

A discourse model for *überhaupt**

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Abstract The German particle *überhaupt* exhibits a variety of uses with seemingly unrelated meanings. Correspondingly, only partial and non-unified theoretical accounts have been proposed. I show how the various intuitions and ostensibly different meanings can be derived from a unified characterization of *überhaupt* as a move to a higher-level question under discussion. The account explains how *überhaupt* could correspond to a single word in German, and it provides additional support for questions under discussion as an important aspect of contexts.

Keywords: *überhaupt*, discourse particle, question under discussion, discourse strategy, focus

1 Introduction

There has been great interest in recent years in studying the way that information is organized in conversation. New theories of discourse structure (Ginzburg 1994, 1995a, 1996, 2012, Groenendijk 1999, Groenendijk & Roelofsen 2009, Roberts 1996/2012, 2004, van Rooij 2003), and notions such as that of a discourse strategy or a question under discussion (Roberts 1996/2012, Ginzburg 1995a,b) have led to advances in our understanding of focus (Büring

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2003, Beaver & Clark 2008), anaphora resolution (Roberts 2003, Schoubye 2009), and speech acts (Roberts 2004). Ideas from discourse structure have also led to new insights for the analysis of discourse particles (McCready 2006, Davis 2009), as some particles are better understood if we move beyond the level of a single utterance and take into account the structure of the surrounding context.¹

In this paper I develop a unified account of the meaning and distribution of the German discourse particle *überhaupt* based on discourse structure. This particle has defied a unified analysis by other means in the past (Thiel 1962, Becker 1976, Harden 1983), and some have even claimed that *überhaupt* has no unified meaning (König 1983: 160). I argue that, if we treat the particle as engaging directly with discourse issues, then a unified analysis can be achieved.

The paper is organized as follows: Section 2 describes the various uses of *überhaupt* and their meanings. I then address problems with previous accounts of *überhaupt* in Section 3, in particular with the domain widening account of Anderssen 2006. In Section 4, I propose a unified account of *überhaupt* that can account for those various uses. Sections 5 and 6 explain links to syntactic issues and to focus theory, respectively. Section 7 shows that the intuitions of widening underlying Anderssen's account, in those situations where they arise, can be understood within my framework.

2 The use of *überhaupt* in German

Native speakers of German, including myself, tend to ascribe to the particle *überhaupt* several distinct uses and meanings. What these various uses and meanings are is described in this section. I will restrict attention to sentences without embedded clauses,² and will consider only questions which are polar. In the rest of the paper, my goal is to demonstrate that all the meanings described can be captured in a formal, unified account based on discourse structure.

¹ These references and many more can be found in the very useful *QUD bibliography* by Craig Roberts, located at <http://www.ling.ohio-state.edu/~croberts/QUDbib/>.

² The reason for excluding embedded clauses is that in general it is not clear what the discourse status of embedded clauses is (Simons 2007). Nothing in the formalism I develop here is geared specifically towards matrix clauses, as the constraints on where *überhaupt* can be used are formulated in terms of the information content of the utterances and in terms of questions under discussion. However, more research is needed to understand how embedded clauses engage with questions under discussion.

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2.1 How *überhaupt* is used

2.1.1 Focused and unfocused *überhaupt* plus negative determiner in statements

The most basic distinction between uses of *überhaupt* is given by its focus. When focused, *überhaupt* is used in a statement to indicate that it generalizes previous statements in the dialogue:

Conversation 1

- | | |
|---|--|
| (i) A: <i>Verkaufen Sie Marmorkuchen?</i> | A: Do you sell marble cake? |
| (ii) B: <i>Nein.</i> | B: No. |
| (iii) A: <i>Verkaufen Sie Schokoladenkuchen?</i> | A: Do you sell chocolate cake? |
| (iv) B: <i>Wir verkaufen überhaupt_F keinen Kuchen.</i> | B: We sell <i>überhaupt_F</i> no cake. |

A paraphrase for the last utterance is *We don't sell any cake at all*. Once this is uttered, the line of interrogation about what cake interlocutor B sells is terminated because the answer to every question (*No*) is entailed by statement (C1.iv).

