Asymmetrical coordination
syntax/semantics and pragmatics
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Abstract: This article aims at showing that the special interpretations of asymmetrical coordinate structures result from an interplay between the syntactico-semantic output of the grammar and pragmatics, but that they do not necessitate the introduction of special syntactico-semantic means; standard assumptions about syntax, semantics and pragmatics suffice for providing an adequate description of the core data.

Keywords: asymmetrical coordination, cooperative principle, logical equivalence, form-meaning correspondence hypothesis

1 Introduction

Asymmetrical coordination refers to coordinate structures like those given in (1), which receive a special interpretation and impose a rigid order on their coordinands.[1] The most prominent reading of example (1a), for instance, is that the event of Jan getting up precedes the event of Jan dressing, and the two (b)-examples can easily receive a conditional interpretation. Since asymmetrical coordination is always clausal in nature, we can normally express the intended interpretations by means of the proposition letters (p, q, etc.) for the semantic content of the propositions expressed by the coordinated clauses and the standard logical connectives (including "<" for precedence).

(1) a. [[Jan stond op] en [hij kleedde zich aan]].   [consecutive: $p < q$]
         Jan stood up and he dressed REFL prt.
         'Jan got out of bed and he dressed.'
     b. [[Jan komt   binnen] en [hij begint te praten]].   [conditional: $p \rightarrow q$]
         Jan comes inside and he starts to talk
         'When(ever) Jan comes in, he will start talking.'
     b′. [[Jan moet vertrekken] of [hij komt   te laat]].   [conditional: $\neg p \rightarrow q$]
         Jan must leave   or he comes too late
         'If Jan doesn't leave (now), he'll be too late.'

The examples in (2) show that the special interpretations of the examples in (1) are nullified when the coordinands are swapped; I have changed the subjects of the two clauses because deictic pronouns normally follow their antecedent, but this does not affect the discussion in any crucial way. Example (2a) shows that changing the order of the two coordinands in (1a) changes the temporal order of the two events: Jan exhibits the somewhat unconventional

behavior of getting dressed before getting out of bed (e.g., because it is extremely cold). And the (b)-examples in (2) show that the conditional readings of the (b)-examples in (1) are lost altogether. The dollar signs in (2) are used to indicate that the examples in (2) have an interpretation different from those in (1).

(2) a. $^{\$}$[[Jan kleedde zich aan] en [hij stond op]].
          Jan dressed REFL prt. and he stood up
          Literally: 'Jan dressed and he got out of bed.'
     b. $^{\$}$[[Jan begint te praten] en [hij komt binnen]].
          Jan starts to talk   and he comes inside
          Literally: 'Jan starts talking and he enters.'
     b′. $^{\$}$[[Jan komt   te laat] of [hij moet vertrekken]].
          Jan comes too late or he must leave
          Literally: 'Jan comes too late or he must leave.'

That the examples in (1) and (2) differ in interpretation goes against the commutativity laws of propositional logic in (3), in which the symbol ≡ stands for "is equivalent to".

(3)   • Commutativity of conjunction and disjunction
     a.   Conjunction: $\varphi \wedge \psi \equiv \psi \wedge \varphi$
     b.   Disjunction: $\varphi \vee \psi \equiv \psi \vee \varphi$

Many researchers have claimed that this shows that asymmetrical coordination is special in some linguistically relevant sense and may therefore require the introduction of special grammatical mechanisms: Culicover & Jackendoff (1997), for instance, have argued that it requires the introduction of a specific correspondence rule linking syntactic and semantic structures, which is able to transform a semantic conjunction into a material implication (they do not extend their proposal to disjunction). Others have argued that we are not dealing with coordination at all. This view seems especially popular among Dutch linguists since Bos (1964), who has introduced a third kind of syntactic relation besides coordination and subordination, which she dubbed *balansschikking* and which I will translate as *balanced ordination*; a prototypical example of a (presumed) balanced ordination is given in (4a). Balanced ordination constructions are taken to be Janus-faced: they resemble coordination in that they involve linking of main clauses (as is clear from the position of the finite verbs) but they resemble subordination in that the first (prototypically) negative clause receives an adverbial-like interpretation, which is normally motivated by showing that examples such as (4a) can be paraphrased by means of a subordinate adverbial clause, as in (4b).

(4) a. [Jan *kan* niets   zeggen] of [Marie *bespot* hem].
          Jan can nothing say   or Marie mocks him
          Literally: 'Jan cannot say anything or Marie mocks him.'
          Paraphrase: If Jan says anything, Marie mocks him.
     b. *Als Jan iets   zegt*, bespot Marie hem.
          if   Jan something says mocks Marie him
          'When Jan says something, Marie mocks him.'

This article argues against claims that asymmetrical coordination requires the introduction of special grammatical means of the sort discussed above. Section 2 starts by showing that the interpretation of asymmetrical conjunctions is not a matter of syntax/semantics only, but results from the interplay between the syntactico-semantic output of the grammar and pragmatics; this makes the introduction of correspondence rules superfluous. Section 3 will show the same for asymmetrical disjunction. This section will also discuss the additional arguments put forward in favor of introducing the syntactic notion of balanced ordination and

argue that they are all flawed. I therefore conclude that standard assumptions on syntax, semantics and pragmatics suffice for providing an adequate description of the core data.

2   Asymmetrical conjunction

The meaning contribution of the coordinator *en* 'and' prototypically involves logical conjunction: by uttering (5a) a speaker commits himself to the truth of the propositions expressed by the two coordinands. That the semantic contribution of *en* is purely truth-conditional is reflected in the fact that the order of the clauses can be reversed without affecting the truth conditions of the sentence, in agreement with the commutativity law of conjunction in (3a). Because of this property this type of coordination is sometimes also referred to as symmetrical coordination.

(5)   • Symmetrical coordination
   a.   [[Jan is ziek] en   [Marie is op vakantie]]. $[p \wedge q]$
        Jan is ill   and Marie is on vacation
   b.   [[Marie is op vakantie] en   [Jan is ziek]]. $[q \wedge p]$
        Marie is on vacation   and Jan is ill

There are, however, many cases of coordination with *en* 'and' that receive an interpretation that goes beyond pure logical conjunction; such coordinate structures are asymmetrical in the sense that reversal of the clauses does affect interpretation. By uttering (6a), the speaker does not only commit himself to the truth of the propositions expressed by the two coordinands but he also expresses that the event referred to by the first coordinand temporally precedes the event referred to by the second coordinand. Example (6b) shows that in this case reversing the two conjuncts does not result in fully equivalent expressions but reverses the temporal precedence relation. The use of the dollar sign indicates that the temporal ordering expressed by (6b) clashes with expectations based on our knowledge of the world.

(6)   • Asymmetrical coordination
   a.   [[Jan stond op] en [hij kleedde zich   aan]]. $[p \wedge q; p < q]$
        Jan stood up and he   dressed REFL prt.
        'Jan got out of bed and he dressed.'
   b. $^{\$}$[[Jan kleedde zich aan] en   [hij stond op]]. $[q \wedge p; q < p]$
        Jan dressed REFL prt. and he stood up

I will assume that temporal ordering, or perhaps some more general notion such as *priority* (cf. Schmerling 1975), is the default interpretation of asymmetrical coordination although we will see that our knowledge of the world can also trigger more specific (causal, concessive, etc.) readings.

2.1   Temporal (consecutive) ordering

Two prototypical cases of asymmetrical coordination are given in (7). Although all examples are impeccable from a syntactic point of view, the primed examples are perhaps a little odd in that they clash with our knowledge of the world, due to the fact that the linear order of the coordinands appears to be interpreted such that it coincides with the temporal order of the events expressed by them: cf. Dik (1968:56-7). Example (7a′) is surprising because it refers to the unconventional state-of-affairs of Jan getting dressed in (before leaving) his bed, and (7b′) is odd since it refers to the unconventional state-of affairs of Jan undressing in (after getting into) the bath.

