

## German *wie*-comment and reporting clauses – a comparison with *so*-parentheticals

Karin Pittner and Werner Frey

### 10.1 Introduction

This chapter is concerned with *wie*-clauses like those in (1a). They contain a verb denoting a speech act or a mental attitude which has a propositional argument position. This argument position is filled via material from the host/matrix clause. In order to bring out their special properties more clearly, they are compared with *so*-parentheticals which have similar functions, cf. (1b).

- (1) a. Maria wird, wie Hans sagte, morgen kommen.  
Maria will as Hans said tomorrow come  
'Mary will come tomorrow, as John said.'  
b. Maria wird, so sagte Hans, morgen kommen.  
Maria will so said Hans tomorrow come  
'Mary will come tomorrow, so John.'

Eggers (1972) calls the *wie*-clauses “Hinweissätze” (‘indication clauses’), both *wie*-clauses and *so*-parentheticals have been called “speech commenting” (Pittner 1993), and “speech-situating” (Brandt 1997). They are also often called comment clauses and reporting clauses (e.g. Kluck and de Vries 2015). We will use the terms as follows: comment clauses (in the following CCs) express both the source of the content of the matrix clause in different ways and the degree of the epistemic commitment or an emotional attitude/stance towards the content of the matrix clause of the logical subject of the *wie*-clause. Moreover, they may serve discourse-structuring and interactional purposes. In contrast, reporting clauses (in the following RCs) transfer the responsibility for the content of the matrix clause to a source other than the speaker. The host of a RC contains direct or indirect reported speech.<sup>1</sup> We will use comment and reporting clause (CRC) as a cover term in the following when no differentiation between these two functions is necessary.

The category of *wie* in *wie*-CRCs is controversial. We will argue that *wie* in these clauses is a relative adverb and point out its relations to *wie* as a manner adverb and as an equative marker in comparison clauses. The *wie*-clause constitutes a free relative clause. While *wie*-CRCs are sometimes considered to be parentheticals, we will argue that in standard use *wie*-CRCs are not parentheticals because they do not fulfil the standard criterion of parentheticals which are, according to Dehé and Kavalova (2007: 1), “expressions that are linearly represented in a given string of utterance (a host sentence), but seem structurally independent at the same time”. Rather *wie*-CRCs are adverbials that are base-generated high in their host clause and serve as epistemic or evidential adverbials. Thus, they have the base positions and functions of several types of ‘higher’ adverbials. They are mainly CCs. Moreover, there are also *wie*-clauses that relate to speech acts or function as discourse markers.

---

<sup>1</sup> This includes mental attitudes which are reported.

In contrast, *so*-parentheticals are mainly RCs. *So* as a deictic manner adverb has grammaticalized into a quotative marker which sets the content of the present utterance equal to the content of another utterance or mental attitude. We will argue that *wie* as the *wh*-equivalent of *so* lacks *so*'s deictic capacity but shares its identifying potential. It relates the present utterance to the utterance or mental state that is referred to by the logical object of the predicate of the *wie*-CRC by taking the two encoded propositions as its arguments. Interestingly, an additional propositional anaphor *es/das* ('it') can be inserted into the *wie*-CRC and the *so*-parenthetical, respectively. We argue that the internal argument position of *wie* and *so*, respectively, is predicated on this propositional anaphor. Furthermore we argue that if the propositional anaphor is not overtly present an empty category appears in its place. The empty category is licensed by being predicated on by *wie* and *so* respectively.

The chapter is structured as follows. Section 10.2 deals with the category of *wie* in the clauses of interest here and its relations to manner-*wie* and *wie* as the standard marker in equative constructions. Section 10.3 deals with the internal and external argument of *wie* which expresses a two-place relation of similarity or, as we will say, congruence between its arguments. In Section 10.4 it is argued that in the standard case *wie*-CRCs are not parentheticals, in contrast to what is often assumed for corresponding *as*-clauses in English, but are regular constituents in their matrix clauses functioning as sentence adverbials or speech act related adverbials. Their textual and discourse structuring functions are described in Section 10.5. In this section we also point to the use of *wie*-clauses as discourse markers. A comparison with *so*-parentheticals is drawn in Section 10.6. Section 10.7 compares *wie*-CRCs and *so*-parentheticals regarding some essential characteristics of parentheticals.

## 10.2. The category of *wie* in comment and reporting clauses

German *wie* 'how/as' is an extremely versatile word, occurring in different categories with different meanings. Like other *wh*-words, it can occur as an interrogative or a relative element, and in these cases mainly has a manner meaning. If it occurs in a complement clause or a relative clause, the verb is in final position.

- (2)
  - a. Wie ist das passiert?  
how is that happened?  
'How did that happen?'
  - b. Sie fragen, wie das passiert ist.  
'They ask how it happened.'
- (3) Sie lösen das Problem (so), wie es sinnvoll ist.  
they solve the problem so how it makes sense.  
'They solve the problem in a way that makes sense.'

*Wie* also occurs as a complementizer in temporal clauses (synonymous with *als* 'when', mainly in Southern Germany), cf. (4a), and in complements denoting events in progress (Umbach et al. 2021, Hinterhölzl 2023), as in (4b):

- (4) a. Wie sie kam, waren alle anderen Gäste schon da.  
 as she came were all other guests already there  
 ‘When she came, all other guests were there already.’
- b. Ich sah (ihn), wie er das Haus verließ.  
 I saw him, how he the house left  
 ‘I saw him leaving the house.’

*Wie* also occurs in equative constructions as a marker of the standard of comparison:

- (5) a. Er ist so schön wie sie (ist)  
 he is so beautiful as she is  
 ‘He is as beautiful as she is’
- b. Er tanzt (so) wie Fred Astaire (tanzt).  
 he dances so as Fred Astaire dances  
 ‘He dances like Fred Astaire.’

Degree-equatives in German (as in (5a)) contain the demonstrative *so* ‘as’ obligatorily and this word optionally occurs in non-degree equatives (as in (5b)) as a correlate in the matrix clause (cf. Jäger 2019:2f.). This is in line with the observation by Haspelmath and Buchholz (1998: 288) that the degree marker is in many languages an adverbial demonstrative pronoun (*so* in German) and the marker of the standard of comparison is an adverbial relative pronoun.

In this section, we will focus on the category of *wie* in CRCs and its relations to manner-*wie* and *wie* in equative constructions. Haspelmath and Buchholz (1998) provide ample evidence that from a cross-linguistic perspective, there is a close relation between manner adverbial clauses, equative constructions and CRCs (“accord clauses” in their terminology) because these clause types are expressed by the same structural means in many languages. German is a case in point because *wie* occurs in all three constructions. As far as the latter two clause types are concerned, manner clauses are free relative clauses and equatives are often explained as free relative clauses as well. Also semantically equatives and manner adverbial clauses are closely related because equatives express equal extent, while manner clauses express equal manner. Haspelmath and Buchholz (1998) call these clauses “similative” because they do not express an exact identity but a similarity of the entities compared in some respects.

Some authors consider *wie*-CRCs to be equatives (Jäger 2018, fn. 13 and the literature quoted there), while others do not (e.g. Haspelmath and Buchholz 1998). We will investigate which characteristics *wie*-CRCs share with equatives and manner clauses since this is closely related to the question of what kind of category *wie* belongs to in CRCs which has been controversially discussed.<sup>2</sup> Contrary to Kluck and de Vries (2015), who classify *wie* in these clauses as a complementizer, we will argue that *wie* in the clauses of interest here is a relative element, introducing a free relative clause (cf. Zimmermann 1997).<sup>3</sup>

We start with adverbial manner clauses introduced by *wie*, which are free relative clauses. As in other adverbial free relative clauses, the relative adverb in the manner clause marks the type

---

<sup>2</sup> Also the category of *as* in English *as*-clauses is controversial. Some authors take it to be a complementizer, which may be similar to *as* in equatives. Potts (2002) considers it “a different beast” and analyses it as a preposition with a CP-complement, which contains an empty operator that is extracted to SpecC (cf. Kluck and de Vries 2015 for a critical discussion).

<sup>3</sup> Kluck and de Vries (2015) mention this as a possible analysis.

of adverbial function the clause fulfils in the matrix clause. A head may be added which turns the free relative into an attributive relative clause:

- (6) a. Sie lösen das Problem (so), wie es sinnvoll ist. (manner adverbial)  
 they solve the problem so how it sense makes.  
 ‘They solve the problem in a way that makes sense.’  
 b. Sie wohnt (dort), wo alle wohnen möchten. (local adverbial)  
 she lives there where all live want  
 ‘She lives there, where all would like to live.’  
 c. Sie geht (dorthin), wohin sie gehen muss. (directional adverbial)  
 she goes there-to where-to she go must  
 ‘She goes where she has to go.’

The examples show that there is a congruence between the adverbial function of the *wh*-element in the relative clause and the adverbial function the relative clause has in the matrix clause. This corresponds to the fact that also for case-marked relative pronouns in free relatives there is matching<sup>4</sup> of the case of the relative pronoun and the case required by the matrix predicate. It must be noted though that this is a rule working on concrete case forms, not on abstract case. In the following example, the relative pronoun is accusative but the relative clause is the subject of the matrix clause. This is possible because the form is identical for nominative and accusative:

- (7) a. Was (ACC) ich nicht weiß, macht mich nicht heiß.  
 what I not know, makes me not hot  
 ‘What I don’t know, does not bother me.’

We will come back to this later when the function of *wie* in the *wie*-CRC and the function of the *wie*-CRC in the matrix clause is discussed.

Various authors assume that free relative clauses are the basis for equative constructions.<sup>5</sup> Equatives and free relative clauses functioning as manner adverbials are closely related because they can have the same deletions and may be reduced to the standard of comparison as in (8):

- (8) a. Peter tanzt (so), wie Eva (tanzt). (manner adverbial)  
 Peter dances so as Eva dances  
 ‘Peter dances like Eve (dances).’  
 b. Er ist so groß wie seine Schwester (ist). (equative construction)  
 he is so tall as his sister is  
 ‘He is as tall as his sister (is).’

We will now address the question whether *wie* in CRCs is a complementizer or a phrasal relative adverb. In the following, arguments against a status as complementizer will be presented. Then the question arises whether *wie* in CRCs is a manner adverb.

An argument for the phrasal character of *wie* is that it can occur in the position before the finite verb (prefield) in independent sentences corresponding to the CRCs:

<sup>4</sup> There are some exceptions to this rule, cf. Pittner (1995b).

<sup>5</sup> Jäger (2018, 2019) deals with the question for German from a diachronic perspective, Haspelmath/Buchholz (1998) note that in many languages the formal means are the same.

- (9) a. Wie sagt er? (cf. wie er sagt)  
 'How does he say?' 'as he said'  
 b. Wie denkst du? (cf. wie du denkst)  
 'How do you think?' 'as you think'  
 c. Wie lautet die Antwort? (cf. wie die Antwort lautet)  
 'What was the answer like?' 'as the answer was'

In these clauses, *wie* is an adverb phrase. Note that *wie* can also occur in CRCs relating to a single expression, often with the verb *nennen* 'call/name', where it fulfils the function of an object predicative.

- (10) Das Genie, wie ihn seine Bewunderer nennen, hat wieder bewiesen,  
 the genius as him his admirers call has again proved  
 wozu es in der Lage ist.  
 whereto it in the position is  
 'The genius, as his admirers call him, has shown what he is capable of.'

Interrogative or relative wh-adverbs are phrasal constituents functioning as adverbials or arguments in the clauses they introduce, in contrast to complementizers which fulfil no such function. Therefore, we assume that *wie* occurring in the clauses of our interest is a relative adverb. It follows that the *wie*-CRC is a free relative clause.

Just like manner free relative clauses introduced by *wie*, *wie*-CRCs can sometimes be extended by *so*.