A distinct example is provided by the use of unfocused *überhaupt* in the following conversation:³

Conversation 2

- | | |
|---|---|
| (i) A: <i>Möchtest du ein Glas Wein?</i> | A: Would you like a glass of wine? |
| (ii) B: <i>Nein, Danke.</i> | B: No, thank you. |
| (iii) A: <i>Hättest du gerne ein Bier?</i> | A: Would a beer appeal to you? |
| (iv) B: <i>Nein. Ich trinke überhaupt keinen Alkohol.</i> | B: No. I drink <i>überhaupt</i> no alcohol. |

Here the final sentence can be paraphrased as *I actually don't drink alcohol*. As in the focused case, it has the effect of terminating a line of inquiry by generalizing prior statements. However, in the unfocused case it plays an additional role: that of *invalidating a presupposition*. The presupposition

³ The focus in (C2.iv) falls on the main verb *trinke*. In the presence of unfocused *überhaupt*, this sentence does not allow any other focus structure. I will not put much emphasis in my exposition of the *überhaupt* usages on showing where the main stress/focus falls when *überhaupt* is not focused. This is because the puzzle of *überhaupt* has standardly been presented simply as one of understanding the relationship between the stressed and unstressed *überhaupt*. I therefore choose to present the issue starting from the same departure point. A tentative explanation of the larger focus issues is given in Section 6.

in question here is not a logical presupposition of any particular utterance, but rather an implicit working assumption by conversant A that B drinks alcohol.⁴

On the other hand, by uttering (C1.iv) interlocutor B does not signal whether or not he thinks that A held some particular assumption about whether he sells cake. B answers the questions about each type of cake in one swoop, but does not comment on what he thinks A's beliefs are. This is why (C1.iv) is permissible both in situations where B thinks A had some assumption and where he thinks A did not. The crucial thing is that, by uttering (C1.iv), B does not take any explicit stance on this point.

Unfocused *überhaupt* could have been employed in sentence (C1.iv) as well, with the same presupposition-challenging meaning (paraphrasable as *We actually don't sell cake*) that is illustrated in (C2). Conversely, focused *überhaupt* could be used in (C2.iv) as well. In that case, B would no longer be challenging an assumption or presupposition, but would simply be resolving the line of questions about alcohol *a*, alcohol *b*, alcohol *c*, all at once.

In what follows, I will mostly stick to (C2) when illustrating the use of unfocused *überhaupt* in declaratives and to (C1) to illustrate the use of focused *überhaupt* in declaratives, just to keep a simple association between uses of *überhaupt* and specific examples.

2.1.2 Focused and unfocused *überhaupt* in questions

In the above examples *überhaupt* appeared in statements resolving a line of inquiry. It can also appear in questions, both in focused and unfocused form, as in the following dialogues:⁵

⁴ Of course, the dialogue does not necessarily entail that A has such a working assumption. However, we provide evidence later that it is important that B *believes* that A assumes he drinks alcohol.

⁵ In this paper, dialogue glosses are omitted to preserve the flow of information. However, the glosses can be reconstructed straightforwardly from the translations provided. In the declarative utterances containing *überhaupt* the translations can be read directly as word-by-word glosses. The German interrogatives containing *überhaupt* differ from the English translations just in that they have the order *verb-subject-überhaupt* as opposed to the English *subject-verb-überhaupt* (*überhaupt* not being an English word, of course). In addition, the German sentences distinguish between formal and informal address in the second person. However, this distinction is not important for and does not interact with the usage restrictions on *überhaupt*. As an illustration, the glosses for (C3.v) and (C4.v) are provided below:

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Conversation 3

- (i) A: *Verkaufen Sie Marmorkuchen?* A: Do you sell marble cake?
(ii) B: *Nein.* B: No.
(iii) A: *Verkaufen Sie Schokoladenkuchen?* A: Do you sell chocolate cake?
(iv) B: *Leider nicht.* B: Unfortunately not.
(v) A: *Verkaufen Sie überhaupt_F Kuchen?* A: Do you sell *überhaupt_F* cake?

Conversation 4

- (i) A: *Möchtest du ein Glas Wein?* A: Would you like a glass of wine?
(ii) B: *Nein, Danke.* B: No, thank you.
(iii) A: *Hättest du gerne ein Bier?* A: Would a beer appeal to you?
(iv) B: *Nein.* B: No.
(v) A: *Trinkst du überhaupt Alkohol?* A: Do you drink *überhaupt* alcohol?

In the first dialogue focused *überhaupt* roughly takes on the meaning *at all*, so that A's last statement can be loosely translated as *Do you sell any cake at all?* By uttering the question with focused *überhaupt*, A is trying to obtain an answer that will resolve her line of inquiry about *a*-cake, *b*-cake, *c*-cake, etc. On the other hand, in the second conversation A's final question, which can be paraphrased as *Do you even drink alcohol?*, tries to get at whether or not the line of interrogation that A is pursuing (*do you want wine? do you want beer? do you want vodka? do you want rum?* and so on) is sensible: if B does not drink alcohol, then any inquiry about what alcoholic drink B wants is pointless.

