Intonation phrases and speech acts
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1 Introduction

Coordinated clauses, appositive relatives, appositions, and parentheticals are syntactically and prosodically separated in certain ways. An early suggestion due to Downing (1970) described this separation in terms of a prosodic domain with *obligatory pauses* at its edges. This prosodic domain was identified with the *intonation phrase boundary* by Nespor and Vogel (1986). We know today that the main cues for intonation phrase boundaries are (a) final lengthening (b) various effects of the sentence melody, measurable in the course of F0 and (c) pauses. Of these, the pauses do not occur regularly at intonation phrase boundaries. For example the evaluation of the Kiel corpus of German spoken language in Peters, Kohler and Wesener (2005) found that only 945 of the 2470 phrase boundaries investigated (37.3%) showed an actual pause. The suggestions of Downing (1970) might best be understood in terms of intuitions about intonation phrase boundaries reported in terms of intuitions about obligatory pauses.

Downing (1970), building on Emonds (1970), suggested that these prosodic boundaries are triggered by syntactically separate *root sentences*, which are defined as unembedded sentences in a certain sense that amounts to particularly high syntactic attachment to the host clause. In that analysis, root sentences are separated by intonation phrase boundaries at both edges. In the example (1) from Downing (1970), the apposition (or appositive relative) is a separate root sentence, and therefore separated by Downing's obligatory pause, or, in Nespor and Vogel's terms, by intonation phrase boundaries.

(1)   The library, / (which is) a large stone and glass building, / is on the east side of the campus.

In Reis (1997) and Holler (2008) appositive relatives and some further German sentence combinations are likewise treated as syntactically unembedded and dubbed *non-integrated*.

Another syntactic approach to appositive relative clauses has been that they are not syntactically attached to the main class but *orphaned*, see e.g. Safir (1986).

Yet other approaches treat them as syntactically attached in special ways. De Vries (2007) further substantiated this natural class and its syntactic lack of genuine embedding. He suggests a minimalist syntactic derivation of them in terms of a special merge operation, further developed and named *par(enthetical) merge* in de Vries (2102), which broadly captures paratactic attachment.

Potts (2005) refers to parentheticals, appositions and appositive relatives as *supplements*. He postulates syntactic attachment that involves a syntactic feature [comma]. This feature triggers the comma intonation and leads to a cut-off semantic interpretation that makes them into separate contributions by the speaker. This perspective is adopted by Selkirk (2005, 2011), with the strengthened assumptions that comma phrases are *illocutionary acts* semantically and that the comma intonation corresponds to intonation phrase boundaries prosodically. A similar connection between illocutionary acts and intonation phrases was postulated for Turkish by Kan (2009).

At the same time, there have been assessments that the boundaries surrounding parentheticals and appositions/appositives are not always intonation phrase boundaries. For certain parentheticals, this was observed by Reis (1995). That parentheticals are not always separate intonation phrases is documented for English by Dehé (2009b) with F0-tracks, confirming some previous descriptions of English. Patin and O'Connor (2013) argue for Shingazidja that appositions show phonological phrase boundaries but not intonation phrase boundaries.

The current paper explores the connection between speech acts and intonation phrases. Speech acts are tested for with modal particles and sentence adverbs. Intonation phrases are assessed intuitively in terms of intuitions about the presence of sentence stress (the prosodic head of the intonation phrase) and about the presence of boundaries. The current paper arrives at the following conclusions:

(2)   a. Speech acts regularly do seem to require separate intonation phrases, confirming this connection in Selkirk (2005, 2011).
       b. However, not all coordinated sentences and not all supplements are actually separate speech acts. Where they are not, they do not seem to correspond to separate intonation phrases.

(2a) confirms the correlation of Selkirk (2005, 2011) between speech acts and intonation phrases. At the same time (2b) removes some entities, including some supplements, from the domain of speech acts and intonation phrases. This broadly follows the work of Marga Reis, who already took the stand in Reis (1995) that parentheticals are not always separate intonation phrases, and took the stand in Reis (1997) that appositive relatives are prosodically separate. Both conclusions will be adopted here. The results are an encouragement to continue the path taken by Reis (1995), Dehé (2009) and Patin and O'Connor (2013) to re-assess the actual prosodic structure of supplements, and in this connection, their syntactic structure and semantic interpretation.

During most of the paper I ignore the issue how the syntax mediates between speech acts (on the LF-side of grammar) and intonation phrases (on the PF-side of grammar). I return to this issue briefly in section 9 at the end of the paper.

The paper is structured as follows. Section 2 provides background to the discussion. Sections 3 – 8 address specific cases: coordinated DPs and coordinated V2-clauses (section 3), appositive relatives and appositions (section 4), right dislocation and afterthought (section 5), multiple focus (section 6), peripheral adverbial clauses (section 7), and parentheticals (section 8). Section 9 addresses the possible syntactic underpinnings of the correlation between speech acts and intonation phrases. Section 10 sums up the results.

2 Background

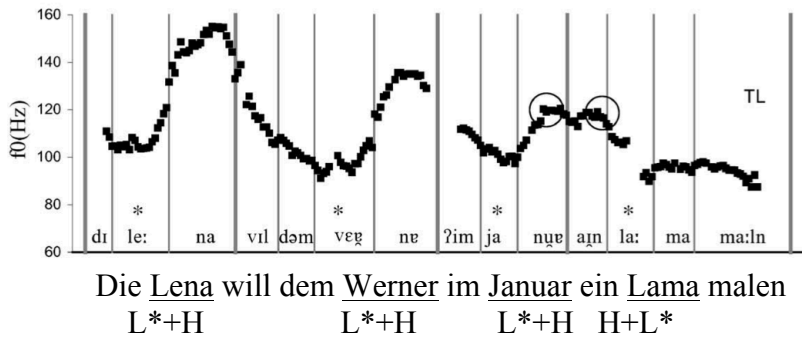### 2.1 Background on intonation phrases in German sentence prosody and intonation

Following Gussenhoven (1983, 1992), Uhmann (1991) and others, a two-level prosodic default analysis of German sentence prosody is assumed. Focus is assumed to be able to change this default. However, within a wide focus, the prosodic default is assigned with reference to syntactic structure. At the lower of the two levels, here symbolized by single underlining, each argument and adjunct (and sometimes the verb) receives phrasal stress (or accent) as shown in (3). The exact rules assigning phrasal stress are not crucial to this paper.[1]

(3)   Die <u>Lena</u> will dem <u>Werner</u> im <u>Januar</u> ein <u>Lama</u> malen.
       the Lena wants the Werner in.the January a llama paint
       '<u>Lena</u> wants to paint a <u>llama</u> for <u>Werner</u> in <u>January</u>.'

This phrasal stress is associated with pitch accents that give rise to tonal movements around the stressed syllables. Consider the pitch-track of a recording of (3) in Figure 1. For each non-final phrasal stresses, it shows a typical rise (L*+H) on *Lena*, *Werner* and *Januar*. The final phrasal stress on *Lama* is realized with a fall (H+L*) in this recording. This intonation pattern is documented extensively for speakers from the South of the German-speaking area in Truckenbrodt (2002, 2004, 2007).

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[1] The reader is referred to the Sentence Accent Assignment Rule of Gussenhoven (1983, 1992), extended to German in Uhmann (1991), and to the accounts in terms of XPs in Truckenbrodt (2006, 2012) and in terms of phases in Kratzer and Selkirk (2007).

160
140
120
100
80
60

f0(Hz)

TL

| dɪ | le: | na | vɪl | dəm | vɛɡ | nɐ | ʔim | ja | nuɐ | aɪn | la: | ma | ma:ln |

Die <u>Lena</u> will dem <u>Werner</u> im <u>Januar</u> ein <u>Lama</u> malen
L*+H   L*+H   L*+H   H+L*

Figure 1. Sequence of three L*+H rises followed by a nuclear H+L* fall on the sentence specified (‚Lena wants to paint a llama for Werner in January.') Speaker TL from Baden-Württemberg. The plot is from Truckenbrodt (2004).

There is a consistent intuition that, if any one of these accents is stronger than the others, it is the last one among them. It is also called the *nuclear stress* in the literature. Uhmann (1991) captures this in terms of a rule of rightmost strengthening as in (4). (For completeness, notice that it is normally this nuclear stress that is shifted by narrow focus.)

(4)   RIGHTMOST STRENGTHENING (Uhmann 1991)
           Strengthen the rightmost accent (here: phrasal stress) in the intonation phrase.

The stronger stress is here indicated by double underlining. When we apply RIGHTMOST STRENGTHENING to the sentence in (3), we thus get (5), which mirrors the intuition about the strongest stress on *Lama*, the last of the phrasal stresses.

(5)   Die <u>Lena</u> will dem <u>Werner</u> im <u>Januar</u> ein <u>Lama</u> malen.
           the Lena wants the Werner in.the January a llama paint
           '<u>Lena</u> wants to paint a <u>llama</u> for <u>Werner</u> in <u>January</u>.'

Important for the current paper is that (4) defines the *intonation phrase* as the domain of RIGHTMOST STRENGTHENING. This conception of Uhmann is in line with the understanding of the nuclear stress in the classical work of Pierrehumbert (1980), it is backed by the understanding of the intonation phrase as a stress domain in Nespor and Vogel (1986), and it is similarly endorsed for English in Selkirk (1995).
        Two coordinated unembedded sentences give rise to two intonation phrases, as in (6). *I* stands for intonation phrase.

(6)   [Der <u>Werner</u> und die <u>Lena</u> wollen dem <u>Lehrling</u> <u>Manieren</u> beibringen]I [und die <u>Lola</u>
           will dem <u>Manuel</u> eine <u>Warnung</u> geben]I
           the Werner and the Lena want the apprentice manners teach and the Lola wants the Manuel
           a warning give
           'Werner and Lena want to teach manners to the apprentice, and Lola wants to give a
           warning to Manuel.'