- (11) Für Baumann ist das, so wie es aussieht, das Karriereende.  
 For Baumann is this so as it looks the career end.  
 'For Baumann is this, as it seems, the end of his career.'  
 (Der Tagesspiegel, 23.01.2000)
- (12) Andererseits ist das Unbewußte ja schon per definitionem  
 contrariwise is the unconscious MP per definition  
 (so wie es definiert ist) eine Blackbox, in die ich nicht hineinsehen kann.  
 (so as it defined is) a blackbox in which I not see\_into can  
 'On the other hand, the unconscious is per definition (the way it is defined) a  
 blackbox one cannot see into.' (DWDS-Corpus Schwantz, Dietrich: Bildung,  
 Frankfurt/Main: Eichborn 1999, p. 374)
- (13) So wie er erzählt hat, war er kein guter Schüler.  
 so as he told has was he no good pupil.  
 'As he told, he was not a good pupil.' (DWDS-Corpus, Hannover, Heinrich:  
 Die Republik vor Gericht 1975 - 1995, Berlin: Aufbau-Taschenbuch-Verl.  
 2001 [1999], p. 286)

It is interesting that *so* may be added, but unlike with manner free relatives, it cannot occur in the matrix clause but, as can be seen in (11) and (12), is separated by punctuation marks from it. This corresponds to the fact that manner adverbials, but not sentence adverbials can be substituted by *so*:

- (14) a. Er tanzt schnell. / Er tanzt so.  
 he dances quickly he dances so.  
 b. Er tanzt wahrscheinlich. /\*Er tanzt so.  
 he dances probably he dances so

The following examples illustrate that *so* may be separated from a manner clause but not from a comment clause:

- (15) a. Er ist so gekommen, wie alle erwartet haben.  
 he is so come as all expected have  
 (only manner reading, \*comment reading)  
 ‘He came in such a manner as all had expected.’
- b. Er ist gekommen, so wie alle erwartet haben.  
 (comment reading, manner reading)
- c. Wie Maria (getanzt hat), so hat Peter getanzt.  
 as Mary danced had so had Peter danced  
 (only manner reading)  
 ‘As Mary had danced, so had Peter.’
- d. Wie alle erwartet haben, so hat Peter getanzt.  
 as all expected have, so had Peter danced  
 (only manner reading)  
 ‘Peter danced in the way that all had expected.’

This shows that *so* is a constituent of the matrix clause if occurring with a manner clause, whereas if it occurs with a comment clause it is not. Further evidence against the complementizer status of *wie* in CRCs comes from long-distance dependencies. The comment or reporting clause may embed a complement clause and *wie* is moved out of this complement clause, which is not possible for a complementizer but only for a wh-element (cf. also Kluck and de Vries 2015:115). This movement is subject to island constraints, it cannot take place if there is an island boundary such as an intervening noun phrase.

- (16) a. Das wird nicht geschehen, wie<sub>i</sub> ich glaube, dass alle annehmen t<sub>i</sub>.  
 this will not happen as I believe that all assume  
 ‘This will not happen as I believe that it will.’
- b. \*Das wird nicht geschehen, wie<sub>i</sub> ich die Nachricht gehört habe, dass alle t<sub>i</sub>  
 this will not so come as I the news heard have that all  
 annehmen.  
 assume  
 ‘This will not happen as I heard the news that all assume that it will.’

A related argument against *wie* as a complementizer is that as in the case of manner relatives and equatives the CRC may be modified by *ganz* ‘completely’ or *genau* ‘exactly’ indicating the degree of the congruence, cf. the following examples. It is plausible to assume that in these cases a silent or overt *so* is modified.

- (17) Er macht das genau/ ganz (so) wie seine Mutter. (manner adverbial)  
 he makes it exactly/wholly (so) as his mother  
 ‘He does it exactly as his mother does it’
- (18) Er ist genauso so groß wie sein Bruder. (equative construction)  
 he is exactly so tall as his brother  
 ‘He is just as tall as his brother is.’
- (19) Er war enorm erfolgreich, ganz (so) wie alle erwartet hatten.  
 he was enormously successful, wholly so as all expected had  
 ‘He was enormously successful, just as all had expected.’
- (20) Er hatte Marie mit “Schwester” angedredet, genau wie sie sich die  
 Umgangsformen der Mafia vorstellt.  
 ‘He had called Mary “sister”, exactly as she had imagined the manners of the  
 Mafia.’ (Johnson, Uwe: Jahrestage, Bd. 1, Frankfurt a. M.: Suhrkamp 1970, p.  
 322)

This brings us to the question what *wie*-CRCs have in common with equative constructions. The *wie*-clauses of interest here are considered to be comparative clauses by some authors (Eggers 1972, Thurmair 2001/2012, Jäger 2018: 492 and *passim*).<sup>6</sup> Eggers, however, remarks that their comparative nature is hardly noticeable anymore (Eggers 1972: 157). According to Thurmair, the function of *wie* in CRCs is the same as in comparison constructions, because it establishes a relation of equivalence, in this case between the proposition in the matrix clause and the open argument position in the *wie*-clause (2006:82). A very similar view is presented by Kluck and de Vries, who, with reference to Dutch and German, state that the interpretation of these clauses “involves a comparison of the contents of the host sentence with the understood embedded proposition” (2015:131). Brandt (1997) states that *wie*-CRCs signal a congruence (“Übereinstimmung”) of the content of the present utterance with the content of the speech act or mental attitude referred to in the *wie*-clause. Like the standard marker in equative constructions *wie* in CRCs expresses a congruence between the content of the mental attitude or speech act referred to in the *wie*-clause with the content of the main clause.

The close proximity of *wie*-CCs to comparison constructions is seen also in the fact that in German there is an antonym of *wie*-CCs, namely clauses introduced by *anders als* ‘different from’ (cf. 21). *Anders* is an adverb signalling a difference and *als* is the standard marker in non-equative comparisons (cf. 22). In contrast to *wie*, it does not indicate equality, but a difference:

- (21) Es regnet heute den ganzen Tag, anders als Kachelmann vorhergesagt hat.  
 it rains today the whole day, other than Kachelmann predicted has  
 ‘Today it is raining all the day, contrary to what Kachelmann predicted.’
- (22) Er ist größer als sein Bruder.  
 he is bigger as his brother  
 ‘He is bigger than his brother.’

Whereas *wie*-CRCs signal a congruence between the speech act or mental attitude described in the CRC and the content of the matrix clause, comment clauses introduced by *anders als* show a contrast between them. This corresponds to the function of *wie* and *als* in comparative constructions, where *wie* occurs in equative and *als* (‘than’) in non-equative comparisons. Like *wie*-CRCs, comment clauses introduced by *anders als* may be intensified by *ganz*, which in this case makes the contrast stronger.

- (23) Es regnet heute den ganzen Tag, ganz anders als es vorhergesagt war  
 it rained today the whole day wholly different as it predicted was  
 ‘Today it is raining all the day, wholly contrary to what was predicted.’

Also diachronically, a close relation between CRCs and comparison clauses is evident in German. *Als* was used as a standard marker instead of *wie* in equative comparisons and also in CRCs *als* was used before it was replaced by *wie* (Jäger 2018: 168, fn. 177 and the literature quoted there).

---

<sup>6</sup> The terms some authors choose show a close relation of *wie*-CCs to comparisons: Dückert (1961: 210) following Feldmann (1901), calls them ‘Verweis- und Berufungssätze’ (‘reference and appeal clauses’), Eggers (1972: 175 f.) ‘Hinweissätze’ (‘indication clauses’).

To summarize, *wie* in the clauses of interest here is a relative adverb introducing a free relative clause. Like the standard marker in equative constructions it signals an equivalence between the content of the speech act or mental attitude encoded by the object argument of the *wie*-clause and the content of the main clause. Its antonym is clauses introduced by *anders als* which signal a contrast between the speech act or attitude referred to in the *wie*-clause and the content of the main clause.

Manner free relative clauses and equative constructions are closely related to each other and to *wie*-CRCs. In these constructions *wie* has a common semantic core which according to Umbach et al. (2021) can be called ‘similarity’, We will not attempt to discuss and to define the highly complex notions of similarity or identity. Instead, we say that as the common semantic core in the different constructions *wie* encodes a two-place relation expressing the congruence of its arguments.<sup>7</sup> But, as was pointed out, there are clear structural differences between these constructions. Whereas a free relative clause usually has no gaps, in equative constructions everything but the standard of comparison may be deleted.<sup>8</sup> In *wie*-CRCs, on the other hand, usually only the propositional argument position of the verb, which is semantically filled by the matrix clause, remains empty. Additionally, the subject and a finite auxiliary may be omitted in *wie*-CRCs containing a participle (*wie gesagt* ‘as (has been) said’, *wie schon erwähnt* ‘as mentioned already’, cf. Section 10.4).

Diachronically, equative constructions are derived from free relative clauses and the standard marker is considered to be grammaticalized from the manner adverb *wie* (e.g. Jäger 2019). It can be tentatively assumed that *wie* in CRCs is also a grammaticalized version of the manner adverb *wie*.

Having established that *wie* in CRCs is not a complementizer, the question arises whether it has a manner meaning. An argument against a manner meaning of *wie* is that a manner adverbial may occur in the clause in addition to *wie*:

- (24) a. Er wird nicht kommen, wie er klar und deutlich sagte.  
 he will not come as he clearly and definitely said  
 ‘He won’t come, as he said very definitely.’  
 b. Doch wie schrieb Joschka Breitner so schön?  
 but how wrote Joschka Breitner so beautifully  
 ‘But how did Joschka Breitner write so beautifully?’  
 (K. Dusse, *Achtsam morden*. München: Heyne 2019, p. 181)

*Wie* can relate to a proposition when it occurs with verbs that take a propositional argument. In these cases, *wie* means roughly the same as *was* ‘what’ in questions like the following, but in contrast to the clause with *was*, the propositional argument position can be realized by a pronoun:

- (25) a. Wie sagte er? wie sagte er es? \*Was sagte er es?  
 how said he how said he it what said he it  
 ‘How did he say? How did he say it?’ Intended: \*‘What did he say?’  
 b. Wie denkst du? Wie denkst du es (dir)? \*Was denkst du es (dir)?  
 How think you how think you it REFL what think you it REFL  
 ‘How do you think? How do you think about it?’ Intended: ‘What do you think?’

<sup>7</sup> It is tempting to speculate that this meaning is also present in the temporal uses of *wie*.

<sup>8</sup> Jäger (2018) argues for an analysis of comparison clauses without the assumption of a deletion.



That *wie* in these questions is not a real manner adverbial is also shown by the possible answers to questions as in (25). A question like *wie denkst du?* will in most situations not be satisfactorily answered by a reply which describes the manner of thinking, like *klar und präzise* ‘clearly and precisely’ or *chaotisch* ‘chaotically’. What this question usually aims at is the content of thinking, i.e. one or more propositions.

Additionally, with some verbs *wie* can relate semantically only to a proposition, as the possible answers to the question in (26) show:

- (26)        Wie lautet die Antwort? \*unklar ?positiv, ✓Er kommt morgen.  
               how sounds the answer    unclear    positive, he comes tomorrow  
               ‘What was the answer like? \*unclear, ?positive’, ✓‘He will come tomorrow.’

In this section it was shown that *wie* is a relative adverb introducing a free relative clause. *Wie* does not have to be a manner adverbial in these clauses but may be a ‘higher’ adverbial relating to a proposition or an object predicative element. This will be discussed in more detail in the following section.

### 10.3. The external and the internal argument of *wie*

We now have to ask the question what role *wie* plays within the *wie*-CRC. In Section 10.2 it was pointed out that with adverbial free relatives the *wh*-element usually has the same adverbial function sentence-internally as the relative clause has in the matrix clause. Hence, it is expected that *wie* in *wie*-clauses that are sentence adverbials is not a manner adverb but functions as an element with a ‘higher’ semantic domain. Note that the common semantic core of the bipartite relation expressed by *wie* is to signal a semantic congruence between its complement and the element it relates to externally. Thus we can assume that *wie* as a manner adverb expresses congruence between processes and as a ‘higher’ adverb it expresses a congruence between events or propositions as a ‘higher’ adverb.

It is important to recognize that the propositional argument of the verb of the *wie*-CRC can be realized by a pronoun, cf. (27). Above we have seen many examples in which such a pronoun does not occur. Thus, in *wie*-CRCs, an additional anaphor *es* or *das* representing the propositional argument may occur but need not; (27) would also be grammatical without *es*.

- (27)        [E]r war schon nicht mehr da, hatte sich verflüchtigt, wie sie es immer  
               he was already no longer there, had REFL vanished, as she it always  
               befürchtet hatte.  
               feared        had  
               ‘He was no longer there, had vanished, as she always had feared.’ (Isabel  
               Allende, *Das Geisterhaus*, Frankfurt a. M.: Suhrkamp 1984)

In (27), the propositional argument of *befürchten* is represented by *es*, and *wie* expresses the congruence of the proposition referred to by *es* and the proposition encoded by the host clause. Another case in point for the cooccurrence of an anaphor and *wie* are comparative relative clauses as in (28).

