

Speaker-Oriented Adverbs of the German *-weise* Sort

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Abstract

Speaker-oriented adverbs (SpOAs) such as *glücklicherweise* ‘fortunately’ in German constitute a secondary proposition by predicating over the main proposition and a syntactically often silent argument ‘Beneficient’. Since SpOAs take wide scope, quantifying adverbs, whether negative or positive, may not precede them syntactically as otherwise they would compete for scope-taking over the rest of the sentence and this would cause a clash with the semantics of SpOAs. By uttering a sentence with a SpOA, the speaker performs two illocutionary acts, one assertive and the other expressive about the same propositional content p . The expressive speech act presupposes the assertive one, which is why any use of SpOAs presupposes the truth of p .

1 Introduction

Speaker-oriented adverbs (SpOAs), a term first used in Jackendoff (1972), are usually used to express the speaker’s emotion or evaluation towards the propositional content p that the speaker asserts by the rest of the sentence or part of the sentence where SpOAs occur. In this paper, I will discuss the lexical semantics/pragmatics of German SpOAs such as *glücklicherweise* ‘fortunately’ and *erfreulicherweise*¹ ‘luckily’ in line with their distributional facts. (1) provides examples from google for illustration.

- (1) a. Erstaunlicherweise scheint aus meiner Erkältung keine Grippe zu werden.
‘Astonishingly, it seems that my cold is not turning into the flu.’
- b. 1858 wurde tragischerweise der letzte Kaplöwe getötet.
 ‘1858, the last Cape Lion was tragically killed.’
- c. Verkehrsunfall mit glücklicherweise nur Leichtverletzten.
 ‘Road accident with fortunately, only mild injuries resulting in’

¹German SpOAs of this type (ADJ-*er-weise*) can often be paraphrased as ‘in an ADJ way’. As adverbs, they do not always have English equivalents. For example, *erfreulicherweise* means ‘in a pleasant way’ and ‘luckily’ is just a rough translation.

- d. Die gekürzte Studiofassung wurde unglaublicherweise OHNE(!) die Musik von Ennio Morricone in den USA veröffentlicht.
 ‘The shortened studio version got published in the USA, unbelievably, without the music of Ennio Morricone.’

The paper is organized as follows. I will first provide an overview about the distribution of SpOAs. Section 3 addresses two previous analyses, one that treats SpOAs as positive polarity items (PPIs) (Nilsen 2004, Ernst 2005) and the other that takes the relation between the main proposition p and SpOAs as conditional (Bonami and Godard 2008): $p \rightarrow SpOA(p)$. I will argue that the PPI-labeling of SpOAs is misleading if not entirely wrong and the conditional semantics for SpOAs is not right, either. In Section 4, I will first discuss the semantics of SpOAs in the double-propositional approach following Bellert (1977) and Bach (1999) and then propose that by use of SpOAs the speaker performs two illocutionary acts, one assertive and the other expressive of the same propositional content p . Most crucially, the expressive speech act presupposes the assertive one, and this is why any use of SpOAs presupposes the truth of p . Section 5 concludes the paper.

2 Distribution of SpOAs

To my knowledge, although the study of positive polarity dates back as early as Bolinger (1960), PPIs only started to gain more attention recently. As counterparts of NPIs, PPIs tend not to occur in downward entailing (Ladusaw 1980), henceforth DE, contexts, illustrated below:

- (2) a. Mary has ***(not)** got married yet_{NPI}.
 b. Mary has (***not**) already_{PPI} got married.

Nilsen (1999) claims that SpOAs are PPIs as they are excluded in DE contexts. The corpus search and speaker judgement experiments² (Liu and Soehn *in press*) confirmed their ‘PPI-hood’: 24 subjects all accepted (3a) and all rejected (3b), for example.

- (3) a. Die Vorschule hat glücklicherweise einen tollen Spielplatz.
 b. ***Die Vorschule hat nicht glücklicherweise** einen tollen Spielplatz.
 ‘The pre-school has (*not) fortunately a great playground.’

According to Bellert (1977), besides negatives, SpOAs do not appear in hypotheticals, questions or performative sentences, either. Her observation holds true for the most part, as shown in the following examples. The reason why SpOAs can appear in the antecedent of conditionals or unreal (echo or tag) questions will be explicated later in the paper when we turn to their semantics.