(7)   • Asymmetrical coordination (temporal)
   a.   [[Jan stond op] en [hij kleedde zich aan]]. $[p \wedge q; p > q]$
        Jan stood up and he dressed REFL prt.
        'Jan got up and he dressed.'
   a′. $^{\$}$[[Jan kleedde zich aan] en [hij stond op]]. $[q \wedge p; q > p]$
        Jan dressed REFL prt. and he stood up
   b.   [[Jan kleedde zich uit] en [hij ging in   bad]]. $[p \wedge q; p > q]$
        Jan dressed   REFL prt. and he went into bath
        'Jan undressed and he took a bath.'
   b′. $^{\$}$[[Jan ging in   bad] en [hij kleedde zich uit]]. $[q \wedge p; q > p]$
        Jan went into bath and he dressed REFL prt

Asymmetrical coordination normally occurs only if the coordinands entertain a certain semantic relation and form an integrated semantic whole in the sense that "we understand the two events as being connected as part of a larger event"; cf. Culicover & Jackendoff (1997). This is only possible when the events referred to by the coordinands are conceived as being *inherently* related, for which reason Zhang (2010) refers to such cases as "natural" coordination. All of this amounts to saying that the temporal interpretation is a pragmatic effect triggered by our knowledge of the world. The temporal ordering can of course also be made explicit by means of a deictic temporal adverbial phrase, as in (8), but such cases differ from temporal asymmetrical coordination in that the temporal order of the events expressed by the coordinands does not have to coincide with the linear order of the coordinands: it does if *daarna* 'after that' is used, but not if *daarvoor* 'before that' is used.

(8)   [[Jan stond op] en ...
           Jan stood up and
   a.   ... [hij kleedde zich *daarna*   aan omdat   het koud was]]. $[p > q]$
           he dressed   REFL after.that prt. because it cold   was
        'Jan got up and he dressed after that because it was cold.'
   b.   ... [hij kleedde zich *daarvoor* aan omdat   het koud was]]. $[p < q]$
           he   dressed REFL before.that prt. because it   cold   was
        'Jan got up and he dressed before that because it was cold.'

The fact that the temporal adverbial phrase *daarvoor* 'before that' in (8b) can be used for canceling the default interpretation of example (7a) provides additional support for the claim that the temporal (consecutive) ordering should be attributed to pragmatics.[2]

2.2   Reason/cause and concession

The previous subsection has shown that asymmetrical coordination typically imposes temporal restrictions on the events referred to by the coordinands, which are not inherently present in the truth-conditional meaning contribution of the coordinator. Dik (1968), Schmerling (1975), Haeseryn (1997: §25.1), Culicover & Jackendoff (1997), Huddleston & Pullum (2002:1299ff.) among others have shown that other, more complex, implicational relations can be expressed as well. The examples in (9) adapted from Dik (1968:57) are like the examples in (7) in that a temporal order of the events expressed by the coordinands is implied but there is yet another additional meaning aspect: (9a) would normally be interpreted such that the death of the female person in question is the *reason* for burying her, while (9b) gives the burial as the *cause* of her death.

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[2] In some cases, "natural" coordination seems to give rise to syntactic reanalysis but this does not seem to have taken place in Dutch, so that I will not digress on this issue here. I refer the reader to Zhang (2010: section 5.3) for a concise review and references.

(9)   • Asymmetrical coordination (reason/cause)
    a.   [[Ze   stierf] en   [we begroeven haar]].
          she died   and we buried   her
    b.   [[We begroeven haar] en   [ze stierf]].
          we   buried   her   and she died

The examples in (10) show that the implicational relations of reason and cause can be made explicit by adding the deictic adverbials *daarom* 'for that reason' and *daardoor* 'because of that' to the second clause. These adverbials are mutually exclusive in these examples for reasons related to our knowledge of the world (although some speakers can use *daarom* for indicating both reason *and* cause), which suggests that the interpretation of the examples in (9) is also pragmatic in nature.

(10) a.   [[Ze stierf] en   [*daarom/*$*daardoor*   begroeven we haar]].
          she died   and for.that.reason/because.of.that buried   we her
          'She died and we buried her for that reason.'
    b.   [[We begroeven haar] en   [*daardoor*/$*daarom*   stierf   ze]].
          we   buried   her   and because.of.that/for.that.reason died   she
          'We buried her and she died because of that.'

Another case mentioned by Huddleston & Pullum is illustrated by (11): (11a) is readily interpreted as concessive, while such an interpretation is not easy to get for (11b). Again the implied relation between the two clauses can be made explicit by means of a deictic adverbial: *desondanks* 'despite of that' fits in naturally in (11a) but not in (11b).

(11)   • Asymmetrical coordination (concession)
    a.   [[Jan eet te veel]   en   [hij blijft   (*desondanks*)   te mager]].
          Jan eats too much and he remains despite.of.that too skinny
          'Jan is eating too much and (in spite of that) he remains too skinny.'
    b. $[[Jan blijft   te mager] en   [hij eet   (*desondanks*)   te veel]].
          Jan remains too skinny and he eats despite.of.that too much

The restrictions on the adverbials in (10) and (11) show that the information of the available semantic relations between the events expressed by the clausal coordinands is part of the common ground, that is, the information shared by the participants in the discourse. This suggests again that temporal ordering is the default interpretation of asymmetrical coordination, and that the more specific readings are superimposed on it on the basis of our knowledge of the world. That the interpretation of (11a) is based on our knowledge of the world can be further supported by comparing it to (12), in which the predicate *te mager* 'too skinny' is replaced by *te dik* 'too fat'.

(12)   [[Jan eet te veel]   en   [hij blijft   (*daardoor*)   te dik]].
             Jan eats too much and he   remains because.of.that too fat
             'Jan is eating too much and he remains too fat (because of that).'

The syntactic structure is identical but the interpretation changes from a concessive into a causal one, as is clear from the fact that adding the adverbial *desondanks* to the second coordinand in (12) would clash with our expectation; the causal adverbial *daardoor* is the more natural addition.

2.3   Condition

This subsection discusses the even more special cases of asymmetrical coordination in (13) with a conditional interpretation; cf., e.g., Kraak & Klooster (1972:276), Haeseryn et al. (1997:1529) and Van der Heijden (1999: §4.1). At an observational level, these examples differ from those in the previous subsections in that the conditional interpretation cannot be

made explicit by means of a deictic adverbial. Another surprising fact is that the first clausal coordinand can be imperative because imperative and declarative clauses normally cannot be coordinated. The rationale for this restriction on coordination may be that a run-of-the-mill conjunctive interpretation is blocked given that declaratives normally have a truth value in a specific situation, while imperatives do not, as they are used for persuading the addressee to bring about a truth transition (that is, as a request to the addressee to make some proposition true).

(13)　　　● Asymmetrical coordination (conditional)
　　a.　[[Jan komt　binnen]　en　[hij begint te praten]].
　　　　 Jan comes　inside　　and　he　starts　to talk
　　　　Literally: 'Jan enters and he starts talking'
　　　　Paraphrase: 'When(ever) Jan enters, he will start talking.'
　　b.　[[Kom hier]　en　[ik schiet]]!
　　　　 come here　and　I　shoot
　　　　'Come here and I'll shoot.'

It seems clear that we are not dealing with some idiosyncratic property of the coordinate structures at hand, because we find the same phenomenon in various languages. However, there does not seem to be an established view on how to account for the conditional interpretation of examples like those in (13). Huddleston & Pullum (2002:1301) suggest that we are dealing with a pragmatic implicature, while Culicover & Jackendoff (1997) suggest that the interpretation is due to a correspondence rule linking syntactic and semantic structure, which transforms a semantic conjunction into a material implication. The two proposals are unfortunately not worked out in sufficient detail to evaluate them properly, but I will argue here that the pragmatic approach is the most promising one and that, consequently, no correspondence rules are needed. Huddleston & Pullum suggest that the semantic link between the conjunctive and conditional interpretation is that $p \wedge q$ and $p \rightarrow q$ both exclude cases where p is true and q is false. They thus suggest that the participants in the discourse only "see" the shaded rows of Table 1 by excluding those cases in which p is false as irrelevant for the evaluation of the examples in (13).

Table 1: Truth table for conjunction and material implication

p	q	$p \wedge q$	$p \rightarrow q$
1	1	1	1
1	0	0	0
0	1	0	1
0	0	0	1

Huddleston & Pullum do not spell out the pragmatic reasoning leading to this "more restricted window" on Table 1. My proposal, which will be given in (16) below, takes as its point of departure the observation that the conditional reading normally does not arise in (non-irrelis[3]) past tense constructions.

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[3] The irrealis is normally formed by means of the past tense form *zou* 'would' or (in more formal language) by the past tense forms of other modal verbs. In agreement with our claim in the main text, irrealis past tense sometimes also triggers conditional interpretations. For simplicity's sake, we will generally ignore this here, although we will briefly discuss one more specific case in Section 3.1; see example (0).