- (28) a. Wir kaufen ein Kleid, wie wir es neulich gesehen haben.  
 we buy a dress such-as we it recently seen have  
 ‘We buy a dress such as we have recently seen.’  
 b. An dem Wärmebegriff, wie er hier dargestellt wurde, bemerken wir...  
 on the notion-of-warmth as it here described was realize we  
 ‘From the notion of warmth as it was described here, we notice...’  
 (Eggers 1972: 174)

In these relative clauses, *wie* relates to certain aspects of the head noun, and there is an additional anaphor relating to this head (cf. Pankau 2023). As in *wie*-CRCs, in comparative relative clauses the pronoun has the function of a subject or direct object. In contrast to *wie*-CRCs, there is always an anaphor in addition to *wie*.<sup>9</sup> Furthermore, these *wie*-clauses cannot be positioned freely, as *wie*-CRCs can, but are restricted to a position behind their head noun and appear either adjacent to it or are extraposed. However, here we see the same division of labour between an anaphor referring to a referent and an anaphor stating a congruence of this referent with another one.

*Wie* in CRCs denotes a relation which states the congruence between two propositional arguments. Its external argument is the proposition denoted by the matrix clause or a propositional part of it, cf. below (38) and (45-47). Semantically the internal argument of *wie* is the proposition referred to by the propositional argument of the verb in the *wie*-CRC. It follows that the internal argument of *wie* is not a syntactic complement of *wie*, since the constituent which encodes this proposition already constitutes the syntactic complement of the *wie*-clause’s verb. A syntactic constituent can only be the subcategorised complement of one predicate. Furthermore, as was already shown in (10), *wie* may occur as a predicative. These different observations suggest that inside the *wie*-CRC *wie* functions as a depictive predicate operating on the propositional argument of the verb. In (29) we roughly indicate the composition for an example like (29i). Note first that the base position of a depictive predicate like *wie* is in the c-command domain of the constituent about which it predicates, cf. (29ii). Semantically *wie* sets its internal argument *y* equal to its external argument *x*, specified by ‘ $\approx$ ’ in (29iii).<sup>10</sup> By being a depictive predicate *wie* identifies its internal argument with the propositional argument of the *wie*-clause’s verb, (29iv). Since the *wie*-clause functions as a sentence adverbial in its host, *wie*’s external argument position is identified with the proposition encoded by the host clause. The overall result is that the proposition encoded by the host is set equal with the content of the clausal argument of the verb in the *wie*-clause, cf. (29v).

---

<sup>9</sup> Fortmann (2021) points out that an anaphor may be unrealized in relative clauses and gives the following examples :

- (i) a. Pilze, wie man in diesem Wald findet, kriegst du sonst nirgendwo.  
 ,mushrooms as one in this forest finds get you otherwise nowhere  
 ‘Mushrooms of the kind you find in this forest are not available elsewhere.’  
 b. Brötchen, wie die Bäcker hier backen, kann man nicht überall bekommen.  
 rolls as the bakers here bake can one not everywhere get  
 ‘Rolls as the bakers from here bake, are not available everywhere.’

They seem to us to be not completely acceptable, however, in written Standard German.

<sup>10</sup> As we have seen, standardly it is assumed that *wie* encodes a relation of similarity, among others Umbach and Gust (2014), Umbach et al. (2023). These authors argue that the relation of similarity is to be understood in semantics as a relation of indistinguishability with respect to contextually given features. Viewed this way, similarity is not a two-place but a three-place relation, which in addition to the two entities to be compared encodes a set of features of the comparison. As already said above, we simplify matters. In the following we refer to the similarity relation – or congruence relation, as we often call it – just by ‘ $\approx$ ’, intended to denote a two-place relation, bearing in mind that ‘similarity/congruence’ means ‘identity with regard to relevant properties’.

- (29) i. Maria wird, wie Otto es erwartet hat, den Preis bekommen.  
 ii. Maria wird, Otto es<sup>1</sup> wie<sup>1</sup> erwartet hat, den Preis bekommen.  
 iii. wie' =  $\lambda y \lambda x (x \approx y)$   
 iv. [wie Otto es erwartet hat]' = [Otto hat es erwartet]' &  $\lambda y \lambda x (x \approx y)(es')$   
     =  $\lambda x [[Otto hat es erwartet]' \& (x \approx es')]$   
 v. [Maria wird, wie<sup>1</sup> Otto es<sup>1</sup> erwartet hat, den Preis bekommen]' =  
     p = [Maria wird den Preis bekommen]' & [Otto hat es erwartet]' & (p  $\approx$  es')

Note that in German depictive predicates can only operate on a direct object or subject but not on indirect or prepositional objects:

- (30) a. Ich habe ihn<sup>1</sup> [gut erholt]<sup>1</sup> getroffen.  
     I have him (ACC) well recuperated met  
     'I met him well recuperated.'  
 b. \*Ich bin ihm<sup>1</sup> [gut erholt]<sup>1</sup> begegnet.  
     I am him (DAT) well recuperated met  
 c. \*Ich habe [mit ihm]<sup>1</sup> [gut erholt]<sup>1</sup> über seinen Urlaub gesprochen.  
     I have with him well recuperated about his holidays talked

Thus, the analysis of *wie* functioning as a depictive predicate in its clause provides a straightforward explanation for the fact that the propositional argument position in *wie*-CRCs can be either the subject or the direct object. Prepositional objects are not possible here. Thus the ungrammaticality of (31a') is expected since the relative adverb *wie* functions as a depictive predicate in the *wie*-clause. As such *wie* cannot be predicated on an argument which constitutes a prepositional object. A verb like *klagen* ('complain') as in (31b) may take its propositional argument as a prepositional object or as a direct object. The latter possibility allows the verb's appearance in a *wie*-clause.

- (31) a. Er bestand \*(darauf), dass er recht hatte.  
     he insisted upon-it that he was right  
     'He insisted upon being right.'  
 a.' \*Er hatte recht, wie er (darauf) bestand.  
     he was right, as he (upon-it) insisted  
     Intended: 'He was right, as he insisted.'  
 b. Sie klagte (darüber), dass das Wetter schlecht war.  
     she complained (thereon) that the weather bad was  
     'She complained that the weather was bad.'  
 b.' Das Wetter war schlecht, wie sie klagte.  
     the weather was bad as she complained

We have seen that in *wie*-CRCs the propositional argument of the verb may be realized by a pronoun or may remain unexpressed. The fact that this argument does not have to be realized overtly is rather puzzling. Normally in German an obligatory argument has to be expressed.

- (32) a. ...,wie André gestern angekündigt hat/\*André hat gestern ankündigt.  
     as André yesterday announced has André has yesterday announced/  
 b. ...,wie Otto erwartet hat/\*Otto hat erwartet.  
     as Otto expected has Otto has expected

The question arises why the propositional argument can remain unexpressed in *wie*-CRCs. It seems that next to its movement trace the preposed *wie*-phrase is able to licence the empty object argument of the verb. At first, this assumption seems implausible. However, we want to suggest that it is not unreasonable since the *wie*-phrase encodes the relation of congruence. This at least ensures the semantic identification of the empty object. Furthermore we might

tentatively assume that the predication over the empty object, accomplished by the depictive predicate, ensures the syntactic licensing of this empty category.

The preposed *wie*-phrase binds its movement trace as usual, (33i). *Wie* functions via its internal argument position as a depictive predicate on the empty propositional argument, (33ii). The preposed *wie* carries a semantic index which encodes its external argument, (33iii). Since *wie* sets its two arguments (nearly) equal the index of its external argument is (nearly) identical to the semantic value of its internal argument. We assume that it is this circumstance that allows the licensing of the empty propositional argument by the external index of *wie*, (33iv). Via lambda-conversion on *wie*'s external argument position with the proposition encoded by the host clause the empty argument position finally gets its content, (33v).

- (33) i. Maria wird, wie<sub>2</sub> Otto t<sub>2</sub> erwartet hat, den Preis bekommen.  
 ii. Maria wird, Otto ec<sup>1</sup> wie<sup>1</sup> erwartet hat, den Preis bekommen.  
 iii.  $\lambda x (x \approx ec')$   
 iv.  $[\text{wie}_2 \text{ Otto } ec^1 t_2^1 \text{ erwartet hat}]' = \lambda x [[\text{Otto hat } ec \text{ erwartet}]' \& (x \approx ec')]$   
 v.  $[\text{Maria wird, wie}^1 \text{ Otto } ec^1 \text{ erwartet hat, den Preis bekommen}]' =$   
 $p = [\text{Maria wird den Preis bekommen}]' \& \text{PAST}(\text{erwarten}'(\text{Otto}', p))$

It is a rather peculiar circumstance that in German one preposed constituent should license two empty categories. However, the item in question is rather special. It is an adverb whose internal and external argument positions are set (nearly) equal.

#### 10.4. *Wie*-clauses as adverbials

It is often assumed that *wie*-CRCs are parentheticals (e.g. Eggers 1972, Kluck and de Vries 2015 among others). *As*-clauses in English, which in many respects correspond to *wie*-CRCs are also taken to be parentheticals (e.g. Potts 2002, 2005). We will argue, however, there is evidence that *wie*-CRCs are regular constituents of their matrix clauses and occupy the base positions of various types of 'higher' adverbials.

First of all, a fact that speaks against a status as parentheticals is that these clauses can occur in the prefield of a verb-second clause (V2-clause); in contrast, a parenthetical is added to a structure that would be complete without it.

- (34) Wie gestern verlautete, kommen die Gäste morgen.  
 as yesterday announced come the guests tomorrow  
 'As was announced yesterday, the guests will come tomorrow.'

That *wie*-CRCs can be constituents of the host and need not appear as parentheticals is also supported by the fact that binding into a *wie*-clause is possible from a higher clause.

- (35) Jeder<sub>1</sub> hofft, dass das Wetter, wie von seiner<sub>1</sub> App vorhergesagt,  
 everyone hopes that the weather as by his app predicted  
 schön wird.  
 beautiful becomes  
 'Everyone hopes that the weather will be fine, as predicted by his app.'

In view of these facts, *wie*-CRCs have been analysed by various authors as constituents of their matrix clauses functioning as sentence adverbials (e.g. Zimmermann 1997, Brandt 1997). This assumption seems to us to be correct. Note, however, that like other non-obligatory adverbials and adverbial clauses, *wie*-CRCs may also occur as parentheticals. In this case they constitute their own intonation unit.

An important piece of evidence for analysing *wie*-CRCs as sentence adverbials is provided by the positions they occur in. In earlier papers (e.g. Frey and Pittner 1998) we have argued that the base position of sentence adverbials in German is above the base positions of all arguments and of other adverbials. For *wie*-CRCs, there are clues that they are generated high in the clause. To their left only other sentence adverbials, modal particles and aboutness topics, which have been moved to this high position (cf. Frey 2004), may occur. With an intonation which integrates the *wie*-CRC into the host we get the following data. (36a) is ungrammatical, because *keiner* ‘nobody’ has no referent and therefore cannot be an aboutness topic, which requires a referent. *Keiner* therefore can only occur after the *wie*-CRC. Likewise the combination of *die Sonne* ‘the sun’ and *scheint* ‘shines’ in the sense of ‘nice weather’ as in (36d) is interpreted thetically, i.e. without a topic-comment-structure. Since *die Sonne* is not a topic, it cannot occur before the *wie*-clause in (36c). However, other sentence adverbials and modal particles can occur to the left of *wie*-clauses as in (36e).

- (36)
- a. \*weil keiner, wie Maria sagt, gekommen ist  
because nobody as Maria said come is
  - b. weil, wie Maria sagt, keiner gekommen ist  
‘because, as Maria said, nobody has come’
  - c. \*weil die Sonne, wie Maria sagt, morgen scheinen wird  
because the sun as Maria says tomorrow shine will
  - d. weil, wie Maria sagt, die Sonne morgen scheinen wird  
‘because, as Mary said, the sun will whine tomorrow’
  - e. weil glücklichlicherweise/ja, wie Maria sagt, morgen die Sonne scheinen wird  
because fortunately /MP as Mary says tomorrow the sun shine will  
‘because fortunately, as Mary said, the sun will shine tomorrow’

Further evidence for the high base position of *wie*-CRCs comes from the missing Principle-C-effect in (37) which indicates that the base-position of the *wie*-CRC is higher than the base position of the subject.

- (37) Wie Peters<sub>1</sub> Mutter sagte, hat er<sub>1</sub> kein Geld.  
as Peters mother said has he no money  
‘As Peters mother said, he has no money.’