2.1.3 *Überhaupt* and universal quantifiers

A third use of *überhaupt* exists, namely *überhaupt* plus a universal quantifier or scalar predicate. This use of *überhaupt* is invariably focused and has no unfocused counterpart:

(C3.v) *Verkaufen Sie überhaupt_F Kuchen?*
sell.PRS.2SG you.2SG *überhaupt* cake.ACC

(C4.v) *Trinkst du überhaupt Alkohol?*
drink.PRS.2SG you.2SG *überhaupt* alcohol.ACC

Conversation 5

- | | |
|---|--|
| (i) A: <i>Wie war das Wetter, als du in Rom warst?</i> | A: How was the weather when you were in Rome? |
| (ii) B: <i>Das Wetter war gut.</i> | B: The weather was good. |
| (iii) A: <i>Wie war das Essen?</i> | A: How was the food? |
| (iv) B: <i>Sehr lecker.</i> | B: Very tasty. |
| (v) A: <i>Wie waren die Leute?</i> | A: How were the people? |
| (vi) B: <i>Die Leute waren sehr nett. Es war überhaupt_F (alles) sehr schön in Rom.</i> | B: The people were very nice. It was überhaupt_F very nice in Rome. |

Here, a paraphrase of the last sentence would be *It was generally/overall very nice in Rome*. Alternatively, A could have asked *War überhaupt_F (alles) schön in Rom?*, which can be paraphrased correspondingly.

2.2 Discourse requirements of *überhaupt*

2.2.1 Summary of the discourse requirements of *überhaupt*

A careful review of the uses of *überhaupt* must make mention of its discourse requirements. In fact, there are precise conditions that must be met in order for a sentence with *überhaupt* to be felicitous.

One such condition is that *überhaupt* cannot occur in an utterance that constitutes a direct reply to a question. Observe that in none of the conversations in 2.1, the utterance containing *überhaupt* directly answered the immediate (last) question asked. In conversation (C1), the answerer does not respond directly to the question about chocolate cake, but opts to make a more general statement instead. In conversation (C2) again the statement that B does not drink alcohol is not a direct answer to any question asked. And finally, in conversation (C5) the last direct question asked is about the people in Rome, and, while B answers this question directly (*Die Leute waren sehr nett.*), the utterance containing *überhaupt* (*Es war überhaupt_F (alles) sehr schön in Rom.*) is a more general statement that does not constitute a direct answer to the question asked by A. If one uses a definition of relevance wherein a reply to a question *q* is relevant exactly when the reply helps resolve *q* without providing any additional information not requested by *q*, then the utterances involving *überhaupt* are not strictly relevant to the last question asked. This is a general restriction on *überhaupt* sentences, a point which will be made more formal in 4.2.

Section 2.1 also illustrated that *überhaupt* is used only when the speaker is settling a sequence of questions. The word ‘settling’ is used here both for the case that a speaker answers an entire sequence of questions in one swoop (resolves the questions), as in (C1), and for the case that a speaker rejects or challenges the validity of a sequence of questions (by calling into question necessary preconditions for these questions), as in (C2). If we entertain the idea that the sequence of questions serves to address some overarching larger question, then we could say that utterances with *überhaupt* turn directly to this superordinate question, answering it or challenging it depending on whether *überhaupt* is focused or unfocused, respectively.

Due to the requirement that utterances with *überhaupt* must settle a sequence of questions, conversation-initial uses of *überhaupt* usually have the effect that the hearer must fill in the requisite context and accommodate the use of *überhaupt* by supplying a suitable background of implicit questions. How difficult this is depends on the nature of the *überhaupt* utterance and on the amount of common ground between the speakers (as it relates to the *überhaupt* utterance).

2.2.2 Examples for contextual restrictions on *überhaupt*

In Section 2.1 we saw felicitous uses of *überhaupt* in conversation. The examples in 2.1 satisfied the discourse requirements of 2.2.1: that an utterance involving *überhaupt* must settle a sequence of questions, and that it must not be a direct reply to a question asked. In this section, we give examples of infelicitous uses of *überhaupt* alongside felicitous ones to illustrate that these discourse conditions are in fact necessary.

It was mentioned in 2.2.1 that out-of-the-blue uses of *überhaupt* usually are cases where the requisite background is being accommodated. Thus, with no special common ground or accommodation the following utterance is odd:

Example 6

(At the beginning of a conversation):

- (i) #*Trinkst du überhaupt/überhaupt*_F #Do you drink *überhaupt* alcohol?
Alkohol?

If, however, a group of friends were looking at the different wines available at a wine tasting, it may be natural for friend A to ask (E6.i) of friend B. This would convey that A has realized that the issues of whether B wants to taste different wines can be shortcut in two different ways. If A uses focused

überhaupt it is to see if all answers to the questions about different wines (*Do you want to taste wine a? Do you want to taste wine b?* etc.) might be *No*, in other words, by using focused *überhaupt* A is seeking to find an exhaustive answer to all these questions at once. By using unfocused *überhaupt*, A signals in addition that she is challenging some prior assumption (by A or someone else) that B drank alcohol.