²The experiments used anti-additive (AA) contexts as stimuli as according to Szabolcsi (2004), it is anti-additivity, a subset of DEness, that PPIs are sensitive to.

(4) Conditionals:

- a. indicative: [*Wenn...?SpOA...,...*SpOA...*]
 Wenn die Vorschule ?glücklicherweise einen tollen Spielplatz hat, können die Kinder *erfreulicherweise mehr Sport treiben.
 ‘If the preschool fortunately has a great playground, the kids can luckily do more sports.’
- b. counterfactual: [*Wenn...*SpOAs...,...*SpOAs...*]
 Wenn die Schule *glücklicherweise einen tollen Spielplatz hätte, könnten die Kinder *erfreulicherweise mehr Sport treiben.
 ‘If the preschool fortunately had a great playground, the kids could luckily do more sports.’

(5) Questions:

- a. Hat die Vorschule *glücklicherweise einen tollen Spielplatz?
 ‘Does the preschool fortunately has a great playground?’
- b. Wer ist unglücklicherweise in einen Unfall verwickelt worden?
 ‘Who (again) unfortunately got into an accident?’
- c. Tom ist unglücklicherweise in der Prüfung durchgefallen, gell?
 ‘Tom unfortunately failed in the exam, right?’

(6) Performatives:

Ich befehle *glücklicherweise dass Du sofort losfährst.
 ‘I order fortunately that you set off immediately.’

As (3)-(6) show, SpOAs cannot be negated, questioned or hypothesized, which makes them different from manner adverbs and degree adverbs such as *ganz* ‘entirely’, *deutlich* ‘clearly’ that can.

Ernst (2005), also labeling SpOAs as PPIs, maintains that they are excluded in non-veridical (Zwarts 1995, Giannakidou 1998) contexts, which also include for instance imperatives or modals besides DE ones.

(7) Imperatives:

Stirb *unglücklicherweise!
 ‘Die unfortunately!’

SpOAs, meeting modal adverbs or verbs, must outscope them.

- (8) a. Unglücklicherweise ist Peter möglicherweise krank.
 ‘Unfortunately, Peter is possibly sick.’
- b. *Möglicherweise ist Peter unglücklicherweise krank.
 ‘Possibly, Peter is unfortunately sick.’
- c. Peter könnte unglücklicherweise krank sein. =
 Es ist unglücklich dass ... ≠
 Es könnte unglücklich sein dass ...
 ‘Unfortunately, Peter could be sick.’ = ‘It is unfortunate that ...’ ≠ ‘It could be unfortunate that ...’

Finally, SpOAs can be embedded by veridical/factive predicates such as *wissen* ‘know’, *bedauern* ‘regret’ or reportives such as *sagen* ‘say’ but not by nonveridical predicates such as neg-raising³ or volitional ones.

- (9) a. Factives:
 Maria weiß (nicht) dass Peter unglücklicherweise gestorben ist.
 ‘Maria does (not) know that Peter unfortunately died.’
- b. Assertives:
 Maria sagte (nicht) dass Peter unglücklicherweise gestorben war.
 ‘Maria did (not) say that Peter unfortunately died.’
- c. Neg-raising predicates:
 Maria glaubt (*nicht) dass Peter unglücklicherweise gestorben ist.
 ‘Maria does (*not) believe that Peter had unfortunately died.’
- d. Volitionals:
 Maria hofft (nicht) dass Peter *tragischerweise gestorben ist.
 ‘Maria does (not) hope that Peter tragically died.’

I will come back to these data in the following discussion.

3 Two Misconceptions about SpOAs

This section discusses two previous analyses, namely, the conditional semantics for French evaluatives by Bonami and Godard (2008) and the PPI-labeling of SpOAs by Nilsen (1999) and Ernst (2005). I will first show that although Bonami and Godard’s proposal correctly predicts some of SpOAs’ behavior, it fails to do so for some others. This also leads to my argument for abandoning the PPI-labeling of SpOAs.