We note that *wie*-CRCs may occur after sentence negation. However, in this case they are not affected by the negation. We assume that if a *wie*-clause occurs after sentence negation, it is used parenthetically. Note that in this case, the construction becomes ambiguous, cf. (38a), where the opposition may have requested to raise the CO<sub>2</sub>-tax or not.<sup>11</sup> In contrast, (38b) has only the reading that the opposition requires that the CO<sub>2</sub>-tax will not be raised. The ambiguity of (38a) seems to be related to which of the propositions encoded by the host clause fills the external argument position of *wie*, the negated or the non-negated one. Interestingly, as the non-ambiguity of (38b) shows, a sentence negation that occurs to the right of the *wie*-clause must belong to the proposition to which the *wie*-clause relates.

---

<sup>11</sup> The preferred reading is that the negation is not in the scope of the *wie*-CRC, the other reading requires prominent pauses before and after the *wie*-CRC.

- (38) a. Die Regierung wird die CO<sub>2</sub>-Abgabe nicht, wie die Opposition fordert, erhöhen.  
 the government will the CO<sub>2</sub>-tax not as the opposition demands raise  
 ‘The government will not raise the CO<sub>2</sub>-tax, as the opposition demands.’  
 b. Die Regierung wird - wie die Opposition fordert - die CO<sub>2</sub>-Abgabe nicht erhöhen.  
 ‘As the opposition demands, the government will not raise the CO<sub>2</sub>-tax.’

Note that also other sentence adverbials used as parentheticals may appear after sentence negation and are then not affected by it.

- (39) Die Regierung wird die CO<sub>2</sub>-Abgabe nicht - allem Anschein nach - erhöhen.  
 the government will the CO<sub>2</sub>-tax not all appearances following raise.  
 ‘The government will not raise the CO<sub>2</sub>-tax, as it appears.’

There is also a use of *wie*-clauses as manner adverbials, which arguably have a base position below direct objects (cf. e.g. Frey/Pittner 1998). If *wie*-clauses occur in the base position of manner adverbials, they are interpreted accordingly, cf. the difference in interpretation of the examples in (40). Whereas in (40a) it is expected that the burgers will be fried, in (40b) the burgers are fried in the expected manner,.

- (40) a. Sie werden wie erwartet die Fleischkühle braten.  
 they will as expected the burgers fry  
 ‘As expected, they will fry the burgers.’  
 b. Sie werden die Fleischkühle wie erwartet braten.  
 they will the burgers as expected fry.  
 ‘They will fry the burgers in the expected manner.’

In this respect, *wie*-clauses behave as other adverbials which are ambiguous between a manner and a sentence adverbial reading:

- (41) a. Sie werden erwartungsgemäß die Fleischkühle braten.  
 they will as expected the burgers fry  
 ‘As expected, they will fry the burgers.’  
 b. Sie werden die Fleischkühle erwartungsgemäß braten.  
 they will the burgers as expected fry.  
 ‘They will fry the burgers in the expected manner.’

A piece of evidence for the occurrence of a *wie*-clause as a manner adverbial is provided by binding data. Cf. the following example where *jeden* ‘everyone’ can bind *er* ‘he’. This is possible because the base position of a manner adverbial is c-commanded by the direct object. Note the contrast to the *wie*-CC in (42b) where no binding is possible, as expected.

- (42) a. Wie er<sub>1</sub> es verdient, hat man jeden<sub>1</sub> bezahlt.  
 as he it deserves has one everyone paid  
 ‘Everyone was paid the way he deserves.’  
 b. \*Wie man ihm<sub>1</sub> versprochen hatte, hat man jeden<sub>1</sub> gut bezahlt.  
 as one him promised had has one everyone well paid

We can conclude that *wie*-adverbial clauses establish a relation of congruence which varies with their syntactic environment. If their base position is after direct objects they are process-related in the terminology of Frey and Pittner (1998) and relate to the manner in which an action is carried out or an event takes place. If they have a higher base position they have no access to the process but only to the proposition and establish a relation of congruence on this level. If on the surface their base position is not determined, *wie*-clauses can be ambiguous. In

(43) it may be the proposition that the decision was made or the way the decision was made that the *wie*-clause relates to.

- (43) Gestern fiel die Entscheidung wie erwartet. (manner or sentence adverbial)  
yesterday fell the decision as expected  
'Yesterday the decision was made (,) as expected.'

There are examples in which *wie*-clauses relate to single expressions in their host clauses (cf. Eggers 1972; Pittner 1993; Thurmair 2001/2012 among others). *Wie*-clauses with the predicate *nennen* ('call/name') always relate to single expressions, which often have quotation marks, cf. the following example, in which *wie* is an object predicative on *sie*:

- (44) „Maddy“, wie sie ihre Fans nennen, ist Model und Designerin ihres eigenen  
“Maddy“as her her fans call is model and designer her own  
Modelabels 21 Reasons Why [...] Fashion label 21 Reasons Why  
““Maddy“, as her fans call her, is a model and designer of her own fashion  
label 21 Reasons Why [...]’ (SZ Magazin 6.12.19, S. 17)

It is sometimes assumed that *wie*-CCs relating to single expressions have to occur right behind them (Eggers 1972, Thurmair 2001/2012). The following examples, however, show that they also can occur before them. In any case, they appear adjacent to the expressions they are related to in order to be interpreted correctly. Note that the *wie*-clause is part of a parenthetical in (45) and is inserted as a parenthetical between a determiner and an adjective in (46) and between a determiner and a noun in (47).

- (45) Diederichsen schließt seinen (wie ich meine: verfrühten) Grabgesang auf die Jugendkultur mit der Mahnung zu größerer "Selbstreflexivität".  
'... his (as I think: premature) dirge ...' (Süddeutsche Zeitung 1992/270, 13)
- (46) Was zum ... Wir haben hier ernste Angelegenheiten zu besprechen!“, schnaubte Rousdon, wütend über die Störung durch eine – wie er glaubte – kindische Spielerei.  
'... by a – as he believed – childish game ...' (M. D. Hay; Geheimnis in Rot, Stuttgart: Klett-Cotta, p. 192)
- (47) Noch öfter spreizte er Mittel- und Zeigefinger zum Victory-Zeichen, um der Welt zu zeigen, daß er sich der - wie er sagt - „Rachejustiz“ der Bundesrepublik nicht beugen will.  
'... the - as he calls it – “revenge justice” by the Federal Republic ...' (tz 13.11.92, p. 17)

The domains of these *wie*-CCs seem to be restricted to the respective phrases. Note, however, that the verbs in the *wie*-clauses of (45)-(46) require a propositional argument. Thus, as arguments of these verbs we have here full propositional structures underlyingly. In (45) for example, the proposition to which the *wie*-clause relates would be constituted by *sein Grabgesang auf die Jugendkultur ist verfrüht* 'his dirge on youth culture is premature'. Similar considerations are valid for (46) and (47).

## 10.5 Different types of 'higher' adverbials

So far we have shown that the *wie*-clauses of our interest standardly occur as sentence adverbials. These sentence adverbials may be epistemic, evidential or reporting, which is also a

kind of evidentiality<sup>12</sup> or relate to some norm (cf. Brandt 1997). Like other adverbials, these adverbials may be expressed by different phrasal categories like APs, AdvPs, PPs or NPs, as the table 10.1 shows.

	Wie-clause	AdjP	AdvP	PP	NP
epistemic	<i>wie ich vermute</i> ‘as I assume’, <i>wie anzunehmen ist</i> , ‘as can be supposed’...	<i>vermutlich</i> ‘supposedly’		<i>unserer Annahme nach</i> ‘as we assume’	<i>meines Wissens</i> ‘as far as I know’
evidential	<i>wie es aussieht</i> ‘as it looks’, <i>wie es scheint</i> ‘as it seems’	<i>scheinbar</i> , ‘apparently’ <i>offensichtlich</i> ‘obviously’, <i>bekanntlich</i> ‘as is generally known’	<i>anscheinend</i> ‘seemingly’, <i>offenbar</i> ‘obviously’, <i>bekanntermaßen</i> ‘as is well known’	<i>dem Anschein nach</i> ‘as it seems’	
reporting	<i>wie X berichtet</i> ‘as X reported’, <i>wie Hans erzählt hat</i> ‘as Hans told’	<i>angeblich</i> ‘reportedly’, <i>vorgeblich</i> ‘allegedly’	<i>gerüchteweise</i> ‘as rumour has it’	<i>laut seiner Aussage</i> ‘according to his report’, <i>dem Bericht zufolge</i> ‘according to the report’, <i>nach seinen Erzählungen</i> ‘according to his account’	
norm	<i>wie es üblich ist</i> ‘as usual’, <i>wie erwartet</i> ‘as expected’	<i>erwartungsgemäß</i> ‘as expected’	<i>üblicherweise</i> ‘usually’	<i>den Erwartungen entsprechend</i> ‘as was expected’	

Table 10.1: Types of sentence adverbials and their categories

<sup>12</sup> Palmer (2001:8) states that epistemic modality and evidential modality are concerned with the factual status of the proposition, the difference being that “with epistemic modality speakers express their judgments about the factual status of the proposition, whereas with evidential modality they indicate the evidence they have for its factual status“.



It must be noted, however, that *wie*-clauses do not cover the whole range of meanings that sentence adverbials can have. They do not occur as emotive comments, which in German are often expressed by adverbs with *-weise*, as e.g. *glücklicherweise* ‘fortunately’, *bemerkenswerterweise* ‘remarkably’, *bedauerlicherweise* ‘regrettingly’.

Besides their use as sentence adverbials, *wie*-clauses may relate to a speech act, e.g. *wie gesagt* ‘as has been said’, *wie schon erwähnt* ‘as has been mentioned’. In fact, *wie*-clauses are often used to refer to another utterance.<sup>13</sup> Due to this characteristic *wie*-clauses may fulfil different text structuring functions. They may relate to utterances earlier in the text in cases like *wie oben schon erwähnt* ‘as has been mentioned above’, *wie schon dargelegt wurde* ‘as was already demonstrated’, etc. Or they may relate to utterances following further down/later: *wie noch zu zeigen sein wird* ‘as will be shown later’, *wie weiter unten noch zu erläutern sein wird* ‘as will be discussed later’ etc., thus improving text coherence.

*Wie*-clauses often are short formulaic hints at other utterances where the subject and a finite verb are omitted. For instance, the phrase *wie berichtet* ‘as reported’ has nearly 6000 hits in the „Berliner Zeitungskorpus 1994-2005“.<sup>14</sup> Also in scientific texts, formulaic expressions which are reduced to *wie* and a participle are very common, such as *wie erwähnt* ‘as has been mentioned’, *wie dargestellt* ‘as demonstrated’, *wie ausgeführt* ‘as explicated’, *wie gezeigt* ‘as was shown’, *wie vermutet* ‘as assumed’, *wie bemerkt* ‘as (has been) remarked’, *wie illustriert* ‘as illustrated’ etc. (cf. Nyenhuis 2016). In these reduced clauses, the omitted subject usually is the author or in the case of newspapers the editorial staff of the paper.

*Wie*-clauses like *wie gesagt* relate the sentence (or rather the speech act, see below) to an earlier utterance and then very often occur at the left periphery before the prefield of their host clause. In contrast evidential clauses like *wie es aussieht* occur mostly in the prefield, sometimes in the middle field. In a sample of 80 instances of the epistemic *wie vermutet* the clause occurs mainly in the middle field or prefield and never at the left periphery before the prefield.

The main function of clauses like *wie gesagt* is to indicate that the utterance is a repetition, thereby avoiding a violation of the relevance principle. This explains why they are often placed at the left periphery of an utterance that might otherwise be interpreted as inducing a violation of relevance. In a sample of 516 hits extracted from DeReKo<sup>15</sup> all instances of *wie gesagt* occur before their host and none in the prefield. They are separated from their hosts by a colon, a dash or a comma.

- (48) *Wie gesagt: Im Vergleich zu einem Ferrari ist der C 1 spottbillig.*  
as said in comparison to a Ferrari is the C1 very-cheap  
‘As I said: Compared with a Ferrari the C1 is very low-priced.’  
(M00/JUN.33010 Mannheimer Morgen, 28.06.2000)
- (49) *Wie gesagt, Musik hat etwas mit Mathematik zu tun.*  
as said music has something with mathematics to do  
‘As I said: Music has something to do with mathematics.’ (M00/JUN.33231  
Mannheimer Morgen, 29.06.2000)

---

<sup>13</sup> This is reflected in the German termini “Hinweissätze” (‘indicating clauses’) by Eggers (1972), and also “hinweisend” (‘indicative’) by Brandt (1997).

<sup>14</sup> Provided by [www.dwds.de](http://www.dwds.de)

<sup>15</sup> Deutsches Referenzkorpus provided by [www.ids-mannheim.de](http://www.ids-mannheim.de), (Mannheimer Morgen 1995-2019).