The prosody of such sequences of two intonation phrases (with two coordinated sentences) are investigated in Truckenbrodt (2002, 2003, 2007). The final H+L* fall of Figure 1 was only found in utterance-final position, i.e. here at the end of the second intonation phrase. At the end of the medial intonation phrase boundary speakers showed differnt configurations of upstep. Figure 2 illustrates an upstep pattern found with four out of eight speakers. The first printed line of (6) is shown, including the first of the two intonation phrases and the beginning of the second intonation phrase. In Figure 2 the non-final (L*+H) rising accents are present on all words with phrasal stress,

3

including the last one of the first intonation phrase. The tonal height of the peaks is now important. The non-final peaks in the intonation phrase show a pattern of successive lowering (downstep) both in Figure 1 and in Figure 2. In Figure 2, the final (nuclear) rise of the first intonation phrase does not continue this downstepping pattern but shows an upstepped tonal height, comparable to the height of the first peak of the recording. In the analysis of Truckenbrodt (2007) this upstepped scaling is a correlate of being related to the intonation phrase, i.e. upstep occurs because the last (L*+H) rise is the prosodic head (strongest stress) of the intonation phrase.
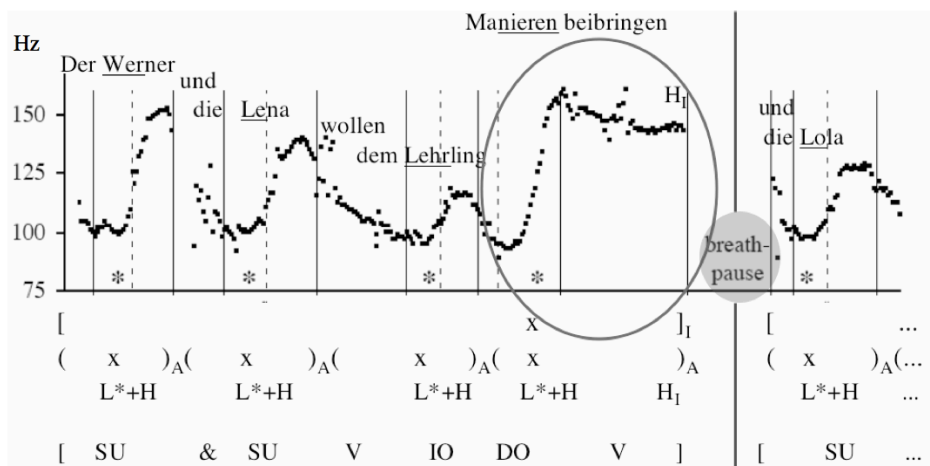
Figure 2. Sequence of three downstepping prenuclear (L*+H) rises followed by an upstepped nuclear (L*+H) rise at the end of an intonation phrase that is followed by another intonation phrase. From Truckenbrodt (2007). The entire sentence and its prosody is shown in (6).

These observations provide some indication that the intuition of stronger nuclear stress derived by RIGHTMOST STRENGTHENING can also have a phonetic correlate: here the upstepped tonal height at the end of the first intonation phrase.

What is important for the rest of this paper is that the intonation phrase is a stress domain, namely the domain for nuclear stress, here marked by double underlining. I here take this nuclear stress that is assigned by (4) to be a linguistic entity (the prosodic head of an intonation phrase) regardless of whether there are also preceding phrasal stresses that are weaker. To emphasize this conception, I employ the term *sentence stress* instead of nuclear stress in the following.

2.2 Background on focus and sentence stress

Focus does not inherently attract sentence stress. If you think that it does, consider (7) and (8). The modifier *manchmal traurig* 'sometimes sad' in (7) allows stress on *traurig* 'sad' without stress on *manchmal* 'sometimes'. In (8) the addition of the focus particle *nur* 'only' gives rise to a local focus interpretation. In the theory of Rooth (1992) this involves the calculation of alternatives to the domain marked ~[...], the scope of the focus. The focus in (8) is on *manchmal* 'sometimes' and this element requires the strongest stress within ~[manchmal traurig] for the focusing to work.

(7)   Peter hat seiner manchmal traurigen Nachbarin einen Kuchen gebacken.
        Peter has his sometimes sad neighbor a cake baked
        'Peter has baked a cake for his sometimes sad neighbor.'

(8)   Peter hat seiner [nur ~[manchmal_F traurigen] Nachbarin] einen Kuchen gebacken.
        Peter has his only sometimes sad neighbor a cake baked
        'Peter has baked a cake for his only [sometimes sad] neighbor.'

The argument that focus requires the strongest stress within ~[...], rather than sentence stress, is from Truckenbrodt (1995), revising a suggestion of Jackendoff (1972). In the example at hand, the

alternative assumption that focus requires sentence stress would give (9a) as the only possible stress-pattern, or perhaps (9b), since postnuclear stress is normally suppressed. The stress-pattern in (8), with sentence stress on *Kuchen* 'cake' would wrongly be ruled out.

(9)   a. Peter hat seiner [nur ~[manchmal_F traurigen] Nachbarin] einen Kuchen gebacken.
        b. Peter hat seiner [nur ~[manchmal_F traurigen] Nachbarin] einen Kuchen gebacken.
           Peter has his only sometimes sad neighbor a cake baked
           'Peter has baked a cake for his only [sometimes sad] neighbor.'

This is of course not what we want. Therefore the effect of focus on the stress is best described as in (10).

(10)   Prosodic effect of focus
        The strongest stress within ~[... [...]_F ...] must be within [...]_F.

        If focus does not require sentence stress (but only the strongest stress in ~[...]), why does it seem to do so in more standard examples like (11)? Here the sentence stress must be on the focus.

(11)   Wem hat Peter einen Kuchen gebacken?
        who has Peter a cake baked
        'For whom die Peter bake a cake?'

        ~[Er hat [seiner Nachbarin]_F einen Kuchen gebacken]
        he has his neighbor a cake baked
        'He baked a cake for his neighbor.'

The reason is: (a) There is an independent requirement that the sentence carries sentence stress. (b) the ~[...] is here the entire clause. Now, if the focus requires the strongest stress in ~[...], it requires that this independently required sentence stress must go to the focus. There is no other place than the focus any more, to which the independently required sentence stress can legitimately go by (10).
        What is the independent requirement that the sentence carries sentence stress? This is the topic of the current paper: It is that certain syntactic (or semantic?) domains require to be intonation phrases, and that the intonation phrase requires a prosodic head, the sentence stress. Downing (1970) suggested that root sentences trigger intonation phrases. I argue, following up on Selkirk (2005, 2011), that speech acts trigger intonation phrases. In (11) both suggestions work. The entire root sentence, or the speech act, must be an intonation phrase and must therefore carry sentence stress. If there is narrow focus, as in (11), the narrow focus restricts by (10) where the sentence stress goes: to the focus.
        If there is no narrow focus as in (5), the sentence stress is assigned rightmost by (4). This means that (4) is only a default rule that has effect where focus does not intervene. For the focus effect (10) to be effective, it must be allowed to take precedence over (4).

2.3 Background on modal particles

Altmann (1987):54.Fn25 tentatively assumes that German modal particles are determined by the sentence type („satztypgesteuert"), and thus that they directly interact with a combination of sentence form and a speech-act related function. Thurmair (1989):73 maintains that modal particles can modify the illocution of a clause, and can therefore be employed as evidence for the illocutionary force of a clause. Zimmermann (2004) works out for the modal particle *wohl* that it modifies the sentence type indicator of the clause it is in. Reis (1997, 2006) employs modal particles as evidence for the independence and thus speech-act related nature of clauses. Applying this we can, for example, employ the possibility of different modal particles in the two clauses in

(12) and in the two clauses in (13) as evidence that each of these clauses is a separate speech act. The dash ,—, indicates the inutition of a pause, here identified with an intonation phrase break. The modal particles are translated by comparable parentheticals, which are italicized.

(12)   Peter ist *wohl* zunächst <u>hier</u> gewesen — und später hat er *ja* die <u>Maria</u> angerufen.
        Peter is MP at.first here been and later has he MP the Maria called
        'Peter has *I suppose* first been here, and later he has *as we know* called Maria.'

(13)   <u>Peter</u>, — der *ja* gerade in <u>Berlin</u> ist, — hat *wohl* schon mehrmals <u>angerufen</u>.
        Peter who MP currently in Berlin is has MP already several.times called
        'Peter, who *as we know* is in Berlin, has *I suppose* already called several times.'

        We must not apply this test blindly. It is known that modal particles are not only compatible with genuine speech acts but also with described speech acts as in (14) (Doherty (1979) and Zimmermann (2004)). Here the modal particle *wohl* (here translated as 'supposedly') does not interact with a real speech act but with a described speech act by Peter.

(14)   Peter sagte, dass Maria *wohl* in Berlin ist.
        Peter said that Maria MP in Berlin is
        'Peter said that Maria is *supposedly* in Berlin.'

Modal particles are argued to be tied to (unembedded or embedded) root clauses (Hooper and Thompson (1973), Heycock (2006)) by Coniglio (2011) und Frey (2011, 2012) and root clauses may either be connected to genuine assertions or to described assertions. It is only in the domain of genuine assertions as in (12) and (13) that they are telling about the speech acts of interest here.

2.4 Background on sentence adverbials

Following Bußmann (2002) sentence adverbials (Satzadverbiale) and sentence adverbs (Satzadverbien) are here taken to specify the subjective estimation of the speaker of the utterance towards the sentential proposition. Examples are *mit Sicherheit* ,certainly', *wahrscheinlich* ,probably', *angeblich* ,allegedly', *hoffentlich* ,hopefully'. Syntactically these are different from modal particles in German insofar sentence adverbs can occupy Spec,CP, the German Vorfeld, while modal particles cannot. However, they share with modal particles the interaction with the semantic/pragmatic embedding of the proposition, i.e. their relation to the speaker and/or speech act, and with this, their extrapropositional nature. According to Frey (2004) sentence adverbs define an early position in the Mittelfeld (between C and the clause-final verb position) that can be preceded in the Mittelfeld only by aboutness topics.
        The interaction of sentence adverbials with the speech act provides us with another means of testing for the number of speech acts. For example in (15) we have evidence for two separate assertions insofar the first assertion is qualified by *mit Sicherheit* ,certainly' while the second assertion is qualified by *angeblich* ,allegedly'.

(15)   Es war *mit Sicherheit* <u>kalt</u> — und der <u>Mond</u> hat *angeblich* geschienen.
        It was with certainty cold and the Moon has allegedly shone
        'It was *surely* <u>cold</u>, and the <u>moon</u> shone *allegedly*.'

        The special status of sentence adverbs can also be seen in the following interaction with afterthought. Afterthought is illustrated in (16a). It can be a separate assertion by the criteria applied here, since it can be separately modified by a sentence adverb as in (16b). Consider then also (16c). This is ruled out, I maintain, because afterthought does not allow for corrections or other changes of

mind by the speaker (unless a special clause licensing this, like ‚I mean' is present, see Ziv and Grosz (1994)). Therefore the change of day in (16c) is not possible.

(16)   a.   Maria hat jemanden gesehen, — den Portier.
                  Maria has someone seen the doorman
                  'Maria saw someone — the doorman.'
        b.   Maria hat *mit Sicherheit* jemanden gesehen, — *angeblich* den Portier.
                  Maria has with certainty someone seen allegedly the doorman
                  'Maria has *surely* seens someone – *allegedly* the doorman.'
        c.   Maria hat am Dienstag jemanden gesehen, — (*am Mittwoch) den Portier.
                  Maria has on Tuesday someone seen on Wednesday the doorman
                  'Maria has seen someone on Tuesday – (*on Wednesday) the doorman.'

What is of interest here is the distinction between (16b) and (16c). Though (16b) presents conflicting strength of speaker certainty in a way that parallels the conflicting days of the week in (16c), the case in (16b) is not ruled out in the same way as (16c). This supports the assessment that sentence adverbs are not ‚regular' constituents contributing to the content. If they were, (16b) would be ruled out in parallel to (16c). Instead the sentence adverb *angeblich* in (16b) qualifies the strength of the second assertion, and in this fashion it does not introduce a correction or other change of mind by the speaker.

       In sum, then, modal particles and sentence adverbs, both interacting with speech acts, will be employed to test for, or enforce speech acts in various complex utterances.