3.1 Conditional semantics for SpOAs

According to Bonami and Godard (2008), the oddness of French evaluatives (what we call SpOAs in the present paper) like *malheureusement* ‘unfortunately’ in the scope of negation (such as **Paul n’est pas malheureusement venu* ‘Paul did not unfortunately come’) is due to the clash between the “main assertion” $\neg p$ and the “ancillary commitment” $p \rightarrow SpOA(p)$. This analysis can elegantly explain the anti-collocational relation between SpOAs and negative contexts. However, it fails to account for the fact that even when preceding adverbs are not negative, such as *immer* ‘always’, thus a clash should not arise as the ‘main assertion’ is positive, the sentences still remain bad. Compare:

- (10) a. Peter ist unglaublicherweise **immer/niemals/oft/manchmal** krank.
 ‘Peter is unbelievably always/never/often/sometimes sick.’
- b. *Peter ist **immer/niemals/oft/manchmal** unglaublicherweise krank.
 ‘Peter is always/never/often/sometimes unbelievably sick.’

³Frank Richter (p.c.) pointed out to me that (9c) is not quite good an example, mainly due to the fact that the neg-raising reading of *glauben* ‘believe’ is sometimes difficult to distinguish from the non-neg-raising reading. If it is not a neg-raising reading then (9c) would be just as fine as (9a-b), whether negation is present or not.

An explanatory analysis of SpOAs should be able to answer the question either why adverbs such as *immer* ‘always’, *nie* ‘never’, *selten* ‘seldom’ cannot outscope SpOAs, or why SpOAs cannot outscope these adverbs if they take a syntactically higher position, although they can outscope for example, *nichts* ‘nothing’, *niemand* ‘nobody’, *wenig* ‘few’, or modals.

- (11) a. **Niemand** hat erfreulicherweise bei der Hochzeit gefehlt. =
Erfreulicherweise hat **niemand** bei der Hochzeit gefehlt.
 ‘Happily, nobody was absent from the wedding.’
- b. Peter **könnte** unglaublicherweise gut angezogen sein. =
Unglaublicherweise **könnte** Peter gut angezogen sein.
 ‘Unbelievably, Peter could be well-dressed.’

Such adverbs that SpOAs tend only to outscope (both semantically and syntactically) are called quantifying adverbs (Lewis 2002/1975). More examples from English are *invariably*, *universally*, *without exception*, *occasionally*, *usually*, *mostly*, *generally*, *infrequently*, *rarely*. They quantify over cases (which might as well simply be events). For example, *always* in *A man who owns a donkey always beats it now and then* is a quantifier over the case: [if x is a man, if y is a donkey, and if x owns y, x beats y now and then]. To figure out the semantics of SpOAs, it is helpful to take quantifying adverbs as a test and see how they behave in relation to SpOAs in a sentence.

I have three points to make on why the quantification by these adverbs has to happen before the semantics of SpOAs comes into play. First, SpOAs are not quantifiable themselves as they are not cases: what they express is not for example an event but an (often emotional) evaluation. This blocks SpOAs from being bound alone in the scope of quantifying adverbs. Second, quantifying adverbs cannot quantify over the event or case expressed by the rest of the sentence, if the latter is already modified by a SpOA, because such a case is closed (by evaluation), that is, the truth value of the expressed proposition is already settled and thus allows no further quantification (that should be considered to yield the truth-value). Last, the possibility to have both the content expressed by SpOAs and that by the rest of the sentence be bound by quantifying adverbs is not available due to the very relation between these two contents, which I will discuss more in Section 4. (12) is my formulation of the semantic constraints concerning the co-occurrence of quantifying adverbs and SpOAs (that are treated as predicates as I will show in Section 4): the combinations marked with * are out and the good one is with \checkmark .

- (12) Semantic constraint of SpOAs:
- a. * quantification > predication_{SpOA} > case
 (i) * (quantification > predication_{SpOA}) > case
 (ii) * quantification > (predication_{SpOA} > case)
- b. \checkmark predication_{SpOA} > quantification > case

The semantic constraint in (12b) requires that SpOAs take a syntactically higher position than quantifying adverbs, as they are in a competing relation for scope-taking over the rest of the sentence and syntactically higher ones win. SpOAs have no problem with adverbs in a syntactically higher position if these adverbs cannot take wide scope, such as

yesterday. In (13), we get the reading that *it is unfortunate that Peter was sick yesterday*. Notably, the SpOA does not only outscope the temporal adverb but also the tense, that is, the entire temporal modification of the sentence.

