a coordination phrase as the regular first conjunct of a coordination.

Keywords: Conditional Conjunction, Asymmetric Coordination, Subordination, Merge-over-Move, Movement to Spec&P.

1. Introducing Conditional Conjunction

A certain number of constructions are regularly cited as being problematic for frameworks which do not allow for complex constructions to be stored in the lexicon. One such construction is the Conditional Conjunction construction. Based on the discussion in Culicover and Jackendoff (1997), it is argued that frameworks such as Minimalism cannot derive the peculiar properties of this construction. The reason for this argument is that the clausal relation in this construction seems to be neither coordinate nor subordinate, which is something not provided for in Minimalist frameworks.

And, in fact, yet, there has been no attempt to derive the Conditional Conjunction construction within a Minimalist framework. This suggests that the construction in question indeed poses a severe challenge for Minimalist theory and related frameworks. In this paper, I will illustrate the peculiar properties of this construction in detail, discuss why they might be challenging from a Minimalist perspective and put forward an analysis which captures the properties of the construction and still adheres to Minimalist assumptions.

I will proceed as follows: Section 2 illustrates the properties of the Conditional Conjunction construction. In Section 3, I will outline the analysis by Culicover and Jackendoff (1997) and discuss its shortcomings and why it is radically incompatible with a Minimalist framework. Section 4 discusses a recent semantic analysis of this construction by Keshet (2013) and shows which syntactic questions it leaves open. Then, I will sketch my proposal, which is compatible with the semantic account by Keshet but addresses syntax of the construction and the pressing questions he was not able to answer. Section 5 discusses some of the consequences of my approach, some of its advantages as well as potential problems. Section 6 shows how the analysis carries over to the German equivalent of this construction. Section 7 concludes.

2. Conditional Conjunction

Conditional conjunction (also known as the left-subordinating-and construction) as well as the related “One more”-construction have been the subject of linguistic studies for several decades now (cf. Ross 1967; Culicover 1970; Lakoff 1970; Culicover 1972; Lakoff 1986; Culicover and Jackendoff 1997; Takahashi 2004; te Velde 2005; Klinedinst and Rothschild 2012; Keshet 2013). The major characteristic of both of these constructions is the apparent mismatch between syntax and semantics. Syntactically, examples like (1-a) and (1-b) look like cases of coordination but their semantics resembles the semantics of a conditional clause (cf. (1-c)), which is generally assumed to be subordinate.¹

- | | | | |
|-----|----|---|-----------|
| (1) | a. | You drink one more can of beer and I'm leaving. | <i>CC</i> |
| | b. | One more can of beer and I'm leaving. | <i>OM</i> |

¹ In what follows, I will use the following abbreviations: CC - Conditional Conjunction; OM - “One more”-construction; Coord - (Ordinary) Coordination; Cond - Conditionals

- c. If you drink one more can of beer, I'm leaving. *Cond*
(Culicover and Jackendoff, 1997, 197ff)

Culicover and Jackendoff (1997), who were, to my knowledge, the first to carve out the properties of these constructions in detail, observed that they may be used to paraphrase conditional clauses; however, their distribution is much more restricted. For example, the conditional reading of these constructions much harder to get when they appear in past or perfect tense:²

- (2) #You've drunk another can of beer and I've left.
(Culicover and Jackendoff, 1997, 198)

An important property of CC constructions is that they are restricted to coordination of a certain category. The conditional reading is lost when either two CPs (as in (3-b)) or two vPs (as in (3-c)) are conjoined.³

- (3) a. You know, of course, [_{CP} that [_{TP} you drink one more beer] and [_{TP} you get kicked out]].
b. #You know, of course, [_{CP} that you drink one more beer] and [_{CP} that you get kicked out]. (Culicover and Jackendoff, 1997, 198)
c. #You [_{vP} drink one more beer] and [_{vP} leave].

Interestingly, even though cases of CC look like a coordinate clauses on the surface, they share a lot of properties with the construction they paraphrase, namely conditional clauses.

This can be illustrated with a number of different properties such as binding, extraction, quantifier raising, right node raising and gapping. All of these properties will be discussed in detail in Sections 4.4 and 5.1. Let me just give two examples which clearly illustrate that the syntactic properties of CCs significantly differ from those of ordinary coordination. In (4), it is shown that ordinary coordination (4-a) can undergo gapping but CCs (4-b) and ordinary conditional constructions (4-c) cannot.

- (4) a. John ordered wine and his wife _ just water. *Coord*
b. #John orders wine and his wife _ just water.⁴ *CC*
c. *If John orders wine, then his wife _ just water. *Cond*

The same holds for variable binding. With regular coordination, one cannot establish binding relations from one conjunct into another. This is shown in

²Throughout this article, minimal pairs between ordinary coordination and conditional conjunction are always constructed on the basis of this observation. Ordinary coordination constructions bear past tense while CCs bear present tense. Note, however, that past tense is not categorically excluded in CCs (see Section 5.5 for discussion).

³A detailed investigation about what kind of category is involved here is given in Section 4.2.

⁴Under the ordinary coordination reading, (4-b) is of course grammatical. However, a CC reading (e.g. in a context where John and his wife always go out together and whenever he orders wine, she orders water because he won't be able to drive home), is impossible.

(5-a) where the variable pronoun in the first conjunct cannot be bound by a quantified expression in the second one. However, as illustrated in (5-b), with CC constructions, binding of a variable pronoun in the first conjunct is possible. Again, CCs pattern with conditionals (shown in (5-c)).

- (5) a. #We gave him_i enough opportunity and every senator_i, no matter how honest, succumbed to corruption. *Coord*
 b. You give him_i enough opportunity and every senator_i, no matter how honest, will succumb to corruption. *CC*
 c. If you give him_i enough opportunity, every senator_i, no matter how honest, will succumb to corruption. *Cond*
(Culicover and Jackendoff, 1997, 204)

It seems that the CC construction combines the surface structure of an ordinary coordination structure with a number of properties which are usually indicative of subordinate structures. For frameworks such as Minimalism, which assume a rather strict dichotomy between subordinate and coordinate structures, such findings pose a severe challenge. As we will see in the following sections, a number of people, most prominently Culicover and Jackendoff (1997), even claimed that such structures are impossible to derive and are thus a fatal counter-argument against frameworks such as Minimalism.

3. The analysis by Culicover and Jackendoff (1997)

The fact that CCs behaves just like conditional clauses with respect to quite a number of tests (i.a. the Gapping and the variable binding examples in the last section) might suggest that they are actually not coordinate at all, and one might think the conjunction *and* may also be used as a subordinator. Culicover and Jackendoff (1997) briefly discuss this possibility but discard it for a number of reasons.

First, they argue that if *and* was a subordinator, it would be a very strange one, at least in English, because it would be the only clause-final subordinator that English has. All other complementizers or C-elements in general always appear in clause-initial position.

Second, they show that, unlike other subordinate clauses, the subordinate clause of a CC must always appear in sentence-initial position. Other kinds of subordinate clauses can appear either sentence-initially, sentence-finally or sometimes even within the main clause:

- (6) a. *[_S Louie puts out a contract on you, [_S [_S he sees you with the loot] and]]. (Culicover and Jackendoff, 1997, 200)
 b. Big Louie puts out a contract on you if he sees you with the loot.
 c. If he sees you with the loot, Big Louie puts out a contract on you.

Hence, Culicover and Jackendoff (1997) conclude that the analysis of *and* as a normal subordinator of English cannot be maintained. Instead they propose a completely new analysis. It is based on the assumption that the apparent

mismatch between syntax and semantics is to be taken literally here. CCs are syntactically coordinate but semantically subordinate.

This assumption helps to solve the puzzle of CCs if one further assumes that all cases where the CC behaves like a coordinate clause are syntactic phenomena and all the cases where it behaves like a subordinate clause are semantic phenomena. This means, for example, that all kinds of binding (i.e. licensing of anaphors, variable binding) make reference to semantic structure and ignore syntax completely. However, Culicover and Jackendoff (1997) are not explicit as to how these purely semantic principles can derive the data in (5). On the other hand, the fact that the semantically subordinate clause of a CC must always appear clause-initially is due to the fact that the whole construction is syntactically coordinate and extraposition of a first conjunct violates some syntactic principle.⁵

- (7) Processes/Constraints ordered by the structure to which they apply according to Culicover and Jackendoff (1997)

<u>Syntax</u>	<u>Semantics</u>
Extraposition	Gapping
<i>CED</i>	Right-Node Raising
<i>CSC</i>	Licensing of anaphors
	Variable Binding
	<i>CSC</i>
	(ATB-Movement)

Whenever CCs pattern with conditional if-clauses with respect to some property, this property is a semantic property, and whenever some property of CCs patterns with coordinate clauses, the property must be a syntactic one.

However, the question is whether the classification of operations and constraints into these two distinct classes is empirically justified or merely stipulated to make the system work. Since the main purpose of this paper is to present an alternative analysis of CCs, I do not want to delve too deeply into that discussion. However, it seems to me that the classification in (7) is, at least for some of the phenomena, far from uncontroversial. The question of whether binding theory (i.e. licensing of anaphors and variable binding) is a matter of syntax or semantics is still under debate. To my knowledge, it has not been possible to capture the complexity of the whole topic of binding theory by means of one module, either syntax or semantics. Hence, it seems problematic to just say that

⁵In its standard formulation the Coordinate Structure Constraint (Ross 1967) prohibits extraction of the first conjunct of a coordination. However, since the Coordinate Structure Constraint is, according to Culicover and Jackendoff (1997), a purely semantic principle and does not apply to CCs (because CCs are semantically subordinate), this ban on extraposition cannot be attributed to it. So, ironically, Culicover and Jackendoff (1997) need to stipulate a constraint which basically does the exact same work as the CSC does but which does it in the syntax. Hence, I have listed the CSC in both columns.

binding applies within the semantics without reference to syntactic structures at all. A similar point can be made for Gapping which is well-known to be subject to a certain number of locality constraints (i.e. Gapping may not cross syntactic barriers. (cf. Hankamer 1973; Neijt 1979; Pesetsky 1982; Chao 1988; Hartmann 2000; Murguía 2004)). And since such locality constraints are usually thought to be syntactic in nature, it seems implausible that Gapping is a purely semantic process. In my opinion, this shows that the approach by Culicover and Jackendoff (1997) has very far-reaching and often undesirable consequences.

Apart from that, a note is in order about the relation of syntactic and semantic structure in the account of Culicover and Jackendoff (1997) in general. As we have seen, they try to show that CCs are semantically subordinate and syntactically coordinate. And since these two states, namely being subordinate and being coordinate, are, according to Culicover and Jackendoff (1997), incompatible with each other within the same level of representation, they try to construct an argument for their hypothesis that syntax and semantics are two completely distinct levels and “that syntax is therefore autonomous in that it is not reducible to semantic structure, and semantic structure is not isomorphic to any level of syntactic structure such as LF” (Culicover and Jackendoff, 1997, 196). This, of course, is incompatible with the standard model of Minimalism, where the semantics is built on the basis of syntactic structure.