(14) a. [[Jan komt   binnen] en [hij begint te praten]].   [present: ambiguous]
        Jan comes   inside   and he   starts to talk
        Literally: 'Jan enters and he starts talking'
        Paraphrase: 'When(ever) Jan enters he will start talking.'
     b. [[Jan kwam binnen] en [hij begon te praten]].   [past: non-conditional]
        Jan came   inside and he   started to talk
        'Jan entered and he started talking.'

The difference between present and past tense is that the latter is normally used for describing a state-of-affairs that has actually occurred before speech time, while the former can have various functions: it can be used for describing the state-of affairs at speech time, but it can also be used as an irrealis form for expressing wishes, expectations, etc. about future states-of-affairs or as a form expressing generic statements if the (linguistic or non-linguistic) context provides clues favoring this.

(15) a. Jan wandelt op de hei.   [(preferably) realis; statement]
        Jan walks   on the moor
        'Jan is walking on the moor.'
     b. Jan wandelt morgen   op de hei.   [irrealis]
        Jan walks   tomorrow on the moor
        'Jan will be walking on the moor tomorrow.'
     c. Jan wandelt normaal gesproken op de hei.   [generic]
        Jan walks   normally speaking   on the moor
        'Jan normally walks on the moor.'

The ambiguity of present tense example such as (14a) is due to the fact that it allows both for a realis and for an irrealis/generic interpretation. The default interpretation seems to be the realis interpretation. For example, when (14a) is used as a stage direction in a play, the author will normally not intend the irrealis/generic reading; it is quite possible that the character Jan will remain/remains silent after coming on stage in other scenes of the play. The conditional reading of (14a) is only compatible with an irrealis/generic interpretation. In such cases, the event referred to by the first coordinand is normally not actualized at speech time: p = 0. The pragmatic reasoning in (16), based on Grice's (1975) cooperative principle, shows that the irrealis interpretation makes it possible to account for Huddleston & Pullum's intuition that the link between the conjunctive and the conditional interpretation is that $p \wedge q$ and $p \rightarrow q$ both exclude cases where p is true and q is false by appealing to the earlier observation that asymmetrical coordination expresses temporal ordering by default. Observe that p and q in (16) correspond with the propositions expressed by the first and second clause in (14a), respectively.

(16)   • Pragmatic reasoning leading to a conditional reading of (14a)
     a. The utterance does not describe an existing state-of-affairs because p = 0, which entails that $p \wedge q = 0$. The utterance should therefore be interpreted as non-realis; cf. maxim of relation.
     b. Speaker S commits himself to $p \wedge q = 1$ at some time t; cf. maxim of quality.
     c. The truth of $p \wedge q$ is not checked for any time t at which p = 0 because p < q; the truth of $p \wedge q$ will only be checked for some/any time t at which p = 1.
     d. Only the first two rows in Table 1 are relevant for evaluating the truth of (14a) and these are compatible with a conditional interpretation of this example.

Although imperatives cannot be assigned a truth value, it seems even easier to derive the conditional interpretation of utterance (13b). The crucial thing is that because imperatives are used to urge the addressee to bring about a certain truth transition (that is, to make a proposition p true), we can again account for the conditional reading by appealing to the temporal ordering of the asymmetrically coordinated clauses and Grice's (1975) cooperative

principle. The pragmatic reasoning is given in (17), where p refers to the proposition that the addressee is urged to make true and q corresponds to the proposition expressed by the second clause in (13b). For more discussion of this construction type, I refer the reader to Proeme (1984) and Fortuin & Boogaart (2009).

(17)   • Pragmatic reasoning leading to a conditional reading of (13b)
   a.   The utterance does not describe an existing state-of-affairs because p = 0, which entails that p ∧ q = 0.
   b.   The imperative invites the addressee A to make p true.
   c.   If A does not make p true, S cannot make p ∧ q true; if A does make p true, S can make p ∧ q true by making q true. Therefore, S commits himself to making q true if A makes p true: cf. maxim of quality.
   d.   Only the first two rows in Table 1 are relevant for evaluating the truth of (13b) and these are compatible with a conditional interpretation of this example.

For completeness' sake, I want to note that examples such as (18a) can be used either as an *encouragement* or as a *warning*, depending on the question as to whether or not proposition q is favorable for addressee A: (18a) will be seen as an encouragement if both A and S know that A would liked to be kissed by S, but as a warning if they both know that A does not want to be kissed by S. The pragmatic lines of reasoning leading to these results are given in (18b&b′), which take the conclusion in (17c) as their point of departure. We will see in Section 3.1 that the corresponding disjunctive construction *Kom hier of ik kus je!* 'Come here or I'll kiss you!' with the coordinator *of* 'or' can only be construed as a warning.

(18) a.   [[Kom hier] en   [ik kus je]]!
            come here   and I   kiss you
            'Come here and I'll kiss you.'
      b.   If A makes p true, S will make q true. Since S knows that A likes q to become true, (18a) is intended as an encouragement.
      b′. If A makes p true, S will make q true. Since S knows that A does not like q to become true, (18a) is intended as a warning.

The discussion above has shown that the conditional interpretation of clausal coordinate structures with *en* 'and' can be derived by appealing to the temporal ordering expressed by asymmetrical coordination in tandem with more or less standard pragmatic reasoning; see Fortuin & Boogaart (2009: Figure 3) for a formulation of the same conclusion in a constructional framework. This makes it unnecessary (and therefore undesirable) to introduce special syntactic or semantic apparatus such as the correspondence rule proposed in Culicover & Jackendoff (1997) to account for such cases.

3   Asymmetrical disjunction

This section discusses asymmetrical disjunction, which comes in two main categories: one in which the initial coordinand is a positive clause (section 3.1) and one in which the first coordinand is a negative clause (section 3.2). We will see that these categories can normally be accounted for in a relatively straightforward way by appealing to standard equivalency rules. Section 3.3 will show, however, that the second subcategory contains a number of subcases that cannot be accounted for in this way, which has led Bos (1964) to the conclusion that we have to distinguish a third syntactic relation dubbed "balanced ordination" besides coordination and subordination; I will investigate the arguments put forward in favor of this notion and conclude that they are all flawed.

3.1   Asymmetrical disjunction I (p ∨ q)

Section 2.3 has shown that coordinate structures with the conjunctive coordinator *en* 'and' can sometimes be interpreted as conditionals. The examples in (19) show that we find the same for coordinate structures with the disjunctive coordinator *of* 'or'; cf. Haeseryn et al. (1997:1534) and Van der Heijden (1999: §4.1) The coordinate structure in (19a) has two declarative main clauses and can be used to motivate the speaker's decision to leave due to its conditional reading "If I don't go (now), I'll be too late". The coordinate structure in (19b) contains an imperative and a declarative clause and is normally used as a warning with the conditional interpretation "If you don't go (now), you'll be too late"; cf. Kraak & Klooster (1972:276).

(19)   • Asymmetrical disjunction (conditional)
    a.   [[Ik ga] of [ik kom   te laat]].
            I   go   or I come too late
           Literally: 'I will go (now) or I'll be too late.'
           Paraphrase: 'If I don't go (now), I'll be too late.'
    b.   [[Ga] of [je   komt te laat]]!
             go   or you come too late
           Literally: 'Go (now) or you'll be too late!'
           Paraphrase: 'If you don't go (now), you'll be too late.'

The question as to why the utterances in (19) can receive a conditional interpretation seems less complicated than the same question for their conjunctive counterparts since Table 2 shows that the disjunction p ∨ q is logically equivalent to ¬p → q, which corresponds neatly with the conditional paraphrases given above.

Table 2

p	q	¬p	p ∨ q	¬p → q
1	1	0	1	1
1	0	0	1	1
0	1	1	1	1
0	0	1	0	0

That p ∨ q and ¬p → q are logically equivalent does not imply, however, that coordinate structures with *of* 'or' are always interpreted as conditionals. This is clear from the fact that such an interpretation is not easily available for example (20a): the propositions expressed by the coordinands in (20) are simply presented as independent of each other, as is clear from the fact that they can be reversed without affecting the meaning of the coordinate structure. We are dealing with symmetrical disjunction: both coordinands can be used as an explanation for, e.g., the observation that the lights are on in Jan's apartment (on the premise that Jan normally switches the light off when leaving home).