- (50) Wie gesagt - man muss sie lieben, den Beruf und seine Kinder.  
 as said one must them love the job and one's children  
 'As I said: You have to love your job - and your children.' (M00/MAI.25514  
 Mannheimer Morgen, 31.05.2000)
- (51) Wie ich ihrer Kollegin bereits sagte: Blanche Trouin wollte es ihr selbst  
 mitteilen.  
 'As I already told your colleague: Blanche Trouin wanted to inform her about  
 it herself.'  
 (M. D. Hay: Geheimnis in Rot, Stuttgart: Klett-Cotta 2017: 183)

These clauses may also refer to the utterance of someone else, like the addressee:

- (52) Wie du gesagt hast: Der hat den Handgranaten-Typ gar nicht so bewusst  
 wahrgenommen.  
 'As you said:...'  
 (K. Dusse, Achtsam morden. München: Heyne 2019, p. 205)
- (53) Wie du selbst sagst: Von einem Kindergartenplatz sind vor allem die Eltern  
 abhängig.  
 'As you personally said:...'  
 (K. Dusse, Achtsam morden. München: Heyne 2019, p. 209)

As expected, the peripheral position preceding a V2-clause is not possible for evidential and reporting *wie*-clauses.

- (54) \*Wie Otto vermutet/meint/glaubt, Musik hat etwas mit Mathematik zu  
 tun.  
 as Otto assumes/thinks/believes music has something with mathematics to do  
 'As Otto assumes/thinks/believes, music has something to do with  
 mathematics.'

This shows that speech act related adverbials are peripheral while reporting and evidential adverbials are syntactically integrated into their matrix clauses in a more central position.

Frey (2023) following Krifka (2023) argues that speech acts are represented in the syntax by an ActP and that in general ActPs cannot occur embedded. Speech act related adverbials are adjoined to ActP or occur in the specifier-position of an ActP as in (55).

- (55) Wie schon gezeigt wurde, hat Musik etwas mit Mathematik zu tun.

On independent grounds Frey (2023) argues that an embedded V2-clause is not an ActP in contrast to an independently occurring V2-clause. According to this view, we expect that speech act related adverbials may not appear as an embedded V2-clause. This is confirmed by (56).

- (56) a. \*Maria sagte, wie schon gezeigt wurde, Musik hat etwas mit  
 Mary said as already shown was music has something with  
 Mathematik zu tun  
 mathematics to do
- b. \*Maria sagte, wie schon gezeigt wurde, hat Musik etwas mit Mathematik zu  
 tun.

By contrast, commenting and reporting *wie*-clauses may appear in the prefield of an embedded V2-clause.

- (57) Maria sagte, wie Otto meint, hat Musik etwas mit Mathematik zu tun.  
'Mary said, as Otto thinks, music has something to do with mathematics.'

Arguably there is a further use of *wie*-clauses in a left-peripheral position. In this usage *wie*-clauses are more separated from the following sentence than in their usage as speech act-related adverbials, cf. (58). Then they occupy the position typical for discourse markers. It follows that besides the use as comments on a single speech act, *wie*-clauses can also occur as discourse markers. According to Heine (2013), these elements are syntactically isolated, their semantic and pragmatic scope is widened and their grammatical status is somewhat opaque. They constitute their own intonation phrases and in written language are set off from the following sentence by colons or dashes. Their function is to give instructions for how the following sequence of utterances is to be interpreted, i.e., in this use the *wie*-clauses may relate to a whole chunk of discourse, cf. (58).

- (58) Wie bereits erwähnt: In Bayreuth gibt es die Wiederaufnahme der umjubelten ‚Meistersinger‘-Produktion. Es gibt eine neue ‚Walküre‘. Und zum ersten Mal tritt in Bayreuth eine Dirigentin ans Pult.  
'As already mentioned: in Bayreuth there is the revival of the acclaimed 'Meistersinger' production. There is a new 'Walküre'. And for the first time, a female conductor is taking the podium in Bayreuth.'

With single written sentences it is often very difficult to decide whether a given *wie*-clause occurs as speech act related adverbial or as a discourse marker. Viewed in isolation the *wie*-clauses of the examples (48) to (5353) could be both.

To summarize, the *wie*-clauses of interest here are mainly comment clauses. The main functions of the *wie*-clauses are to comment on the present utterance by indicating the information source, the degree of commitment, relating it to other utterances in the same or other texts or to utterances by addressees.

## 10.6 A comparison with *so*-parentheticals

In this section, we want to make some comparative remarks on *wie*-clauses and clauses introduced by *so* serving similar functions. Like the *wie*-clauses, these *so*-clauses usually contain an empty argument position, which is understood as referring to the content of the host clause.

As was already pointed out, *so* and *wie* are closely related elements appearing in comparison constructions, where *so* serves as a degree marker and *wie* as a marker for the standard. Both elements occur as degree markers (*wie groß?* 'how tall', *so groß* 'so tall') and as manner adverbs functioning as adverbials or predicative elements. *So* originally is a manner adverb, but unlike *wie* it is not a wh-element, but its demonstrative equivalent.

In contrast to *wie*-clauses, where the verb is in final position, *so*-parentheticals are verb-second clauses with an adverb functioning as an operator which is not a relative or interrogative adverb in their prefield. It is sometimes called a quotative marker or quotative operator (cf. e.g. König 2015, Kluck and de Vries 2015).

*So*-parentheticals often occur with direct speech which is quoted verbatim as in (59), or their host clause is in the subjunctive indicating indirect speech as in (60). Also mixed quotations combining direct and indirect speech are quite common, cf. (61).

- (59) „Manchmal“, so sagt sie, "besuche ich Menschen im Altersheim und bringe ihnen Käsekuchen.“  
 “”Sometimes”, so she says, “I visit people in the retirement home and bring them cheese cake.”” (Berliner Zeitung, 11.01.1995)
- (60) Auch etablierte Demokratien in Westeuropa seien, so sagen sie, immer stärker bedroht.  
 ‘Also established democracies in Western Europe are, so they say, more and more in danger.’ (Die Zeit, 15.03.2017 online)
- (61) Er wolle, so sagte er, einen "Fehler revidieren" und ein "freies und offenes Internet" fördern.  
 ‘He wanted, said he, to “correct a mistake” and support a “free and open internet”’. (Die Zeit, 27.04.2017 online)

They typically contain a verb denoting a speech act or a mental attitude or a noun derived from these verbs. In contrast to *wie*-CRCs, in *so*-parentheticals all constituents but the subject may be deleted. In these cases the subject mentions the source as in (62a) or describes the illocutionary role or the stance toward the proposition held as in (62b).

- (62) a. Er habe die Tat gestanden, so die Polizei.  
 ‘He confessed to the crime, the police said.’  
 b. Er ist nicht der Mörder, so die Annahme.  
 ‘He is not the murderer, so the assumption.’

Like *wie*-clauses, the *so*-parentheticals may relate to a special expression in the host clause and then occur adjacent to this expression. Often this expression bears quotation marks, as in the following example.

- (63) Es ist schon erstaunlich, wie aus dem katholischen München die – so der Spiegel – „Hauptstadt eines schweigenden Volksbegehrens nach ganzheitlicher Besinnung“ wurde.)  
 ‘It is astonishing how the Catholic Munich became - according to the Spiegel - the "capital of a silent petition for holistic tanning".’ (Münchner Wochenblatt 10/93:p.2)

That *so*-parentheticals are mainly reporting clauses is also evidenced by corpus data. In a sample of 500 *so*-parentheticals and 500 *wie*-clauses<sup>16</sup>, the subjunctive indicating indirect speech occurs in 46% of *so*-parentheticals and direct speech as indicated by quotation marks occurs in 16% of *so*-parentheticals. Thus in contrast to *wie*-clauses, which are mainly comment clauses, *so*-parentheticals are mostly reporting clauses. In a minority of cases, however, *wie*-clauses may also occur with reported speech, mentioning the source. In our sample 2% of *wie*-clauses occur with the subjunctive indicating indirect speech and 1% with direct quotations.

---

<sup>16</sup> The sample was taken from the DWDS Referenz- und Zeitungskorpora, for the time span from 1980-2018. It contains 100 hits taken randomly for each of the verbs occurring most frequently in these clauses (*berichten* ‘report’, *heißen* in phrases like *wie es heißt* ‘as it is said’, *erklären* ‘explain’, *mitteilen* ‘tell’ and *sagen* ‘say’) for both *so*-parentheticals and *wie*-clauses.

Carlsen (1998:82ff.) in her corpus study of *wie*-clauses in newspapers found about 10% of the host clauses are marked by subjunctive as a sign of reported speech, some of them mixed quotations as indicated by quotation marks.

Next we want to show that the *so*-clauses are always parentheticals. As parentheticals, they are inserted into sentences that would be grammatical without them. They cannot occur in the prefield of a German verb-second clause, which means that they are not constituents of the host clauses.

- (64) \*So sagte Maria, wird Otto uns helfen.  
so said Maria will Otto us assist  
Intended: 'Otto will help us, Mary said'

*So*-parentheticals are not intonationally integrated, even in their reduced forms.<sup>17</sup> In writing, they are always separated from their host clauses by either commas, parenthesis or dashes. As verb-second clauses, they constitute their own information units with a focus accent usually on the subject.

As parentheticals, they do not enter into any scope relations with their host clauses. A negation in the host clause is always part of the reported speech act independent of the position of the parenthetical, as in (65), (in contrast to the parenthetical use of *wie*-clauses, cf. (38):

- (65) a. Die Regierung wird die CO<sub>2</sub>-Abgabe nicht, so der Bundeskanzler, erhöhen.  
the government will the CO<sub>2</sub>-tax not, so the chancellor, raise.  
'The government will not raise the CO<sub>2</sub>-tax, as the chancellor says.'  
b. Die Regierung wird, so der Bundeskanzler, die CO<sub>2</sub>-Abgabe nicht erhöhen.  
the government will so the chancellor, the CO<sub>2</sub>-tax not raise.  
'The government will not, says the chancellor, raise the CO<sub>2</sub>-tax.'

Also the pronoun *we* in the host clause is always understood to include the parenthetical subject, in contrast to parenthetically used *wie*-CRCs:

- (66) a. Wir werden die CO<sub>2</sub>-Abgabe nicht, so der Bundeskanzler, erhöhen.  
we will the CO<sub>2</sub>-tax not so the chancellor raise.  
'We will not raise the CO<sub>2</sub>-tax, as the chancellor says.'  
b. Wir werden die CO<sub>2</sub>-Abgabe nicht, wie der Bundeskanzler vorschlägt, erhöhen.

In reporting *so*-parentheticals, *so* identifies the content of the present utterance with the content of the speech act or mental attitude described in the parenthetical. The original speaker or experiencer referred to in the parenthetical remains responsible, the commitment is made by her/him, not the present speaker. The reporting speaker may distance herself/himself from the content by an adverb like *jedenfalls* 'at any rate' or *zumindest* 'at least'. If a *so*-parenthetical contains a noun derived from a verb, it is the agent of the underlying verb that the parenthetical is oriented to.

---

<sup>17</sup> To our knowledge, there are no empirical studies of their intonation so that we have to rely on our intuition regarding this point.

*So*-parentheticals require a compatibility between the speech act or mental attitude described in the parenthetical and the sentence type of the host clause (cf. Pittner 1993, 1995a). An interrogative verb in the parenthetical is not compatible with a declarative host clause and vice versa<sup>18</sup>:

- (67) a. Wen, so fragt Karl, kennt Uta nicht?  
 who so asks Karl knows Uta not?  
 ‘Who, asks Karl, doesn’t Uta know?’
- b. \*Hans, so fragt Otto, kennt Uta nicht.  
 John so asks Otto knows Uta not.  
 ‘John does not know Uta, asks Otto.’
- (68) a. Hans, so sagt Otto, kennt Uta nicht.  
 John so says Otto, knows Uta not.  
 ‘John does not know Uta, Otto says.’
- b. \*Wen, so sagt Karl, kennt Uta nicht?  
 who so says Karl knows Uta not?

In contrast and interestingly, a compatibility between the speech act or mental attitude denoted in a parenthetically used *wie*-clause and the sentence type of the host clause is not necessary, cf. the following examples, where the host is an interrogative sentence, but the *wie*-clause denotes an assertive speech act (cf. Pittner 1993).