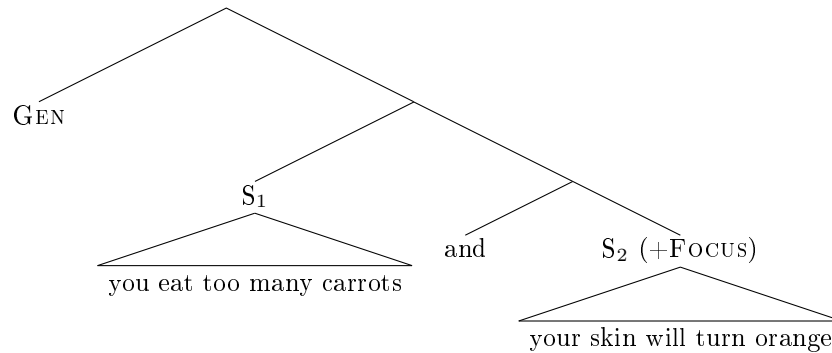
I will, in the remainder of this paper, show that it is possible to develop an analysis of CCs that is consistent with the fundamental assumptions of Minimalist Theory and nevertheless captures all of its central properties. To this end, I will draw heavily on a recent paper by Keshet (2013), who presents a convincing analysis of the semantic properties of CCs. However, since this analysis only focuses on the semantic properties of the construction, quite a number of questions about the syntactic properties of CCs remain unanswered.

4. A derivational analysis of Conditional Conjunction

4.1. The semantic analysis by Keshet (2013)

In contrast to previous analyses such as Culicover and Jackendoff (1997) or Klinedinst and Rothschild (2012), Keshet (2013) neither assumes two different lexicon entries for *and*, nor a mismatch between different levels of representation. According to him, CCs are characterized by a standard coordination phrase within the scope of a modal element and the correct representation for an example like *You eat too many carrots and your skin will turn orange* is (8).

(8)



Using a number of tests, inter alia pitch contour evaluation, Keshet conclusively shows that CCs have a quite restricted focus structure. In CCs, the first conjunct is generally unfocused while the second is usually focused.⁶ Take the following minimal pair in (9) and (10) uttered in a context in which someone asks about the controls a computer game.

- (9) What happens when you hit the space bar?
You hit the space bar and your character jumps.
- (10) How do you make your character jump?
??You hit the space bar and your character jumps. (Keshet 2013, p. 228)

If the given information is part of the first conjunct as in (9), then using a CC is possible. However, if the first conjunct consists of new information and the given information is part of the second conjunct, the answer is unacceptable. Matrix-level focus must fall on the second conjunct.

To form a CC, a generic modal element takes scope over a normal conjunction whose conjuncts have these special focus properties. Due to the fact that this modal element is focus-sensitive, the unfocused first conjunct may join the restriction of the modal such that the structure above receives an interpretation like *Generally, in situations where you eat too many carrots, you eat too many carrots and your skin turns orange*. This is basically the same process as with regular conditionals in which a high modal takes scope over the main clause and the conditional with the result that the backgrounded conditional joins the restriction of the modal (cf. Kratzer (2012)). As the first conjunct joins the restriction of the modal, it restricts the set of possible situations in which the proposition in the second conjunct is true. A generic modal like *always* as in *You come on time and you always get a seat* thus states that in each situation in which the first conjunct is true, the second conjunct is true as well. This is the meaning of a generic CC.

⁶ Even though virtually all examples of CCs have this kind of focus structure, this is not necessarily the case. Keshet discusses CC examples in which focus can fall on the first conjunct as well. He shows that his analysis can cope with these examples and he shows that such examples indeed have a slightly different meaning.

However, since not all CCs are generic, Keshet (2013) argues that instead of a generic modal, the same position can also be occupied by a covert modal yielding a future interpretation. This assumption may seem ad hoc at first but Keshet argues that the same element is necessary for the semantic derivation of conditionals whose main clause does not contain an overt modal and, more generally, for future uses of present tense forms.⁷ Thus, the covert modal in *You leave this house and you are grounded* either states that whenever you leave this house, you will be grounded or that if you leave this house at a certain point in the future you will be grounded, depending on whether the covert modal in the second conjunct has a generic or a future reading (cf. (Keshet 2013, p.221f)).

Thus, Keshet convincingly shows that it is possible to derive the semantics of CCs while still maintaining a coherent meaning of the conjunction *and* and without doing away with the idea of a semantic structure which interprets the output of the syntax. Furthermore, many of the peculiar properties of CCs such as the modal and tense restrictions of both conjuncts or the special focus properties of the construction nicely fall out from his analysis.⁸

However, as Keshet frankly admits, there are a number of syntactic properties which lack a satisfying answer. First, data concerning binding of anaphors and variable pronouns indicate that the underlying structure of CCs is not as simple as Keshet sketches. In cases of standard coordination, elements within one conjunct cannot be bound by elements within the other conjunct.

- (11) *We gave him_i enough opportunity and every senator_i, no matter how honest, succumbed to corruption. *Coord*
(Culicover and Jackendoff, 1997, 204)

However, with CCs, the case is different. If we use present tense to promote the CC reading, binding is possible. This strongly suggests that there is something more to these structures than just garden-variety coordination.

- (12) You give him_i enough opportunity and every senator_i, no matter how honest, will succumb to corruption. *CC*
(Culicover and Jackendoff, 1997, 204)

Second, we find that, at least some speakers accept asymmetric extraction from CCs. If CCs were instances of ordinary coordination, extraction would be un-

⁷The fact that Keshet assumes that the category future is a modal category rather than a temporal one will also be of importance in the course of the discussion about the height of the level of coordination in Section 4.2.

⁸An anonymous reviewer points out that the mechanisms Keshet employs resemble those in the semantic framework of Pietroski (2005) et seq. In Pietroski's system, all kinds of lexical items are taken to be monadic predicates which are conjoined (or: concatenated in Pietroski's terms) to yield the correct meaning. In the case of CCs, the two events in question are concatenated to form a complex event very much in the same way as serial verb constructions in Chapter 3.3 in (Pietroski, 2005, p.209ff). In a sense, this provides a strong argument for Keshet's semantic account to CCs and, more generally, to a derivational treatment of the construction like the one proposed in the next sections.

grammatical due to Ross' (1967) Coordinate Structure Constraint. This is shown in (13).

- (13) a. *This is the pizza Sam ordered and Mary asked for an orange juice.
- b. *This is the beverage Sam ordered a pizza and Mary asked for.

In (13-a), *pizza* is extracted from the first conjunct leaving the second conjunct intact. In (13-b), *beverage* is moved out of the second conjunct without affecting the first one. However, in both cases, extraction leads to ungrammaticality. But, in contrast to the examples above, extraction from CCs is only slightly degraded, if at all, at least according to Culicover and Jackendoff (1997). In (14-a), an element was extracted from the left conjunct while leaving the right one intact. In (14-b), vice versa.

- (14) a. ?This is the loot that you just identify _ and we arrest the thief on the spot.
- b. ?This is the thief that you just identify the loot and we arrest _ on the spot.⁹ (Culicover and Jackendoff, 1997, 206)

As with binding, Keshet (2013) acknowledges these data but does not offer an explanation. He briefly alludes to cases of asymmetric coordination as in (15) and states that violations of the Coordinate Structure Constraint are possible in other cases as well. However, it is important to note that CCs should not be lumped together with simple cases of asymmetric coordination since the latter obligatorily involves low coordination of two phrases involving the same subject (cf. (16)).

- (15) Here's the whiskey_i which I went to the store and bought t_i.
(Ross 1967)

- (16) *Here's the whiskey_i which I went to the store and Peter bought t_i.

Nevertheless, this parallelism between CCs and asymmetric coordination is an interesting observation that I will come back to in the next section. There, I argue that these two constructions share quite a number of properties and even though they are to be distinguished, they should be derived with the same underlying mechanism.

Third, Keshet (2013) observes another property of CCs which shows that what we are dealing with here is not a case of ordinary coordination. It concerns the behavior of adverbs. In CCs, an adverb in the second conjunct may covertly raise into a position where it takes scope over both conjuncts. Hence, whether

⁹It should be noted that the data on extraction out of CCs are not uncontroversial. Some speakers find that extraction from CCs is degraded in general, some allow for asymmetric extraction but only from either the left or the right conjunct. Nevertheless, I think these data are of significance because there is a clear contrast between (14) and clear violations of the Coordinate Structure Constraint (as with ordinary coordination in (13) above). This shows that there must be a basic structural difference between ordinary coordination on one hand and CCs and other cases of asymmetric coordination on the other.

the adverb is located within the second conjunct or whether it is above both conjuncts does not affect the meaning:

- (17) You come early enough, and you sometimes get a seat.
 = Sometimes, you come early enough and you get a seat.
 (Keshet, 2013, 242)

This is not possible when the adverb is located in the first conjunct (see (18)). Similarly, covert adverb raising is also ungrammatical with ordinary coordination (see (19)).

- (18) You sometimes come early enough, and you get a seat.
 ≠ Sometimes, you come early enough and you get a seat.
 (Keshet, 2013, 242)
- (19) Peter went to Canada and Mary sometimes visited him.
 ≠ Sometimes, Peter went to Canada and Mary visited him.

Again, we see that the second conjunct of a CC is somehow more amenable to certain processes than the first conjunct and Keshet suggests that the reason is for this asymmetry is an underlying relation between CCs and the construction they paraphrase, namely conditional subordinate clauses. He does not develop this idea any further and does not specify how this relation could look like but I think that this intuition is on the right track and in the next section, I will implement it into a theoretical approach.

So, to sum up, Keshet's (2013) analysis derives the semantics of CCs including some of the more peculiar properties of CCs such as the distinct focus structure and the tense or mood restrictions. However, Keshet's analysis is limited to the semantic properties of the construction and the syntactic properties, which are, in a sense, just as peculiar, cannot be accounted for.

Thus, in what follows I will propose a syntactic analysis which is entirely compatible with Keshet's semantic account and explains the syntactic peculiarities that had been left unresolved in Keshet's work.

4.2. *The categories of both conjuncts*

Before I can present the actual analysis, I will briefly discuss the question what the category of the conjuncts in a CC is. We have seen in Section 2 that the size of the conjuncts must be smaller than a CP because the conditional meaning is lost when both conjuncts contain a complementizer.¹⁰ On the other

¹⁰ An anonymous reviewer pointed out an example which suggests that conjuncts within a CC can be CPs because they can allow for fronting.

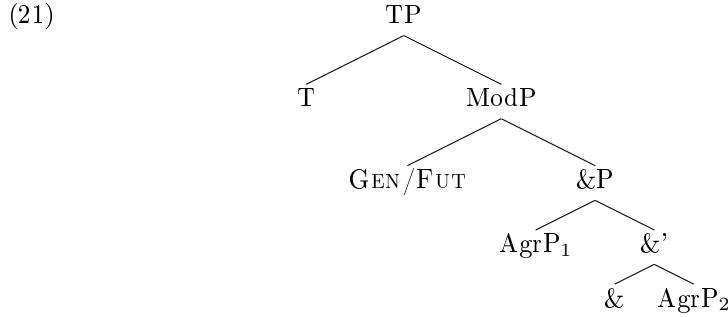
- (i) You drink one more beer and [CP OUT you go]

This is unexpected under Keshet's analysis because he presupposes that the modal operator selects for a specific syntactic category and hence CP-coordination is not an option for CCs. However, as we will see below and in Section 6, the data in German suggest that TPs (or AgrPs in Keshet's analysis) are not the only option for forming a CC. Data such as (i) seem

hand, each conjunct must be bigger than a vP because vP-coordination never yields a conditional interpretation. The relevant examples are repeated in (20) below.

- (20) a. #You know, of course, [_{CP} that you drink one more beer] and [_{CP} that you get kicked out]. (Culicover and Jackendoff, 1997, 198)
 b. #You [_{vP} drink one more beer] and [_{vP} leave].