(20)   • Symmetrical disjunction
    a.   [[Jan is thuis] of [hij heeft per ongeluk het licht aangelaten]].   [p ∨ q]
            Jan is home   or he   has   by accident the light on-left
           'Jan is at home or he has accidentally left the light on.'
    b.   [[Jan heeft het licht per ongeluk aangelaten] of [hij is thuis]].   [q ∨ p]
            Jan has   the light by accident on-left   or   he is home
           'Jan has accidentally left the light on or he is at home.'

The examples in (19), on the other hand, are clearly asymmetrical; reversing the order of the clausal coordinands in (19a), repeated here as (21a), results in the loss of the conditional

interpretation. The resulting structure in (21b) is in fact quite marked due to a lack of coherence. Reversing the imperative and declarative clauses in (19b) simply leads to a completely unacceptable result: cf. *[[Je komt te laat] of [ga]]!* (literally: "You will come too late or go!").

(21)   • Asymmetrical disjunction
    a.   [[Ik ga] of [ik kom   te laat]].   [conditional]
       I   go   or I   come too late
       'I go (now) or I'll be late.'
    b. $^\$$[[Ik kom   te laat]   of [ik ga]].   [non-conditional]
       I   come too late or I   go

As in the corresponding coordinate structures with *en* 'and', the conditional interpretation is normally not possible if the utterance is in the past tense. Example (22) may be syntactically well-formed but is just as incoherent as example (21b), which strongly suggests that the conditional interpretation of asymmetrical disjunction constructions is also restricted to, and possibly even triggered by, non-realis contexts.

(22) $^\$$[[Ik ging] of [ik kwam te laat]].
       I   went   or I   came too late
       Literally: 'I went or I came too late.'

The conditional interpretation of (19/21a) is also related to the temporal ordering typically found in asymmetrical coordination constructions: because the event referred to by the first coordinand precedes the event referred to by the second coordinand, manipulation of the truth value of p may restrict the truth value of q, which is more transparently expressed by means of the "conditional" formula $\neg p \rightarrow q$ than by the more "neutral" formula $p \vee q$; see Van Canegem-Ardijns & Van Belle (2010) for a somewhat different proposal in the same spirit.

(23)   • Pragmatic reasoning leading to a conditional reading of (19a)
    a.   The utterance does not describe an existing state-of-affairs: $p \vee q = 0$. The utterance should therefore be interpreted as non-realis; cf. maxim of relation.
    b.   Speaker S commits himself to $p \vee q = 1$ at some time t; cf. maxim of quality.
    c.   If S makes p true, q may be false or true in order for $p \vee q$ to be true; if S makes p false, q must be true in order for $p \vee q$ to be true.
    d.   Because q is undesirable for S, the conditional reading $\neg p \rightarrow q$ provides a motivation for making p true.

Although imperatives cannot be assigned a truth value, it is even easier to derive the conditional interpretation of utterance (19b). Because the use of an imperative urges the addressee to make a certain proposition p true, we can again account for the conditional reading by appealing to the temporal ordering of the asymmetrically coordinated clauses and Grice's (1975) cooperative principle, where p refers to the proposition that the addressee is urged to make true and q corresponds to the proposition expressed by the second clause.

(24)   • Pragmatic reasoning leading to a conditional reading of (19b)
    a.   The utterance does not describe an existing state-of-affairs: $p \vee q = 0$.
    b.   The imperative invites the addressee A to make p true.
    c.   If A makes p true, $p \vee q = 1$ regardless of the truth of q; if A makes p false, $p \vee q = 1$ only if $q = 1$.
    d.   Because q is undesirable for A, the conditional reading $\neg p \rightarrow q$ provides a warning to A not to make p false.

The fact that the examples in (19a) and (19b) can both be construed as providing a rationale for making p true is crucially based on the fact that q is undesirable for, respectively, the

speaker and the addressee. This raises the question as to why examples such as (25) sound so weird (on the assumption that being on time is desirable for the speaker/addressee) or receive an ironic interpretation.

(25) a. $^${[[Ik blijf] of [ik kom   op tijd]].
          I   stay or I   come in time
          Compare: 'I'll stay or I'll be in time.'
     b. $^${[[Blijf] of [je   komt op tijd]]!
          stay   or you come in time
          Literally: 'Stay or you'll be in time!'

Pragmatic reasoning along the lines of (24) would lead to the wrong conclusion that the utterances provide a rationale for making p false, as this would leave open the possibility that q would become true. The reason for the markedness of (25b) may be that the normal function of the imperative is to persuade the addressee to make a certain proposition p true and this is at odds with the conclusion, drawn from the pragmatic reasoning in (24), that it would be better for the addressee not to make p true. In other words, the utterance leads to a pragmatic paradox by providing the addressee with conflicting signals; cf. Van Canegem-Ardijns & Van Belle (2010). This may also be the reason for the markedness of (25a): the speaker leads the addressee down the garden path by first providing him with a positive declarative that must be rejected later on the basis of pragmatic reasoning.

The conditional readings of the disjunctive coordinate structures discussed so far are based on the equivalence rule $\varphi \vee \psi \equiv \neg\varphi \rightarrow \psi$. There is a second conditional-like reading, illustrated in (26), which has been referred to as the exceptive reading. This reading is triggered when the second clause is past tense and contains the modal verb *moeten* 'must'; see Welschen (1999:16ff.) for extensive discussion.

(26)   We gaan wandelen of het moest/zou moeten regenen.
          we go   walk   or it   should/would must rain
          Literally: 'We go walk, or it should rain.'
          Paraphrase: 'We will go for a walk, unless it rains.'

Assuming that the meaning of *unless* can be described as "if not", we can translate the paraphrase of (26) as: $\neg q \rightarrow p$. Table 3 shows that this reading is expected given that $\neg q \rightarrow p$ is also logically equivalent to $p \vee q$.

Table 3

p	q	$\neg q$	$p \vee q$	$\neg q \rightarrow p$
1	1	0	1	1
1	0	1	1	1
0	1	0	1	1
0	0	1	0	0

The exceptive reading of (26), which seems part of formal language, is clearly related to the subjunctive-like impact of irrealis past tense forms like *moest* 'should', *zou moeten* 'would have to', etc. The pragmatic reasoning leading to this reading is briefly outlined in (27).

(27)   • Outline pragmatic reasoning leading to the exceptive reading of (26):
     a.   irrealis past tense entails: q = 0 or q =1 at contextually determined time *t*.
     b.   S commits himself to making $\neg q \rightarrow p$ true at *t*.
     c.   if $\neg q$ = 0 at *t*, (26) is true regardless the truth of p; see shaded rows in Table 3.
     d.   if $\neg q$ = 1 at *t*, (26) is true only if p = 1; see non-shaded rows in Table 3.
     e.   if $\neg q$ = 1 at *t*, S commits himself to p = 1 at *t*.

   This subsection has shown that the more special readings assigned to the disjunctive examples of the form p ∨ q can easily be accounted for by appealing to logical equivalence rules and standard pragmatic reasoning; we therefore do not need any unconventional syntactic or semantic means in order to account for these data.

   3.2   Asymmetrical disjunction IIa (¬p ∨ q)

The conditional reading of the type of disjunctive coordinate structures discussed in the previous subsection, illustrated again in (28a), is based on the logical equivalence of the two statements p ∨ q and ¬p → q; cf. Table 2. This subsection discusses a second kind of disjunctive coordinate structure with a conditional reading, in which the first coordinand is a negative declarative clause; the conditional reading of such examples is illustrated in (28b).

(28) a.   [[Ik ga] of [ik kom te laat]].   [type I: φ ∨ ψ ≡ ¬ φ → ψ]
          I   go or I come too late
          Literally: 'I'll go or I'll be too late.'
          Paraphrase: If I do not go (now) I'll be too late.
      b.   [[Ik blijf niet langer] of [ik kom te laat]].   [type II: ¬φ ∨ ψ ≡ φ → ψ]
          I   stay no longer   or I come too late
          Literally: 'I won't stay any longer or I'll be too late.'
          Paraphrase: If I stay any longer, I'll be too late.

We can account for the conditional reading of (28b) by applying the logical equivalency rule given within square brackets, which is illustrated in Table 4.