- (13) Peter war gestern unglücklicherweise krank.
 ‘Peter was yesterday unfortunately sick.’

3.2 PPI-labeling of SpOAs

We have seen that although the distributional facts stated in Section 2 seem all to suggest that SpOAs be PPIs, this labeling is misleading. The example of quantifying adverbs show that it is not negative polar quantification that SpOAs are hostile to but adverbial quantification that slips away from the scope of SpOAs, no matter whether it is negative or positive. Quantifying adverbs must follow SpOAs syntactically, because semantically, SpOAs have to take wide scope and a clash would arise if syntax says otherwise.

To render a general remark, the PPIs recorded in the existing literature seem not to be homogeneous. The term of PPIs is to my mind more of a distributional commonness of different things. For instance, SpOAs and PIAs⁴ are certainly not of the same kind, although distributionally speaking, both seem to crave for positive polar contexts. This distinguishes PPIs from NPIs in the way that NPIs (at least the set of minimizers) make up a natural class, whereas there is no such corresponding natural class of PPIs.

4 The Semantics and Pragmatics of SpOAs

Having discarded the PPI labeling and the conditional semantics for SpOAs, I will now discuss the semantics of SpOAs following the double-propositional view (Bellert 1977, Bach 1999) and the pragmatics of SpOAs in speech act theory. First, I will argue for treating SpOAs as two-place predicates, one argument being the main proposition⁵ and the other one a Beneficent that does not necessarily co-incide with the speaker. In speech act theory, by uttering a sentence with SpOAs, the speaker performs two illocutionary acts about the same propositional content *p*, one assertive and the other expressive/evaluative by use of SpOAs. The assertive one is independent while the expressive presupposes the assertive one, and this is why any use of SpOAs presupposes the truth of *p*.

⁴Adverbs of this type are called positive intensifying adverbs (PIAs, Liu and Soehn *to appear*) such as *total* ‘totally’, *durchaus* ‘absolutely’ also tend not to occur in negative contexts, but for the reason that they contribute no propositional content to a sentence but are used as conventional tools to intensify an (mostly positive) utterance and therefore negating, questioning or hypothesizing of them would be vacuous.

⁵‘Proposition’ has always been a confusing term to me and I guess, probably to many others as well. In the current analysis, I take propositions as something truth-evaluable, though, what I take as linguistic means to express propositions might differ from many existing proposals: to me, besides sentences, the speaker can use certain noun phrases such as ‘the king of France’, prepositional phrases such as ‘with a pair of sunglasses’ to express propositions, and the reason why we usually only interpret an atomic sentence as a single proposition is but a question of theoretic convenience and necessity.

4.1 Semantic Duality

The double-propositional insight for SpOAs is found at least in Jackendoff (1972), Bellert (1977) and Bach (1999). Jackendoff (1972) maintains that modal adverbs such as *certainly* are predicates over a sentence, while SpOAs such as *happily* predicate over a sentence and the argument SPEAKER, that is, $SpOA(SPEAKER, S)$. Thus modal adverbs should be handled differently from SpOAs. Modal adverbs are added to the rest of the sentence to constitute one proposition. SpOAs predicate over the main proposition expressed by the rest of the sentence, and this predication constitutes an extra proposition. Bellert echoes this view (1977: p.342) about SpOAs: “the adverb makes a second proposition by evaluation of the fact, event, or states of affairs denoted by S.” Bach (1999) calls SpOAs assessives and claims that they “contribute to the content of the utterance” (p.359) by a second - evaluative/assessive - proposition.

However, paraphrasing modal ADVs and SpOAs such as *certainly* and *happily*, we can easily get the same structure *it is certain/happy that S*. Since both epistemic certainty and emotive evaluation are in the end speaker-oriented, to what extent do they really differ? The solution I suggest here is to treat SpOAs as two-place predicates taking Beneficent (or Recipient, Experiencer) as the second argument, that is, $SpOA(S, Beneficent)$. By contrast, modal adverbs are one-place predicates such that $ModalAdv(S)$ ⁶.