Keshet (2013) argues that CC is a coordination of AgrPs, a functional projection between TP and vP, which holds responsible for agreement between the subject and the verb. Right above this AgrP root modals are merged and since the generic and the future operator fall into this class of modals, the structure of CCs is as follows:



Keshet's arguments for the fact that each conjunct is a AgrP involve agreement as well as tense and modal restrictions. With respect to agreement, it is evident that the subject of each conjunct independently agrees with its own verb (cf. (22)). And since agreement with the verb is usually associated with the T-head or Agr-head¹¹, it is clear that at least an agreement phrase must be present within each conjunct to ensure independent subject-verb agreement.

Second, as we have seen in Section 2, there are certain restrictions on tense in both conjuncts. If both conjuncts are present tense (as in most examples above), CCs are well-formed.¹² If both conjuncts are past tense, then the construction is grammatical too. However, even though both tense forms are acceptable in CCs as such, a combination of them is ungrammatical. A CC in which the

to suggest the same thing for English.

¹¹ The existence of an Agr-head as proposed in Pollock (1989) is not an uncontroversial assumption as this head is often seen as mostly unmotivated from an empirical perspective and unnecessary from conceptual minimalist perspective (cf. discussion in Iatridou (1990); Chomsky (1995)). However, as will become clear below, it is indispensable for Keshet to assume that subject agreement features and tense features are located on distinct heads. In the following, I will show, however, that the tense and mood restrictions which Keshet takes to be an indicator of the size of conjuncts must be due to factors other than the size of the conjuncts and hence, there is no need to assume the existence of an AgrP anyway.

¹² Keshet follows Abusch (1988, 1997); Ogiara (1989, 1996) in assuming that future is a modal category rather than a tense form and hence, all examples which involve a future auxiliary *will* or *be going* are taken to be present tense.

first conjunct is past tense but the second one is present tense cannot convey a conditional meaning:

- (22) #You ate too many carrots and you will turn orange.
(Keshet, 2013, 215)

Keshet takes this as evidence that the construction contains only one T-head because otherwise one would expect the possibility of distinct tense forms in each conjunct. Hence, each conjunct must be smaller than TP.

Finally, Keshet takes a look at modals and finds that there are certain restrictions on the appearance of modal categories in CCs as well. He shows that so-called epistemic modals as well as epistemic adverbs are not possible in CCs. (23) shows that CC readings are excluded when one conjunct contains an epistemic modal, either a covert one (23-a) or an overt one (23-b).

- (23) a. #He ate the omelet and Urquhart was immune to arsenic.
b. #He ate the omelet and Urquhart must have been immune to arsenic.
(Keshet, 2013, 217)

The same holds for epistemic adverbs such as *probably*. A conditional reading is excluded with these adverbs:

- (24) #John leaves at six and he is probably at home by eight.¹³

Keshet argues that a number of people (e.g. Iatridou (1991); Abusch (1997) i.a.) have shown that epistemic modals and adverbs are interpreted right above the TP. Accordingly, since the conjuncts cannot contain these elements, the conjunction site must be TP or lower.

In the remainder of this section I will argue that even though the tense restrictions as well as the modal restrictions Keshet reports are real, they must be due to factors other than the size of the conjuncts. The argument is based on the German equivalent of this construction and goes as follows: In German, word order tells us independently that each conjunct must contain at least a C-head. Nevertheless, we find the exact same tense and mood restrictions we found with the English example. Hence, it is very implausible to assume that the restrictions in English are due to the size of the conjuncts and in German, they are due to some other factor.

So, let us take a look at the argument more closely. I will discuss the properties of the German construction in detail in Section 6 but for now, it is sufficient to note that German has an equivalent construction which looks, at least superficially, like English CCs.

- (25) a. Du trinkst noch ein Bier und ich hau ab.
You drink more one beer and I leave PRT

¹³ Example slightly adapted from (Keshet, 2013, 217) who cites Schwager (2005). Since the original examples contained different tense forms in both conjuncts, the conditional reading was excluded for independent reasons.

- b. Du isst zu viele Karotten und du wirst orange.
 You eat too many carrots and you will be orange

Crucially, each conjunct in this construction is verb-second. And since the widely adopted analysis for verb-second clauses is V-to-C movement (see e.g. den Besten (1977); Schwartz and Vikner (1989) and many others), each conjunct must contain a C-head.

This alone is not surprising. It may very well be that CCs in German differ from their English equivalents with respect to their categorical status.¹⁴ What is surprising, however, is that German CCs exhibit the very same restrictions with respect to tense and modals.

First, with respect to tense, we find that CCs can occur in present as well as in past tense (cf. (26-a) and (26-b)). However, a combination of both tenses, where the two conjuncts differ in their temporal specification, does not have a conditional reading (26-c).

- (26) a. Du kommst zu spät zum Treffen und sie schmeißen dich
 You come too late to meeting and they kick you
 sofort raus.
 immediately out
- b. Früher waren die Regeln echt streng: Du kamst nur eine
 Back then were the rules really strict: You came only one
 Minute zu spät und sie schmissen dich sofort raus.
 minute too late and they kick you immediately out
- c. #Er fuhr gestern los und er kommt heute gegen vier an.
 He drove yesterday PRT and he comes today about four PRT
 Intended reading: 'If he started to drive yesterday, then he will
 arrive about four o'clock today'

The same holds for modal categories. Here, we also find that the restrictions which modals can and which cannot appear in German are the same as in English. Epistemic readings are incompatible with CCs in German as well. This holds with covert epistemics as in (27-a), with overt ones as in (27-b) as well as with epistemic adverbs as in (27-c).

- (27) a. #Er isst das Omelett ganz auf und er ist immun gegen Arsen.
 He eats the omelet whole PRT and he is immune to arsenic
- b. #Er isst das Omelett ganz auf und er muss immun gegen
 He eats the omelet whole PRT and he must immune to
 Arsen sein.
 arsenic be

¹⁴In fact, I argue in Section 6 that German CCs are CPs while English CCs are only TP's since they behave crucially different with respect to embedding.

- c. #John verlässt das Büro um sechs and er ist wahrscheinlich gegen
 John leaves the office at six and he is probably about
 acht zuhause.
 eight at.home

To conclude, German exhibits the very same restrictions on tense and modals as English. Hence, it seems fairly implausible to assume that these restrictions follow from the size of each conjunct in English and from another reason in German. The natural assumption would rather be that these restrictions are due to the same reasons in both languages and that the conjunct size is an independent factor. Thus, these arguments for the conjunct size are invalid and the only one that remains is the first one by Culicover and Jackendoff (1997) (see examples (20)) which has shown that the size of each conjunct in English CCs must be smaller than CP but bigger than vP/VP. Thus, I will stick to the default assumption that both conjuncts are TPs since the motivation for stipulating the existence of an AgrP has disappeared.¹⁵

4.3. *The main idea of the analysis*

As we have seen in the previous sections, the Conditional Conjunction construction seems to exhibit subordinate and coordinate properties at the same time. This poses an interesting challenge for all generative theories such as Minimalism which assume a strict dichotomy of clausal relations: The relation between two clauses can either be a subordinate or a coordinate one but nothing in between.

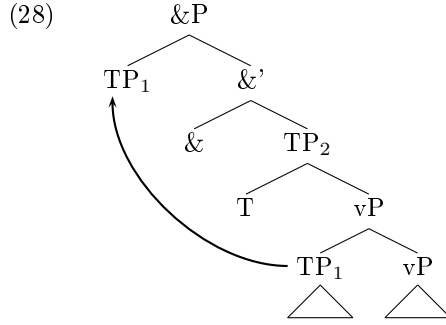
And since, in addition, it is generally assumed that a coordinate relation cannot be mapped to a subordinate one (or vice versa) by means of transformational rules or other processes, Culicover and Jackendoff (1997) concluded that the puzzling properties of CCs cannot be derived in frameworks such as Minimalism. Hence, they argue that constructions like CC prove the empirical inadequacy of frameworks such as Minimalism. In this paper, I want to argue instead that a derivational Minimalist approach is particularly well-suited to derive the dual behavior of the CC construction and that standard view that the semantics interprets syntactic structures can still be maintained.

The core assumption of my theory is this: Contrary to what Culicover and Jackendoff (1997) claim, subordinate structures can be mapped to coordinate ones by means of transformational rules: A clause can be merged as an adjunct and then, at a later stage of the derivation, it can be moved to the specifier of a coordination phrase.

Transferred to the concrete cases of CC constructions, the structure looks as follows: We have seen in the preceding section that both conjuncts of an English CC seem to be TPs. Since the first clause of a CC has the interpretation of a

¹⁵It should be emphasized though that the whole mechanism to derive the peculiar properties of CCs which I will present in the following section is also compatible with the assumption that the conjuncts of English CCs are AgrPs or any other category.

conditional clause, I assume further that the first conjunct is base-generated in the same position as regular conditional clauses. According to Haegeman (2003), event-conditionals are merged “before the IP is completed”,¹⁶ hence I take them to be adjuncts to vP. Finally I assume that this adjunct TP is moved to the specifier of a coordination phrase which thus conjoins two TPs.¹⁷ I conclude that the structure of CCs in English looks as follows:



A TP is merged as an adjunct to vP just as any other conditional adjunct clause would. Then matrix T is merged building matrix TP (i.e. TP₂). In a next step, the coordination head & is merged taking TP₂ as a complement. Then, TP₁ moves out of TP₂ into the specifier of the coordination head. Following the semantic analysis by Keshet (2013), this coordination head itself is merged as a complement by the modal which is responsible for the generic or future conditional interpretation.¹⁸ Syntactically however, the result of this derivation is superficially indistinguishable from regular coordination.¹⁹

¹⁶See the discussion about the different kinds of conditional clauses in Section 5.3.

¹⁷It has been claimed in the literature that TPs cannot be moved in languages like English or German because one never finds stranded complementizers. However, as Abels (2003) shows, there is no general prohibition against the movement of TPs. Instead, what Abels (2003) argues for is that TPs can be moved if they are not directly embedded under a C-head. And since the TPs we are dealing with here are not (immediately) headed by CPs, I take this kind of TP movement not to be problematic.

¹⁸Intuitively speaking, the adjoined base-position of TP₁ reflects the idea that there is an underlying connection between conditional clauses and conditional conjunction constructions. And as far as I can see, it is not implausible that a more fine-grained analysis of the semantics of CCs may reveal that a certain subcomponent of the meaning of CCs is due to the subordinate base-position of the first conjunct. However, since the semantics I assume builds on the analysis of Keshet (2013), who showed that the semantics can be derived without the subordinate base position, I, for the time being, assume that the first conjunct is interpreted in its derived position (for exceptions see section 4.4.2.)

¹⁹It should be noted that in Stroik and Putnam (2013), coordination is also derived by means of movement to derive binding asymmetries between the two conjuncts. However, crucially, Stroik and Putnam (2013) claim that *any* case of coordination is derived via movement. In my approach, regular coordination is still the result of base-generation. Thus, the binding examples Stroik & Putnam want to exclude (see (i)) must be due to some other mechanism.

(i) *Mary_i read a poem to him_i and a short story to Bob_i.

4.4. Deriving the properties

In the previous section, we have seen how the analysis is supposed to work. The idea is simple: The conditional TP is base merged as a subordinate adjunct and then it is moved to the specifier of a coordination phrase yielding a structure which is linearly practically indistinguishable from a coordination of two independent TPs. As we will see in the following sections, this will derive the peculiar properties of CCs: The subordinate properties follow from operations or processes at an early stage of the derivation and the coordinate properties follow from operations or processes at a later stage of the derivation or are a result from its output.