       What notion of speech act are we working with, if we pursue the assumption that modal particles and sentence adverbs, where they do not interact with a described speech act, interact with a real speech act? Assume, for concreteness (as I would be inclined to) for the modal particle *wohl* that [wohl p] presupposes that someone commits to p and that the modal particle adds to this that the strength of the commitment (Searle 1975) is weak, or more specifically a supposition (German "Vermutung", see Zimmermann 2004). In a described commitment as in (14) this can operate on the strength of the described commitment. However, in (12) and (13), if there is no described commitment, *wohl* needs to find and operate on a commitment by the speaker. The test will normally be applied, as in the preceding examples, with a combination of two conflicting modal particles or sentence adverbs. Where they are possible, this seems to show that two combined structures involve, or can at least involve, two separate commitments by the speaker. In this application of the tests, we seem to be testing for separate speech acts in the sense of separate speaker commitments. Note that speaker commitments are assertive speech acts in the sense of Searle (1975).

3 Coordination

3.1 Coordinated DPs

I first employ a simple case for conveying a feeling of the relation between genuine speech acts and intonation phrases. It employs a surface string of coordinated DPs. Ordinarily coordinated DPs can easily each carry an accent without each being an intonation phrase (see also Grabe (1998)). A single sentence adverb can take scope across all of them, as in (17b), so that it is plausible that we are dealing with a single assertion.

(17)   Wer war auf der Party?
         'Who was at the party?'
         a.   Die <u>Maria</u>, die <u>Claudia</u>, der <u>Hans</u> und der <u>Peter</u>.
                  the Maria the Claudia the Hans and the Peter
         b.   *Angeblich* die <u>Maria</u>, die <u>Claudia</u>, der <u>Hans</u> und der <u>Peter</u>.
                  allegedly the Maria the Claudia the Hans and the Peter
                  '(*Allegedly*) Maria, Claudia, Hans, and Peter.'

However, we can also modify the DPs with separate sentence adverbs as in (18). In that case each assertion is separated by a clear pause from the next one, and carries sentence stress.

(18)   Wer war auf der Party?
         'Who was at the party?'

         Mit Sicherheit die <u>Maria</u>, — *angeblich* die <u>Claudia</u>, — *wahrscheinlich* der <u>Hans</u> — und *möglicherweise* der <u>Peter</u>.
         with certainty the Maria allegedly the Claudia probably the Hans and possibly the Peter
         '*Surely* <u>Maria</u>, *allegedly* <u>Claudia</u>, *probably* <u>Hans</u>, and *possibly* <u>Peter</u>.'

Importantly it is not possible to squeeze these different assertions into a single intonation phrase, with the weaker divisions in (17a,b).

(19)   Wer war auf der Party?
         'Who was at the party?'

         #* *Mit Sicherheit* die <u>Maria</u>, *angeblich* die <u>Claudia</u>, *wahrscheinlich* der <u>Hans</u> und *möglicherweise* der <u>Peter</u>.
         with certainty the Maria allegedly the Claudia probably the Hans and possibly the Peter
         '*Surely* <u>Maria</u>, *allegedly* <u>Claudia</u>, *probably* <u>Hans</u>, and *possibly* <u>Peter</u>.'

This suggests that speech acts and intonation phrases are related. The connection is descriptively captured in (20), essentially from Selkirk (2005, 2011).

(20)   Each speech act requires a separate intonation phrase and concomitant sentence stress.

(20) allows (18), where each speech act corresponds to a separate intonation phrase. (20) rules out (19) since the separate speech acts do not correspond to separate intonation phrases. I return to the issue of the syntactic connection between speech acts and intonation phrases in section 10 at the end of the paper.

3.2 Variation in coordinated sentences

The way Downing (1970:27) describes it, two coordinated unembedded sentences are obligatorily separated by a pause, as in his example (21); when the conjunction of two clauses is embedded as in (22), they are not separated by an obligatory pause. The intuition about an *optional* pause in this position is not relevant to Downing's rule that predicts intuitions about *obligatory* pauses from the syntax.

(21)   Mary will sing / and Bob will play his banjo.

(22)   I hope that Mary will sing (/) and Bob will play his banjo.

This picture is now refined for German in terms of speech acts. It was seen in (12) and (15) that coordinated V2-clauses can constitute two separate speech acts. However, it turns out that it is also possible to form a single assertion from coordinated V2-clauses in German. Thus a speech act adverbial in the Vorfeld (Spec,CP) very naturally has scope over both its own clause and a following coordinated V2-clause, as in (23).[2]

(23) a. *Angeblich* hat der Mond geschienen und es ist kalt gewesen.
          allegedly has the moon shone and it is cold been
          '*Allegedly* the moon shone and it was cold.'
      b. *Wahrscheinlich* hat der Mond geschienen und es ist kalt gewesen.
          probably has the moon shone and it is cold been
          '*Probably* the moon shone and it was cold.'

The test in (24) from Clemens Mayr (personal communication) documents the scope of the initial sentence adverb over the second conjunct. The addition is possible without contradiction because *angeblich* 'allegedly' qualifies *es is kalt gewesen* 'it was cold'.

(24) *Angeblich* hat der Mond geschienen und es ist kalt gewesen. Aber *in Wirklichkeit* ist es nicht kalt gewesen.
      allegedly has the moon shone and it is cold been but in reality it is not cold been
      '*Allegedly* the moon shone and it was cold. But *in fact* it was not cold.'

The salient wide-scope reading is not or not as readily available when the speech act adverb is not in the Vorfeld as in (25a) or (25b). While judgments may vary a bit, the addition is more marked in (26) than in (24).

(25) a. Der Mond hat *angeblich* geschienen und es ist kalt gewesen.
          the moon has allegedly shone and it is cold been
          'The moon *allegedly* shone and it was cold.'
      b. Der Mond hat *wahrscheinlich* geschienen und es ist kalt gewesen.
          the moon has probably shone and it is cold been
          'The moon *probably* shone and it was cold.'

(26) Der Mond hat *angeblich* geschienen und es ist kalt gewesen. #? Aber *in Wirklichkeit* ist es nicht kalt gewesen.
      the moon has allegedly shone and it is cold been. But in reality is it not cold been
      'The moon *allegedly* shone and it was cold, but *in fact* it was not cold.'

There is no corresponding wide-scope reading of a speech act adverb in the Vorfeld of the second V2-clause. The addition of the bracketed expression in (27) leads to a clear contradiction.

(27) Der Mond hat geschienen und *angeblich* ist es kalt gewesen. #*Aber in Wirklichkeit hat der Mond nicht geschienen.
      the moon has shone and allegedly it is cold been but in reality has the moon not shone
      'The moon shone and allegedly it was cold (but in fact the moon didn't shine).'

These observations suggest that integration into a single assertion is possible, and that it is possible in a particular form. I hypothesize that the second clause can be conjoined with only a part of the

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[2] These cases are different from the asymmetric coordination investigated by Höhle (1990), who concentrates on cases in which the second conjunct is formally a V1-clause. There may be relations between the two kinds of asymmetric coordination. They are beyond the scope of this paper.

first clause, as in (28). The sentence adverb, outside of the coordinate structure, then receives wide scope.

(28)   *Angeblich* [[hat der Mond geschienen] und [es ist kalt gewesen]]
        allegedly has the moon shone and it is cold been
        'Allegedly the moon shone and it was cold.'

In this analysis obtaining wide scope in (25) requires that the second V2-clause be conjoined with a constituent below the sentence adverb which itself is below the finite verb, as in (29). This may be more marked for some speakers than for others, but it is a sensible consequence of the current analysis that it should generally be more marked because of the greater asymmetry between the two conjuncts.

(29)   ? Der Mond hat *angeblich* [[geschienen] und [es ist kalt gewesen]]
          the moon has allegedly shone and it is cold been

A wide-scope reading in (27) is ruled out on very general assumptions.
        Notice then that single speech-acts of this kind also allow a prosodically integrated stress-pattern with sentence stress on the conjunction *und* 'and', in appropriate contexts.

(30)   Hat der Mond geschienen? Ist es kalt gewesen?
        Angeblich [hat der Mond geschienen] <u>und</u> [es ist kalt gewesen]
        allegedly has the moon shone and it is cold been

        'Did the moon shine? Was it cold? *Allegedly* the moon shone <u>and</u> it was cold.'

This stress-pattern is not contingent on the presence of the initial speech act adverb:

(31)   Hat der Mond geschienen? Ist es kalt gewesen?
        [CP Der Mond hat geschienen] <u>und</u> [CP es ist kalt gewesen]
        the moon has shone and it is cold been

        'Did the moon shine? Was it cold? The moon shone <u>and</u> it was cold.'

        Notice then that the integrated prosodic stress-pattern in (31) does not in fact allow distinct sentence adverbs or modal particles in the two conjuncts. This is shown in (32) and (33).

(32)   Hat der Mond geschienen? Ist es kalt gewesen?
        * [CP Der Mond hat *sicher* geschienen] <u>und</u> [CP es ist *wahrscheinlich* kalt gewesen]
        the moon has surely shone and it is probably cold been

        'Did the moon shine? Was it cold? The moon *certainly* shone <u>and</u> it *probably* was cold.'

(33)   Hat der Mond geschienen? Ist es kalt gewesen?
        * [CP Der Mond hat *ja* geschienen] <u>und</u> [CP es ist *wohl* kalt gewesen]
        the moon has MP shone and it is MP cold been

        'Did the moon shine? Was it cold? The moon shone, *as we know*, <u>and</u> it was cold, *supposedly*.'

For comparison, I point out that the focus on the conjunction in (31) is optional, and if is omitted, we find a stress-pattern with two separate intonation phrases as in (34).

(34)   Hat der Mond geschienen? Ist es kalt gewesen?
        [CP Der <u>Mond</u> hat geschienen] — und [CP es ist <u>kalt</u> gewesen]
        the moon has shone and it is cold been

        'Did the moon shine? Was it cold? Yes, the <u>moon</u> shone and it was <u>cold</u>.'

Crucially, this separate stress pattern is compatible with distinct sentence adverbs or modal particles in each conjunct, as shown in (35) and (36). These, then, minimally contrast with (32) and (33).

(35)   Hat der Mond geschienen? Ist es kalt gewesen?
        [CP Der <u>Mond</u> hat *sicher* geschienen] — und [CP es ist *wahrscheinlich* <u>kalt</u> gewesen]
        the moon has surely shone and it is probably cold been

        'Did the moon shine? Was it cold? The <u>moon</u> *certainly* shone and it *probably* was <u>cold</u>.'

(36)   Hat der Mond geschienen? Ist es kalt gewesen?
        [CP Der <u>Mond</u> hat *ja* geschienen] — und [CP es ist *wohl* <u>kalt</u> gewesen]
        the moon has MP shone and it is MP cold been

        'Did the moon shine? Was it cold? The <u>moon</u> shone, *as we know*, and it was <u>cold</u>, *supposedly*.'

The observations support (20): (32) and (33) can be ruled out by (20) because the separate speech acts do not correspond to separate intonation phrases. (30) and (31) are allowed by (20) because a single speech act does not need to be parsed into two separate intonation phrases.