- (69) Hast du - wie Otto erzählt hat - tatsächlich ein 5-Gänge-Menü gekocht?  
 have you as Otto told has actually a five course meal cooked  
 ‘Did you – as Otto told us – actually cook a five course-meal?’
- (70) Ist das nun auch ein Buch über die Pandemie (wie in den ersten Rezensionen  
 is this now also a book about the pandemic as in the first reviews  
 bemerkt)?  
 remarked  
 ‘Is this a book about the pandemic (as noted in the first reviews)?’  
 (Fußnote 14/2020, 23, slightly adapted)

The host clause can be an interrogative sentence, whereas the *wie*-clause may relate to an assertive speech act or a corresponding mental attitude.<sup>19</sup> Note, however, that the host may not be a *wh*-question. Thus, *wie*-clauses require that their matrix clauses denote closed propositions, i.e. the matrix clauses are not allowed to have open argument or adverbial positions.<sup>20</sup>

We assume that the necessary congruence between the sentence type of the host clause and the speech act described in the *so*-parenthetical is due to the semantics of *so*. Ehlich (1986) argues that *so* is a demonstrativum, which, in contrast to *dieser* ‘this’ or *jener* ‘that’, does not refer to objects, acts or events as a whole, but to aspects or properties of them. If we refer with

---

<sup>18</sup> Fortmann (2011:14) points out that there may be *so*-parentheticals in interrogative sentences containing a verb like *glauben*:

(i) Warum kommt Theo – so glaubt zumindest Franz - mit seinem Hund?  
 why comes Theo so believes at least Franz with his dog?  
 ‘Why does Theo come - as at least Franz believes – with his dog?’

This is a (marginal) possibility with questions about cause. The parenthetical can be taken to refer to rest of the proposition which is complete without the causal adverbial.

<sup>19</sup> For further discussion of this point cf. Fortmann (2011), Frey/Pittner (to appear).

<sup>20</sup> Questions for the cause (*warum/why*) may be an exception, argueably because they contain closed propositions. (Carla Umbach, p.c.), cf. also Fortmann (2011) and fn. 17.

*dieser Baum* ‘this tree’ to an object, the whole object is pointed to, but the expression *so ein Baum* ‘such a tree’ points to certain aspects of it. We assume that in *so*-parentheticals one of the aspects *so* refers to is the kind of commitment a clause encodes. Thus *so* also relates anaphorically to the commitment its antecedent encodes. Now the commitment made, for example, in an assertion is different to the commitment made in a question. Therefore with *so*-parentheticals we find a congruence between the sentence type of the host and the speech act or mental attitude denoted in the parenthetical.

*So* has also been described as a deictic manner adverb (e.g. König and Umbach 2018), equivalent to *auf diese Weise* ‘in this manner’. Umbach and Gust (2014) call it a “similarity demonstrative” which expresses “similarity to the individual or event the speaker points at” (p. 4). As they state, “ad-adjectival cases express similarity with respect to only one dimension, i.e. the one provided by the adjective”, whereas “ad-nominal cases express similarity with respect to a number of dimensions” associated with the noun (p. 25). We would like to argue that this approach can be extended to the adverbial uses of *so* which as a manner adverb in the narrow sense relates to processes, in the terminology of Frey and Pittner (1998), but can also operate at higher levels.

There has been a long discussion going back to Ross (1972) about whether *so* can appear as a propositional anaphor or not. Expressions like *so I am told/so wurde mir erzählt, he said so/man sagt so* point in this direction. *So* as a propositional anaphor seems to be more widely used in English than in German. *So* can occur as object after verbs denoting propositional attitudes like *assume, think, believe, guess, expect, imagine, suggest* etc. and desiderative verbs like *wish, desire*, etc. It also can occur with a few other verbs belonging to neither of these two groups, such as *remain, know, seem, appear*, but cannot occur as a pronominal object after factive verbs like *regret, prove, grasp, comprehend, ignore, resent*, etc. (cf. König 2015:43).

Interestingly, a sentence with the verb *sagen* is grammatically complete if either *so* or *es* or both of these elements occur, cf. (71):

- (71) a. Man sagt es/so.  
           one says it/so.  
           ‘One says so.’  
       b. Man sagt es so.  
           one says it so  
       c. \*Man sagt.  
           one says

The fact that a pronoun relating to the proposition may occur additionally shows that *so* at least does not always fill this argument position but may relate to it indirectly. On the other hand it is obvious that *so* is not restricted to a reading as a manner adverb in the narrow sense, i.e. related to a process in the terminology of Frey and Pittner (1998). Its characterization as a “similarity demonstrative” (Umbach and Gust 2014) opens the possibility of capturing its meaning on a more general level. It may operate on the manner level, establishing similarity between processes, but it may also operate as an element on a higher level in which it relates to propositions or even to speech acts.

Note that also regarding German *so*-parentheticals it can hardly be assumed that *so* always fills the argument position of the parenthetical verb. An additional anaphor *es/das* (‘it’) representing the host clause may occur in *so*-parentheticals (cf. Pittner 1993, Fortmann 2007). This

argument position may even be filled by a full NP: *So erzählt man die Geschichte*, ‘so the story is told’ (cf. Fortmann 2007).

- (72) Das letzte Ziel der Musik, so vertraute es Sainte Colombe seinem Schüler Marais  
 the last goal of music so confessed it Sainte Colombe his pupil Marais  
 an, liegt in der Rückkehr der Toten.  
 PART lies in the return of dead  
 ‘The last goal of music, so confessed Sainte Colombe to his disciple Marais, is the return of the dead.’ (Süddeutsche Zeitung 23. Nov. 92: 14)
- (73) Dieses Gespräch sei es gewesen, so jedenfalls erzählte es Assange später, das  
 this talk be it been so at any rate told it Assange later that  
 den heute weltberühmten Netzaktivisten auf die Idee für das Projekt  
 the today world-famous net activist on the idea for the project  
 seines Lebens gebracht habe  
 his life brought have  
 ‘It was this conversation, Assange later recounted, which lead the today world-famous net activist to the idea for his life project.’ (Die Zeit, 29.11.2010, online)

This raises the question why either one of these elements or both *so* and *es* may occur and what *so* exactly relates to. Kluck and de Vries (2015) suggest that in case only *so* is present it fills the propositional argument position of the verb. They further suggest that in the cases when *es* is present the manner meaning of *so* is activated. Fortmann (2007:115) assumes that *so* is an adverbial modifier referring to the manner (wording) of the reported speech, while *es* refers to its content. It can be objected, however, that *so*-parentheticals often occur with indirect speech which is not quoted verbatim. This means that *so* may relate to the wording, but it can also relate to other aspects of an utterance. Furthermore it is not quite clear what Fortmann (2007) assumes for cases where *so* is present but not *es*. How is the empty propositional argument of the verb licensed then?

We want to suggest another approach and treat *so* in the same way as we treat *wie*. Like *wie*, *so* equates the content of the host clause and the content of the speech act or mental attitude referred to in the *so*-parenthetical. Like *wie*, *so* functions via its internal argument position as a depictive predicate on the propositional argument of the verb of its clause. However, there is also a difference. Due to its deictic potential *so* just points to the content of the host clause and does not operate as a predicate on the host, as *wie* does. Note that the fact that *so* does not fill its external argument position by being the head of a sentence adverbial operating on the host clause corresponds to the fact that the *so*-clause is a parenthetical. It is just not possible that *so* would predicate on (parts of) the host clause because the *so*-clause does not belong to the host. Thus, *so*'s external argument position is semantically filled by *so*'s anaphoric reference to substantial components of the proposition or the speech act encoded by the host clause.

As in *wie*-clauses, in *so*-parentheticals the propositional argument of the verb may be realized by a pronoun or may remain unexpressed. Again the question arises why the propositional argument can remain unexpressed. We want to suggest that the reason is quite similar to the case of the empty propositional argument in the *wie*-clause. As with *wie*, it is the fact that *so* equates its two argument positions that makes it possible for it to license two empty categories. *So*'s external index is anaphorically closed. As in the case of *wie* the external index is identical to the semantic value of its internal argument. This again allows the licensing of the empty propositional argument, which is identical to the internal argument of *so*.



Note that for the analysis of the very similar Dutch construction Kluck and de Vries (2015) consider an alternative to their main proposal. As stated above, according to their main proposal, when a pronominal is present, *zo* functions as a manner adverbial, while in the absence of a pronominal, *zo* appears as the propositional argument of the verb. According to their alternative idea, *zo* always appears as a manner adverbial. In the absence of a pronominal, the proposed manner *zo* binds its trace and the empty argument of the verb. Note that there are differences between our suggestion and Kluck and de Vries's (2015) alternative to their main proposal. In their alternative proposal they see a configuration reminiscent of the parasitic gap construction, although here the trace of the moved operator *c*-commands the empty argument, which is not the case in true parasitic constructions. We have rejected the analysis of *so* in *so*-parentheticals as a manner adverbial and we also consider Kluck and de Vries' (2015) alternative proposal to be semantically rather problematic. However, we share the assumption that the proposed *so* licenses two empty elements.

Next the question arises how *so* developed into the quotative marker as it appears in *so*-parentheticals. König (2015: 49) describes a cross-linguistic tendency for manner deictics to grammaticalize into quotative markers.<sup>21</sup> It becomes evident that there is a grammaticalized quotative marker *so* in German from examples like the following where the verb is omitted.

- (74) Keiner, *so* Hans, hat das gesehen.  
 no one *so* John has it seen  
 'No one, according to John, has seen this.'

The omitted verb can only be a verb denoting a speech act, not a verb expressing a mental attitude towards the host clause. In these verbless parentheticals, *so* marks a verbatim or indirect quote. Thus, if no verb occurs in the parenthetical, *so* is a quotation marker. Its extended meaning as a propositional anaphor is activated when a verb occurs.

In sum, we claim that *so* as a demonstrative points to an object that is in some crucial respect congruent with its internal argument. It was argued that *so* is not restricted to a manner interpretation in the narrow sense but can operate as a depictive predicate at semantically higher levels relating to a proposition or a speech act. In the *so*-parentheticals of interest here it points to an utterance or a mental attitude whose content or wording strongly resembles the one of the utterance or mental attitude referred to in the parenthetical. Thus, the 'similarity demonstrative' *so* points to a congruent object which may be a process, a proposition or its wording or even a speech act.

That *so* as a similarity demonstrative occurs with reported speech is in line with theories of quotation which explain it essentially as demonstration (e.g. Davidson 1979, Clark and Gerrig 1990).<sup>22</sup> According to Clark and Gerrig, quotation in a wider sense is the demonstration of a linguistic action of another person: "you can demonstrate what a person did in saying something" (1990: 764). Clark and Gerrig see quotation as demonstration in the sense that the object referred to (the quoted utterance) is depicted. They illustrate what they understand by depiction with an example from tennis, where the service of a tennis ace may be described

---

<sup>21</sup> König (2015:49) also states that "in English *so* and *thus* have more or less lost this use [as a quotative marker, KP and WF] and the manner expressions *like* or *way* with or without the proximal demonstrative determiner *this* is used instead". This explains why *so*-parentheticals are a rather marginal phenomenon in English.

<sup>22</sup> The connection between demonstrative *so* and demonstration theories of quotation is made explicit by Schlenker (2021), cf. also Umbach et al. (2023).

or it may be demonstrated by imitating the essential movements. According to a selectivity principle they postulate, it is sufficient if essential characteristics of the original utterance are depicted. This means that the demonstration is not identical, but congruent to the action that is depicted. *So* as a demonstrative establishes this relation between its internal argument mentioning the original utterance and the host which demonstrates the contents of the utterance the parenthetical relates to.

*So*-parentheticals are mainly reporting clauses. By means of the demonstrative *so*, *so*-parentheticals can point at another utterance usually made by someone else, which is often quoted verbatim. The commitment remains with the original speaker, whereas in *wie*-CCs the commitment to the truth of the proposition is with the present speaker who mentions the source of his information or the strength of epistemic commitment.

### 10.7 Some notes on parentheticals

*Wie*-CRCs are often assumed to be parentheticals. And we claimed that the *so*-clauses of interest here are always parentheticals. Kluck and de Vries (2015) see both types of clauses in German and their Dutch equivalents (with *so* and *zoals*) as parentheticals. While the *so*-clauses of interest here are parentheticals, the *wie*-clauses standardly are not. However, semantically and pragmatically *wie*-clauses exhibit some characteristics of parentheticals.

According to the definition by Dehé and Kavalova (2007: 1) parentheticals are elements which are linearly part of a sentence but nevertheless structurally independent. For example, parentheticals cannot be the focus of a cleft construction, they cannot be questioned, and they may be deleted without affecting the grammaticality of the overall structure (cf. Dehé 2014: 18ff.).