4.4.1. Coordinative Properties

Let us have a look at the coordinative properties first. We have seen in Section 2 that the CC behave like cases of regular coordination with respect to standard constituent tests. The present approach straightforwardly accounts for these facts: Here *and* is not a subordinator. It is the normal coordinator and thus it must always appear between the two conjuncts. Second, it is clear how we may derive the fixed order of both clauses. We have seen that the conditional clause must always precede the main clause. The &-head used with CCs is the exact same &-head we use with normal coordination. Hence, the first conjunct must always precede the second one because the specifier of the &-head is always on the left. Adjuncts may appear on the left as well as on the right of their hosts, specifiers may not. They obligatorily precede their respective heads, at least in English.

In other words: The coordinative properties of the CC construction derive from the fact that the coordinative head is linearized as follows:

(29) Spec&P (i.e. first conjunct) \succ & \succ Comp&P (i.e. second conjunct).

Thus, this analysis correctly excludes sentences in which both conjuncts appear to the left of *and*, as would be expected if *and* was a subordinator. Furthermore, the present analysis also explains why the order of conjuncts is fixed, namely because the specifier of the &-head is always on the left of its complement. Furthermore, the analysis also makes the right prediction with respect to constituent structure, i.e. *and* forms a constituent together with the second conjunct to the exclusion of the first one but not vice versa. So, to sum up, the coordinate properties of CCs all involve phenomena which are related to the surface structure of a sentence, such as linearization and constituent structure. Hence, the present approach, in which the result of the derivation is a proper coordinate construction makes the right predictions.

4.4.2. Binding

We have seen in section 2 that facts about licensing of anaphors and variable binding suggest that the first clause of CC construction is in fact subordinate,

at least in some sense because, just as with subordinate conditionals, the first conjunct of a CC may contain an anaphor or a variable which is bound by an expression in the second conjunct. This is expected under the present analysis because the first conjunct is a proper subordinate clause at an early stage of the derivation.

It has been known at least since Belletti and Rizzi (1988) and much subsequent work that some elements such as anaphors and variable pronouns can be bound at any stage of the derivation and that subsequent movement processes may conceal the original c-command relation which allowed for binding. Take the following example:

- (30) Which pictures of himself₁ do you think [that Bill₁ likes e best]?
(Belletti and Rizzi, 1988, 314)

In (30), the phrase *which pictures of himself* originates in a position below *Bill* and in that position, *himself* can be bound. The fact that subsequent wh-movement of a phrase including the anaphor does not affect the binding relation.

This essentially derives why the first conjunct of a CC behaves completely identical to subordinate conditionals with respect to binding of anaphors and variables. Conditional clauses and CCs are base-generated in the same position in the tree. In that position, all anaphors and variables can be bound. Once the binding relation is established, the anaphor (or the variable pronoun) is licensed for the rest of the derivation, regardless of whether the conditional clause stays in situ (as in if-clauses) or whether it moves higher up in the tree (as in CCs). Take a look at the example in (31).

- (31) Another picture of himself appears in the newspaper and John will definitely go and get a lawyer.

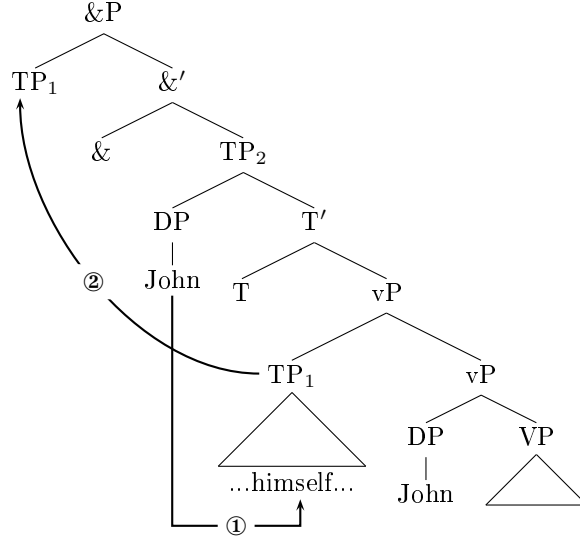
As long as *Another picture of himself appears in the newspaper* is in its base position as an adjunct to the vP of the matrix clause, the anaphor can be bound by the matrix subject *John*.²⁰

²⁰In the example in (31) it looks as if mere c-command is sufficient to derive the data which show binding into a vP adjunct. However, it should be noted that this cannot be the whole story as there are examples where an embedded subject or even an object may also bind into a vP-adjunct.

- (i) a. Another picture of him(self) appears in the newspaper and Susan thinks John will definitely be offended.
b. Another picture of him(self) appears in the newspaper and an early retirement will begin to appeal to John. (Culicover and Jackendoff, 1997, 202)

Culicover and Jackendoff (1997) speculate that there is an additional requirement of a logophoric relation to establish the binding relation. They take this as an argument that the whole binding theory should be dealt with in the semantics. However, this is not the only way to go as Landau (2001) and Sundaresan (2012) have shown that logophoric relations can and maybe even should be dealt with in the syntax. I am taking a more moderate stance here by saying that the effects of binding theory are partly syntactic and partly semantic. If, however, it turned out that we are dealing with a case of semantic binding here, this would still be

(32)



The fact that after binding has applied the whole TP_1 is moved to the specifier of the $\&P$ does not change anything about the well-formedness of binding relation.

It should be noted at this point that this analysis of the binding data entails that the first conjunct is interpreted in two different positions. Its scopal properties are interpreted in its derived position since we have seen in Section 4.1 that the semantic analysis of CCs that Keshet assumes presupposes an interpretation of the first conjunct immediately below the modal. With respect to the properties of binding of variables or anaphors, the first conjunct is semantically reconstructed to its adjoined base position. Once the first conjunct has reached its final position, elements within the first conjunct are no longer c-commanded by their hosts in the second conjunct. At first sight, this may seem like an undesirable result. However, quite a number of people have shown that reconstruction is more complex than just a simple yes/no-distinction. A certain movement step may be reconstructed for one property but not for another. Lebeaux (1990); Munn (1994); Chomsky (1995), for example, have shown that in *wh*-movement contexts in embedded clauses, reconstruction is obligatory for principle C but not for principle A. On a more general level, it has been argued since Jackendoff (1972) that many moved items (if not all) are interpreted in two different positions at the same time (for a historical overview see Fox (2000)). In the example from Belletti and Rizzi above (30), the dislocated *wh*-phrase is interpreted in its derived position with respect to its operator properties but it is interpreted in its base position with respect to properties like predicate-argument relations like θ -role assignment as well as for binding of the reflexive. Fox (2000), drawing on Longobardi (1987) and Heycock (1995), argues, for ex-

compatible with the present analysis. In this case, one would just have to assume that the binding relation is established after reconstruction has taken place.

ample, that the moved phrase in *How many people did Mary decide to hire?* can be interpreted above and below the scope-sensitive element *decide* even though for other properties, it must also be interpreted in its surface position. Generally, examples like these are often taken as arguments for the copy theory of movement. Interestingly, it seems that, in the case at hand, it is the lower copy which is mapped to the restrictor of the modal since we want the restrictor to contain a licensed anaphor. In a sense, this is surprising because the higher copy of the first conjunct is much closer to the modal than the lower one. On the other hand, one can state that a non-local mapping relation of this sort is the standard case with regular conditionals. Regular conditional clauses can turn up in their base position and are also mapped to the restrictor in the exact same way. Thus, what the modal does in order to find a restrictor is to search in the same position it always finds one, namely in the vP-internal base position of conditional clauses. This derivation thus accounts for the cases, which involve a bound reflexive in the first conjunct. It does, however, not necessarily account for the cases where there is a bound variable pronoun in the first conjunct. The relevant example in (12) is repeated in (33).

- (33) You give him_i enough opportunity and every senator_i will succumb to corruption.

In these cases, one might argue that the interpretation of the variable pronoun in two different positions cannot be accommodated since only the referent of the lower copy is determined by means of c-command. Thus, the explanation for this example is of a different kind. In Section 4.4.4, we will see that a quantifier may covertly raise out of the second conjunct to take scope over the whole conjunction. Thus, in the case at hand, *every senator*, undergoes QR into a position where it c-commands the variable pronoun.

4.4.3. Extraction

In Section 4.1, a connection was drawn between CCs and cases of asymmetric coordination because in both cases we find the possibility of asymmetric extraction out of only one of the conjuncts. However, this is not the only similarity between these two phenomena. It has been argued that, in both cases, the semantics of the sentences convey a subordinate rather than a coordinate meaning. In the case of CCs, we have seen that the first conjunct has a conditional meaning and in the case of asymmetric coordination, it has been claimed that one of the conjuncts has a temporal meaning. Accordingly, Ross' (1967) example *Here's the whiskey which I went to the store and bought* can be paraphrased as *Here's the whiskey I bought when I went to the store*.²¹ Interestingly,

²¹ See Schmerling (1975); Goldsmith (1985); Lakoff (1986); Na and Huck (1992) for discussion of the subordinate meanings of the asymmetric coordination cases. There, it has also been noted that several other subordinate meanings can be conveyed by these constructions such as concessive (i-a) or causal (i-b) meanings.

- (i) a. How much_i can you drink t_i and still stay sober?

one finds that the extractability with respect to these constructions is just as controversial as with CCs (see Lakoff (1986); Na and Huck (1992); de Vos (2005, 2009) for different perspectives).²²

I will not participate in these discussions but rather show how the approach I pursue allows to capture the facts for speakers who find a circumvention of the Coordinate Structure Constraint acceptable. I adopt Ross' original version of the Coordinate Structure Constraint given below:

- (34) Coordinate Structure Constraint (CSC):
In a structure [_{&P} A [_{&'} & B]], movement (out) of either A or B is prohibited.²³

Now, from the definition of the CSC above, it is clear that extraction out of either conjunct of a CC cannot take place after the first conjunct has moved because then a coordinate structure is established. Hence, extraction must have applied earlier, namely as long as the TP is in its base position as an adjunct to vP. At this stage of the derivation, the structure is a subordinate one which per se allows for extraction.

Nevertheless, in order to derive these extraction patterns, we are confronted with two distinct questions. First, why can we extract out of what turns out to be the first conjunct and second, why can we extract out of what turns out to be the second conjunct? We will address these questions independently.

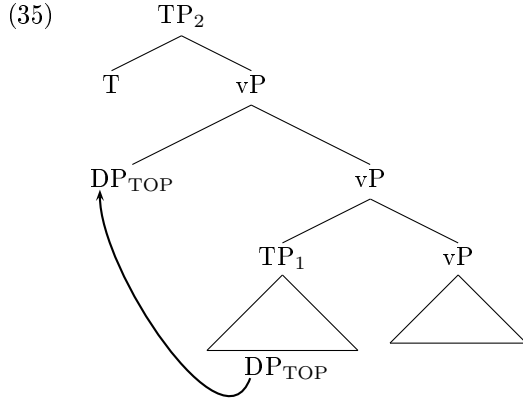
First, we face the question of how extraction from the first conjunct takes place. We have concluded above that any kind of extraction must apply *before* the first TP makes its crucial movement step to Spec&P. This is shown in (35). A DP with a topic feature is to be extracted out of the adjunct and targets an intermediate position in the matrix clause, i.e. TP₂.²⁴

-
- b. That's the stuff_i the guys in the Caucasus drink t_i and live to be a hundred?

²²It is worth noting that there is only one concrete analysis for these cases of asymmetric coordination that seems to be (by and large) compatible with Minimalist assumptions, namely de Vos (2009).

²³Of course, (34) is not literally identical with Ross' version of the CSC but I take (34) to be merely a technically updated variant of Ross' CSC in the sense that it allows for a concrete technical implementation.