3.3 Further remarks: Information structure and the integrated stress-pattern

This section and the following one solidify and complete the preceding analysis. Readers interested in reviewing the main points of the current paper are encouraged to skip to section 4.
        We have moved into a domain not considered by Downing (1970). We are taking information structure into account and employ two content-given clauses to obtain the special stress-pattern in (30) and (31). I assume that information structure can override default prosody in other cases. For example, both assignment of focus and assignment of givenness (Féry and Samek-Lodovici (2006), Ladd (1983)) are assumed to be able to override the default stress-pattern in (5). Could it not then be that (20) is similarly overridden by information structure effects on prosody?
        (37) formulates the prosodic effect of givenness on sentence stress.

(37)   Given constituents reject sentence stress.

Consider now a single sentence of which the content is given, as in (38). It requires sentence stress as in (38a) and cannot simply lack it as in (38b). Verum focus (here focus on the finite verb in C that intuitively highlights that the sentence is presented as true; see Höhle 1992) is also an option, as in (38c), though this is orthogonal to the point at hand. The observation that unembedded content-given sentences still carry sentence stress is from Höhle (1992).

(38)	Ist es kalt gewesen?
	is it cold been
	'Was it cold?'

	a.		Es ist <u>kalt</u> gewesen.
	b.	*	Es ist kalt gewesen.
	c.		Es <u>ist</u> kalt gewesen.
		it is cold been
		'It was cold.'

In the context of the current discussion, the most reasonable analysis of this stress-effect is in terms of (20). The speech act requires an intonation phrase which in turn requires sentence stress. Importantly, (20) is here up against the prosodic effect of givenness in the same way as in (30) and (31). We seem to see in the simpler case in (38) that (20) overrides the givenness effect (37): Sentence stress is assigned even though the content of the clause is given.

Since (20) is not overridden in (38), we are led to assume that it is also not overridden in (30) and (31). This supports the earlier analysis in which we correlated the special stress pattern in (30) and (31) not with an overriding givenness effect, but with the presence of only a single speech act.

At the same time, focus assignment is arguably involved in (30) and (31), so let us turn to this and to a fuller analysis of these examples. I will present my account top-down so as to simplify the exposition. The examples (31) and (34) are repeated here as (39a) and (39b).

(39)	Hat der Mond geschienen? Ist es kalt gewesen?
	a.	[CP Der Mond hat geschienen] <u>und</u> [CP es ist kalt gewesen]
	b	[CP Der <u>Mond</u> hat geschienen] — und [CP es ist <u>kalt</u> gewesen]
		the moon has shone and it is cold been

'Did the moon shine? Was it cold? Yes, the moon shone and it was cold.'

First, the coordinated sentence consists only of stress-rejecting elements: the two sentences of which the content is given in the context, and the functional conjunction *und* 'and', which we expect to reject stress like other functional element, e.g. pronouns. Among these, I postulate that the stress-rejecting element of function words is stronger. All else being equal, we will therefore not have stress on the conjunction as in (39a) but elsewhere as in (39b).

Second, the conjunction *und* 'and' may carry narrow focus, which accounts for the stress-pattern in (39a). The background to this focus includes the two clauses. The background in a focus must be given in the context (Jacobs 1991), and this is satisfied here insofar the content of each of the two clauses is given in the context. Focus is possible on *und* 'and' in a way that broadly resembles verum focus. The conjunction *und* 'and' encodes the truth-value pair (true, true). Therefore semantic alternatives to this focus (Rooth 1992) are other truth-value pairs, which also represent possible alternative answers in this context: (true, false), (false, true), (false, false). For example, such a semantic alternative is the assertion that the moon shone but that it was not cold.

Can we be sure that *und* is focused in (39a)? While this seems to be intuitively plausible, one might also want to consider an alternative analysis: Assuming a single speech act, the stress-rejecting effect of givenness in (37) might be stronger than the stress-rejecting effect of the function word *und* 'and', and so stress might simply be pushed to the conjunction because it is pushed away from the given clauses. The distinction is not crucial for our analysis and for our conclusions. However, I tend to think that the focus analysis is correct for the following reason. Consider (40b). This is a similar example with *oder* 'or'. It employs different conjunct sentences so as to add plausibility and relevance to the disjunction. Here it appears to be more difficult to end up with sentence stress on *oder* 'or'.

(40)   A: Hat der Mond geschienen? Hatte Peter eine Taschenlampe dabei?
        B: Ich bin nicht sicher.
            a.   [CP Der <u>Mond</u> hat geschienen] – oder [CP Peter hatte eine <u>Taschenlampe</u> dabei]
            b. # [CP Der <u>Mond</u> hat geschienen] oder [CP Peter hatte eine Taschenlampe dabei]
                the moon has shone or Peter had a flashlight therewith
            Jedenfalls konnte Peter etwas sehen.
            at.any.rate could Peter something see

        'Did the moon shine? Did Peter have a flash light with him? I am not sure. #The moon shone
        <u>or</u> Peter had a flash-light with him. At any rate, Peter was able to see something.'

This is unexpected on the givenness-analysis of (39a): *oder* 'or' should be just as good for receiving
the sentence stress that is pushed away from the disjuncts. However, the degradation in (40b) is
expected on the focus analysis of (39a). *oder* 'or' does not contribute a truth-value pair (it is true on
any of the truth-value combinations true-false, false-true and true-true). It is therefore reasonable
that it should be less of a suitable contrast for focusing it.

3.4 Further remarks: another constraint on the prosody of coordinated sentences

I have argued that coordination of V2-clauses is possible in a single-speech-act. Even in the domain
of a single speech act, however, there is at least a tendency to stress not only one sentential conjunct
but both. This is not inherently detrimental to (20), since it predicts only the minimum of prosodic
boundaries. It places no ban on additional intonation phrase divisions. In this section I address the
issue where the additional boundaries, i.e. the tendency to have sentence stress in both conjuncts,
even in the presence of a single speech act, comes from.
        Consider first (41). In a single speech act in which both sentential conjuncts are new, a
natural stress-pattern involves sentence stress on each conjunct.

(41)   [What was it like during that night?]
        Angeblich hat der <u>Mond</u> geschienen und es ist <u>kalt</u> gewesen.
        allegedly has the moon shone and it is cold been
        'Allegedly the moon shone and it was cold.'

I suggest in Truckenbrodt (2005) that German shows the effect of the constraint in (42). This
constraint right-aligns any clause, be it a root sentence or not, with an intonation phrase boundary.
Separate sentence-stress is then the consequence of the intonation phrase division.

(42)   Align-CP: Each CP is right-aligned with an intonation phrase boundary.

I support this in Truckenbrodt (2005) with the results of a small experiment with a single speaker
who consistently showed intonation phrases at right, but not left edges of embedded clauses. The
current account follows Selkirk (2011) and Downing (2011) in assuming that two syntactic
categories may trigger intonation phrase boundaries: the simple CP as in (42) on the one hand, and
a larger one, comparable to the root sentences of Downing (1970) on the other.
        Another German example that examplifies the effect of (42) is shown in (43).

(43)   Peter sagt, dass der <u>Mond</u> geschienen hat – und dass es <u>kalt</u> gewesen ist.
        Peter says that the moon shone has and that it cold been is
        'Peter says that the <u>moon</u> shone – and that it was <u>cold</u>.'

Unlike the effects of (20), however, the effects of (42) can be overridden by prosodic effects of
information structure. In (44) for example, where the embedded conjunction is contextually given,
it seems that the entire structure is a single intonation phrase with a single sentence stress.

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(44)   Maria sagt, dass der Mond geschienen hat – und dass es kalt gewesen ist.
         Maria says that the moon shone has and that it cold been is
         Ja, Peter sagt <u>auch</u>, dass der Mond geschienen hat und dass es kalt gewesen ist.
         yes Peter says also that the moon shone has and that it cold been is

         'Maria says that the moon shone and that it was cold.
          Yes, Peter <u>also</u> says that the moon shone and that it was cold.'

It seems reasonable, then, that the single speech-act in (41) requires intonation phrase boundaries at its edges due to (20), but that the internal boundary is not related to a root sentence or speech act, but simply to the additional clause boundary.

    It is for this reason, I think, that we normally have two intonation phrases for two coordinated (unembedded) V2-clauses. The cases in (30) and (31)/(39a) are special insofar they require special information structure that overrides (42). Importantly, this refined understanding of these cases is compatible with the argument made in connection with (30) – (33) earlier: This special case also requires a single overarching speech act, for otherwise (20) enforces a division between the two speech acts, as in (32) and (33).

3.5 Summary of constraints and ranking

This section provides an overview of the constraints and their postulated strength-relations (rankings). The numbering of the constraints from above is retained in the current section. The effect crucially argued for in this paper is (20).

(20)   Each speech act requires a separate intonation phrase and concomitant sentence stress.

Focus, if it has widest scope in the speech act, will direct the stress that is required by (20) to the focused constituent due to (10):

(10)   Prosodic effect of focus
         The strongest stress within ~[... [...]$_F$ ...] must be within [...]$_F$.

Where narrow focus does not put restrictions on the sentence stress, the default in (4) will make itself felt.

(4)   RIGHTMOST STRENGTHENING (Uhmann 1991)
         Strengthen the rightmost accent (here: phrasal stress) in the intonation phrase.

The following effect of givenness is subordinate to (20). Therefore (20) will require sentence-stress in an all-given assertion.

(37)   Given constituents reject sentence stress.

However, in addition to (20) there is also a clause-effect on intonation phrases, the one in (42). It is weaker than the givenness-effect (37).

(42)   Align-CP: Each CP is right-aligned with an intonation phrase boundary.

Since (20) is stronger than the givenness-effect (37), and the (37) is stronger than (42), we obtain:

(45)   Speech-act-effect (20)   >>   Givenness-effect (37)   >>   Clause-effect (42)

In this sense the clause-effect (42) is weaker than the speech-act-effect (20).

4 Appositive relatives and appositions

4.1 Appositive relatives

Reis (1997) takes appositive relatives to be a standard case of non-integrated constituents. The appositive from (1) is repeated here as (46).

(46)   The library, / which is a large stone and glass building, / is on the east side of the campus.

We have seen the point of Reis (1997, 2006) in (13) that they allow modal particles. The same is true for sentence adverbs:

(47)   Peter, — der *angeblich* gerade in <u>Berlin</u> ist, — kann dir *mit Sicherheit* <u>helfen</u>.
        Peter who allegedly currently in Berlin is can you with certainty help
        'Peter, who is *allegedy* in Berlin right now, can *surely* help you.'

They seem to be normally separated by pauses and carry obligatory sentence stress.[3] Here, then, different analyses under discussion derive the correct result. This includes Downing's original analysis, in which the appositive is a root sentence. Similarly the generalization (20) predicts the intonation phrase boundary from the separate speech act.

4.2 Appositions that are intonation phrases

Downing (1970:152f) points out that appositions like (48) are synonymous to appositive relative clauses as in (46), and that the former, like the latter, are separated by obligatory pauses (here with his notation '/').

(48)   The library, / a large stone and glass building, / is on the east side of the campus.

An observation that I know from Werner Frey (personal communication) is that appositions allow sentence adverbs as in (49). Their scope is the apposition. As shown in (49) this is accompanied with the intuition of the senence breaking apart into three intonation phrases with three instances of sentence stress.