In verb-second languages such as German, parentheticals cannot occupy the so-called prefield in front of the finite verb. Note that we have seen that this only applies to *so*-parentheticals, but not to the *wie*-clauses, which can occur in the prefield. Moreover, there is no c-command of an element from outside into the parenthetical. We have shown that this criterion does not apply to *wie*-CRCs either, which are not structurally independent but have a number of characteristics of sentence adverbials.

On the semantic and pragmatic level, however, *wie*-CRCs show characteristics of parentheticals, since parentheticals typically function as “modifiers, additions to or comments on the current talk” as Dehé and Kavalova (2007:1) note. They contain subsidiary information that does not directly relate to the central question, the “question under discussion” (in the terminology of Roberts 1996) dealt with in a text. This certainly applies to *wie*-CRCs, since they never contain the main information given in a sentence.

It is often assumed that parentheticals are “marked off from their hosts by some form of punctuation in writing or special intonation contour in speech” (Burton-Roberts 2006: 180). In written language, dashes, commas or parentheses may be used for this purpose, which correspond to prosodic cues in spoken language. This applies to *so*-RCs, which are always set off from their host clauses by punctuation marks and, as far as we can tell in view of the lack of any empirical studies on this point, are also set off from their hosts by pauses. *Wie*-clauses, on the other hand, are not always surrounded by punctuation marks, especially in their shorter and more formulaic forms. This may reflect their intonation, since they are often not set off

from their matrix clauses by pauses.<sup>23</sup> It must be noted though that they may be separated by pauses from their host clauses and thereby be marked as parentheticals, which is possible for any non-obligatory constituent in a sentence (cf. Pittner 1995a).<sup>24</sup> Some authors see intonational criteria as the hallmark of parentheticals. Bolinger (1989:185), for instance, states that “[b]y definition the parenthesis interrupts the prosodic flow of the frame utterance” and that “intonation is more than a reflection of the fact that a given segment of discourse is a parenthesis; it is often the main cue differentiating it as such”. Besides pauses, a lower in pitch than the matrix sentence, and a rising terminal are seen as characteristic of parentheticals (Bolinger 1989:186).<sup>25</sup> There are no studies of the intonation of *wie*-CRCs, as far as we know. It seems highly plausible though that they may be set off by pauses from their host clauses. This applies to any constituent that is not obligatory; it may be set off by pauses from the surrounding sentence and thereby be marked as a parenthetical.

Also with regard to their positions, *so*-parentheticals and *wie*-clauses differ. In our sample, *so*-parentheticals occur very often after the constituent in the prefield and before the finite verb in V2-clauses. *Wie*-CRCs in our sample occur in this position, which has been identified by Altmann (1981) as being typical for parentheticals, only when they comment on a single expression in the prefield. This is in line with our observation that CRCs relating to single expressions are positioned adjacent to them. In our sample of 500 *so*-clauses and 500 *wie*-clauses, only 12 *wie*-clauses occur after the first constituent in the prefield and before the finite verb in V2-clauses (pre-V2), 122 in a mid-position and 357 occur postposed at the end of the sentence. 12 are postposed but point at the following sentence, as indicated by colons. Figure 10.1 shows the percentages of *so*- and *wie*-clauses in pre-V2, midposition and postposition.<sup>26</sup>

---

<sup>23</sup> Gussenhoven (2004) observes for English that shorter comment or reporting clauses may be included (incorporated) in the preceding intonation phrase or they may be encliticized, in which case they are set off from preceding material by a boundary tone. It can tentatively be assumed that this also applies to their German counterparts.

<sup>24</sup> Potts (2002, 2005), who introduces parentheticals by adjunction, sees a “comma feature” as a means which differentiates parentheticals from regular adjuncts. He assumes that the comma feature, which he considers obligatory for parentheticals, signals isolation, thus “accounting for the commas in print and the intonational boundary marks in speech” (Potts 2005: 98). Moreover, it signals that they contain non-at-issue information which can be described as a conventional implicature according to Grice (1975).

<sup>25</sup> Dehé and Kavalova (2007:12ff.) mention surrounding pauses, lower or higher pitch, diminished loudness, and increased tempo as possible characteristics.

<sup>26</sup> Since *so*-parentheticals do not occur sentence-initially, sentence-initial position of *wie*-clauses is not taken into account. The query was for *wie*-clauses and *so*-clauses after a comma.

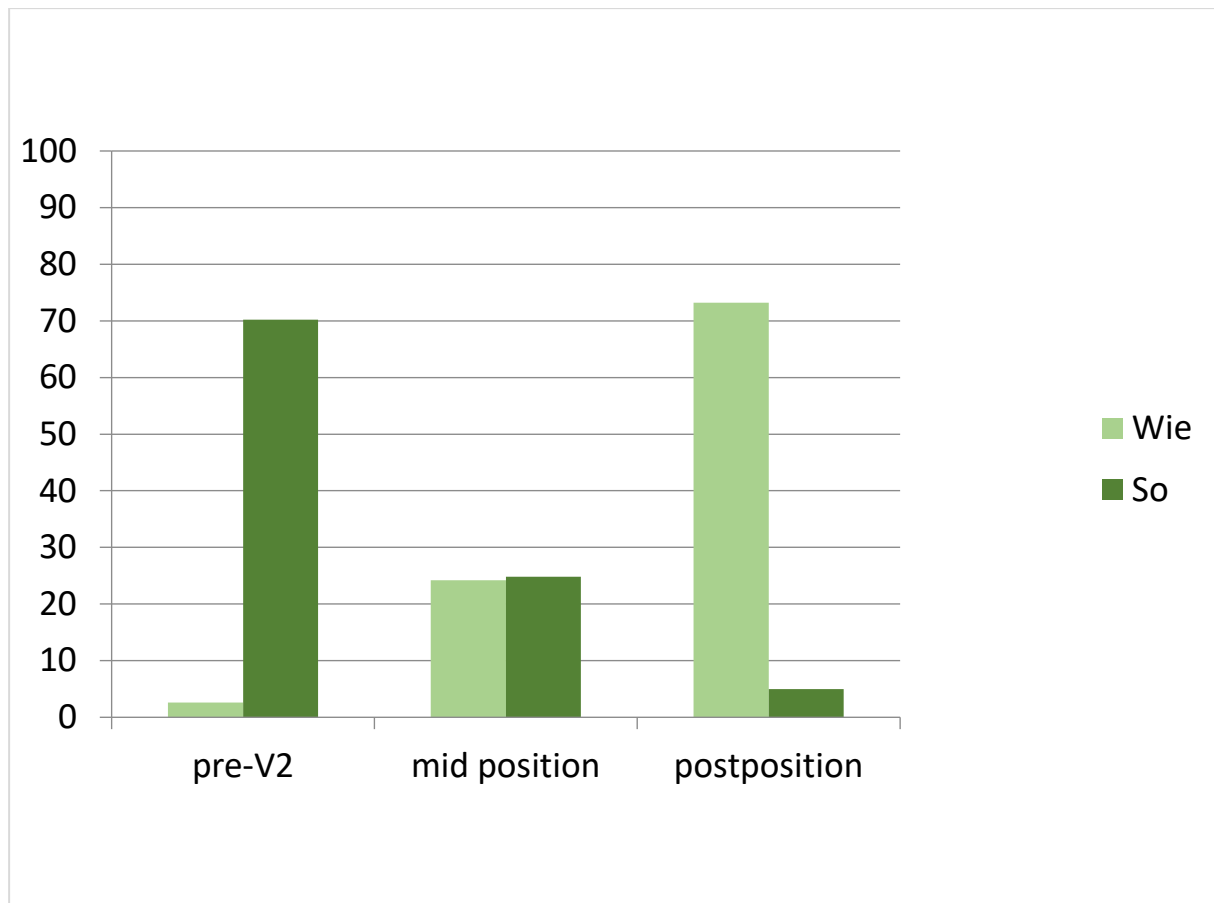


Figure 10.1: Positions of *wie*-CCs and *so*-parentheticals (in percentage)

As already said, parentheticals are linearly inserted into their clauses but seem to be structurally independent at the same time. There have been a number of attempts to capture their special characteristics. It has been suggested that they are not part of the host clause at all (the ‘orphan analysis’ e.g. by Haegeman 1991/2009). Under such an analysis, however, it is obviously not possible to capture any effects of the actual position of a parenthetical. For example, a parenthetical may be linearised inside an embedded clause. In such a case, the semantic domain of the parenthetical may be restricted to the embedded clauses. Consider (75a) and (75b), which have very different readings. In (75a), the semantic domain of the *so*-parenthetical is the embedded clause, in (75b) the whole sentence lies within its domain.

- (75) a. Otto behauptet, dass in diesem Jahr, so sagt Maria, die Steuern gesenkt werden.  
 Otto maintains that in this year so says Mary the taxed lowered are  
 ‘Otto maintains that, Mary says, the taxes will be lowered this year.’  
 b. Otto, so sagt Maria, behauptet, dass in diesem Jahr die Steuern gesenkt werden.  
 Otto so says Mary maintains that in this year the taxes lowered are

It has also been suggested that the parenthetical derives from an original matrix clause (e.g. McCawley 1982, Newmeyer 2014, Giorgi 2016). We do not want to go into the details of these analyses, but only would like to point out that these approaches have a hard time explaining why *wie*-CCs used as parentheticals and *so*-parentheticals can occur after more than one constituent of their host. In the approach by Giorgi (2016), for example, the matrix clause starts as the complement of a projection KP (KommaP), where the head K is the feature [+comma] and the parenthetical occupies the specifier position of the KP. Above this KP there is another  $K^0$  which takes the lower KP as complement. Either the whole complement is

moved to the specifier position of the higher KP or its left constituent. However, in an example like (76) an XP and a head which is independent of XP precede the parenthetical.

- (76) a. Er wird, wie alle sagen, morgen kommen.  
he will as all say tomorrow come  
'He will, as they say, come tomorrow.'  
b. Er<sub>1</sub> wird, so sagen alle, morgen kommen.  
he will so says everyone tomorrow come

A more promising approach is taken by de Vries (2007, 2012). He offers an analysis of parentheticals which tries to explain both their dependency and their independence in the syntactic structure. De Vries assumes that the parenthetical is embedded in an abstract parenthetical phrase ParP. De Vries argues within a minimalist framework for two types of merge, regular merge and the non-canonical parenthetical (PAR-)merge. PAR-merge, which builds up ParP, renders the par-merged constituent invisible to c-command-based relations from the outside. Therefore, although ParP is adjoined to the host, resulting in the linear order of parenthetical and host, and thus is syntactically included in the host, parentheticals do not interact with material of the host in terms of c-command-based relations.

However, as illustrated in (75a) and (75b) the positioning of a parenthetical may induce a semantic locality effect. Such locality phenomena are plausibly due to the fact that parentheticals undergo some sort of local structural licensing. The domain of the licenser constitutes the semantic domain of the parenthetical. This is an important aspect that is not immediately covered in de Vries' (2007, 2012) approach and that the analysis proposed by Frey and Pittner (to appear) wants to take into account. Frey and Pittner (to appear) argue that the ParP of a given parenthetical is adjoined to the XP of its licensing projection  $X^0$  and can be linearized in between the major constituents which are c-commanded by  $X^0$  and are not more closely c-commanded by a  $Y^0$  of the same category as  $X^0$ .

## 10.8 Conclusions

This chapter primarily deals with comment and reporting clauses (CRCs) in German introduced by *wie*, which were compared with *so*-parentheticals serving similar functions. The category of *wie* in CRCs was argued to be a relative element introducing a free relative clause. This relative element bears characteristics of *wie* as the standard marker in equative comparison constructions because it establishes a relation of congruence between the content of the speech act or mental attitude referred to in the *wie*-clause and its matrix clause.

For *wie*-clauses we argued that standardly they are not parentheticals, but constituents of their matrix clauses with a base position typical for sentence adverbials above all verbal arguments and all other kinds of adverbials. They are epistemic, evidential or reporting sentence adverbials which express an epistemic stance towards the matrix proposition, mention the source of the information in the matrix clause, relate the sentence to other utterances made by the speaker or someone else, or comment on single expressions in it. In a minority of cases, they function as RCs occurring with verbatim quotes or indirect speech marked by the subjunctive. It was shown that there is also a use of *wie*-clauses as speech act-related adverbials and a use as discourse markers. We argued that inside the *wie*-CRC *wie* is a depictive predicate which predicates over the object argument of the *wie*-clause's verb. A tentative proposal to account for the fact that this object argument may be lexically unexpressed is that *wie* is able to license this empty category because *wie* encodes a relation of congruence between its two arguments

to the effect that the empty argument position in the *wie*-clause is identified with material from the matrix clause.