²⁴In the following examples, I will, for the sake of concreteness, assume that the element which is to be extracted is a DP with a topic feature. However, it could of course also be some other feature which enforces movement. In the case of a wh-pronoun, for example, this could lead to some complications. Wh-elements are, as a reviewer points out, inherently focussed by assumption and since they can be contained in the first conjunct of a CC, the unique focus structure of CCs that Keshet identifies is not given. As I said in footnote 6, Keshet gives some examples with a focussed first conjunct. Since his analysis can derive these examples as well, I do not take these examples to be problematic.



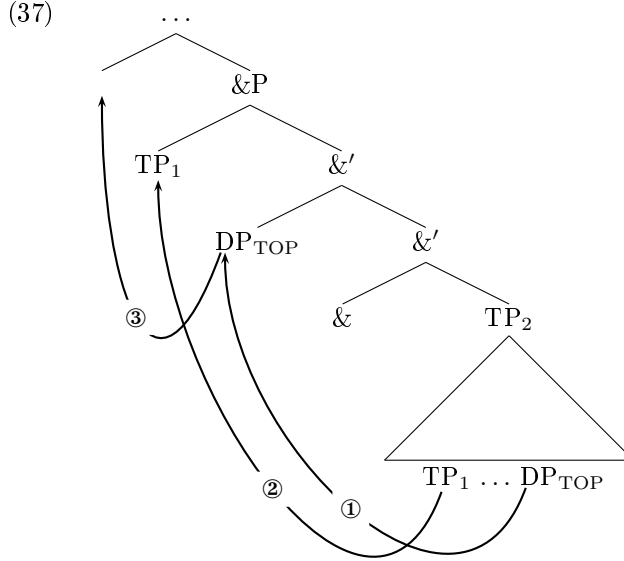
In its base position, TP_1 is adjoined to the vP of the matrix clause. It is in that position that movement of the *wh*-pronoun out of the adjunct applies. If it applied later in the derivation, this step would encounter a violation of the Coordinate Structure Constraint, but at this point, there is no coordinate structure present (yet). The immediate question that this step raises is, of course, why this movement does not violate the Condition on Extraction Domains (Huang 1982), which usually prohibits movement operations out of (among other things) adjuncts. However, as has been shown by Taylor (2007) for English as well as Etxepare (2002) for Spanish and Yoshida (2006) for Japanese, *if*-clause conditionals can be transparent for extraction when they precede the matrix clause. This is illustrated in (36) for English:

- (36) a. [Which car]₁ does Michelle believe if she buys t_1 , her insurance premium will increase? (Taylor, 2007, 189)

This is exactly the same configuration as with the first clause of a CC in their base position: A left-adjoined conditional clause. Even though the general question why the sentence-initial *if*-clause conditionals do not obey the CED (at least in some cases) still lacks a satisfactory answer, the data in (36) strongly support the view that extraction out of the first clause of a CC may apply as long as it is in its base position. Hence, we may extract an element out of TP_1 as long as TP_1 is in its base position.

This brings us to the second question, namely how we can extract out of the second conjunct, i.e. TP_2 .

If we take (34) as a basis, we might envision a possible derivation which derives an CC with extraction out of the second conjunct but still does not violate the Coordinate Structure Constraint as formulated in (34). It is given in (37) below:



After TP_2 is merged as the complement of the $\&$ -head, we have two possibilities of how to proceed. The first possibility is to move TP_1 out of TP_2 into the specifier of $\&P$. Once this is done, a complete coordinate structure is generated and subsequent movement of the wh-phrase out of TP_2 would violate the CSC as formulated above (34). Hence, this possibility leads to a crash of the derivation. There is another possibility which is to move the wh-phrase into an intermediate position²⁵ (= step 1 in (37)) and subsequent movement of TP_1 (= step 2 in (37)). Since step 1 does not complete the $\&P$ (because the $\&$ -head contains another selectional feature to merge the first conjunct), the CSC does not yet apply. Hence step 2 is still licit. The final step now is to further move the wh-pronoun to a higher position in the tree (= step 3 in (37)). This step also does not violate the CSC because at that point the wh-phrase is no longer part of one of the conjuncts. But since the Coordinate Structure Constraint also prohibits movement of a whole conjunct, it must be ensured that the wh-phrase does not count as a conjunct for the CSC while being in the specifier of the $\&P$. The reason for that might be that the wh-phrase itself contains features which signal that it is not a proper conjunct. Another possibility might be the fact that the wh-phrase has been attracted by a category-neutral edge feature (and not by a c-selectional feature like a proper conjunct) on the $\&$ -head shows that the wh-phrase is not a proper conjunct and hence may be moved out without violating the CSC.

A final note about the derivation in (37) is in order. In (37), we successfully circumvented a violation of the CSC but still managed to extract out of only

²⁵I assume here that the wh-phrase must cyclically move through the specifier of the coordination phrase. This is basically equivalent to saying that $\&P$ is a phase (cf. Reich 2007 for the same assumption).

one conjunct. The immediate question that comes to mind is, of course, why this kind of derivation is not possible with regular clausal coordination. If this derivation was possible with all kinds of clausal coordination, it would always be possible to circumvent the CSC. This would be equivalent to saying that one could always move out of the second conjunct of a coordination. Hence, we have to distinguish normal coordination and coordination in case of CC constructions. With normal coordination, circumventing the CSC is impossible; with CCs, it is possible. I argue that the difference lies in the fact that the first conjunct of a CC comes about via Movement. With normal coordination, the first conjunct is the result of (External) Merge. To be more concrete, I assume a well-known principle that regulates the order of operations and distinguishes these two syntactic operations: The Merge-over-Move Principle (Chomsky 1995, 2000).^{26,27}

- (38) Merge over Move (MOM):
 If, at some point of the derivation, Merge and Move can both apply,
 then Merge always applies first.

The exact point of the derivation which is of interest here is when the &-head and TP₂ have been merged. As I illustrated above, with CCs, we do have two possibilities. Either we first move TP₁ and then we move the wh-phrase (which leads to a violation of the CSC) or we move the wh-phrase first and then we move TP₁ (which leads to a circumvention of the CSC). Here, the two operations in competition are two instances of Movement. Hence, MOM does not regulate their relative order, both orders are possible.

So let us imagine a similar situation with regular, clausal coordination. We have merged the &-head with the second conjunct. If the second conjunct contains a wh-phrase, we also have two possibilities of how to proceed. Either we

²⁶I leave the fact aside that in many recent publications, Merge and Move are assumed to be instances of the same operation: Move is to be seen as Internal Merge while Merge is External Merge. I take it that even though these two operations share a common label nowadays, it must be possible to distinguish them at least at a certain point of the derivation.

²⁷One reviewer demurs that the MOM principle is far from uncontroversial. Indeed, there are a number of papers which criticize Chomsky's (1995,2000) accounts of expletive insertion (see e.g. Bošković (2002, 2007); Epstein and Seely (2006); Castillo et al. (2009)) and argue that, in lack of empirical evidence, the MOM principle should be abandoned. On the other hand, there are also a number of proposals which argue that there are other empirical domains in which the effects of a merge-over-move preference can be observed (see e.g. Hornstein (2001); Drummond (2011); Zeijlstra (2014)).

On a more technical level, Shima (2000) argues that, conceptually, we would rather expect a preference move-over-merge rather than the opposite. However, this argument has been countered by Graf (2010) who argues to solve the conceptual problems raised in Shima's work and derive the MOM preference from abstract principles of Language Faculty.

Accordingly, I tend to side more with the work arguing in favor of a MOM preference. But if it turned out that such a preference does not exist, then the proposal presented here does not necessarily break down as a consequence. As far as I can see, one should not rule out the possibility that the derivation in (37) is ungrammatical with external merge of the first conjunct because of completely independent reasons.

first move the wh-phrase and then we merge the first conjunct (which would circumvent the CSC) or we first merge the first conjunct and only then we move the wh-phrase out of the second conjunct (which violates the CSC). Here, the two operations in competition are one instance of Merge and one instance of Move. Hence, MOM forces Merge to apply first. However, if Merge applies first, we encounter a CSC violation in the second step. So, asymmetric extraction out of the second conjunct of normal coordinate clauses either violates the CSC or MOM and is hence prohibited.

So, to sum up this section, we have seen that analysis can derive the patterns in which CC constructions seem to violate the CSC. It was shown that this violation is only apparent since the crucial extraction patterns apply *before* the coordination structure is even established.

4.4.4. Raising of Adverbs

The third puzzle that could not be solved by Keshet’s semantic analysis of CCs concerned the behavior of adverbs. We have seen in Section 4.1, that a quantified adverb in the second conjunct of a CC behaved like it was able to take scope over the whole coordination while an adverb in the first conjunct could not. The relevant examples are repeated in (39).

- (39) a. You come early enough, and you sometimes get a seat.
 = Sometimes, you come early enough and you get a seat.
- b. You sometimes come early enough, and you get a seat.
 ≠ Sometimes, you come early enough and you get a seat.
- (Keshet, 2013, 242)

Usually, these kinds of scopal variabilities are derived via quantifier raising. *Sometimes* is an existential quantifier thus undergoes quantifier raising to take scope over elements it follows in linear order. In (40), it is shown that *sometimes* can either modify the embedded verb or the matrix verb even though it is located in the embedded clause.

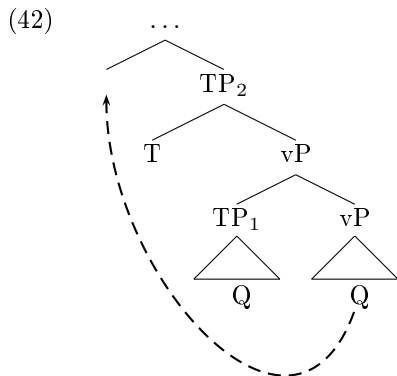
- (40) Peter wishes he could call in sick sometimes.
- wish > sometimes
sometimes > wish

Coordinate structures, however, constrain the applicability of quantifier raising. If *sometimes* is contained within a conjunct, it cannot take scope over the whole coordination, at least not with ordinary coordination (see (41)). Hence, if CCs were a case of regular coordination, the data in (39) would be unexpected.

- (41) Peter went to Canada and Mary sometimes visited him.
 \neq Sometimes, Peter went to Canada and Mary visited him.

However, it is clear why the present approach may derive these facts without further ado. In Section 4.4.2, it was already suggested that the movement process which turns the adjunct TP into a proper first conjunct must be reconstructed into its base position for at least some semantic purposes. Hence, it follows that

for the issue of quantifier raising, the structure is a subordinate one. Thus, it is completely expected that a quantifier within the second conjunct may raise to take scope over the whole construction while a quantifier within the first conjunct is trapped within that clause because it is an adjunct.



It must be emphasized that this kind of quantifier raising does not only apply to adverbs. As we have seen in Section 2 and in Section 4.4.2, a quantified element in the second conjunct can bind a variable pronoun in the first one. This follows straightforwardly if we assume that this element can undergo QR to take scope over the complete coordinate structure if it is contained in the second conjunct. It cannot, however, if it is contained in the first one.

It should be noted that what we find here is an interesting asymmetry between quantifier raising and other kinds of movement such as *wh*-extraction as illustrated in the preceding section. We find that at least some speakers accept *wh*-movement out of a conditional adjunct but quantifier raising out of an adjunct seems to be uncontroversially ill-formed. At this point, I do not have an explanation for this asymmetry, but it seems that either the different kinds of movement (\bar{A} -movement vs. QR) or the different levels of representation (syntax vs. LF) may be responsible for this asymmetry.

4.5. *Interim summary*

In the preceding section, I proposed a new approach to the puzzling CC construction, which has led Culicover and Jackendoff (1997) to question one of the fundamental assumptions of the Minimalist Program and related syntactic theories, namely that the semantics of an utterance is calculated on the basis of its syntactic structure. I have argued that it is possible to derive the syntax of CCs including the most striking of its puzzling properties and still adhere to Minimalist assumptions.