Below we give a number of example conversations, followed by both felicitous and infelicitous uses of *überhaupt*. We will see that the general rule is that *überhaupt* is felicitous whenever the sentence containing it settles a sequence of questions.

Consider the following conversation:

Conversation 7

- | | |
|--|---------------------------------|
| (i) A: <i>Möchtest du ein Glas Wein?</i> | A: Do you want a glass of wine? |
| (ii) B: <i>Nein, Danke.</i> | B: No, thank you. |
| (iii) A: <i>Hättest du gerne ein Bier?</i> | A: Would you like a beer? |
| (iv) B: <i>Nein.</i> | B: No. |

Here are some felicitous and infelicitous follow-ups (note the different speakers):

- | | |
|---|---|
| (C7.v)-a B: <i>#Ich möchte überhaupt kein Bier.</i> | B: #I want <i>überhaupt</i> no beer. |
| (C7.v)-b B: <i>Ich möchte kein Bier.</i> | B: I want no beer. (I don't want beer.) |
| (C7.v)-c A: <i>#Möchtest du überhaupt etwas Vodka?</i> | A: #Would you like <i>überhaupt</i> some vodka? |
| (C7.v)-d A: <i>Möchtest du etwas Vodka?</i> | A: #Would you like some vodka? |
| (C7.v)-e A: <i>Trinkst du überhaupt Alkohol?</i> | A: Do you drink <i>überhaupt</i> alcohol? |
| (C7.v)-f B: <i>Ich trinke überhaupt keinen Alkohol.</i> | B: I drink <i>überhaupt</i> no alcohol. |

The follow-ups using *überhaupt* that are felicitous are the last two, (C7.v)-e and (C7.v)-f. These utterances include instances of unfocused *überhaupt*. Utterance (C7.v)-f states that B does not even drink alcohol. Because this was a necessary condition for B wanting to drink wine, beer, or any number of different alcoholic drinks, the uttering of (C7.v)-f serves to settle the line of interrogation begun by A in (C7). In this case, B terminates the line of interrogation by showing that it may have been based on an incorrect

assumption.⁶ The corresponding question (C7.v)-e with unfocused *überhaupt* (paraphrasable as *Do you even drink alcohol?*) serves to elicit the statement that B does not drink alcohol, which would likewise settle the sequence of questions in (C7), again by showing that a necessary precondition was not met. Other types of utterances, such as questions continuing the line of interrogation, like (C7.v)-c, or direct answers to an uttered question, like (C7.v)-a, are infelicitous if they include *überhaupt*, although they are felicitous without *überhaupt*—see (C7.v)-d and (C7.v)-b.⁷

Similarly, in the following conversation only those uses of *überhaupt* that occur in a sentence that settles a sequence of questions are allowed.

Conversation 8

- | | | |
|-------|--|--------------------------------|
| (i) | <i>A: Verkaufen Sie Marmorkuchen?</i> | A: Do you sell marble cake? |
| (ii) | <i>B: Nein.</i> | B: No. |
| (iii) | <i>A: Verkaufen Sie Schokoladenkuchen?</i> | A: Do you sell chocolate cake? |
| (iv) | <i>B: Leider nicht.</i> | B: Unfortunately not. |

Below are several infelicitous and felicitous follow-ups:

- | | | |
|----------|---|--|
| (C8.v)-a | <i>B: #Ich verkaufe überhaupt_F keinen Schokoladenkuchen.</i> | B: #I sell überhaupt _F no chocolate cake. |
| (C8.v)-b | <i>B: Ich verkaufe keinen Schokoladenkuchen.</i> | B: I sell no chocolate cake. |
| (C8.v)-c | <i>A: #Verkaufen Sie überhaupt_F Karottenkuchen?</i> | A: #Do you sell überhaupt _F carrot cake? |
| (C8.v)-d | <i>A: Verkaufen Sie Karottenkuchen?</i> | A: Do you sell carrot cake? |
| (C8.v)-e | <i>A: Verkaufen Sie überhaupt_F Kuchen?</i> | A: Do you sell überhaupt _F cake? |
| (C8.v)-f | <i>B: Ich verkaufe überhaupt_F keinen Kuchen.</i> | B: I sell überhaupt _F no cake. |

The utterance (C8.v)-f, which contains focused *überhaupt*, settles the sequence of questions of whether B sells *a*-cake, *b*-cake, *c*-cake, . . . , while

⁶ That A offers B alcoholic drinks does not imply that A assumed B drinks alcohol. However, since A offers B several alcoholic drinks in a row, B may reasonably suspect that A assumes B drinks alcohol. This assumption can be challenged in a sentence with unfocused *überhaupt*.