Table 4

p	q	¬p	¬p ∨ q	p → q
1	1	0	1	1
1	0	0	0	0
0	1	1	1	1
0	0	1	1	1

Note that the equivalence rule deriving the conditional reading in (28a) would actually suffice to derive the conditional reading of (28b) as well: applying this rule to the formula ¬p ∨ q results in ¬¬p → q, which is in turn equivalent with p → q because the two negative operators cancel each other. We would therefore expect that there is little to say about the conditional reading of (28b) because we may follow essentially the same pragmatic reasoning leading to the conditional reading of (28a), However, there is a complication in that examples of this type in (28b) can express a somewhat wider range of interpretations. Example (29a), for instance, does not only allow a conditional reading but also a temporal (consecutive) reading with a generic, habitual or iterative flavor.

(29) a.   [Jan kan niets   zeggen] of [Marie protesteert].
          Jan can nothing say   or   Marie protests
          Literally: 'Jan cannot say anything or Marie protests.'
      b.   Conditional paraphrase: 'If Jan says something, Marie protests.'
      b′. Temporal paraphrase: 'Marie protests when Jan is saying something.'

Following Van den Toorn (1972), we can derive the temporal/iterative reading from the equivalence rule ¬φ ∨ ψ ≡ ¬(φ ∧ ¬ψ), according to which (29a) can be paraphrased as "it is not true that Jan says something and Mary does not protest". The temporal reading is even more prominent in the past tense counterpart of example (29a) in (30), which is in accordance with our earlier conclusion that the conditional reading requires an irrealis context.

(30) a. [Jan kon niets zeggen] of [Marie protesteerde].
     Jan could nothing say   or   Marie protested
     Literally: 'Jan could not say anything or Marie protested.'
     Temporal paraphrase: 'When Jan said anything, Marie protested.'

The main conclusion of this subsection is that the more special readings assigned to disjunctive examples of the form ¬p ∨ q can be accounted for by means of logical equivalence rules and standard pragmatic reasoning. This supports my claim that asymmetric coordination does not necessitate the introduction of any unconventional syntactic or semantic means, but there is a complication, which will be discussed in Section 3.3.

3.3   Asymmetrical disjunction IIb: balanced ordination (balansschikking)

The previous subsection has argued that the more special readings assigned to disjunctive examples of the form ¬p ∨ q do not necessitate the introduction on any special syntactic or semantic means. This goes against one of the main streams in the literature on Dutch, which denies that asymmetrical disjunctions of this form involve "true" coordination. An important leading to this conclusion is that, although we are at least superficially dealing with coordination in examples such as (31a), the initial clauses receive a *subordinate* adverbial-like interpretation, as is clear from the paraphrases in the (b)-examples.

(31) a. [Jan kan niets   zeggen] of [Marie protesteert].
     Jan can nothing say   or   Marie protests
     Literally: 'Jan cannot say anything or Marie protests.'
   b. *Als Jan iets   zegt*, protesteert Marie.
     if   Jan something says protests   Marie
     'If Jan says something, Marie protests.'
   b′. *Zodra   Jan iets   zegt*, protesteert Marie.
     as.soon.as Jan something says protests   Marie
     'As soon as Jan says something, Marie protests.'

This (alleged) discrepancy between form and meaning is problematic for the (still popular) form-meaning correspondence hypothesis, according to which differences of interpretation should be reflected directly in syntactic structure; see, e.g., the introduction by G.F. Bos and H. Roose in their edition of De Groot (1949) and Elffers-van Ketel (1991:189ff). Bos (1964) solved this problem by claiming that constructions such as (31a) are instantiation of a more special syntactic construction with properties of both coordination and subordination, which she dubbed BALANSSCHIKKING "balanced ordination". The principal aim of this section is to show that Bos' arguments for claiming that balanced ordination is a third type of *syntactic* relation besides coordination and subordination are all flawed in one way or another and can therefore not be used for arguing in favor of it. But Section 3.3.1 will begin by setting the stage by briefly reviewing the syntactico-semantic oriented literature on the relevant set of constructions.

3.3.1   A bird's eye view on the syntactico-semantic literature

The logical approach to what has become known as balanced ordination was initiated by Terwey (1892), who distinguishes three subcategories. The first category consists of various construction types with a conditional interpretation. Constructions of this type were discussed in Section 3.2, in which it was shown that their interpretation can easily be accounted for by appealing to the logical equivalence rule ¬φ ∨ ψ ≡ φ → ψ; cf. Van den Toorn (1972), Van der Heijden (1999: section 4.2.2) among others. Some more examples are given in (32).

(32) a.   [[Ik blijf niet langer] of [ik kom te laat]].
      I   stay no longer   or   I   come too late
      Literally: 'I will not stay any longer or I will be too late.'
      Paraphrase: 'If I stay any longer, I'll be too late.'
   b.   [Er   is geen mens]   of [hij moet sterven].
      there is no human.being or   he   must die
      Literally: 'There is no human being or he must die.'
      Paraphrase: 'All people must die.'
   c.   Er   is geen probleem zo groot of het kan opgelost   worden.'
      there is no problem   that big or it   can prt.-solved be
      Literally: 'There is no problem that big or it can be solved.'
      Paraphrase: 'However big, every problem can be solved.'

The second category distinguished by Terwey contains constructions that receive a temporal (consecutive) interpretation, such as the two examples in (33). Such examples may have a generic flavor, as the examples in (29a)/(30a), or may simply express succession, as the examples in (33). Van den Toorn (1972) has claimed that such interpretations can be accounted for by appealing to the equivalence rule $\neg\varphi \vee \psi \equiv \neg(\varphi \wedge \neg\psi)$. Van Hauwermeiren (1973) has shown, however, that this holds true for examples such as (33a) but not for examples such as (33b).

(33) a.   [Jan was nog niet thuis]   of [de telefoon   ging].
      Jan was not yet   at. home   or the telephone rang
      Literally: 'Jan was not yet home or the telephone rang.'
      Paraphrase: 'The phone rang immediately after Jan came home.'
   b.   [Jan was nauwelijks   thuis] of [de telefoon   ging].
      Jan was hardly (=not long) home   or the telephone rang
      Literally: 'Jan hardly arrived home or the telephone rang.'
      Paraphrase: 'The phone rang immediately after Jan came home.'

The easiest way of demonstrating Van Hauwermeiren' point is by considering the entailments in (34) of the clausal coordinands preceding the coordinator *of* 'or' in (33); the entailment in (34a) shows that the first coordinand of the coordinate structure in (33a) is a negative declarative clause ($\neg$p), while the entailment in (34b) shows that the first coordinand in (33b) is a positive declarative clause (p). This means that the two examples in (33) have the propositional logical translations in the primed examples (contra Welschen 1999, who claims that both examples involve constituent negation for reasons related to his Dutch example given in the footnote).[4] These translations thus refute Van den Toorn's suggestion that the consecutive readings can all be derived by the equivalence rule $\neg\varphi \vee \psi \equiv \neg(\varphi \wedge \neg\psi)$; this is evidently not the case for (33b).

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[4] Van Hauwermeiren illustrates the contrast by substituting the conjunctive coordinator *en* 'and' for *of* 'or'; this is possible (for pragmatic reasons) if the coordinate structure expresses p $\vee$ q but excluded if it expresses $\neg$p $\vee$ q. The test gives the correct result for examples of the first category, which all resist this substitution, but works less well for examples such as (0a). I believe this to be related to the fact that negation figures prominently in hyperboles such as *I haven't done anything!*, which are often used to express that the speaker has done less than he would have liked. That hyperbolic language may be relevant is clear from the following example from Welschen (1999:37/50): *Hij had de telefoon nog niet neergelegd of/en hij ging weer* (literally 'He hadn't put down the phone yet or/and it rang again.' The example with *en* 'and' cannot be literally true, as standard landline telephones in the 1990's could only ring when they were put down. The fact that this example can be used in a hyperbolic sense accounts for the fact that Hauwermeiren's test fails in the case at hand.

(34) a.   Jan was nog niet thuis ⊨ Jan was niet thuis   [negative declarative]
      a′. (33a): ¬p ∨ q
      b.   Jan was nauwelijks thuis ⊨ Jan was thuis   [positive declarative]
      b′. (33b): p ∨ q

It is not easy to show either that the equivalence rule ¬φ ∨ ψ ≡ ¬(φ ∧ ¬ψ) plays a role in deriving the consecutive reading of example (33a), due to the fact that the meaning contribution of the adverbial *nog* 'yet' is not immediately clear. In order to see this, we should note that the two examples in (35) can be considered each other's negative counterparts.