4.1.1 Beneficent and Speaker

Bonami and Godard (2008) already express doubt concerning the notion of the speaker-orientation for French evaluatives: “the agent responsible for the evaluative may be different from the speaker. Accordingly, an adequate analysis must not presuppose that evaluatives are strictly speaker-oriented” (p.15). The assigning of Beneficent instead of SPEAKER as the second argument solves the problem. This means that the emotion or evaluation that the speaker expresses by use of SpOAs towards the main proposition could be attributed to the speaker himself, but also to the addressees, the subject of the sentence, etc. In other words, the Beneficent might co-incide with the speaker, but this does not have to. It can be made explicit linguistically, with *for*-phrases in English as in (14a), or contextually. In (14b), the fact that Paul screwed up in the final exam is unfortunate for him and maybe for the speaker as well.

- (14) a. Unfortunately for most female PhD students, having babies can add unnecessary stress to their academic lives.
 b. Paul unfortunately screwed up in the final exam.

Despite the context dependency of Beneficents, a felicitous use of SpOAs presupposes the existence of such a Beneficent. In a war situation where the speaker informs his own party about the serious casualties of the opposite party, the use of *unglücklicherweise* or *tragischerweise* will be outrageous. This means that the existence of such Beneficents should be in the semantics of a sentence with SpOAs, therefore, I propose to render this

⁶Of course, we can introduce the argument SPEAKER into both cases, ending up with SpOAs as three-place predicates and modal adverbs as two-place ones, but this move will lead to redundancy, as we then need to assign every sentence a SPEAKER argument.

argument into the logical form of such a sentence: $(\lambda Q.\lambda P.Q(P, \textit{Beneficient}))(s\textit{poa})$, although it is often syntactically silent.

4.1.2 Proposition and Sentence

One can argue whether the contribution by SpOAs is propositional, i.e. whether it has a truth value. However, by introducing the Beneficient as their argument, the meaning contribution of SpOAs is indeed truth-evaluable. If the speaker says that *Sadly for Paul, he screwed up in the final exam*, the meaning of SpOAs is truth-evaluable in terms of whether Paul truly or falsely has sad emotions due to the fact that he screwed up in the final exam. Emotions, despite the perceptive difficulty in comparison, are entities/Dasein, I believe. Therefore, by a sentence with SpOAs the speaker expresses (at least) two propositions. The rule of ‘one sentence, one proposition’, although practical in most cases, is but of theoretic convenience. Bach (1999) and Potts (2005) both challenged this view in their discussions of conventional implicatures including the cases of *but* and SpOAs. I do so as well but also for an extra reason, namely, the main proposition that SpOAs predicate over might be the rest of the sentence or just a fragment of it. SpOAs do not necessarily take the rest of the sentence as their (immediate) affective domain.

- (15) Peter war unglücklicherweise gestern krank.
 ‘Peter was unfortunately sick yesterday.’
- a. Peter war unglücklicherweise GESTERN krank.
 ‘Peter was unfortunately yesterday sick.’
- b. Gestern war unglücklicherweise PETER krank.
 ‘Unfortunately, Peter was yesterday sick.’

(15) shows that SpOAs, despite their syntactical category as sentence adverbs, are subject to the focus effect of the rest of the sentence. Intonation and word order change can be used to clearly indicate their affective domain, which can be the entire sentence such as in (15) or a propositional fragment of it such as capitalized in (15a) and (15b). The latter two sentences can be best paraphrased with cleft constructions, roughly as *it is unfortunate that it is yesterday that Peter was sick* and *it is unfortunate that it is Peter who was sick yesterday*. In a similar way, we can paraphrase the sentences in (1) as (16): only in (1a) does the SpOA take the entire rest of the sentence as its argument.

- (16) a. It is astonishing that it seems that my cold is not turning into the flu.
 b. 1858, the last Cape Lion was killed. It is tragical that the last Cape Lion was killed.
 c. (There was a) road accident. It is fortunate that people were only mildly injured.
 d. The shortened studio version got published in the USA. It is unbelievable that they published it without the music of Ennio Morricone.

This is to show that SpOAs also provide evidence for the multipropositionality of natural language sentences without SpOAs: for example, in (1c) the prepositional phrase expresses a proposition. Therefore, not only does ‘one sentence’ not necessarily express

only ‘one proposition’, but ‘one proposition’ does not have to be expressed by ‘one sentence’.