⁷ There are felicitous continuations of (C7) that include focused *überhaupt*, this kind of continuation is not shown here. Instead, this kind of continuation is illustrated in the follow-ups to (C8) for the analogous cake conversation.

the matching question (C8.v)-e is geared towards eliciting an utterance that settles whether B sells *a*-cake, *b*-cake, *c*-cake, . . .⁸ Once again, simple follow-up questions that continue the same line of interrogation—like (C8.v)-c—or direct answers containing no extra information—such as (C8.v)-a—cannot felicitously include *überhaupt*.⁹

Again, in the conversation below, the utterances that may include *überhaupt* are those that settle the line of interrogation pursued by A in (C9) regarding Rome's weather, Rome's food, Rome's people, and so on. Among the choices listed, those are the utterances (C9.vii)-f, which says that everything was nice in Rome, or the corresponding question (C9.vii)-e that tries to elicit the answer that everything was nice in Rome.

Conversation 9

- | | |
|--|---|
| (i) A: <i>Wie war das Wetter, als du in Rom warst?</i> | A: How was the weather when you were in Rome? |
| (ii) B: <i>Das Wetter war toll.</i> | B: The weather was good. |
| (iii) A: <i>Wie war das Essen?</i> | A: How was the food? |
| (iv) B: <i>Sehr lecker.</i> | B: Very tasty. |
| (v) A: <i>Waren die Leute nett?</i> | A: Were the people nice? |
| (vi) B: <i>Ja.</i> | B: Yes. |

Felicitous and infelicitous follow-ups:

- | | |
|---|---|
| (C9.vii)-a A: <i>#Wie waren die Museen überhaupt_F?</i> | A: #How were the museums <i>überhaupt</i> ? |
| (C9.vii)-b A: <i>Wie waren die Museen?</i> | A: How were the museums? |
| (C9.vii)-c B: <i>#Die Leute waren überhaupt_F nett.</i> | B: #The people were <i>überhaupt</i> nice. |
| (C9.vii)-d B: <i>Die Leute waren nett.</i> | B: The people were nice. |
| (C9.vii)-e A: <i>War überhaupt_F alles schön in Rom?</i> | A: Was <i>überhaupt_F</i> everything nice in Rome? |
| (C9.vii)-f B: <i>Es war überhaupt_F (alles) schön in Rom.</i> | B: It (Everything) was <i>überhaupt_F</i> nice in Rome. |

⁸ These uses of focused *überhaupt* are possible both when there was an assumption that B sells cake and when there was no such assumption. Contrary to unfocused *überhaupt*, the use of focused *überhaupt* therefore does not signal that an assumption is being challenged.

⁹ I used the follow-ups to (C8) to illustrate the use of focused *überhaupt*, while I used the follow-ups to (C7) to illustrate the use of unfocused *überhaupt*. However, the setup of these conversations is identical, they are kept apart just to maintain an easy phenomenon-to-conversation correspondence.

The examples above show that the particle *überhaupt* is used only within very specific discourse structures and that usually a context of a very particular kind is required. Since *überhaupt* does not make any truth-conditional contribution, I take these strict distributional requirements of *überhaupt* to be the key to the meaning of *überhaupt*. This is rigorously formulated in 4.4, the central part of this paper.

2.3 Classification of the meanings of *überhaupt*

2.3.1 Two uses of *überhaupt*: Resolving and Doubting

I stated that all felicitous sentences with *überhaupt* in the examples above have the property that they settle a sequence of questions. For instance, the sequence of questions of whether or not B sells marble cake, chocolate cake, or any number of other cakes is resolved when B utters *Ich verkaufe überhaupt_F keinen Kuchen*. B resolves the whole sequence of questions regarding *a*-cake, *b*-cake, *c*-cake etc. in one swoop. I will call this kind of settling a *resolving* use of *überhaupt*. Now consider the felicitous statement *Ich trinke überhaupt keinen Alkohol* in (C7). This statement also settles the sequence of questions regarding alcohol *a*, alcohol *b*, alcohol *c*, However, this time B settles this sequence of questions by pointing out that a certain precondition, namely the condition that B drinks alcohol, does not hold true. I will label this kind of settling move a *doubting* use of *überhaupt*. The corresponding *resolving* and *doubting* questions, i.e., *Verkaufen Sie überhaupt_F Kuchen?* and *Trinkst du überhaupt Alkohol?* are the natural question counterparts to the previously mentioned declaratives and I will call them *resolving* and *doubting*, respectively.

Notice that, in our examples, the focused uses of *überhaupt* correspond to *resolving* moves, while the unfocused uses correspond to *doubting* moves. This distinction between *doubting* and *resolving* moves will be made explicit in Section 4.