(35) a.   Jan is nog niet thuis.
           Jan is yet not   home
      b.   Jan is al   thuis.
           Jan is already   home

Consequently, the application of the equivalence rule ¬φ ∨ ψ ≡ ¬(φ ∧ ¬ψ) to (33a) would give rise to the paraphrase *it was not the case that Jan was already at home and the phone didn't ring*. This correctly expresses that on the premise that Jan was already at home, we must conclude from (33a) that the phone rang.

        The third category distinguished by Terwey contains constructions of the type in (36). Examples like these express several types of functions: *het scheelde niet veel of ...* is a conventional means of expressing approximation, similar to that expressed by the adverbial *bijna* 'almost' in the paraphrase in (36a′); the meaning of *het kan niet anders of ...* comes very close to that of the epistemic verb *moeten* 'must' in (36b′), and *ik twijfel er niet aan of ...* has more or less the same meaning as the modal adverb *ongetwijfeld* 'undoubtedly' in (36c′).

(36) a.   Het scheelde niet veel of hij had de eerste prijs gewonnen.
           it   differed   not much or he had the first prize won
      a′. Hij had bijna de eerste prijs gewonnen.   [paraphrase]
           he   had nearly the first prize won
           'He had nearly won the first prize.'
      b.   Het kan niet anders   of hij heeft de eerste prijs gewonnen.
           it   can not be.different or he has   the first prize   won
      b′. Hij moet de eerste prijs hebben gewonnen.   [paraphrase]
           he   must the first prize have   won
           'He must have won the first prize.'
      c.   Ik twijfel er   niet aan of hij heeft de eerste prijs gewonnen.
           I doubt there not of   or he has   the first prize won
      c′. Hij heeft ongetwijfeld de eerste prijs gewonnen.   [paraphrase]
           he   has   undoubtedly the first prize won
           'He will undoubtedly have won the first prize.'

The placement of the finite verbs nevertheless strongly suggests that we are dealing with coordination, which is also suggested by the fact that the string *of hij had gewonnen* cannot be topicalized: cf. *Of hij had de eerste prijs gewonnen scheelde niet veel*. However, the acceptability of the examples in (37) suggests that this string can be pronominalized. It is therefore not very surprising that it has sometimes been suggested that we are dealing with embedded clauses after all.

(37) a. Dat scheelde niet veel.
         that differed   not much
         'That was close.'
     b. Dat kan niet anders.
         that can not   be.different
         'That must be so.'
     c. Ik twijfel daar niet aan.
         I   doubt   there not about
         'I don't doubt that.'

It will be clear that the second and the third category are problematical for a rigid coordination approach. This was in fact already noticed by Terwey (1892), who accordingly provides a special account of these categories. He argues that the conditional examples from the first category developed in the 16th and 17th century from juxtapositions of two clauses, one negative and one (probably) positive, by adding the coordinator *of* 'or' After this development had taken its course, the second and third category developed along the lines of the first one. This process will have been facilitated by the fact, discussed below example (34), that at least some instances of the second category are superficially similar to the conditional constructions from the first category. Hauwermeier's (1973) observation that the intended interpretation of the balanced ordination construction in (38b) is the same as expressed by the coordinate structure with standard conjunction in (38a) in fact shows that the analogical change does not require more than replacement of *en* 'and' by *of* 'or'; I like to thank Ton van der Wouden (p.c.) for comments that helped me fleshing out this argument.

(38) a. [Jan was nauwelijks   thuis] *en* [de telefoon   ging].
          Jan was hardly (=not long) home   and the telephone rang
          'Jan had hardly arrived home and the telephone rang.'
     b. [Jan was nauwelijks   thuis] *of* [de telefoon   ging].   [= (33b)]
          Jan was hardly (=not long) home   or   the telephone rang
          Literally: 'Jan had hardly arrived home or the telephone rang.'
          Paraphrase: 'The phone rang immediately after Jan came home.'

According to Terwey, the analogical change was also facilitated by the fact that in all three categories the initial clause always includes some form of negation. Terwey's analogy hypothesis justifies assigning examples of the second and third category an idiomatic status; this manifestly holds for examples of the third category, as these are generally of a formulaic nature. It should be noted, however, that even within the set of idiomatic constructions various systematic subclasses can be distinguished on the basis of their interpretation; we will not discuss these here but refer the reader to Welschen (1999) and Malepaard (2007/2008) for extensive discussion. Instead we will discuss the arguments given in Bos (1964) for assuming that balanced ordination involves a third type of *syntactic* relation besides coordination and subordination.

3.3.2   Balanced ordination is not a syntactic relation

The traditional syntactic literature on balanced ordination constructions has mainly focused on the question as to whether we are really dealing with "true" coordination in such cases. The main reason for denying this is that balanced ordination does not exhibit properties typically found in disjunctive coordinate structures, such as those indicated in (39). This argument for concluding that we are not dealing with run-of-the-mill coordination is still cited with approval in more recent works such as Haeseryn et al. (1997: section 26.6), Van der Heijden (1999), and Welschen (1999).

(39)   • Properties of *of* 'or' in symmetrical disjunctions (Bos 1964: chapter IV)
   a. Polyadic disjunction is possible
   b. Correlative disjunction is possible
   c. Inversion of coordinands is possible
   d. Conjunction reduction is possible
   e. Omission of *of* is sometimes possible
   f. The illocutionary force of the clausal coordinands need not be identical
   g. Omission of one coordinand does not affect the meaning of the other

That we are not dealing with syntactic subordination either is immediately clear from the fact that the linked clauses both have the shape of main clauses with the finite verb (given in italics) in second position; these verbs cannot occur in clause-final position, that is, in a position following the direct object.[5]

(40)   • Placement of the finite verbs
   a. Jan *kan* niets   zeggen of Marie *bespot* hem.   [main + main]
       Jan can nothing say   or Marie mocks him
       Literally: 'Jan cannot say anything or Marie mocks him.'
   b. *Jan *kan* niets zeggen of Marie hem *bespot*.   [main + non-main]
   c. *Jan niets *kan* zeggen of Marie *bespot* hem.   [non-main + main]
   d. *Jan niets *kan* zeggen of Marie hem *bespot*.   [non-main + non-main]

Furthermore, if we were dealing with subordination, the string starting with the element *of* would be the most likely candidate, but this string does not behave like a clausal constituent. The examples in (41) show that it differs from true subordinate clauses such as the object clause *of Marie komt* in (41a) in that it can neither be topicalized nor pronominalized. Note that the dots in (41b″) are used to indicate that the string starting with *of* cannot be replaced by any proform other than *dat* 'that' either.

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[5] What happens in embedded contexts is less clear. Welschen (1999:8) has claimed that the second coordinand is frozen in the sense that it must appear as a main clause in such contexts.

(i)   a. %Ik denk [dat Jan niets   kan zeggen] of [Marie bespot hem].   [non-main + main]
          I   think that Jan nothing can say   or Marie mocks him
      b. *Ik denk [dat Jan niets   kan zeggen] of [dat Marie hem bespot]. [non-main + non-main]
          I   think that Jan nothing can say   or that Marie him mocks

Although the acceptability contrast between the two examples in (i) seems real, examples such as (ia) do not sound fully natural and do not appear to occur in colloquial speech. Furthermore, acceptability judgments seem to depend on various factors, such as the choice of matrix predicate: speakers seem to accept examples of this kind most readily if the predicate is a verb of saying or cognition (such as *zeggen* 'to say' and *denken* 'to think'). Examples like those in (ii), on the other hand, are judged as marked and speakers do not seem to be able to grasp the intended conditional reading without explicit instruction (that is, without directing them to the form in (0a)).

(ii) a. ?Het is vervelend [dat Jan niets   kan zeggen] of [Marie bespot hem].
           it   is annoying   that Jan nothing can say   or Marie mocks him
      b. ?[Het feit [dat Jan niets   kan zeggen] of [Marie bespot hem]] is vervelend.
           the fact that Jan nothing can say   or Marie mocks him   is annoying

The artificiality of examples such as (ia) makes it difficult to decide whether they should/can be used for evaluating the competing proposals. That care should be taken before jumping to a conclusion is especially clear in the light of the earlier conclusion that at least some presumed balanced ordination constructions are idiomatic in nature.

(41)   • Topicalization and pronominalization of the second clause
    a.   Jan weet   niet *[of   Marie komt]*.
        Jan knows not   whether Marie comes
        'Jan doesn't know whether Marie will come.'
    a′. *Of Marie komt* weet ik niet.
    a″. Ik weet *dat* niet.
    b. [Jan kan niets   zeggen] *of [Marie protesteert]*.
       Jan can nothing say   or Marie protests
       'Jan cannot say anything or Marie protests.'
    b′. **Of Marie protesteert* kan Jan niets zeggen.
    b″. *Jan kan niets *dat*/... zeggen.