4.2 Pragmatic Asymmetry

I have argued above that the meaning contribution by SpOAs can be analysed as propositional, that is, two things (propositions) are said in a sentence with SpOAs. However, these two things are not said equally. In this section, I will show that the truth/falsity of the proposition that the speaker expresses by SpOAs is dependent on that of the main proposition and has correspondingly a secondary status in discourse logic. In other words, there is a pragmatic asymmetry between them. In the following, I will briefly discuss Potts’s (2005) analysis and then propose an alternative analysis in speech act theory.

4.2.1 SpOAs as conventional implicatures

Potts (2005) treats SpOAs as conventional implicatures (CIs), which he considers to be entailments, but different from what he calls “at-issue entailments”. Informally, (17) entails both (17a) and (17b), but the former is the at-issue entailment and the latter the CI.

- (17) Luckily, Willie won the pool tournament. (Potts 2005: p.187)
- a. p : Willie won the pool tournament.
 - b. $\lambda p.$ **lucky**(p)

Although the term of CI is sometimes confusing as Potts admits himself, with his analysis, we are able to distinguish (17) from (18). In (18a), the at-issue content is $\lambda p.$ **lucky**(p) and in (18b), both p and $\lambda p.$ **lucky**(p) are at-issue contents due to the conjunction.

- (18) a. It is lucky that Willie won the pool tournament.
b. Willie won the pool tournament and this is lucky.

It is worth noting that SpOAs, or CIs in general, do convey new information, just as the definite NP in *The king of France is bald* could be new information for people who didn’t know whether France is Republican or Monarchic. In this sense, both CIs and presuppositions differ from “at-issue entailments” essentially in terms of informative prominence.

4.2.2 SpOAs in speech act theory

SpOAs are illocutionary words (Bellert 1972, Bartsch 1976). First consider:

If we adopt illocutionary point as the basic notion on which to classify uses of language, then there are a rather limited number of basic things we do with language: we tell people how things are, we try to get them to do things, we express our feelings and attitudes, and we bring about changes through our utterances. Often, we do more than one of these at once in the same utterance. (Searle 1979: p.155)

In one and the same utterance with SpOAs, the speaker does not only tell people how things are but at the same time also expresses his or someone else's feelings and attitudes towards the way things are. However, there is a question of (logical) order in doing the two things, as I formulate below:

(19) Pragmatics of $SpOA(p)$:

The speaker performs two speech acts, one (factually) assertive and the other expressive of the same propositional content p . The assertive speech act is performed independently. However, the expressive speech act presupposes the assertive one, therefore, any use of SpOAs presupposes the truth of p .

With (18a), the speaker only performs one assertive speech act of the propositional content that *It is lucky that Willie won the pool tournament*, while with (18b), the speaker performs two assertive speech acts of two different propositional contents by conjunction. In the case of SpOAs, the expressive content is parasitic on the asserted content, and secondary to the latter, as the expressive speech act cannot be successfully performed if the assertive speech act is not successfully performed, but not vice versa.

By uttering a sentence $(\lambda Q.\lambda P.Q(P, Beneficent))(spoa)$, the speaker commits himself to both the truth of P and the (evaluative/emotional) content Q towards P for the beneficiary of the described state of affairs by P . P and Q can both be negated independently (Bellert 1977), but not at the same time due to their very relation: denying P makes the denying Q unnecessary and denying Q presupposes the agreeing on P . The truth/falsity of P is independent of that of Q , while Q becomes an issue only when P holds true (is asserted). This is illustrated below:

- (20) A: Tom is unfortunately dead.
 B: No, he is not dead.
 B': He is dead, but it is not unfortunate for you!
 B'': He is dead, but it is not unfortunate to me.

4.3 (Non-)Veridicality

In Section 3, I have shown that SpOAs take wide scope and they should precede quantifying adverbs, whether they are negative or positive, because quantifying adverbs also take wide scope over the rest of the sentence and if they syntactically precede SpOAs, this will cause a clash. The pragmatics of an utterance $SpOA(p)$ as I formulated in (19) says that any content predicated over by SpOAs is asserted by the speaker and therefore does not allow any further quantification. This applies for the negative adverb *nicht* 'not' as well: informally speaking, you cannot tell people how things are and express the feelings or evaluations while simultaneously denying the way things are.