2.3.2 Summary

A summary of the main types of *überhaupt* just discussed is given in Table 1, which also indicates the presupposition¹⁰ behavior of each type.

¹⁰ The term 'presupposition' will be used in a wide sense here, both for presuppositions in the classical sense, as well as for an implicit assumption from previous discourse. What we call

unfocused <i>überhaupt</i>: (presupposition-challenging)	focused <i>überhaupt</i>_F: (need not challenge a presupposition)
α) <i>überhaupt</i> in polar question: Trinkst du <i>überhaupt</i> Alkohol? “Do you even drink alcohol?”	δ) <i>überhaupt</i> _F in polar question: <i>Hast du überhaupt</i> _F Hausaufgaben “Were you assigned any homework at all?”
β) <i>überhaupt</i> + negation (declarative): <i>Ich trinke überhaupt keinen Alkohol.</i> “I (actually) don’t drink alcohol.”	ϵ) <i>überhaupt</i> _F + negation (declarative): <i>Ich habe überhaupt</i> _F keine Hausaufgaben “I wasn’t assigned any homework at all.”
γ) N/A	η): <i>überhaupt</i> _F + universal quantifier or scalar predicate: <i>Es war überhaupt</i> _F alles schön in Rom. “It was generally nice in Rome.”

Table 1 Summary of the main types of *überhaupt*

3 Previous accounts

There is previous work describing the uses and meanings of *überhaupt*. König (1983) classifies them into: group A, which encompasses focused *überhaupt* plus universal quantifier or scalar predicate; group B, which includes other uses of focused *überhaupt*, such as focused *überhaupt* plus negation or uses in polar questions; and group C, unfocused *überhaupt*.¹¹ In the examples that König provides for group A, the particle *überhaupt* could be translated by English *generally*; he describes the meaning as one of generalization, which is in accord with my description of (C5). König’s group B features examples where *überhaupt* can be captured by English *at all*, see conversation (C1). Finally, English *actually* or *even* are suitable paraphrases for the group C uses of *überhaupt*. König characterizes this use as one that challenges a precondition, just as I claimed for (C4). He posits, using etymological arguments, that the use of *überhaupt* plus universal quantifier (or scalar predicate) is the primary one. He likens groups A and B by saying that they

presuppositions here will not always be a syntactically visible presupposition; however, in the tree structures that I will define in 4.2, these will be true presuppositions in the classical sense.

¹¹ König also mentions a “surprise” use of *überhaupt*, but considers it marginal. He describes it as being used when someone has a sudden insight. One of his examples is the utterance *Ach überhaupt, da fällt mir noch was ein* (roughly: Oh *überhaupt*, I have an idea).

both are used in an utterance that represents a generalization. König further points out that groups B and C occur in the same syntactic environments, after negation or in polar questions, although they place different restrictions on the previous discourse. König stops short, however, of providing a unified meaning for *überhaupt*, and in fact claims that the meaning of these different groups cannot be derived from a single basic meaning (König 1983: 160). Like König, Thiel (1962) and Becker (1976) identify one particular usage of *überhaupt* (and the corresponding meaning for this usage) as primary, and the other meanings as derivative. They also find no single meaning to be applicable to all uses of *überhaupt*. Interestingly, these authors vary in terms of which usage they regard as the basic one. For König and Thiel, a certain meaning conveying generalization or exhaustivity, corresponding roughly to König's group A, is the primary one. On the other hand, Becker regards the use of *überhaupt* to challenge a claim (König's group C) as the primary use. Harden (1983) offers a characterization of *überhaupt* in terms of features (such as *extension*, *casual*, *aggressive*, *emphasis*, ...), which are either present or absent in different syntactic or conversational environments. While it is possible to collect all the possible *überhaupt* features (not all of which are active in all contexts) in a single matrix, this corresponds more to taking the union of all the possible meanings rather than representing a single meaning for *überhaupt* that unifies the different uses.

Anderssen (2006) develops a broader theory of *überhaupt* in terms of domain widening. However, the usages of *überhaupt* that he addresses still form just a proper subset of the types described by König. For instance, Anderssen (2006) remarks that his domain widening theory does not rigorously account for the use of *überhaupt* that challenges a claim or assumption (Anderssen 2006: 7).