The analysis proposed is based on the novel idea that a phrase is base-generated as an adjunct and then moved to the specifier of a coordination phrase. In doing so I am able to derive the fact that CC constructions combine subordinative and coordinative properties. Following the approach sketched in Section 4.3, subordinate properties follow from processes that apply early on

in the derivation whereas coordinate properties follow from later operations. This distinction is built on the standard assumptions about syntactic structure building. What one might call “early processes” are in fact the typical structure building operations like Agree or Movement. These operations can apply at any stage of the syntactic derivation. However, given the Earliness Principle (Pesetsky 1989), they must apply as soon as the syntactic context is given. Once one has the possibility to agree or to extract, one has to do so. On the other hand, the “late operations” that are responsible for the coordinate properties like linearization are not purely syntactic. Linearization is generally taken to be a postsyntactic process that applies very late. It is thus not surprising, that the syntactic structure we built behaves like a coordinate one with respect to late processes like linearization.

5. Open issues and questions

5.1. Right Node Raising and Gapping

Another property which suggests that CCs are not regular coordinate constructions is that they do not allow Gapping (43-a) or Right Node Raising (43-b).

- (43) a. #John orders wine and his wife _ just water.
 b. #The wine taster approves of _ and the whole table orders the 1996 Riesling from the sunny vineyards in southern Alsace.

I want to argue that these data follow not from the syntactic derivation of CCs but rather from independent properties of the construction. In the literature about Gapping, there is no agreement as to whether Gapping should be derived via ellipsis (Sag 1976; Hankamer 1979; Jayaseelan 1990; Hartmann 2000; Coppock 2001; Lin 2002 etc.) or ATB-movement (cf. Johnson 1996, 2009). However, regardless of the respective type of analysis, the more recent approaches to Gapping appear to agree that a prerequisite for Gapping is relatively low coordination, namely vP-coordination. This accounts for scope effects where negation and modals take scope over the whole coordination as in (44). Here, the conjunction height is shown to be relatively low because negation obligatorily takes scope over both conjuncts.

- (44) a. We can't eat caviar and him beans.
 $\neg((We\ eat\ caviar) \ \& \ (him\ eat\ beans))$
 $*(\neg(We\ eat\ caviar) \ \& \ \neg(him\ eat\ beans))$
 (Johnson 1996)

If, however, Gapping can only apply with vP- or VP-coordination, it is not surprising that it is impossible with CCs which, as we have seen, involve TPs. The same explanation, however, cannot be extended to the ban on Right Node Raising (RNR) in CC constructions. RNR is generally possible with TPs or even bigger categories:

- (45) John believes $_$ but I doubt [that I will win the race].

I argue that the answer to the question why CCs do not allow RNR is to be found in their distinctive focus structures. An integral part of Keshet's semantic theory of CCs was that he argued that the first conjunct of a CC is generally unfocused while the second one is focused. In order to show that, he uses a number of different tests such as pitch contour evaluation, interaction effects between modals and focus, evidence from fronted adverbials and question-answer pairs. The latter has been discussed in section 4.1. The relevant data are repeated below.

- (46) What happens when you hit the space bar?
 You hit the space bar and your character jumps.
- (47) How do you make your character jump?
 ??You hit the space bar and your character jumps. (Keshet 2013, p. 228)

In (46), the given information is part of the first conjunct. Hence, using a CC is possible. However, if the first conjunct consists of new information and the given information is part of the second conjunct, the answer is unacceptable. The reason for that is according to Keshet that the second conjunct of CCs is inherently focused but if that conjunct consists of given material only, the construction sounds odd.

- (48) You hit the space bar and THE CHARACTER JUMPS_F

However, it has been argued that the applicability of RNR is related to focus structure as well. For example, according to Hartmann (2000), the crucial factor which decides whether RNR is licensed or not is the marking of focus within the two clauses. RNR is licensed only if the respective elements immediately preceding the 'raised' category bear contrastive focus features which introduce a set of alternative propositions, and each focused constituent is contained within set of alternatives of the other focused constituent. In a clause like (49), both verbs bear a contrastive focus feature [F], and for both verbs a set of alternatives is calculated containing propositions about what Peter could have done to the asparagus.

- (49) Peter COOKED_F and Peter ATE_F the asparagus.
 (Hartmann, 2000, 115)

If *eating* and *cooking* are contained within the respective sets of alternatives, which they certainly are, then RNR is licensed.²⁸

²⁸This is, of course, an incomplete and sketchy recapitulation of Hartmann's theory. However, the technical details of this focus assignment procedure are not of importance here. Also, it should be noted that even though I speak of 'raised' categories, Hartmann does not assume actual raising but pursues a deletion analysis of RNR.

So, it seems that focus marking plays a crucial role with respect to both phenomena, the formation of CCs and the applicability of RNR. And from what we have seen, it is pretty evident that the restrictions both phenomena impose on the focus structure of the sentence are incompatible. On one hand, with CCs, the first conjunct cannot bear matrix-level focus since the second one does and on the other hand, RNR requires elements within both conjuncts to bear contrastive focus. This incompatibility of focus requirements leads to an incompatibility of CCs and RNR in general.

5.2. *The movement trigger*

Up to this point, I have been neglecting the question how the crucial movement step, which takes an adjunct and turns it into a conjunct, is triggered. Technically, there are a number of possibilities to overcome this problem. However, I want to argue that this movement step in question is just the expected result of the properties any coordination head must be endowed with for independent reasons.

An, as far as I can see, uncontroversial property of the standardly assumed coordination head, is that it obligatorily takes two arguments. In this respect, it resembles the English T-head which obligatorily needs some element within its specifier. In other words, the subject position (SpecTP) must be filled in English and similarly, the specifier of an &P must be filled. As with the coordination head under the present analysis, SpecTP can be filled either by Merge (of an expletive) or by Move (of the subject). If there is an expletive in the numeration, it takes priority over a movement operation which remerges the subject in SpecT (cf. Chomsky (2000)). If there is no expletive available, the probe on T searches for a proper candidate to move it to SpecTP. The exact same thing can be said to be true for the coordination head. A coordination head obligatorily needs an element in its specifier. If there is one in the numeration or in the work space, this element takes priority and is merged in Spec&P. If there is no external element available, the &-head starts probing whether there is some internal candidate inside its complement. If this probing is successful, as in the cases of CCs, the goal is moved to Spec&P.

The general strategy to ensure that the subject position is filled in English is to assume an EPP feature located on T which triggers movement to SpecTP. The same could be done with &Ps. If &P is endowed with an EPP feature to ensure that its specifier is filled, then the correct derivations are predicted. As an alternative, we could say that &P bears a subcategorization feature that requires its specifier to be filled, in our case [uTP]. If this feature cannot be checked by merging something externally, the feature starts probing within the tree.

5.3. *Other Types of Conditionals*

There are a two types of non-hypothetical conditionals I have not discussed in this paper so far. Bhatt and Pancheva (2006) call them factual conditionals and relevance conditionals. The former are also known as premise-conditionals

(term from Haegeman (2003)). Factual (or premise-) conditionals “carry the presupposition that someone (other than the speaker) believes the proposition expressed by the if-clause to be true”. An example is given in (50-a). A relevance conditional, on the other hand, “specifies the circumstances in which the consequent is discourse-relevant, not the circumstances in which it is true”²⁹ (see (50-b)).

- (50) a. If (as you claim) we are so short of teachers, we’d better send our children to Germany to be educated. (Haegeman 2003)
 b. If you are thirsty, then there is beer in the fridge. (Bhatt and Pancheva 2006)

Neither of these conditional clauses can be paraphrased with a CC.

- (51) a. #We are so short of teachers and we’d better send our children to Germany to be educated.
 b. #You are thirsty and there is beer in the fridge.

This follows from the present analysis without further ado because Haegeman (2003) has argued that in contrast to regular conditionals, factual conditionals are base-generated in the C-domain (*above TP*, in Haegeman’s terms). Hence, of course, the position in the specifier of a coordination head which conjoins two TPs is not available for them because this would imply counter-cyclic movement down the tree.

The same thing also holds for relevance conditionals. As Bhatt and Pancheva (2006) show, relevance conditionals are even further away from the clause they modify than factual conditionals because they always appear in the linear order in (52).

- (52) Matrix Clause » Factual Conditional » Relevance Conditional
 You should leave [_{FC} if you’re so unhappy] [_{RC} if I may say so]
 (Bhatt and Pancheva, 2006, 674)

The natural assumption is, thus, that relevance conditionals are merged even higher up in the tree and hence the same explanation applies for why they cannot form CCs.

5.4. Overgeneration

Two anonymous reviewers expressed their doubts as to whether the mechanism proposed in Section 4.3 can be constrained to avoid overgeneration. Also, the question has been raised, as to whether one wants to introduce a completely new mechanism to derive a rather marginal construction such as Conditional Conjunction. In this section, I will briefly discuss these issues.

As for the latter question, a quick note is in order about the novelty of the mechanism I proposed. In my view, movement to specifiers is one of the few

²⁹ Both quotes from Bhatt and Pancheva 2006, 671.

fully established concepts in Minimalist theory and if the coordination head is a syntactically well-behaved head, as claimed by those who follow Munn’s (1987) analysis of coordination, then movement to this head’s specifier is expected to a certain extent because all other heads allow for movement to their specifiers.

In Weisser (2014*b*), I argue that quite a number of different phenomena should be derived by means of movement to Spec&P. These include a number of different clause-chaining constructions predominantly found in languages of (south-)east Asia, Papua New Guinea and North America. Furthermore, it is argued that a variety of phenomena usually subsumed under the label *asymmetric coordination* are to be derived in that fashion. Amongst these are the prototypical cases in English as in *Here’s the whiskey I went to the store and bought* (cf. i.a. Ross (1967); Schmerling (1975); Goldsmith (1985); Lakoff (1986)) but also other cases in German (examples in Höhle (1991); Buring and Hartmann (1998)) and other Germanic languages. These cases illustrate that a variety of different categories can move to Spec&P. We find that vPs (in cases of asymmetric coordination in English), TPs (in CCs) and CPs (in cases of asymmetric coordination and CCs in German (see next section)) are possible candidates for movement to Spec&P.

As for the question of overgeneration, I would like to assume that there are three independent factors constraining movement to Spec&P. The first and foremost principle that constrains the application of movement to Spec&Ps is the *Law of the Coordination of Likes* (Williams 1978). It says, among other things, that only identical categories can be conjoined and thus prohibits derivations in which a XP moves to the specifier of an &P whose complement is anything but a CP. This excludes a number of ungrammatical derivations.

Second, we find that, in all of the cases above, it has been argued that an adjunct is moved to Spec&P but never an argument. Thus, we must posit something like (53):

- (53) Axiom:
Only adjuncts can move to Spec&P.

Of course, one would like to have a convincing explanation for (53) but, so far, I can only speculate. A general strategy to explain movement asymmetries between arguments and adjuncts is to attribute this difference to the nature of traces (or copies) they leave behind. It has been claimed that adjuncts either leave no trace or they leave a trace of a different kind (see Rizzi (1990); Epstein (1992) and works in Tree-Adjoining Grammar for discussion.). This solution is complicated further by the fact that, as we have seen, a trace (or a copy) of the adjunct might be necessary for purposes of reconstruction. One would have to say, along the lines of (Chung, 1998, p.346), that adjuncts do leave traces but these traces differ from argument traces in a number of properties (for example in their licensing conditions).