The conflicting data led Bos (1964) to suggest that we are neither dealing with coordination nor subordination but with a third syntactic relation she dubs BALANSSCHIKKING "balanced ordination". As the postulation of this novel syntactic relation is crucially based on problems pertaining to the properties of disjunctive coordination listed in (39), we will review them in what follows and argue that they are less problematic for a coordination approach than is generally assumed: we are dealing with a collection of pre-theoretical problematic issues that largely disappear when we look at them more closely.

Property (39a): Polyadic disjunction is possible.
This property refers to the fact that disjunctive coordination is recursive/iterative in the sense that coordinate structures with *of* 'or' may contain more than two coordinands; cf. *[Jan leest een gedicht] (of) [Marie zingt een lied] of [Els speelt orgel]* 'Jan reads a poem (or) Marie sings a song or Els plays the organ'. Bos claims that polyadic constructions do not allow a conditional reading. Example (42a) seems to support this claim (at least under a flat intonation contour; see fn.6) but its unacceptability need not be syntactic in nature; it might simply be due to the fact that it expresses an incoherent meaning. That this might indeed be the proper tack to take can be supported by the fact that example (42b), in which the string *[Jan kan niets zeggen] of [Marie protesteert]* is replaced by the conditional clause *Als Jan iets zegt, protesteert Marie*, is also incoherent.[6]

(42) a. *[[Jan kan niets   zeggen] of [Marie protesteert]] of [de voorzitter grijpt in].
         Jan can nothing say   or Marie protests   or the chairman interferes
    b. *[Als Jan iets   zegt, protesteert Marie] of [de voorzitter grijpt in].
        if Jan something says protests   Marie or the chairman interferes

This account of the unacceptability of (42a) is based on the assumption that it has the structure [[XP or YP] or ZP]. We could also assign it the alternative structure [XP or [YP of ZP]], which would lead to a coherent reading corresponding to that of the conditional construction in (44b). According to Wagner (2010), such a structure should be recognizable by a non-flat intonation contour involving an intonation break (prosodic boundary) before the first occurrence of *of*.

(43)   Wagner's generalization on polyadic coordinate structures: In a coordinand sequence A < B < C, if the prosodic boundary separating A and B is weaker than the one separating B and C, then [[AB] C]; if it is stronger, then [A [BC]].

This intonation break is indicated by a comma in example (44a), which indeed strikes me as relatively acceptable. This shows Bos' claim as straightforwardly refuted. Because the effect

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[6] The two examples in (0) are fully acceptable if the second occurrence of *of* is preceded by a distinct intonation break. Such cases cannot be used for refuting Bos' claim, however, because the clause *de voorzitter grijpt in* would then be interpreted parenthetically, i.e., as an afterthought.

of intonation on the acceptability and interpretation of examples such as (42a) and (44a) has not been discussed in the literature so far, I will not digress on this issue here, especially as our main conclusion does not crucially depend on it.

(44) a. $^{(?)}$[Jan kan niets   zeggen], of [[Marie protesteert] of [de voorzitter grijpt in]].
       Jan can nothing say   or Marie protests   or the chairman interferes
   b. Als Jan iets   zegt, [[protesteert Marie] of [grijpt de voorzitter in]].
      if Jan something says protests   Marie or the chairman interferes
      'If Jan says anything, Marie protests or the chairman interferes.'

The main conclusion is that the unacceptability of (42a) is not a matter of syntax. The logical equivalence rule $\neg\varphi \lor \psi \equiv \varphi \to \psi$ can be applied only once to the formula $((\neg p \lor q) \lor r)$, which results in $((p \to q) \lor r)$. The two examples in (42) are therefore logically equivalent, and we may therefore conclude that (42a) is infelicitous for the same reason as (42b): they are both semantically incoherent.

Property (39b): Correlative disjunction is possible.
Disjunctive coordinate structures come in two guises: one with the simplex coordinator *of* 'or' and one with the correlative coordinator *of ... of....* 'either ... or ...'. Example (45b) shows that correlative *of ... of ...* blocks the conditional reading, which I indicate here by the dollar sign.

(45) a. Of   [Jan leest   een gedicht] of [Marie zingt een lied].
        either Jan recites a poem   or Marie sings a song
   b. $^{\$}$Of   [Jan kan niets   zeggen] of [Marie protesteert].
      either Jan can nothing say   or Marie protests

The fact that the conditional reading is not available should not surprise us in the light of the fact that correlative *of ... of ...* expresses *exclusive* disjunction, and Table 5 shows that $\neg p \veebar q$ is not equivalent to $p \to q$. The fact that (45b) has no conditional reading is thus clearly not related to syntax, but is a straightforwardly semantic matter.

Table 5

p	q	¬p	¬p ⊻ q	p → q
1	1	0	1	1
1	0	0	0	0
0	1	1	0	1
0	0	1	1	1

Note in passing that this does not necessarily imply that there are no asymmetrical exclusive-disjunctive structures, but if such structures existed, they would be interpreted as a material equivalence $(p \leftrightarrow q)$ given the equivalence rule $\neg\varphi \veebar \psi \equiv \varphi \leftrightarrow \psi$. Wim Klooster (p.c.) observes that the examples in (46), discussed earlier in Kraak & Klooster (1968:275), may be of this type: the coordinate structure is characterized by the fact that *of* is accented, which is a hallmark of exclusive disjunction, and the interpretation is something like "not p unless perhaps if q", which comes quite close to "p if and only if q".

(46) a. Dat beest   daar   is geen hond OF het is een poedel.
          that animal over.there is no dog   or it   is a poodle
          Literally: 'That animal over there is not a dog or it is a poodle'.
          Paraphrase: If that animal over there is a dog, it can only be a poodle.
      b. Er   zit geen fout in het artikel OF het moest een typefout zijn.
          there sits no error in the article or it   should a typo   be
          Literally: 'There is no error in the article or it should be a typo.'
          Paraphrase: If this article contains any error, it can only be a typo.

Property (39c): Inversion of coordinands is possible.
This property refers to the fact that in agreement with the commutativity law of disjunction in (3b), the coordinands in a disjunctive coordinate structure can often change places without affecting the logical meaning of the structure as a whole: the meaning expressed by example (47a) is logically equivalent to the meaning expressed by example (47a′). The (b)-examples, on the other hand, show that inversion of the coordinand in the conditional construction cancels the conditional reading, which is again indicated by the hash sign. It is not unlikely, however, that this is related to the fact that the antecedent of the conditional temporally precedes (or has priority over) the consequence. We may thus be dealing not with a syntactic but the pragmatic effect discussed in Section 2.1 that the order of the coordinands in an asymmetrical coordination coincides with the temporal order (or the priority) of the events expressed by them.

(47) a.   [Jan leest   een gedicht] of [Marie zingt een lied].
            Jan   recites a poem   or Marie sings a song
      a′. [Marie zingt een lied] of [Jan leest   een gedicht].
      b.   [Jan kan niets   zeggen] of [Marie protesteert].
            Jan can   nothing say   or Marie protests
      b′. $[Marie protesteert] of [Jan kan niets zeggen].

Property (39d): Conjunction reduction is possible.
This property refers to the fact that disjunctive coordinate structures such as (48a) can apparently be reduced as in (48a′). The (b)-examples, on the other hand, show that this reduction blocks the conditional reading, which is indicated again by the dollar sign.

(48) a.   [Jan heeft een gedicht gelezen] of [hij heeft een lied gezongen].
            Jan has   a poem   read   or he has   a song   sung
      a′. [Jan heeft   een gedicht gelezen] of [~~hij heeft~~ een lied gezongen].
      b.   [Jan kan niets zeggen] of [hij kan vertrekken]
            Jan can nothing say   or he can leave
      b′. $[Jan kan niets zeggen] of [~~hij kan~~ vertrekken].

There are reasons for assuming that forward conjunction reduction of the type in the primed example does not exist and that we are dealing instead with non-clausal coordination, as indicated in (49); we are thus not dealing with two separate propositions but with a single proposition with a complex predicate. As the conditional reading can only arise when we are dealing with two separate propositions, we may conclude that the alleged problem with property (39d) is based on an incorrect presupposition and can ultimately be attributed to semantics.