SpOAs also tend not to occur in contexts such as conditionals, yes-no questions, performative sentences, imperatives, neg-raising predicates, volitionals, modals, as by these things the speaker does not assert the embedded proposition, i.e. the speaker does not state how he believes the world is, thus it would be odd to use SpOAs, which predicate over a proposition that is asserted. In brief, if we do not know "how things are" in the

first place, it is impossible to “express our feelings and attitudes” towards the way they are.

Concerning modals, it is observed by Regine Eckardt (p.c.) that if we change *möglicherweise* ‘possibly’ in (8b) into *vielleicht* ‘maybe’, the sentence turns good. I think the meaning contribution of *vielleicht* here is similar to that of *ich glaube* ‘I believe’: in both cases, the speaker expresses his uncertainty about what he asserts, which makes the assertion sound weaker, but it is definitely different from *möglicherweise* where the content by the rest of the sentence is simply not asserted⁷.

- (21) a. Vielleicht ist Peter unglücklicherweise krank.
 ‘Maybe, Peter is unfortunately sick.’
 b. Ich glaube, Peter ist unglücklicherweise krank.
 ‘I believe, Peter is unfortunately sick.’

The reason why SpOAs are possible in the antecedent of indicative conditionals is, as Ernst (2005) points out, because there “the truth of the proposition is still somehow implicated”, while this possibility is certainly unavailable with counterfactuals. As Daniel Hole (p.c.) pointed out, if we substitute *if* with *given that*, the occurrence of SpOAs follows even more naturally. It is to note that the speaker could fairly well use conditionals even when she does believe the truth of the antecedent but thinks that the antecedent is not common-grounded, in a similar fashion as the projection problem of presuppositions in conditionals. For the same reason, SpOAs can occur in echo questions and tag questions, as the expressed content is also maintained as true by the speaker, while they are bad in yes-no questions. Most of the contexts stated above seem to echo Ernst’s (2005) observation that SpOAs may not occur in the scope of nonveridical contexts. Briefly, the concept of nonveridicality captures the state of uncertainty, where the truth value of the sentence is not yet known.

(22) Definitions (Zwarts 1995, Giannakidou 1998):

- a. F is veridical if $Fp \Rightarrow p$.
 b. F is nonveridical if $Fp \not\Rightarrow p$.

The notion of nonveridicality is useful for proposition embedding functions: SpOAs do not occur in nonveridical predicates because they would influence the truth of p and therefore lead to a clash with the meaning of SpOAs, while this problem does not arise with factives as they preserve the truth of the embedded proposition and therefore are harmonious with SpOAs. However, the crucial point is that SpOAs cannot occur in the scope of anything⁸, veridical or non-veridical, that is, they semantically outscope everything including temporal/modal modification or quantification (see Section 3.1). The examples below demonstrate different behaviors of the same SpOA with regard to the adverbs *yesterday* and *always*, although both are veridical.

⁷This is the reason why *möglicherweise* should not receive the same analysis as SpOAs of the *-weise* sort.

⁸One exception are “pragmatic adverbs” (Bellert 1977) or “utterance modifiers” (Bach 1999) such as *frankly*, *sincerely*, *honestly*, *briefly*, *precisely*. However, they take scope over SpOAs not semantically but pragmatically, as with these words, the speaker comments on the act of his utterance rather than the content of it.

- (23) a. Peter war gestern_{veridical} unglücklicherweise krank.
 ‘Unfortunately, Peter was sick yesterday.’
 b. *Peter ist immer_{veridical} unglücklicherweise krank.
 ‘Peter is always unfortunately sick.’
 c. Yesterday, Peter was unfortunately sick. ≠
 It was yesterday unfortunate that Peter was sick.

However, SpOAs are themselves veridical, as $SpOA(p)$ entails p . Whether we take veridicality as a semantic or pragmatic concept, this is in line with the pragmatics of SpOAs as in (19).

5 Summary

In the foregoing, I have argued that the labeling of SpOAs as PPIs is misleading and a conditional semantics for their meaning is not quite right, either. SpOAs predicate over the main proposition where they occur, which yields a secondary proposition. I take both contents as propositional as both are truth-evaluable. However, there is a pragmatic asymmetry between these two propositions, which I showed in speech act theory: by uttering a sentence with SpOAs, the speaker performs two speech acts, one assertive and one expressive of the same propositional content p , but the expressive one presupposes the assertive one (therefore, any use of SpOAs presupposes the truth of p), while the assertive one is independent.

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