The final factor that constrains the applicability of movement to the specifier of the coordination head is the semantics interpreting the construction as a whole. Crucial to the semantics of this construction is the operator which takes

scope over the whole conjunction. However, as Keshet (2013) extensively argues, such operators are very restricted with respect to their position in the tree (i.e. the semantic type they select). In other words, the coordination height is predefined by the semantic type of the operator that is available. Thus we cannot conjoin two VPs, for example, to create a CC because their semantic type conflicts with the requirements of the operator which seems to select TPs.

5.5. *Tense restrictions*

In Section 2 it has been noted that CCs predominantly occur in present tense. We have seen a few examples in which CCs in past tense seem to be allowed if the context has been shifted to the past before:

- (54) Back in the days, schools were strict: You came one minute too late and you got detention for a week. (Keshet, 2013, 215)

In footnote 5 of their paper, Culicover and Jackendoff (1997) give an example of a grammatical usage of a CC in perfective aspect when an appropriate context is given:

- (55) (context: I'm about to open the door to find out whether or not you've broken anything.)
You've broken another vase and I'm leaving.

In Section 4.2, I argued contra Keshet (2013) that these tense restrictions are not due to the fact that each conjunct does not contain its own T-head. The conclusion in Section 4.2 was that there must be some other reason behind these restrictions. Both examples above seem to be acceptable only when the context paves the way. This suggests that what we are dealing with here is not an absolute ban on perfective aspect or past tense in general but rather a pragmatic condition that the first conjunct in a CC construction must be underspecified with respect to its factivity (Kiparsky and Kiparsky 1970; Lyons 1977). Past tense and perfective aspect usually imply factivity and hence, are ungrammatical CCs. This implication however, can be avoided if the context is shifted to a situation in which the first conjunct can be understood as underspecified with respect to factivity. I do not have a satisfying explanation why CCs are only compatible with situations of underspecified factivity, but I would like to argue that the answer to this question is to be found in the pragmatics of this construction rather than in its syntax.

5.6. *The concept of phases*

In this section, I want to say a few words about the notion of phases in this paper. Up to this point, I have deliberately excluded specific assumptions about the size and/or the properties of phase heads because they did not seem necessary. This paper makes no claims as to whether, as is standardly assumed, only vP, CP and DP are phases or whether other projections are phases as well. The only necessary assumption I made was that &Ps are phases because in the course of the discussion, I have argued that movement can target an

intermediate landing site in Spec&P. Remarkably, it is the fact that the &P is a phase which enables movement out of it. If the &P was not a phase, elements would be trapped inside of it due to the CSC.

As we will see in the following section about CCs in German, the conjuncts of CCs in German are different from conjuncts in English CCs. In German, conjuncts of a CC must contain their own C-head. This may be problematic for some accounts which treat phases as semantically identical units crosslinguistically (see e.g. Sheehan and Hinzen (2011); Hinzen (2012)). Whether that means that the notion of phases in Sheehan and Hinzen (2011); Hinzen (2012) is on the wrong track or whether the standard analysis of V2 in German must be revised is beyond the scope of this paper.

6. Conditional Conjunction in German

In this section, I want to briefly discuss the German equivalent of Conditional Conjunction. In German, only some speakers accept the construction with a finite left conjunct. If the first conjunct appears to be an imperative clause, the construction is uncontroversially well-formed.

- (56) a. ?Du kommst noch einen Schritt näher und ich schieße.
 You come more one step closer and I shoot
 b. Komm noch einen Schritt näher und ich schieße.
 Come.IMP more one step closer and I shoot
 ‘You come one step closer and I shoot.’

As a first observation about these German data, which was already discussed in Section 4.2, note that even though the respective first conjuncts look like their English counterparts, they cannot have the same categorial status since, in German, verb-first (V1) as well as verb-second (V2) word order is derived via V-to-C movement. Hence, the either conjunct in German CC-constructions must be a CP.

Furthermore, it can be observed that CCs seem to be less flexible in German. They can appear in embedded contexts but only in embedded verb-second clauses. In embedded verb-final clauses, the construction is completely ungrammatical (cf. (57)).

- (57) a. Du weißt schon, du kommst noch einen Schritt näher und ich
 You know already you come more one step closer and I
 schieße.
 shoot
 b. *Du weißt, dass du noch einen Schritt näher kommst und ich
 You know that you come more one step closer and I
 schieße.
 shoot

As in English, Right Node Raising and Gapping are disallowed with CCs:

- (58) a. *Wünsch' dir einfach _ und die Oma kauft dir das
 Wish.IMP yourself just _ and the grandma buys you the
 große Piratenschiff von Lego.
 big pirate.ship by Lego
 b. *Trink noch ein Guinness und ich _ noch ein Kilkenney.
 Drink.IMP more one Guinness and I _ more one Kilkenney

Unlike in English, extraction from CCs is generally prohibited. One can neither extract asymmetrically out of the left conjunct nor out of the right conjunct of these constructions.

- (59) a. *Welchen Wein bestellst du und der Kellner ist begeistert?
 Which wine order you and the waiter is amazed
 b. *Was beschwerst du dich und der Kellner bringt dir
 What complain you yourself and the waiter brings you
 auf der Stelle?
 immediately

Binding into the first conjunct is possible in German. This is illustrated by the variable binding contexts in (60). *jeder Politiker* binds the variable pronoun *ihn* in the first conjunct.

- (60) a. Du bestichst ihn_i anständig und jeder Politiker_i wird in deinem
 You bribe him properly and every politician will in your
 Sinne abstimmen.
 favor vote
 b. Bestich' ihn_i anständig und jeder Politiker_i wird in deinem
 Bribe.IMP him properly and every politician will in your
 Sinne abstimmen.
 favor vote

So, in principle, the analysis presented in Section 4 can be transferred to the German case with the small adjustment that, in German, we are dealing with CP-coordination headed by a C-head attracting V. This derives the V1 or V2 word order and it also has the positive side effect that it derives why the CC-construction in German can only be embedded under bridge verbs, which allow V2 complements.

If we assume the same analysis for the German data, the explanations that derived why Gapping and Right Node Raising are not grammatical in English carry over directly. The same holds for the explanation why binding into the first conjunct of a CC construction is possible. The question that remains is why extraction is completely ungrammatical in German. However, the answer to that question is not surprising if one is familiar with extraction patterns in German. In example (57), it was shown that German CC constructions can be embedded only as V2-clauses under bridge verbs. However, it has been shown that V2-clauses in German are generally intransparent for extraction (for arguments in favor of this view and analyses to derive it see Reis 1996; Müller 2004; Heck

2010).

- (61) a. Ich weiß nicht, wen du meinst, dass sie getroffen hat?
 I know not, who you think, that she met has
 ‘I don’t know who you think that she has met?’
 b. *Ich weiß nicht, wen du meinst, hat sie getroffen?
 I know not whe you think has she met
 ‘I don’t know who you think she has met?’

Hence, the lack of transparency of CC constructions is expected since verb-second clauses in German are not transparent in general.

As a short summary, the present analysis carries over to German with one small adjustment, namely that both conjuncts in German CCs must be CPs instead of TPs.³⁰

This small adjustment does not affect the argumentation why there is neither Gapping nor Right Node Raising from these constructions. However, it does affect the question of extractability and we have seen that the facts about extraction reflect this prediction. While extraction is possible in English, it is not in German because extraction from verb-second clauses in German is prohibited in general.

7. Conclusion

The present analysis of the Conditional Conjunction construction can be taken as an argument in favor of two assumptions. First, it presents a new argument for the hypothesis that coordination structure is built by means of a coordination head merging both conjuncts as its arguments. This results in an asymmetric construction with the first conjunct asymmetrically c-commanding the second (as proposed in Munn (1987); Zoerner (1995); Johannessen (1998)). In a GB model of coordination with ternary branching, an analysis which turns an adjunct into the first conjunct of a coordination by means of movement would probably not be possible. Also, in a coordination structure built by means of adjunction, this analysis would be problematic. Previous arguments for the asymmetric coordination hypothesis were based either on theory-internal considera-

³⁰As a reviewer points out, given that CCs are CPs, one might expect that CCs can paraphrase relevance conditionals or factual conditionals in German. This, however, is not the case.

- (i) a. Wenn du durstig bist, ist da Bier im Kühlschrank.
 If you thirsty are, is there beer in.the fridge.
 b. #Du bist durstig und da ist Bier im Kühlschrank.
 You are thirsty and there is beer in.the fridge.

This is unexpected under the assumptions I made so far but in order to derive this account, one might resort to a split-CP approach for the left periphery in German (as in Mohr (2005); Weisser (2014a)). All we need to ensure is that the merging site of relevance conditionals is not contained in the category that is coordinated.

tions or empirical findings concerning morphological agreement. The argument put forward in this paper was novel in the sense that it has shown that the asymmetric coordination hypothesis may also have syntactic consequences, for example, that the specifier may be a proper landing site for movement processes.

Secondly and maybe more importantly, the present analysis supports the standard Minimalist assumption that the semantics of a sentence is computed on basis of its syntactic structure. It does so by invalidating the claim made by Culicover and Jackendoff (1997) that the CC construction (or, as they call it, the left-subordinating-and construction) is incompatible with this very assumption and cannot be derived in a standard Minimalist framework. However, as I have shown, in a derivational model of syntax being coordinate and being subordinate does not necessarily exclude each other. The main assumption of the Derived Coordination Approach that I pursue here is that a subordinate clause is turned into a first conjunct by means of movement if certain semantic and syntactic requirements are met. This can account for the fact that CCs look like a normal coordinate clause on the surface even though most of its syntactic properties resemble those of a subordinate relation.

Empirically, this analysis, which follows the general idea of the Derived Coordination Approach pursued in Weisser (2014*b*), can be seen as one strategy to account for constructions which combine syntactic properties of subordinate and coordinate clauses. It has been argued in the literature that generative frameworks cannot integrate the complete range of clausal relations and hence the present account might be seen as a first attempt to do so.

Abels, Klaus (2003), Successive cyclicity, anti-locality, and adposition stranding, PhD thesis, University of Connecticut, Storrs.

Abusch, Dorit (1988), ‘Sequence of tense, intensionality and scope’, *Proceedings of the West Coast Conference on Formal Linguistics* (7), 1–14.

Abusch, Dorit (1997), ‘Sequence of tense and temporal de re’, *Linguistics and Philosophy* (20), 1–50.

Belletti, Adriana and Luigi Rizzi (1988), ‘Psych-verbs and θ -theory’, *Natural Language and Linguistic Theory* 6, 291–352.

Bhatt, Rajesh and Roumyana Pancheva (2006), Conditionals, in ‘Blackwell Companion to Syntax’, Blackwell, pp. 638–687.

Bošković, Željko (2002), ‘A-movement and the EPP’, *Syntax* 5, 167–218.

Bošković, Željko (2007), ‘On the Locality and the Motivation of Move and Agree: An even more minimal theory’, *Linguistic Inquiry* 38, 589–644.

Büring, Daniel and Katharina Hartmann (1998), ‘Asymmetrische Koordination’, *Linguistische Berichte* (174), 172–201.

Castillo, Juan Carlos, John Drury and Kleanthes Grohmann (2009), ‘Merge Over Move and the Extended Projection Principle: MOM and the PP Revisited’, *Iberia: An International Journal of Theoretical Linguistics* 1.1, 53–114.