In contrast to *wie*-clauses, *so*-parentheticals are predominantly RCs. They can occur with verbatim quotes as indicated by quotations marks and indirect speech often marked by subjunctive or with mixed quotations. In verbless parentheticals, *so* is a quotative marker which developed out of a deictic manner adverb denoting similarity. We argued that *so* can be a propositional anaphor that also refers to the commitment associated with the proposition it relates to. Due to its deictic potential as a ‘similarity demonstrative’, it serves to equate the content of the present utterance with the content of an utterance or a mental attitude held by the parenthetical subject. Therefore, the speech act or mental attitude denoted in the parentheticals must be congruent with the sentence type of the host clause.

We concluded by showing that *wie*-clauses, in contrast to *so*-clauses, lack some essential characteristics of parentheticals. Furthermore, based on a sample of 1000 sentences, it was shown that *so*-parentheticals very often occur after the first constituent preverbally in V2-sentences, which is a position that is typical for parentheticals. *Wie*-clauses occur in this position only if they comment on a single expression in the prefield.

### Acknowledgements

We would like to thank the editors of this volume as well as two anonymous reviewers for their helpful comments on an earlier version of this chapter.

### Primary sources

Authentic examples are taken from the corpora in *Digitales Wörterbuch der deutschen Sprache* ([www.dwds.de](http://www.dwds.de)) or from the *Deutsches Referenzkorpus* (DeReKo), provided by the Leibniz-Institut für deutsche Sprache ([www.ids-mannheim.de](http://www.ids-mannheim.de)), if not specified otherwise.

### References

- Altmann, Hans. 1981. Formen der ‘Herausstellung’ im Deutschen: Rechtsversetzung, Linksversetzung, Freies Thema und verwandte Konstruktionen (Linguistische Arbeiten). Tübingen: Niemeyer.
- Bolinger, Dwight. 1989. Intonation and its Uses. Melody in Grammar and Discourse. London: Edward Arnold.
- Brandner, Ellen and Iris Bräuning. 2013. Relative *wo* in Alemannic: Only a complementizer? *Linguistische Berichte* 234: 131–169.
- Brandt, Margareta. 1997. Der „redesituierende“ *wie*-Satz. *Sprache und Pragmatik* 44: 1-35.
- Burton-Roberts, Noel. 2006. Parentheticals. In *Encyclopaedia of Language and Linguistics*, edited by Keith Brown, 179-182. 2nd ed. Amsterdam: Elsevier.
- Carlsen, Laila. 1998. Redewiedergabe mit redeeinleitendem *wie*-Satz. *Deutsche Sprache* 26: 63-89.
- Clark, Herbert H. and Richard J. Gerrig. 1990. Quotations as Demonstrations. *Language* 66 (4): 764-805.
- Davidson, Donald. 1979. Quotation. *Theory and Decision*, 11 (1). 27-40.
- Dehé, Nicole. 2014. *Parentheticals in Spoken English - The Syntax-Prosody Relation*. Cambridge University Press.
- Dehé, Nicole, and Yordanka Kavalova (eds.). 2007. *Parentheticals*. Amsterdam: Benjamins.
- Dückert, Joachim. 1961. Das geschichtliche Verhältnis des vergleichenden *als* und *wie*. *Beiträge zur Geschichte der deutschen Sprache und Literatur* (PBB) 83: 205–230.

- Eggers, Hans. 1972. Die Partikel *wie* als vielseitige Satzeinleitung. *Linguistische Studien* 1. Düsseldorf: 159-182
- Ehlich, Konrad. 1986. *So*: Überlegungen zum Verhältnis sprachlicher Formen und sprachlichen Handelns, allgemein und an einem widerspenstigen Beispiel. In *Sprache und Pragmatik*, edited by Inger Rosengren, 279-298. Lunder Symposium.
- Feldmann, Wilhelm. 1901. Das vergleichende *als* in der deutschen Schriftsprache. *Zeitschrift des Allgemeinen Deutschen Sprachvereins* 16: 38–41.
- Fortmann, Christian. 2007. The complement of reduced parentheticals. In *Parentheticals*, edited by Nicole Dehé, and Yordanka Kavalova, 89-119. Amsterdam: Benjamins.
- Fortmann, Christian. 2011. Die Suggestion der Theorie – Satzmodus-(In)Kongruenz bei Parenthesen. *Zeitschrift für Sprachwissenschaft* 30/1: 1–44.
- Fortmann, Christian. 2021. Komplementation bei reduzierten Parenthesen. Manuscript University of Tübingen.
- Frey, Werner, and Karin Pittner. 1998. Zur Positionierung von Adverbialen im deutschen Mittelfeld. *Linguistische Berichte* 176: 489-534.
- Frey, Werner, and Karin Pittner. To appear. Parenthetical clauses. In *Handbook of Clausal Embedding*, edited by Manfred Krifka et al. Language Science Press.
- Frey, Werner. 2004. A medial topic position for German. *Linguistische Berichte* 199: 153-190.
- Frey, Werner. 2023. On the categorical status of different dependent clauses. In *Propositionale Argumente im Sprachvergleich: Theorie und Empirie. / Propositional Arguments in Cross-Linguistic Research: Theoretical and Empirical Issues*, edited by Jutta M. Hartmann, and Angelika Wöllstein. Tübingen: Narr, 363-408.
- Giorgi, Alessandra. 2016. Epistemic adverbs, the prosody-syntax interface and the theory of phases, *Romance linguistics 2013: Selected papers from the 43rd Linguistic symposium on Romance languages*, John Benjamins. 99-117.
- Grice, Herbert P. 1975. Logic and conversation. In *Syntax and Semantics: Speech Acts*, edited by Peter Cole and J. Morgan, 41-58. Academic Press.
- Gussenhoven, Carlos. 2004. *The Phonology of Tone and Intonation*. Cambridge University Press.
- Haegeman, Liliane. 1991/2009. Parenthetical adverbials: the radical orphanage view. In *Aspects of Present-Day English Linguistics. Festschrift for M. Ukiyaji*, 232-254. Tokio: Kaitahuska; (2009), *Dislocated elements in Discourse*, edited by Ben Shaer, Philippa Cook, Werner Frey and Claudia Maienborn, 331-347. New York: Routledge.
- Haspelmath, Martin/Buchholz, Oda. 1998. Equative and similative constructions in the languages of Europe. In: *EUROTYP. Vol. 3: Adverbial constructions in the languages of Europe. (= Empirical Approaches to Language Typology, 20–3)* edited by Johan van der Auwera and Dónall O Baoill, 277–334. Berlin: de Gruyter.
- Heine, Bernd. 2013. On discourse markers: Grammaticalization, pragmaticalization, or something else? *Linguistics* 51.6: 1205–1247.
- Hinterhölzl, Roland. (this volume). On perceptive evidential *wie*-clauses in German: a situation-based account.
- Jäger, Agnes. 2018. *Vergleichskonstruktionen im Deutschen. Diachroner Wandel und synchrone Variation*. Berlin: de Gruyter.
- Jäger, Agnes. 2019. The syntax of comparison constructions in diachronic and dialectal perspective. In: *Glossa* 4(1): 70. 1-51. DOI: <http://doi.org/10.5334/gjgl.651>
- Kluck, Marlies, and Mark de Vries. 2015. On V2, gaps, and operators in comment and reporting parentheticals. In *Parenthetical Verbs*, edited by Stefan Schneider, Julie Glikman, and Mathieu Avanzi, 103-133. Berlin: de Gruyter.
- König, Ekkehard, Carla Umbach. 2018. Demonstratives of Manner, of Quality and of Degree: A Neglected Subclass. In: *Atypical Demonstratives*, edited by Marco Coniglio, Andrew Murphy, Eva Schlachter, and Tonjes Veenstra, 285-328. Berlin: de Gruyter Mouton.
- König, Ekkehard. 2015. Manner deixis as source of grammatical markers in Indo-European languages. In *Perspectives on historical syntax*, edited by Carlotta Viti, 33-60. Amsterdam: Benjamins.

- Krifka, Manfred. 2023. Layers of the clause: Propositions, judgements, commitments, acts. In *Propositionale Argumente im Sprachvergleich: Theorie und Empirie. / Propositional Arguments in Cross-Linguistic Research: Theoretical and Empirical Issues*, edited by Jutta M. Hartmann, and Angelika Wöllstein. Tübingen: Narr.
- McCawley, James D. 1982. Parentheticals and discontinuous constituent structure. *Linguistic Inquiry* 13: 91-106.
- Newmeyer, Frederick. 2014. Parentheticals and the Grammar of Complementation. In *Parenthetical Verbs*, edited by Stefan Schneider, Julie Glikman, and Mathieu Avanzi, 13-37. Berlin: de Gruyter.
- Nyenhuis, Agnieszka. 2016. Phraseologisierte Konstruktionen in wissenschaftlichen Texten. In: *Germanistik zwischen Tradition und Innovation. Akten des XIII. Kongresses der Internationalen Vereinigung für Germanistik*, vol. 2, edited by Jinhua Zhu and Michael Szurawitzki, 161-166. Berlin: Peter Lang.
- Palmer, F.R. 2001. *Mood and Modality*. 2<sup>nd</sup> ed. Cambridge: University Press.
- Pankau, Andreas (this volume): Comparative relative clauses in German introduced by *wie*.
- Pittner, Karin. 1993. *So und wie* in Redekommentaren. *Deutsche Sprache* 21 (4): 306-325.
- Pittner, Karin. 1995a. Zur Syntax von Parenthesen. *Linguistische Berichte* 156: 85-108.
- Pittner, Karin 1995b. The Case of German Relatives. *The Linguistic Review* 12/3, 197-231.
- Potts, Christopher. 2002. The syntax and semantics of *as*-parentheticals. *Natural Language and Linguistic Theory* 20: 623-689.
- Potts, Christopher. 2005. *The logic of conventional implicatures*. Oxford: Oxford University Press.
- Reinhart, Tanja 1983. Point of View in Language - The Use of Parentheticals. In *Essays on Deixis*, edited by Gisa Rauh, 169-174. Tübingen: Narr.
- Roberts, Craige (1996): 'Information Structure: Towards an integrated theory of formal pragmatics'. In *OSU Working Papers in Linguistics* 48, edited by Jae Hak Yoon, and Andreas Kathol, 91–136.
- Ross, John Robert. 1972. Act. In *Semantics of Natural Languages*, edited by Donald Davidson and Gilbert Harman, 70–126. Dordrecht: D. Reidel and Company.
- Schlenger, Tim O. 2021. Die Semantik der Quotationsmarkierung durch das Demonstrativpronomen ‚so‘. Bachelor thesis University of Cologne.
- Thurmair, Maria. 2006. *Vergleiche und Vergleichen. Eine Studie zu Form und Funktion der Vergleichsstrukturen im Deutschen*. Tübingen: Niemeyer. DOI: 10.1515/9783110927054
- Traugott, Elizabeth Closs. 1988. Pragmatic strengthening and grammaticalization. In Shelley Axmaker, Annie Jaissner and Helen Singmaster (eds.), *Proceedings of the fourteenth annual meeting of the Berkeley Linguistic Society*, 406-416. University of California, Berkeley: Berkeley Linguistic Society.
- Traugott, Elizabeth Closs. 1989. On the rise of epistemic meanings in English: An example of subjectification in semantic change. *Language* 65: 31-55.
- Umbach, Carla, and Helmar Gust. 2014. Similarity demonstratives. *Lingua* 149: 74-93.
- Umbach, Carla, Hinterwimmer, Stefan and Helmar Gust. 2021. German *wie*-complements: Manners, methods and events in progress. *Natural Language and Linguistic Theory*. <https://doi.org/10.1007/s11049-021-09508-z>
- Umbach, Carla, Hinterwimmer, Stefan und Ebert, Cornelia. (in this volume). Depictive manner complements.
- Vries, Marc de. 2007. Invisible constituents? Parentheticals as B-merged adverbials. In *Parentheticals*, edited by Nicole Dehé and Yordanka Kavalova, 203-234. Amsterdam: Benjamins.
- Vries, Marc de. 2012. Unconventional mergers. In *Ways of Structure Building*, edited by Myriam Uribe-Etxebarria and Vidal Valmala, 143–66. Oxford University Press.
- Zimmermann, Ilse. 1997. *So und wie* in satzadverbiellen Phrasen. *Sprache und Pragmatik* 44: 36-68.