In the remainder of this section I will discuss the meaning that Anderssen proposes to account for ϵ and η , two of the *überhaupt* types I laid out in Section 2. Anderssen points out that his domain widening account cannot fully explain types α and β , namely unfocused *überhaupt* (Anderssen 2006: 7).¹²

Anderssen's account (Anderssen 2006) of *überhaupt* incorporates elements from a group of theories of English *any* that claims that *any* consists of a domain widener plus existential quantifier. Under these accounts, *any* is thus semantically complex. In Anderssen's analysis, the German *überhaupt* is an overt manifestation of this semantic complexity. He claims that it

¹² Anderssen does not refer to this type of *überhaupt* as the unfocused one, but it is clear that these are the uses he has in mind.

corresponds just to the first part of *any*, namely the domain widening part, and argues that this is evidenced by the fact that *überhaupt*, unlike *any*, can combine with a determiner. To describe when *überhaupt* is licensed, Anderssen relies on a group of theories for NPIs that argue that domain widening is allowed only when it results in strengthening (Kadmon & Landman 1993, Krifka 1995, Lahiri 1998, Chierchia 2004).

Below are the expressions that Anderssen, based on Chierchia 2004, provides as analyses for the following two sentences. I have added focus marking on *überhaupt* because sentence (E10.ii) below without focus has a different sense—namely, one paraphrasable as *I actually don't have potatoes.*, which would not be adequately captured by the formulas in (E10). In what follows, I will be distinguishing focused from unfocused *überhaupt* even though Anderssen did not make this distinction.

Example 10

- (i) *Ich habe keine Kartoffeln.* I have no potatoes.
 $\neg(\exists x \in D)\text{potato}(x) \wedge \text{have}(\text{speaker}_c, x)$
- (ii) *Ich habe **überhaupt_F** keine Kartoffeln.* I have **überhaupt_F** no potatoes.
 $(\forall D' \supseteq D)\neg(\exists x \in D')\text{potato}(x) \wedge \text{have}(\text{speaker}_c, x)$

Anderssen argues that *überhaupt* is licensed in this case because the second of these expressions entails the first. He uses a similar strengthening argument to explain why *überhaupt* can occur with a universal quantifier. The argument here is that a positive sentence with *überhaupt alle* (*überhaupt all*) will entail the corresponding sentence without *überhaupt* if *überhaupt* is analyzed as a domain widener.

I believe that Anderssen's account is problematic in two respects: its distributional predictions for *überhaupt*, and its characterization of *überhaupt* in terms of domain widening. I begin by discussing the distributional predictions.

Anderssen's theory predicts that the sentence *Ich habe **überhaupt_F** keine Kartoffeln* is always felicitous, anywhere in discourse. This follows from the fact that it entails the (in his account) weaker sentence *Ich habe keine Kartoffeln* and that thus *überhaupt* satisfies the strengthening requirement. But I illustrated in Section 2 that this is not correct. The reader may refer to Section 2 for the distributional requirements for sentences involving focused *überhaupt* plus negation. I limit myself to one illustrative example here. Consider the following exchange in English, which roughly captures the intuitions behind Anderssen's definition (E10.ii):

Conversation 11

- (i) A: *Do you have potatoes?*
- (ii) B: *No, I have no potatoes whatsoever.*

Contrary to what [Anderssen's](#) conditions for (focused) *überhaupt* state, this dialogue cannot be translated with focused *überhaupt*:

Conversation 12

- (i) A: *Hast du Kartoffeln?* A: Do you have potatoes?
- (ii) B: *#Nein, ich habe überhaupt_F keine Kartoffeln.* B: No, I have *überhaupt* no potatoes.

[Anderssen](#) points out “distributional similarities” between phrases with *überhaupt* and *any* ([Anderssen 2006](#): 1), but ultimately does not discuss the distributional requirements of *überhaupt* in their own right. As a result, important distributional differences are missed. For instance, [Anderssen](#) seems to suggest that in negative sentences *überhaupt kein* and *not any* pattern in the same way. I believe this to be incorrect. The stringent restrictions of *überhaupt* on the preceding discourse were outlined in the previous section. Without going into a lengthy discussion of English *any*, I claim that there are many cases where *any* in a negative sentence can be used, but where *überhaupt* plus negation would not be appropriate. An important reason for this is that very often negated sentences with *any* represent the canonical, or least marked, way to negate a given positive statement. A sentence like *I don't have any friends* is the canonical negation of *I have friends*, whereas *Ich habe keine Freunde* (without *überhaupt*) is the canonical negation of *Ich habe Freunde*. The corresponding sentence with *überhaupt*, i.e., *Ich habe überhaupt keine Freunde* has much more stringent requirements on the preceding discourse, as outlined in Section 2. A minimal difference is that *Ich habe überhaupt keine Freunde* cannot be used as a direct answer to the question *Hast du Freunde?* (Do you have friends?), whereas the corresponding sentence with *any* could be used in such a situation.

[Anderssen's](#) analysis, however, is restricted to the scope of a single sentence. It does not take into account the distributional requirements of *überhaupt*, but in fact makes the incorrect prediction that focused *überhaupt* plus negation or universal quantifier can occur at any point in a discourse.