- Chao, Wynn (1988), *On Ellipsis*, Garland, New York.
- Chomsky, Noam (1995), *The Minimalist Program*, MIT Press, Cambridge, Mass.
- Chomsky, Noam (2000), Minimalist Inquiries: The Framework, in R.Martin, D.Michaels and J.Uriagereka, eds, ‘Step by Step’, MIT Press, Cambridge, Mass., pp. 89–155.
- Chung, Sandra (1998), *The Design of Agreement*, University of Chicago Press.
- Coppock, Elizabeth (2001), Gapping: In defense of deletion, in M.Andronis, C.Ball, H.Elston and S.Neuvel, eds, ‘Proceedings of Chicago Linguistic Society 37’, University of Chicago, Chicago Linguistic Society, pp. 133–148.
- Culicover, Peter (1970), ‘One more can of beer’, *Linguistic Inquiry* (3), 366–369.
- Culicover, Peter (1972), ‘OM-sentences’, *Foundations of Language* 8, 199–236.
- Culicover, Peter W. and Ray Jackendoff (1997), ‘Semantic subordination despite syntactic coordination’, *Linguistic Inquiry* 28(2), 195–217.
- de Vos, Mark (2005), *The Syntax of Pseudo-Coordination in English and Afrikaans*, University of Leiden. Centre for Linguistics.
- de Vos, Mark (2009), ‘An Argument for VP coordination: Scene-setting coordination and weak islands’, *Southern African Linguistics and Applied Language Studies* 27, 1–23.
- den Besten, Hans (1977), *On the Interaction of Root Transformations and Lexical Deletive Rules*, University of Tillburg, PhD Dissertation.
- Drummond, Alex (2011), Binding Phenomena within a Reductionist Theory of Grammatical Dependencies, PhD thesis, University of Maryland.
- Epstein, David (1992), *Traces and Their Antecedents*, Oxford University Press.
- Epstein, Samuel and Daniel Seely (2006), *Derivations in Minimalism: Exploring the elimination of A-chains and the EPP*, Cambridge University Press, Cambridge.
- Etxepare, Ricardo (2002), ‘Null Complementizers in Spanish’, *International Journal of Basque Linguistics and Philology* (XXX-2), 469–496.
- Fox, Danny (2000), *Economy and Semantic Interpretation*, Linguistic Inquiry Monograph 35, Cambridge, MIT Press.
- Goldsmith, John (1985), A principled exception to the Coordinate Structure Constraint, in W.Eilfort, P.Kroeber and K.Peterson, eds, ‘Papers from the General Session at the Twenty-First Regional Meeting’, Vol. 21, Chicago Linguistic Society, pp. 133–143.

- Graf, Thomas (2010), ‘A Tree-Transducer Model of Reference Set Computation’, *UCLA Working Papers in Linguistics* **15**.
- Haegeman, Liliane (2003), ‘Conditional Clauses: External and Internal Syntax’, *Mind & Language* **18**(4), 317–339.
- Hankamer, Jorge (1973), ‘Unacceptable Ambiguity’, *Linguistic Inquiry* **4**, 17–68.
- Hankamer, Jorge (1979), *Deletion in coordinate structures*, New York, Garland.
- Hartmann, Katharina (2000), *Right Node Raising and Gapping*, Amsterdam, John Benjamins.
- Heck, Fabian (2010), Against direct Recursion in Grammar. Ms. University of Leipzig.
- Heycock, Caroline (1995), ‘Asymmetries in Reconstruction’, *Linguistic Inquiry* **26**, 547–570.
- Höhle, Tilman (1991), Assumptions about asymmetric coordination in German, in J.Mascaro and M.Nespor, eds, ‘Grammar in Progress: Glow Essays for Henk van Riemsdijk’, Dordrecht: Foris.
- Hinzen, Wolfram (2012), Phases and semantics, in A.Gallego, ed., ‘Phases: Developing the framework’, Mouton de Gruyter, Berlin, pp. 309–342.
- Hornstein, Norbert (2001), *Move! A Minimalist Theory of Construal*, Blackwell, Malden, Mass.
- Huang, Cheng-Teh James (1982), Logical Relations in Chinese and the Theory of Grammar, PhD thesis, MIT, Cambridge Mass.
- Iatridou, Sabine (1990), ‘The past, the possible and the evident’, *Linguistic Inquiry* (21), 123–129.
- Iatridou, Sabine (1991), *Topics in Conditionals*, PhD. thesis MIT Cambridge, MA.
- Jackendoff, Ray (1972), *Semantic Interpretation in Generative Grammar*, Cambridge, MIT Press.
- Jayaseelan, Karattuparambil A. (1990), ‘Incomplete VP deletion and Gapping’, *Linguistic Analysis* (20), 64–81.
- Johannessen, Janne Bondi (1998), *Coordination*, Oxford University Press, USA.
- Johnson, Kyle (1996), *In search of the English Middle Field*, University of Massachusetts, Amherst.
- Johnson, Kyle (2009), ‘Gapping is not (VP-)ellipsis’, *Linguistic Inquiry* (40), 289–328.

- Keshet, Ezra (2013), ‘Focus on conditional conjunction’, *Journal of Semantics* **30**(2), 211–256.
- Kiparsky, Carol and Paul Kiparsky (1970), Fact, in M.Bierwisch and K.Heidolph, eds, ‘Progress in Linguistics’, The Hague: Mouton.
- Klinedinst, N. and D. Rothschild (2012), ‘Connectives without truth tables’, *Natural Language Semantics* **20**, 1–39.
- Kratzer, Angelika (2012), *Modals and Conditionals*, Oxford University Press.
- Lakoff, George (1970), ‘Linguistics and Natural Logic’, *Synthese* **22** pp. 151–271.
- Lakoff, George (1986), ‘Frame semantic control of the Coordinate Structure Constraint’, *CLS 22 - The parasession on Pragmatics and Grammatical Theory* pp. 152–167.
- Landau, Idan (2001), ‘Control and extraposition: The case of super-equi’, *Natural Language and Linguistic Theory* (19), 109–152.
- Lebeaux, David (1990), Relative clauses, licensing, and the nature of the derivation, in J.Carter, R.-M.Dechaine, B.Philip and T.Sherer, eds, ‘Proceedings of NELS 20’, Amherst:GLSA, pp. 318–332.
- Lin, Vivian (2002), Coordination and Sharing at the Interfaces, PhD thesis, MIT, Cambridge MA.
- Longobardi, Giuseppe (1987), Extraction from np and the proper notion of head, in A.Giorgi and G.Longobardi, eds, ‘The Syntax of Noun Phrases’, Cambridge, Cambridge University Press, pp. 57–112.
- Lyons, John (1977), *Semantics: Volume 2*, Cambridge University Press.
- Müller, Gereon (2004), ‘Verb-Second as vP-first’, *Journal of Comparative Linguistics* **7**, 179–234.
- Mohr, Sabine (2005), ‘V2, Discourse Functions and Split-CP’, *Societas Linguistica Europaea* **38**.
- Munn, Alan Boag (1987), ‘Coordinate Structure and X-bar theory’, *McGill Working Papers in Linguistics* **4**(1), 121–140.
- Munn, Alan Boag (1994), A Minimalist Account of Reconstruction Asymmetries, in M.González, ed., ‘Proceedings of NELS 24’, Amherst:GLSA, pp. 397–410.
- Murguia, Elixabete (2004), Syntactic Identity and Locality Restrictions on Verbal Ellipsis, PhD thesis, University of Maryland.
- Na, Younghee and Geoffrey Huck (1992), On extracting from asymmetrical structures, in ‘The Joy of Grammar: A Festschrift for James D. McCawley’, Amsterdam/Philadelphia, John Benjamins, pp. 251–274.

- Neijt, Anneke (1979), *Gapping*, Dordrecht, Foris.
- Ogihara, Toshiyuki (1989), *Temporal Reference in English and Japanese*, PhD. University of Texas, Austin.
- Ogihara, Toshiyuki (1996), *Tense, Attitudes and Scope*, Springer, Berlin.
- Pesetsky, David (1982), On Paths and Categories, PhD thesis, Massachusetts Institute of Technology.
- Pesetsky, David (1989), Language-Particular Processes and the Earliness Principle. Ms. MIT Cambridge, Mass.
- Pietroski, Paul (2005), *Events and Semantic Architecture*, Oxford University Press.
- Pollock, Jean-Yves (1989), ‘Verb Movement, Universal Grammar and the Structure of IP’, *Linguistic Inquiry* (20), 365–424.
- Reich, Ingo (2007), From Phases to ATB-Movement, in ‘Proceedings of CLS 43’, Chicago Linguistic Society.
- Reis, Marga (1996), Extractions from Verb-Second Clauses in German?, in U.Lutz and J.Pafel, eds, ‘On Extraction and Extraposition in German’, Benjamins, Amsterdam, pp. 45–88.
- Rizzi, Luigi (1990), *Relativized Minimality*, MIT Press. Cambridge, Mass.
- Ross, John Robert (1967), Constraints on variables in syntax, PhD thesis, Massachusetts Institute of Technology. Massachusetts Institute of Technology. Dept. of Modern Languages and Linguistics. Thesis. Ph.D.
- Sag, Ivan (1976), Deletion and Logical Form, PhD thesis, Cambridge University.
- Schmerling, Susan (1975), ‘Asymmetric conjunction and rules of conversation’, *Syntax and Semantics* 3, 211–231.
- Schwager, Magdalena (2005), *Interpreting Imperatives*, PhD. thesis. Frankfurt/Main, Germany.
- Schwartz, Bonnie and Sten Vikner (1989), ‘All Verb Second Clauses are CPs’, *Working Papers on Scandinavian Linguistics* 43, 27–49.
- Sheehan, Michelle and Wolfram Hinzen (2011), ‘Moving towards the edge’, *Linguistic Analysis* 37, 405–458.
- Shima, Etsuro (2000), ‘A Preference for Move over Merge’, *Linguistic Inquiry* 31, 375–385.
- Stroik, Thomas and Michael Putnam (2013), *The Structural Design of Language*, Cambridge University Press.

- Sundaresan, Sandhya (2012), Context and Co(reference) in the syntax and its interfaces, PhD thesis, University of Tromsø/Universität Stuttgart.
- Takahashi, Hidemitsu (2004), The English Imperative: A Cognitive and Functional Analysis, PhD thesis, Hokkaido University.
- Taylor, Heather Lee (2007), Movement from If-clause Adjuncts, *in* A.Conroy, C.Jing, C.Nakao and E.Takahashi, eds, ‘University of Maryland Working Papers in Linguistics 15’, University of Maryland, pp. 189–202.
- te Velde, John (2005), *Deriving Coordinate Symmetries: A phase-based approach integrating Select, Merge, Copy and Match*, John Benjamins: Linguistics Today.
- Weisser, Philipp (2014*a*), A Minimalist Analysis of the Implicational and-construction in German, *in* A.Assmann, S.Bank, D.Georgi, T.Klein, P.Weisser and E.Zimmermann, eds, ‘Topics at Infl’, *Linguistische Arbeitsberichte* 92, Universität Leipzig - Institut für Linguistik, pp. 483–498.
- Weisser, Philipp (2014*b*), Derived Coordination: A Minimalist Perspective on Clause Chains, Converbs and Asymmetric Coordination, PhD thesis, Universität Leipzig. PhD Thesis.
- Williams, Edwin (1978), ‘Across-the-board Rule Application’, *Linguistic Inquiry* (9), 31–43.
- Yoshida, Masaya (2006), Sometimes smaller is better: Sluicing, Gapping and Semantic Identity, *in* C.Davis, A.Deal and Y.Zabbal, eds, ‘Proceedings of NELS 36’, Amherst:GLSA, pp. 259–287.
- Zeijlstra, Hedde (2014), *Upward Agree is superior*, Talk given the Leipzig Colloquium “Neuere Arbeiten zur Grammatiktheorie”.
- Zoerner, Ed (1995), *Coordination: The Syntax of &P*, Doctoral Dissertation, University of California, Irvine.