(49)   a.   Der <u>Peter</u>, — *angeblich* ein <u>Psychologe</u>,— hielt gestern einen <u>Vortrag</u>.
                the Peter allegedly a psychologist held yesterday a talk
                'Peter, *allegedly* a psychologist, gave a talk yesterday.'

        b.   Der <u>Peter</u>, — *offenbar* der neue <u>Hiwi</u>, — kam gestern in mein <u>Büro</u>.
                the Peter apparently the new research.assistant came yesterday into my office
                'Peter, *apparently* the new research assistant, came into my office yesterday.'

When they carry sentence adverbs, the intonation phrase boundaries and accompanying sentence stress are particularly clear in German.

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[3] Frota (2000) argues for European Portugues that appositives can also enter into recursive intonation phrasing if they form an intonation phrase themselves, which in turn is part of an intonation phrase with preceding material.

However, there are reasons to believe that appositions do not always trigger intonation phrase boundaries or constitute separate speech acts. I discuss two kinds of cases.

4.3 Accented appositions

The first case goes back to Patin and O'Connor (2013) who argue for Shingazidja that appositions show phonological phrase boundaries but not intonation phrase boundaries in that language.

In German Molitor (1979) and Zifonun et al. (1997):2038ff distinguish nominative appositions, which allow the presence of an adverb, from case-agreeing apposition carrying another case, which do not (see also the detailed recent work in O'Conner 2008 and Heringa 2011). This also applies to the speech-act-related sentence adverbs discussed here. In (49) the appositions carry nominative. In (50) the dative argument *dem Peter* can take a case-agreeing dative apposition as in (50a). This case-agreeing dative apposition does not allow a sentence adverb, as shown in (50b). It seems to be clear that this apposition is not a speech act. The best prosodic approximation to (50a) seems to be as in (50c), without intonation phrase breaks. This case seems to me to be similar to the kind of cases discussed by Patin and O'Connor (2013).

(50)   a.   Die Maria hat dem Peter, dem Psychologen, einen Brief geschrieben.
                 the Maria has the Peter the psychologist a letter written
                 'Maria wrote a letter to Peter, to the psychologist.'

        b. *   Die Maria hat dem Peter, *angeblich* dem Psychologen, einen Brief geschrieben.
                 the Maria has the Peter allegedly the psychologist a letter written
                 'Maria wrote a letter to Peter, *allegedly* to the psychologist.'

        c.   Die <u>Maria</u> hat dem <u>Peter</u>, dem <u>Psychologen</u>, einen <u>Brief</u> geschrieben.
                 the Maria has the Peter the psychologist a letter written
                 'Maria wrote a letter to Peter, to the psychologist.'

Thus, while appositions sometimes can be accompanied by sentence adverbs as in (49), and in that case are intonation phrases, there are other cases that are not speech acts, as in (50), and seem not to be accompanied by intonation phrase boundaries. There is, it seems in German, intuitively more going on than a simple additional accent. There is some additional special prosody. However, it does not seem to be a division at the level of the intonation phrase.

4.4 Unaccented appositions

A second case, new to my knowledge, involves epithets (see Potts 2005:158ff; English examples are *jerk*, *bastard*, or *darling*) that occur as appositions to the right of the noun. Examples are shown in (51). Surprisingly they do not require accent at all, and are not preceded by either an intonation phrase boundary or a phonological phrase boundary. The examples in (51) contrast with those in (49) and with (50c) in this regard. The stressless version is not possible with regular content, as (52) shows.

(51)   a.   Der <u>Peter</u>$_1$ *der Schlawiner*$_1$ hat mir wieder meine <u>Plätzchen</u> stibizt.
                 the Peter the filou has me again my cookies pilfered
                 '<u>Peter</u>, *that filou*, has pilfered my <u>cookies</u> again.'

        b.   Der <u>Peter</u>$_1$ *der Gauner*$_1$ hat schon wieder meine <u>Schuhe</u> versteckt.
                 the Peter the crook has again my new shoes hidden
                 '<u>Peter</u>, *that sly customer*, has hidden my <u>shoes</u> again.'

      c.   Der <u>Peter</u>₁ *die Schlafmütze*₁ hat wieder seine <u>Aufgaben</u> vergessen.
           the Peter the nightcap has again his assignments forgotten
           '<u>Peter</u>, *that sleeping pill*, has forgotten his <u>assignments</u> again.'

(52)   a. * Der <u>Peter</u> *der neue Mitarbeiter* hielt gestern einen <u>Vortrag</u>.
           the Peter the new employee held yesterday a talk
           '<u>Peter</u>, *the new employee*, gave a <u>talk</u> yesterday.'

      b. * Der <u>Peter</u> *ein Mitarbeiter* hielt gestern einen <u>Vortrag</u>.
           the Peter an employee held yesterday a talk
           '<u>Peter</u>, *an employee*, gave a <u>talk</u> yesterday.'

A range of expressions that show the stressless behavior is given in (53).

(53)   der Schlawiner, der arme Kerl, der Idiot, die dumme Kuh, die Schlafmütze
       'the filou, the poor guy, the idiot, the stupid cow, the nightcap (slow person)

While appositions carry non-at-issue content as a rule, the content of epithets is in addition non-at-issue as a lexical property. The consequences of their different prosodic behavior from other appositions will be left open here.

     What is interesting for the purpose at hand is that epithet appositions do not allow speech act adverbs or modal particles, no matter how they are stressed:

(54)   a.   Der Peter *(*offenbar) der Schlawiner* hat mir wieder meine Plätzchen stibizt.
           the Peter apparently the filou has me again my cookies pilfered
           'Peter, (*apparenty*) *that filou*, has pilfered my cookies again.'

      b.   Der Peter *(*wohl) der Schlawiner* hat mir wieder meine Plätzchen stibizt.
           the Peter MP the filou has me again my cookies pilfered
           'Peter, (*supposedly*) *that filou*, has gotten my cookies again.'

Thus, whatever expressive appositions are, it seems that they are not speech acts in the sense relevant here.

     What is of interest in connection with the current paper, then, is that the appositions that are speech acts, like the ones in (49), require intonation phrases as predicted by (20). On the other hand, appositions that are not speech acts in the relevant sense, like the accented ones in (50) and the unaccented ones in (51), do not seem to be intonation phrases. The latter are also admitted by (20).

5 The distinction between right dislocation and afterthought

5.1 Some properties of RD and AT

I follow the terminology of Ziv and Grosz (1994) and Averintseva-Klisch (2009): Right dislocation (RD) is the term for stressless resumption, typically of a personal pronoun as in (55). Afterthought (AT) is stressed resumption as in (56). Unlike RD, AT involves both an additional sentence stress on the resuming element and an obligatory pause preceding the resuming element. The pause is here correlated with an intonation phrase boundary preceding the stressed constituent.

(55)   Ich habe sie <u>gesehen</u>, die Schauspielerin.
       I have her seen, the actress
       'I have <u>seen</u> her, the actress.'

(56)   Ich habe jemanden <u>gesehen</u> — die <u>Schauspielerin</u>.
        I have someone seen the actress.
        'I have <u>seen</u> someone, — the <u>actress</u>.'

The distinction between RD and AT is interesting in connection with the search for the syntactic trigger of obligatory sentence stress, since RD is without such sentence stress while AT carries sentence stress. I begin with some general properties of the two constructions in the current section before turning to this issue.

     RD may be used to disambiguate the referent of the pronoun in the preceding discourse. However, as shown by Averintseva-Klisch (2009), this need not be so. In the example (57) from her (the stress is added by me), the information provided by RD is not required for disambiguating the reference of the pronoun. However, the example is acceptable.

(57)   *Meine Chefin₁* dreht manchmal völlig durch. *Die₁* <u>ist</u> halt so, *die Frau₁*.
        my boss.FEM turns sometimes completeley throught that.FEM is MP like.that the woman
        'My boss sometimes looses her temper. She is like that, that woman.'

     AT instead of RD can in certain cases be obligatory. As noted by Zwart (2001), resumption of indefinites requires sentence stress on the resuming element. Example (56) is of this kind.

     A number of syntactic differences between RD and AT are pointed out by Ziv and Grosz (1994) for English and Averintseva-Klisch (2009) for German. Despite the differences, Ott and de Vries (2012) and Truckenbrodt (to appear) argue that both are derived by syntactic deletion.

     I will call the clause that precedes the elliptical constituent the *host clause*. (Altmann (1981) and Averintseva-Klisch (2009) call it *matrix clause*.) The deletion account represents the host clause as a separate root sentence in both RD and AT. In (58) and (59) the host clause, crucially without the dislocated constituent, is a root sentence. I argue in Truckenbrodt (to appear) that this correctly derives (a) that the host clause must carry sentence stress on its own and (b) that no focus-background structure may go across host clause and dislocated constituent.

     As for the elliptical clause, this is also a root sentence before deletion in (58) and (59). I note in Truckenbrodt (to appear) that the stress facts suggest that this second root clause is retained in AT as in (59), where we find a corresponding sentence stress on the elliptical constituent. On the other hand, the second CP node (and possibly other syntactic structure with it) seems to be deleted in RD as in (58), along with the deletion of overt material. This would be a necessary assumption since we do not find sentence stress on the elided constituent here.

(58)   CP   ~~CP~~
        Ich habe sie <u>gesehen</u>,   ~~ich habe~~ die Schauspielerin ~~gesehen~~.
        I have her seen   I have the acress seen
        'I have <u>seen</u> her,   ~~I have seen~~ the actress.'

(59)   CP   CP
        Ich habe jemanden <u>gesehen</u> — ~~ich habe~~ die <u>Schauspielerin</u> ~~gesehen~~.
        I have someone seen   I have the actress seen
        'I have <u>seen</u> someone   ~~I have seen~~ the <u>actress</u>.'

In the following I discuss the issue in terms of speech acts. This replaces the account in terms of (58) and (59).

5.2 Speech acts and RD/AT

The cases that involve obligatory AT to the exclusion of stressless RD are all and only those in which the resuming element adds new content, i.e. in which the resuming elided clause has content that is different from the content of the first clause. This includes the resumption of indefinites from Zwart (2001), as in (60).

(60) a. Ich habe jemanden <u>gesehen</u>, <s>ich habe</s> die <u>Schauspielerin</u> <s>gesehen</s>.
          I have someone seen I have the actress seen
          'I have <u>seen</u> someone, <s>I have</s> <s>seen</s> the <u>actress</u>.'

      b. * Ich habe jemanden <u>gesehen</u>, die Schauspielerin.   (* without stress
            I have someone seen the actress   on *Schauspielerin*)
            'I have <u>seen</u> someone, the actress.'

Obligatory AT to the exclusion of RD is also observed with the resumption of all kind of other elements, so long as the resuming element is not definite itself and does not resume a personal pronoun or other definite constituent. Examples from Truckenbrodt (to appear) include resumption of adverbials as in (61) and resumption of negation as in (62).