(49) a.   Jan heeft [[$_{VP}$ een gedicht gelezen] of [$_{VP}$ een lied gezongen]].
      b.   Jan kan [[$_{VP}$ niets zeggen] of [$_{VP}$ vertrekken]].

Bos only provides examples with forward conjunction reduction, but gapping and backward conjunction reduction are also impossible. The examples in (50) show that this is not an

incidental property of asymmetrical disjunction: the (a)-examples show that sentence negation in the first coordinand *always* blocks gapping in coordinate structures with *en* 'and' and *of* 'or' (see also Neijt 1979:65-66), although it is possible with *maar* 'but' if the second coordinand features the affirmative marker *wel* as well; the (b)-examples show that the same holds for backward conjunction reduction. Consequently, we do not expect gapping or backward conjunction in asymmetrical coordinate structures with *en/of* either.

(50) a. *Jan won de auto niet en/of Marie de fiets.   [Gapping]
          Jan won the car not   and/or Marie the bike
          Compare: *Jan didn't win the car and/or Marie the bike
      a′. Jan won de auto niet maar Marie de fiets   *(wel).
          Jan won the car not   but   Marie the bike   AFF.
          'Jan didn't win the car but Marie did win the bike.'
      b. *Jan heeft GEEN BOEKEN ~~gekocht~~ en/of   Marie heeft DRIE CDs gekocht.   [BCR]
          Jan has   no books   bought   and/or Marie has   three CDs bought
          intended: 'Jan hasn't bought any books and/or Marie has bought three CDs'
      b′. Jan heeft GEEN BOEKEN ~~gekocht~~ maar Marie heeft WEL DRIE CDs   gekocht
          Jan has   no books   bought but Marie has   AFF three CDs   bought
          'Jan hasn't bought any books but Marie has bought three CDs'.

Property (39e): Omission of of *'or' is sometimes possible.*
The problem related to this "property" refers to the fact that the disjunctive coordinator *of* can sometimes be left unexpressed, while this is impossible in conditional/temporal constructions such as (51).

(51)   [Jan kan niets   zeggen] *(of) [Marie protesteert].
            Jan can nothing say   or Marie protests
           Literally: 'Jan cannot say anything or Marie protests.'

I believe that this argument is invalid in view of the fact that omission of the disjunctive coordinator is rare anyway and seems to be subject to stringent conditions. Bos (1964:242) provides two examples only. Her first example is the following: *Hij wandelde wat in the tuin, ging op het terras zitten, amuseerde zich met steentjes keilen* 'He strolled in the garden, sat on the terrace, entertained himself by skimming stones'. This example, which was probably constructed on the basis of a polysyndetic construction with *of* given earlier on the same page, seems marginal out of context; in fact, I can interpret it in a conjunctive fashion at best. Her second example is again highly marked out of context: *Je doet het, je doet het niet (mij kan het niet schelen)* (literally: "You do it, you leave it (I don't care)". The fact that this example must be interpreted as a disjunction is due to the fact that a conjunctive interpretation would lead to a contradiction, which only leaves us with an exclusive-disjunction reading; cf. Van den Toorn (1972:105). All in all, the fact that leaving out the coordinator in examples such as (51) is impossible does not seem to be problematic for assuming that we are dealing with a coordinate structure here.

Property (39f): The illocutionary force of the clausal coordinands need not be identical.
The problem concerns the alleged facts that the two clausal coordinands must be declarative and that clauses differing in illocutionary force certainly cannot be mixed, which is illustrated by Bos (1964:242) by means of the infelicitous example in (52a). This problem disappears, however, in view of the acceptability of example (52b).

(52) a. $^\$$Twijfel er   niet aan   of [kom terug]!
          doubt there not about or come back
     b. [Kom niet hier] of [ik schiet]!
          come not here or   I shoot
          'Don't come here or I'll shoot!'

The fact that the coordinands are normally declarative in alleged balanced ordination construction is of course due to the fact that declaratives are the prototypical means by which propositions are expressed.

Property (39g): Omission of one coordinand does not affect the meaning of the other.
This property refers to the fact that leaving out one of the coordinands in an example such as (53a) does not affect the meaning of the remaining one: example (53b) has the same meaning as the first coordinand of (53a) and (53c) has the same meaning as the second coordinand.

(53) a. [Jan leest   een gedicht] of [Marie zingt een lied]
           Jan recites a poem   or   Marie   sings a song
     b. Jan leest een gedicht.
     c. Marie zingt een lied.

Bos contends that this does not always hold for the type of conditional construction under discussion. One piece of her evidence is given in (54): example (54a) is a generic construction while (54b) is a negative existential construction, and her claim is that the meaning of the clause *er is geen mens* differs in the two examples.

(54) a. [Er   is geen mens]   of [hij moet sterven].
           there is no human.being or   he   must die
           'All people must die.'
     b. [Er   is geen mens].
           there is no human.being
           'There are no people (here).'

Because Bos does not make explicit what the alleged difference in meaning is, arguing against her claim is difficult, but I assume that what she proposes is that a speaker uttering (54a) presupposes that there are human beings while a speaker uttering (54b) explicitly denies this presupposition (see p.249). Presuppositions are not part of semantics proper, however, but part of the common ground (the shared knowledge about the discourse domain). Bos seems to confuse this with the meaning of a sentence, which is related to the commitment of a speaker: a speaker using the sentence *er is geen mens* in (54b) commits himself to the truth of the formula $\neg\exists x$ MENS(x) within the discourse domain. A speaker using the sentence *er is geen mens of hij moet sterven* in (54a) does not commit himself to the truth of $\neg\exists x$ MENS(x), but to the situation depicted in the Venn diagram in Figure 1, where A stands for the property denoted by *mens* 'human' and B for the property denoted by *sterfelijk* 'mortal' (that is, *must die*): the set of people must be properly included in the set of entities denoted by *sterfelijk*. The fact that Figure 1 is also the set-theoretical representation of material implication shows that the generic reading of (54a) can again be derived by means of the equivalence rule $\neg\varphi \lor \psi \equiv \varphi \rightarrow \psi$.
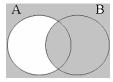

Figure 1: Material implication p → q

The discussion above inevitably leads to the conclusion that there are no reasons for assuming that the clause *Er is geen mens* has a different meaning in the two examples in (54): it simply has the meaning expressed by $\neg\exists x$ MENS(x). There are differences in use conditions for the two examples but these are not of a semantic nature but fully determined by pragmatic considerations (the common ground). This means that Bos' final objection against attributing a run-of-the-mill coordinate structure to the type of conditional construction under discussion does not hold water and should be rejected. In short, all seven arguments put forward by Bos against the run-of-the-mill coordination analysis are flawed and therefore cannot be used in favor of balanced ordination either. This is a welcome result as it has never become clear how balanced ordination can be implemented in (formal) syntactic terms.

4 Conclusion

This article has shown that the interpretation of asymmetrical coordinate structures is the upshot of an interplay of various syntactic, semantic and pragmatic factors. It has been shown that no special grammatical mechanisms or stipulations are needed to account for the more special readings of such structures. The temporal, causal and concessive readings of asymmetrical conjunction can all plausibly be attributed to pragmatics, while the conditional interpretations can normally be derived by appealing to standard equivalency rules from propositional logic. We have further seen that the more special interpretations can be triggered in various ways: the nature of the triggers (irrealis, modality, etc.) involved has not been thoroughly investigated in this article but it is clear that pragmatics (and thus knowledge of the actual world) plays an important role.

The fact that the special interpretations of asymmetrical coordinate structures can be straightforwardly accounted for by appealing to the interplay of standard syntactic, semantic and pragmatic means shows that they cannot be used for motivating the introduction of special grammatical means such as Culicover & Jackendoff's (1997) correspondence rules linking syntactic and semantic structures. It also nullifies Bos' (1964) claim that we cannot account for the relevant facts by adopting the dichotomy between coordination and subordination, but that a third relation is needed: balanced ordination. This is a fortuitous result because it has never become clear how balanced ordination, which seems to be motivated only by the guideline that there should be a strict "one–to-one" form-meaning correspondence (where "meaning" is not used in its standard formal-semantic sense but in the looser sense of "interpretation"), can be implemented in formal-syntactic terms. The "one–to-one" form-meaning correspondence hypothesis remains a useful guideline, of course, and need not be abandoned in full but the discussion above has shown that the crucial notion of meaning should be defined strictly in terms of formal logic.

<div align="center">References</div>

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