(61) a. Ich habe sie oft <u>gesehen</u>, <s>ich habe sie</s> jeden <u>Tag</u> <s>gesehen</s>.
          I have her often seen I have her every day seen
          'I have often <u>seen</u> her, <s>I have</s> <s>seen her</s> every <u>day</u>.'

      b. * Ich habe sie oft <u>gesehen</u>, jeden Tag.   (* without stress on *jeden Tag*
            I have her often seen every day   on the reading in which *jeden Tag*
            'I have often <u>seen</u> her, every day.'   'every day' refines *oft* 'often')

(62) a. Er hat sie nicht <u>gefunden</u>, <s>er hat sie</s> an keinem <u>Ort</u> <s>gefunden</s>.
          he has her not found he has her in no place found
          'He has not <u>found</u> her, <s>he has</s> not <s>found her</s> in any <u>place</u>.'

      b. * Er hat sie nicht <u>gefunden</u>, an keinem Ort.   (* without stress on *keinem Ort*)
            he has her not found he has her in no place found
            'He has not <u>found</u> her, in any place.'

All these cases of obligatory AT allow conflicting speech act adverbials and conflicting modal particles in the main clause and the resuming element:

(63) a. Ich habe *sicher* jemanden <u>gesehen</u>, <s>ich habe</s> *wahrscheinlich* die <u>Schauspielerin</u>
          <s>gesehen</s>.
          I have surely someone seen I have probably the actress seen
          'I have *surely* <u>seen</u> someone, <s>I have</s> *probably* <s>seen</s> the <u>actress</u>.'

      b. Ich habe *ja* jemanden <u>gesehen</u>, <s>ich habe</s> *wohl* die <u>Schauspielerin</u> <s>gesehen</s>.
          I have MP someone seen I have MP the actress seen
          'I have, *as we know*, <u>seen</u> someone, <s>I have</s> *supposedy* <s>seen</s> the <u>actress</u>.'

(64) a. Ich habe sie *sicher* oft ~~gesehen~~, ~~ich habe sie~~ *wahrscheinlich* jeden Ṭag ~~gesehen~~.
          I have her surely often seen I have her probably every day seen
          'I have *surely* often ~~seen~~ her, ~~I have~~ *probably* ~~seen her~~ every ~~day~~.'

      b. Ich habe sie *doch* oft ~~gesehen~~, ~~ich habe sie~~ *wohl* jeden Ṭag ~~gesehen~~.
          I have her MP often seen I have her MP every day seen
          'I have, *let's not forget*, often ~~seen~~ her, *I suppose* ~~I have seen her~~ every ~~day~~.'

(65) a. Er hat sie *offenbar* nicht ~~gefunden~~, ~~er hat sie~~ *angeblich* an keinem Ọrt ~~gefunden~~.
          he has her apparently not found he has her allegedly in no place found
          '*Apparently* he has not ~~found~~ her, *allegedly* ~~he has~~ not ~~found her~~ in any ~~place~~.'

      b. Er hat sie *ja* nicht ~~gefunden~~, ~~er hat sie~~ *wohl* an keinem Ọrt ~~gefunden~~.
          he has her MP not found he has her MP in no place found
          '*As we know* he has not ~~found~~ her, *supposedly* ~~he has~~ not ~~found her~~ in any ~~place~~.'

On the other hand, resumption of a personal pronoun or other definite element by a coreferent definite element can be stressless (RD) as in (66a) or stressed as in (66b). Either way, this kind of resumption does not allow a separate speech act adverb or modal particle, as shown in (67).[4]

(66) a. Maria hat ihn₁ ~~eingeladen~~, den Schauspieler₁.
      b. Maria hat ihn₁ ~~eingeladen~~, — den Ṣchauspieler₁.
          Maria has him invited the actor
          'Maria has invited him, the actor.'

(67) a. Maria hat ihn₁ eingeladen, (*angeblich*/*offenbar*/*ja*/*wohl*) den Schauspieler₁.
          Maria has him invited allegedly/apparently/MP/MP the actor
          'Maria has invited him, (*allegedly*/*apparently*/*as we know*/*supposedly*) the actor.

      b. Maria hat den Peter eingeladen, (*offenbar*) ihren Bruder.
          Maria has the Peter invited apparently her brother
          'Maria has invited Peter (*apparently*) her brother.'

      c. Maria hat ihren Bruder eingeladen, (*offenbar*) den Schauspieler.
          Maria has her brother invited apparently the actor
          'Maria has invited her brother (*apparently*) the actor.'

This is compatible with the current account: In all cases in which speech act adverbs and modal particles testify to a separate speech act (i.e. those in (63) – (65)), there is AT, i.e. a separate intonation phrase with separate sentence stress.

The following analysis of the distribution of sentence adverbs and modal particles is also compatible with the current account. Let us adopt the notion of assertion of Stalnaker (1978), by which an assertion adds content to the common ground (unless the addressee objects). The two classes of cases are now distinguished by whether content is added to the common ground by the dislocated element. Where it is definite and resumes another definite as in (67), there is no additional content in a formal and directly relevant sense. In that case, the resuming element does not constitute the addition of content to the common ground, i.e. is not an assertion, and

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[4] Note that speech act adverbs here differ from the expressions *ich meine* 'I mean', which is possible in (67a).

consequently no speech act adverbs are possible. In the other cases (60) – (62) new content is added to the common ground by the dislocated element, and therefore a separate assertion is constituted. This separate assertion allows the presence of a sentence adverb or modal particle.

In this account, (20) correctly predicts that new content requires obligatory AT, i.e. a separate intonation phrase and separate sentence stress, as was seen in (60) – (62). Thus, new content requires a separate speech act, and by (20) therefore requires the separate intonation phrase with separate sentence stress.

A further question concerns the distribution of stressless vs. stressed resumption in the domain of coreference, for example in (66a) vs. (66b). Consider the following cases of coreferent full DPs. In (68) only stressless resumption is possible. In (69) stressed resumption is possible.

(68)   Was ist mit Marias Bruder, dem Hans?
        What about Maria's brother the Hans
        'What about Maria's brother, the guy called Hans?'

        Maria hat ihren Bruder <u>eingeladen</u>, den Hans / #— den <u>Hans</u>.
        Maria has her brother invited, the Hans
        'Maria has <u>invited</u> her brother, the guy called Hans.'

(69)   Was ist mit Marias Bruder?
        'What about Maria's brother?'

        Maria hat ihren Bruder <u>eingeladen</u>, —den <u>Hans</u>
        Maria has her brother invited the Hans
        'Maria has <u>invited</u> her brother, the guy called <u>Hans</u>.

These cases allow two conceivable directions of analysis. On the one hand, Hans is contextually given in the answer in (68), but not in the answer in (69). It could therefore be that the givenness constraint (37) rejects sentence stress on *Hans* in (68) but not in (69). In (69), the regular stress rules could then assign accent to *Hans* in (69) and, since there is a preceding intonation phrase boundary, build a second intonation phrase with a second sentence stress on the dislocated constituent.

However, another conceivable interpretation of the distinction is that there is an additional speech act for the dislocated constituent in (69) after all. Before the additional speech act, the identity of Maria's brother and Hans would not be taken as established – this is what would allow a second speech act. After the second speech act, the identity of Maria's brother and Hans could be made to follow from an assumption about the identity of the two events in RD/AT. The overall intention of the speaker would then conceivably be to make two speech acts with, by inference, identical content, which might still provide for a reason why there could not be a speech act adverb that modifies one part but not the other. In this account, the impossibility of stressed resumption in (68) would also correctly follow. Since the context question unambiguously identifies Maria's brother and Hans, a second speech act for the dislocated constituent in the answer would not be possible. The second part would in all cases, including the reference of the dislocated constituent, be identical to the first part.

I leave this issue of the correct account unresolved here. I note that on either account, the facts reviewed here about RD and AT are compatible with (20). However, the choice among the two preceding possibilities bears on the strength of the role played by (20) in this domain. If the account in terms of prosodic constraints and givenness of (68) vs. (69) is correct, then this analysis could also be maintained to account for the stress-facts in (60) – (62) above: Stress might here be assigned by the prosodic constraints, where givenness does not prevent them from assigning stress. The account would still be compatible with (20), but an opponent of (20) could then also maintain that the stress-facts of RD and AT can also more generally be derived in a different fashion. On the

other hand, if the speech-act account of (68) and (69) can be substantiated, then the distinction between stressless RD and stressed AT would in its entirety be a distinction between one and two speech acts, and (20) would carry the burden of relating the speech-act distinction to the stress distinction.

In summary, the observations about speech acts and sentence stress in RD and AT are compatible with (20). They open up interesting possibilities concerning a strong role of (20) in this domain, but we cannot be empirically sure at the moment that this is the way to go.

6 Multiple focus

Additional evidence for the role of speech acts comes from observations in connection with multiple focus. I will first present a discussion from the literature, in order to then show how (35) is relevant to it.

Selkirk (2005) suggested that each focus in a multiple-focus construction requires sentence stress in a separate intonation phrase. She supported this with examples from the board game Clue. For the murder to be solved, the game defines a set of possible perpetrators, a set of possible locations, and a set of possible weapons. Players make statements like (70). These require sentence stress on each of the foci.

(70)   I suggest that the crime was committed [in the <u>lounge</u>]$_F$ – [by Mr. <u>Green</u>]$_F$ – [with a <u>wrench</u>]$_F$.

It seems at first reasonable to analyze these as examples of multiple focus in answer to a silent question like 'Who did it where with what?'. However, it is pointed out in Kabagema-Bilan et al. (2011) that the stress-facts in such a setting are comparable in German, as shown in (71), while simple cases of multiple focus with a context question as in (72) seem to show a different stress-pattern. In (72) one sentence stress suffices for each set of foci. Nevertheless each focus requires accent.

(71)   Ich schage vor, dass das Verbrechen im <u>Salon</u> begangen wurde, – von Mr. <u>Green</u>, – mit einer <u>Rohrzange</u>.

(72)   [Who called whom?]
         [<u>Hans</u>]$_F$ hat [<u>Maria</u>]$_F$ angerufen, — [<u>ich</u>]$_F$ habe [<u>dich</u>]$_F$ angerufen, —
         Hans has Maria called I have you called
         und [<u>Jane</u>]$_F$ hat [<u>Bill</u>]$_F$ angerufen.
         and Jane has Bill called
         '[<u>Hans</u>]$_F$ called [<u>Maria</u>]$_F$,— [<u>I</u>]$_F$ called [<u>you</u>]$_F$, and [<u>Jane</u>]$_F$ called [<u>Bill</u>]$_F$.'

This observation converges with Schwarzschild (1999) who also observed that each focus is accented when multiple foci are assigned. His example is shown in (73).

(73)   John cited Mary but he DISSED$_{F1}$ SUE$_{F2}$.

In the German translation (74) a single sentence stress in the second clause is likewise enough, if both foci are accented.

(74)   <u>Hans</u> hat <u>Maria</u> zitiert aber er hat <u>Sue</u>$_F$ <u>ignoriert</u>$_F$.
         Hans has Maria cited but he has Sue ignored
         'Hans cited Mary but he ignored Sue.'

Thus, building on Schwarzschild (1999), the correct rule that defines the minimum of stress in multiple-focus constructions seems to be (75a). This is endorsed in Kabagema-Bilan et al. (2011) and employed in Truckenbrodt (2012, 2013). It seems to hold in addition to (10), which is repeated here as (75b).

(75)   Prosodic effects of focus:
        a.   Each focus requires accent.
        b.   The strongest stress within ~[... [...]_F ...] must be within [...]_F.

In (72) – (74), then, (75a) correctly requires accent on each focus. The effect of this is noticeable in (72) insofar the normally unstressed pronouns carry accent under focus. In (73) the otherwise only optionally accented verb requires accent when focused. In addition, each clause in (72) – (74) is an assertion and therefore an intonation phrase that requires sentence stress in the current analysis. As in other cases of multiple accents in the intonation phrase, this sentence stress is assigned on the rightmost accent of the intonation phrase by (4). It seems, then, that focus does not inherently lead to intonation phrase divisions or sentence stress.

     We now come to the question that is of interest in connection with the current paper: Why did it seem so plausible initially that each focus requires sentence stress? Why does that seem to be the correct observation in (70) and (71)? Notice that (75) does not predict the sentence stress on each of the foci in (70) and (71). Instead, only accent would be assigned to each of the non-final foci.

     The answer I offer is that each focus in (70) and (71) is a separate claim, and therefore a separate assertive speech act. This can again be made visible in terms of sentence adverbs as in (76).

(76)   Ich glaube, dass das Verbrechen *wahrscheinlich* im <u>Salon</u> begangen wurde, –
        I think that the crime probably in.the salon committed was
        sicher von Mr. <u>Green</u>, – *möglicherweise* mit einer <u>Rohrzange</u>.
        surely by Mr. Green possibly with a wrench
        ,I think that the crime was *probably* committed in the <u>lounge</u>, *surely* by Mr. <u>Green</u>,
        possibly with a <u>wrench</u>.'

It seems that the context of the board game leads us listeners to understand each of the foci in these examples as a separate claim. They are claims about where the crime was committed, or by whom it was committed, or what weapon was used. Each of the foci will be evaluated on their own as right or wrong. This distinguishes the Clue examples from cases like (72a). There we would not be inclined to maintain that the speaker is making one claim about who called Mary (John) and another claim about who John called (Mary), for example. Rather, there is a single claim about who called who (John, Mary), then another one (me, you), etc.

     It is reasonable that the distinction between the two classes of cases is also a syntactic distinction. For example, it is easily possible to insert a coordinating *and* before the final adjunct in (70) (or a German corresponding *und* in (71)). Also, we would not a priori want to rule out a deletion analysis in (70), but we would want to rule out a deletion analysis of (72) in which each focus comes from a separate clause.

     In sum, it seems that focus does not require sentence stress, while speech acts do require sentence stress. We saw two kinds of cases in which sentences contained multiple foci. In the Clue examples, each focus represents a separate claim, hence a separate speech act, and it receives it own sentence stress. In (72) two foci together enter into one claim, and here we find that only one instance of sentence stress is required. The number of required sentence stresses thus mirrors the number of speech acts that are present, regardless of the number of foci. The observations are correctly predicted by (20), which connects obligatory sentence stress to speech acts.

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7 Peripheral adverbial clauses

Haegeman (2004, 2006) distinguishes central and peripheral adverbial clauses. The distinction is worked out for German in Frey (2011, 2012), with some further comments in Frey and Truckenbrodt (2013). Of interest here are peripheral adverbial clauses, like the bracketed adversative clause in (77).

(77)   Es ist dunkel, [obwohl der Mond am Himmel steht].
         it is dark although the moon in.the sky stands
         'It is dark, even thought the moon is in the sky.'

Haegeman (2004) suggested that these peripheral adverbial clauses are right-adjoined to their CP host clause. Frey (2011, 2012) observed that they can also occur in the German Vorfeld Spec,CP, as in (78).

(78)   [Obwohl der Mond am Himmel steht], ist es dunkel.
         although the moon in.the sky stands it is dark
         'Even though the moon is in the sky, it is dark.'

According to both authors, peripheral adverbial clauses are root clauses, and this is related to their high position. Coniglio (2011) and Frey (2011, 2012) observed that evidence for their root clause status is that they can carry modal particles in German.

(79)   Wie warm ist es wohl draußen?
         'How warm is it, *do you think*, outside?'

         Es ist *wohl* <u>kühl</u>, — obwohl *ja* den ganzen Tag die <u>Sonne</u> geschienen hat.
         it is MP cool although MP the whole day the sun shone has
         'It is, *I think*, cool, even though, *as we know*, the sun has shone all day.'

This is also true of sentence adverbs.

(80)   Konnte man etwas sehen in jener Nacht?
         'Was it possible to see something during that night?'

         Nein. Obwohl *mit Sicherheit* der <u>Mond</u> am Himmel stand — war es *angeblich* <u>dunkel</u>.
         no although with certainty the moon in.the sky stood was it allegedly dark
         'No, even though the moon was *surely* in the sky, it was *allegedly* dark.'

According to Haegeman (2006) and Coniglio (2011) peripheral adverbial clauses are separate speech acts. According to Frey (2011, 2012) they are potential but not real speech acts, though still distinguished from clauses that are not speech acts.

Here two issues are discussed in connection with peripheral adverbial clauses. First, as discussed in Frey (2011, 2012) and Frey and Truckenbrodt (2013) some amount of integration of peripheral adverbial clauses into the host clause is also possible; this is not explored in detail here, but some remarks are made about parallels and a difference to coordinate sentences. Second, the more integrated cases allow for the observation of an interesting additional interaction between speech acts and sentence stress.

A consequence of the more integrated options is that sentence stress on the complementizer of the peripheral adverbial clause is possible, with a single all-embracing intonation phrase, in parallel to focus on the conjunction in coordinated V2-clauses. The examples in (81) are from Frey and Truckenbrodt (2013).

(81)   Peter meinte, dass es dunkel war und dass der Mond am Himmel stand.
        'Peter thought that it was dark and that the moon was in the sky.'

        a. Ja, es war dunkel <u>trotzdem</u> der Mond am Himmel stand.
        b. Ja, es war dunkel <u>obwohl</u> der Mond am Himmel stand.
        c. Ja, es war dunkel <u>gleichwohl</u> der Mond am Himmel stand.
           yes it was dark although the moon in.the sky stood
        'Yes, it was dark although the moon was in the sky.' (*trotzem, obwohl, gleichwohl*:
                                                            although)

As expected in the current paper, this is compatible with the presence of a single speech act adverb that has scope over both host clause and peripheral adverbial clause. This is true if the speech act adverb is in the Vorfeld as in (82). The case is parallel to the coordinated structures in (30).

(82)   War sie denn traurig weil der Mond am Himmel stand?
        'Was she sad because the moon was in the sky?'

        Angeblich war sie traurig <u>obwohl</u> der Mond am Himmel stand.
        allegedly was she said although the moon in.the sky stood
        'Allegedly she was sad <u>even though</u> the moon was in the sky.'

In difference to coordinated structures, this wide scope reading is also unmarked when the speech act adverb follows the finite verb in the host clause:

(83)   War sie denn traurig weil der Mond am Himmel stand?
        'Was she sad because the moon was in the sky?'

        Sie war *angeblich* traurig <u>obwohl</u> der Mond am Himmel stand.
        she was allegedly sad although the moon in.the sky stood
        'She was allegedly sad <u>even though</u> the moon was in the sky.'

Confirmation for the current account is that two distinct speech act adverbials are not compatible with the integrated stress pattern, as shown in (84a). The example (84b) is added for comparison.

(84)   a.   * Sie war *angeblich* traurig <u>obwohl</u> *meines Wissens* der Mond am Himmel stand.
                she was allegedly sad although my.GEN knowledge.GEN the moon in.the sky stook
                'She was *allegedly* sad <u>even though</u>, *as far as I know*, the moon was in the sky.'

        b.   Sie war *angeblich* <u>traurig</u> — obwohl *meines Wissens* der <u>Mond</u> am Himmel stand.
                she was allegedly sad although my.GEN knowledge.GEN the moon in.the sky stook
                'She was *allegedly* <u>sad</u>, even though, *as far as I know*, the <u>moon</u> was in the sky.'

Here (20) requires an intonation phrase and sentence stress for each speech act, deriving (84b) and ruling out (84a).
        I turn to the second observation to be discussed. The structural and semantic asymmetry between host clause and peripheral adverbial clause allows us to see a new speech-act related contrast. (85) and (86) differ minimally in the context, the utterance by speaker A. In (85) this context provides both the content of the following host clause and its having been asserted by speaker A. In (86) the context provides the content of the following host clause, but its truth is here put up for question. In the intonation (85) allows a matrix clause without sentence stress while (86) requires separate intonation phrase.

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(85)   A: Es ist dunkel gewesen.
       it is dark been
       'It was dark.'

       B: a.   Es ist dunkel gewesen obwohl der <u>Mond</u> geschienen hat.
          b.   Es ist <u>dunkel</u> gewesen — obwohl der <u>Mond</u> geschienen hat.
               it is dark been although the moon shone has

               a. 'It was dark although the <u>moon</u> shone.'
               b. 'It was <u>dark</u> although the <u>moon</u> shone.'

(86)   A: Ist es dunkel gewesen?
       is it dark been
       'Was it dark?'

       B: a. # Es ist dunkel gewesen obwohl der <u>Mond</u> geschienen hat.
          b.   Es ist <u>dunkel</u> gewesen — obwohl der <u>Mond</u> geschienen hat.
               it is dark been although the moon shone has

               a. # 'It was dark although the <u>moon</u> shone.'
               b.   'It was <u>dark</u> although the <u>moon</u> shone.'

These observations are interpreted as follows. Since the content of the host clause is given in both cases, the host-clause will be stressless as in (85a) unless it is also an assertion as in (85b) and (86b). In the latter case its being an assertion overrides the stress-rejecting effect of givenness (37) as in earlier cases in this paper. In (85b) this is a re-assertion by speaker B of the previous assertion by A. In (86b) this is an assertion by speaker B that answers the question by speaker A. Why is (86a) infelicitous? In the current account the entire utterance is an assertion here, which includes both host clause and peripheral adverbial clause. It seems to be reasonable to maintain that a closer match to the preceding question needs to be asserted, i.e. only the host clause, since this is the information that is asked for in the question. Such a requirement will furthermore not come into play in (85a), where the information in the host clause is not asked for in the question.

This is a new kind of confirmation for the current account. Without the grammatical link between speech acts and intonation phrases, it would be difficult to account for the distinction between (85a) and (86a). The link between speech acts and intonation phrases, however, connects the reasonable speech act distinction (the host clause needs to be separately asserted in (86a) but not in (85a)) directly to the prosodic distinction.

8 Parentheticals

Downing (1970:87) postulates, in his terms, obligatory pauses at the edges of parentheticals, as in (87).

(87)   The girls, / I suppose, / will make some sandwiches.

Potts (2005) treats parentheticals as supplements that are marked with the feature [comma] that triggers comma intonation.

However, Dehé (2009a) shows with F0-tracks of English recordings that parentheticals are not regularly separated by the intonation phrase boundaries that we might expect given such earlier descriptions. This case is quite convincing.

I adopt a distinction by Reis (1995). She separates two kinds of parentheticals in their prosodic behavior. She casts the distinction primarily in terms of focus-background structures

(p.30f) and additionally postulates a speech act correlation (p.70). I here present the speech act distinction as primary. It is quite plausible but, as we will see, not easy to substantiate.

There are, on the one hand, sentences that are separate speech acts inserted into other sentences. The following examples are from Reis (p.31) with her prosodic annotations and her observation about the deviation of the b.-examples. These inserted speech acts are prosodically disintegrated by the description of Reis, by which she means they carry separate stress and they are separated by obligatory pauses. In the current terms these inserted speech acts are separate intonation phrases due to (20).

(88)   a.   In BONN wohnt sie – wen WUNdert's – seit der Trennung.
        b.   * In BONN wohnt sie (–) wen wundert's (–) seit der Trennung.
               in Bonn lives she who surprised is since the separation
               '<u>Bonn</u> is, who would be <u>surprised</u>, where she lives since the separation.'

(89)   a.   In BONN wohnt sie – das sagt jedenfalls der FRANZ – seit der Trennung.
        b.   * In BONN wohnt sie (–) das sagt jedenfalls der Franz (–) seit der Trennung.
               in Bonn lives she that says at.any.rate the Franz since the separation
               '<u>Bonn</u> is, that's what <u>Franz</u> says, where she lives since the separation

Reis (p.70) points out that (90), another case of this kind, involves a genuine assertion of the parenthetical. The speaker asserts the infixed sentence.

(90)   Hans – (das) glaubt/sagte jedenfalls der Paul – wird morgen zum Direktor gewählt.
        Hans that believes/says at.any.rate the Paul is tomorrow as.the director voted
        'Hans, that's what Paul thinks/said at any rate, will be voted director tomorrow.'

By contrast, there is a more specific class of parentheticals (the topic of her paper) that correspond to English parentheticals like *I suppose*, *Mary believes*, and that in German are realized in V1-form as in Reis' examples (91) (her punctuation).

(91)   Hans *glaubt/sagte Peter*, wird morgen zum Direktor gewählt.
        Hans believes/says Peter is tomorrow as.the director voted
        'Hans, *Peter believes/said*, will be voted director tomorrow.'

        Hans wird morgen *glaubt/sagte Peter*, zum Direktor gewählt.
        Hans is tomorrow believes/says Peter as.the director voted
        'Hans will be, *Peter believes/said*, voted director tomorrow.'

Of these, she notes that they are prosodically integrated: They are unstressed and not separated by obligatory pauses. This assessment is endorsed by Steinbach (2007), where the account of Reis (1995) is further developed and the point is made that these parentheticals are embedded root phenomena.

As for the speech act, Reis observes that in (90) it is "strictly asserted that Paul believes that p", while the inserted clauses in (91) merely "express it (...) i.e. they just identify the source for the assertability of p", the main clause (p.70). I think that these remarks are compatible with the classification of such parentheticals as evidential in nature in Rooryck (2001), and with their treatment as parallel to presupposed information in the account of parentheticals of Asher (2000) in Segmented Discourse Representation Theory (SDRT). The distinction allows me to fit parentheticals into the current account: Inserted sentences as in (88) – (90) are genuine speech acts and hence intonation phrases by (20). Those in (91) are not genuine speech acts and therefore need not be intonation phrases by (20). The distinction is endorsed here.

Reis does not give any support for her plausible position in terms of independently established tests, and it does not seem to be easy to do so. Notice in particular that our test in terms of speech act adverbs seems not to work here. Speech act adverbs are possible inside of parenthetical speech acts as in (92), but they are also possible inside of non-asserted V1-parentheticals as in (93).

(92)   Hans wurde — das <u>glaubst</u> du mir *hoffentlich*— zum <u>Direktor</u> gewählt.
        Hans was that believe you me hopefully as.the director voted
        'Hans was, this you *hopefully* <u>believe</u> me, voted <u>director</u>.

(93)   Hans wurde, sagte Maria *angeblich*, zum <u>Direktor</u> gewählt.
        Hans was says Maria allegedly as.the director voted
        'Hans was, Mary says *allegedly*, voted <u>director</u>.'

We have seen initially that we must not apply our tests blindly, and we seem to have encountered another case where blind application would lead to the wrong result. This is a bit troubling. Here I offer support for the position of Reis by the following argument.

The examples in (94) are to be judged as possible responses to the initial question. This controls for their status as assertions: If they can be responses to the question (and nothing else is wrong) they are assertions. (94a) is an assertion. The matrix clause is a V2-clause, the German standard form of assertions. The complementizer-initial *dass*-clause is a subordinate clause. A complementier-initial clause can stand on its own in German, as in (95). However, it never constitutes an assertion, as illustrated in (94b). Crucially, this does not change when the main clause of (94a) is added in parenthetical form to (94b), as in (94c). If the parenthetical were asserted like the main clause in (94a), we might expect that (94c) is just as good an assertion and an answer to the question as (94a). However, it seems that the parenthetical can only be a modification of an independently established assertion. In (94d), where the host clause is a V2-clause with assertive content of its own, the parenthetical can operate on that independently established assertion.

(94)   Wie wird das Wetter?
        'What will the weather be like?'
        a.   Maria sagt, dass morgen die Sonne scheint.
                Maria says that tomorrow the sun shines.
                'Maria says that the sun will shine tomorrow.'
        b. # Dass morgen die Sonne scheint.
                that tomorrow the sun shines.
                'that the sun will shine tomorrow'
        c. # Dass morgen, sagt Maria, die Sonne scheint.
                that tomorrow, says Maria, the sun shines
                'that the sun will shine tomorrow, says Maria'
        d.   Morgen, sagt Maria, scheint die Sonne.
                tomorrow says Maria shines the sun
                'The sun will shine tomorrow, says Maria.'

(95)   Dass sie so schön singen kann!
        that she so well sing can
        'I am amazed that she can sing so well!'

This suggests that the parenthetical in (94c) is not asserted in the way in which the matrix clause in (94a) is asserted. It thus supports the assessment of Reis that parentheticals of this kind are not asserted.

In summary, adopting a position of Reis (1995) allows me to tentatively fit parentheticals into the perspective argued for in other sections of this paper: Where parentheticals are speech acts infixed into other speech acts, they are separate intonation phrases. However, the special class of parentheticals that have the form of infixed matrix clauses are not speech acts and not separate intonation phrases.

9 Remarks on the syntax of intonation-phrase triggering

I have made a case at a descriptive level that speech acts trigger intonation phrases. However, speech acts are on the LF-side of grammar while intonation phrases are on the PF-side of grammar. We expect that there are no grammatical principles directly connecting them. Instead, there must be syntactic entities that mediate between them. In the case at hand, there must be a syntactic entity that is mapped to speech acts on the one hand and to intonation phrases on the other hand. What syntactic entity might this be?

I think that this may not be the [comma] feature of Potts. What seems to me to be right about the [comma] feature is that elements with non-at-issue content typically also have special intonational properties. However, we saw with specific appositions and specific parentheticals that the special intonation is not always that they form separate intonation phrases. It was also argued that the relevant supplements are not speech acts in the relevant sense.

However, it seems to me as though a revision of the suggestion of Downing (1970) in terms of unembedded sentences might work. This would also be in the spirit of Reis (1997) and Holler (2008), where non-integrated clauses are identified with unembedded clauses, and in the spirit of a structural rather than a featural separation in de Vries (2007). The idea is that unembedded clauses in a certain sense constitute speech acts on the one hand, and are mapped to intonation phrases on the other hand.

This would be compatible with a special categorical status of the relevant clauses. For example, the relevant syntactic notion might be that of unbedded ForcePs, where ForcePs are projections anchored to a (described or real) speaker as in Haegeman (2004) and Frey (2011, 2012).

For the coordinated DP constituents, this would mean that the single-speech-act case derives from a single clause as in (96a), while the separate speech acts is derived by deletion from multiple unembedded clauses as in (96b).

(96)   Who was at the party?
   a.   [Allegedly Mary and John and Bill ~~were at the party~~].
   b.   [Surely Mary ~~was at the party~~] and [allegedly John ~~was at the party~~] ....

For the coordinated V2-clauses a syntactic suggestion was outlined above as to how the integrated case involve a second clause that is syntactically embedded in the first clause.

For appositions, RD and AT, this raises issues beyond the scope of the current paper.

In the domain of parentheticals, the integrated parentheticals would then also need a syntactically integrated analysis. Reis (1995) suggests that they form a constituent with the constituent preceding them. This would have the desired consequences.

In sum, it seems to be possible that the correlation between speech acts and intonation phrases is mediated by a syntactic notion of unembedded constituents similar to the original definition of Downing (1970), though revised for specific cases that are perhaps part of their root sentence after all. In addition, these root sentences are mapped to speech acts.

10 Conclusion

This paper explored the claim that Selkirk (2005, 2011) formulated in an extension of Potts (2005), namely the claim that each speech act requires an intonation phrase. In the current paper this was tested with modal particles and sentence adverbs. A good amount of support for Selkirk's claim was

found. At the same time, it turned out that the domain of application of this claim is different from what we may have expected: Not all coordinated sentences, and not all supplements actually are separate speech acts. If they are not, they also don't seem to have to be separate intonation phrases. The following cases were discussed.

Coordinated surface-DPs are normally joined in a single speech act, but can be forced by sentence adverbs to constitute multiple speech acts. As multiple speech acts they require multiple intonation phrases, as a single speech acts they are fine in a single intonation phrase.

Coordinated clauses can join into a single speech act or constitute two separate speech acts. Two separate speech acts require two separate intonation phrases, while a single speech act also allows a rendition as a single intonation phrase under appropriate conditions.

Appositive relatives form a separate speech act and a separate intonation phrase.

Appositions may constitute a speech act, in which case they are a separate intonation phrase. There are two classes of appositions that seem not to constitute a speech act or an intonation phrase, accented appositions and epithets as appositions that do not require accent.

Resumption (AT/RD) containing semantically new content constitutes a separate speech act, and a separate intonation phrase, i.e. AT. Where no new content is involved, the current claim cannot be falsified; some issues were left open in regard to these cases.

In cases of multiple focus, we found separate intonation phrases where each focus expresses a separate claim, but a single intonation phrase where two foci together express a single claim.

 Peripheral adverbial clauses also show variation between integration and non-integration. Where they are a separate speech act, they require a separate intonation phrase. Further support for the analysis was seen in a requirement on sentence stress on the main clause just in case it is arguably an assertion.

For parentheticals a distinction by Reis (1995) was adopted. If a speech act is simply infixed into another one, it will need to be an intonation phrase. A special class of parentheticals discussed as evidentials by Rooryck (2001) is also classified by Reis as not being a genuine assertion. This case does not constitue a separate intonation phrase.

If speech acts have a prosodic correlate, it follows from the architecture of grammar that they also have a syntactic correlate. A plausible candidate for this is unembedded constituents in the sense of Downing (1970), Reis (1997), Holler (2008) and de Vries (2007), with revisions that allow certain coordinated clauses, certain appositions, certain parentheticals, and right-dislocated constituents to be syntactically integrated in the relevant sense. These constituents might also be unembedded ForcePs.

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