The second problem with [Anderssen's](#) account is its range of applicability: I claim that the domain widening account only applies to a specific subclass of examples, even once we have restricted our attention just to types ϵ and η .

To see a type η example where *überhaupt* need not involve domain widening, consider the following:

Conversation 13

- | | |
|---|---|
| (i) A: <i>Hast du zwei Kinder?</i> | A: Do you have two children? |
| (ii) B: <i>Nein.</i> | B: No. |
| (iii) A: <i>Hast du ein Kind?</i> | A: Do you have one child? |
| (iv) B: <i>Nein.</i> | B: No. |
| (v) B: <i>Ich habe überhaupt_F kein Kind.</i> | B: I have überhaupt_F no children. |

Here, the notion of “*Kind*” has not been widened—in part because it is a fairly precise notion, but also because it is not necessary in order to make sense out of the conversation. The interlocutor is simply stressing that she has no child. The use of *überhaupt* does not produce a widened or loosened notion of the word child. However, that is exactly what is expressed by the formula in (E10).

In the next section I will account for the type ϵ and type η uses of *überhaupt* using a discourse approach. In addition, I will show how the discourse approach can explain types α , β and δ , which Anderssen does not explain. In particular, I will demonstrate how the gap between focused and unfocused *überhaupt* can be bridged, something that König and Anderssen indicated their accounts did not do, at least not rigorously. Finally, in Section 7, I will show that the domain widening intuition, in those cases where it is in fact appropriate (which is a proper subset of where Anderssen claims domain widening applies), can be recovered using the discourse account of this paper. The advantage of the discourse-based approach is that it continues to work even in non-domain-widening instances of the usages discussed by Anderssen and, contrary to domain widening, it also covers the other types of *überhaupt* described in Section 2, most importantly unfocused *überhaupt*.

4 A discourse model for *überhaupt*

The central claim of this paper is that the inclusion of discourse structure allows a unified account of *überhaupt*. The study of discourse structure begins with the assumption that discourse serves a purpose, and is organized to serve that purpose. The simplest manifestation of this is the idea that, at any given point in a conversation, there is some issue being addressed or

pursued. If we think of this issue as a question that we are trying to answer, we arrive at the notion of a question under discussion, or QUD for short.

As a simple example, if Sam says *Jenny ate a salad and Mary ate pasta*, he might be addressing the QUD *What did your sisters eat for lunch?* This QUD is a simple question that Sam can answer using a single utterance. For the most part, however, the goal of a conversation cannot be articulated in terms of a simple question, and even if the QUD has been articulated it may not be easily answerable. Such complex issues can be addressed in stages, via sub-issues manageable using the vocabulary available. These ideas have been formalized by various authors, e.g., Groenendijk (1999) and Roberts (1996/2012), and will play a role in the formalism of Section 4.4.

Section 4.1 lays out the proposal for *überhaupt* informally. Afterwards, in Sections 4.2 and 4.3, we develop the formalism we will use to make our formal proposal for the meaning of *überhaupt* in Section 4.4.

4.1 Informal description

The core of our proposal is that *überhaupt* marks an utterance as a move to a higher question under discussion. In a conversation, we may be addressing questions concerning sub-aspects of a larger question *Q*. If we want to doubt the validity of the larger question *Q*, or if we want to resolve *Q* in one swoop, we can use *überhaupt* to do so. Let us consider the following example:

Conversation 14

- | | | |
|-------|--|--|
| (i) | <i>A: Meinst du, dass diese Aufgabe durch Induktion lösbar ist?</i> | A: Do you think that this problem is solvable by induction? |
| (ii) | <i>B: Nein, ich habe das gestern versucht und es hat nicht funktioniert.</i> | B: No, I tried that yesterday and it didn't work. |
| (iii) | <i>A: Vielleicht hilft uns das Theorem, das wir im Unterricht gelernt haben.</i> | A: Perhaps the theorem that we learned in class will help. |
| (iv) | <i>B: Nein, das trifft hier nicht zu.</i> | B: No, that doesn't apply here. |
| (v) | <i>A: Wir haben schon alles versucht. Ist die Aufgabe überhaupt lösbar?</i> | A: We've already tried everything. Is the problem <i>überhaupt</i> solvable? |

While the larger question *Q* that is being addressed here is something along the lines of *What is the way in which this problem can be solved?*, the actual utterances merely address a kind of subquestion of this larger question—*Is*

*induction the right way? or Can we use the theorem from class? etc.—i.e., particular questions about possible ways to solve the problem. If many methods have failed, at some point an interlocutor might ask whether the original question *Q* was valid at all or, in particular, whether the presupposition that there was some way the problem could be solved is valid. When we address this higher-level concern, it is the use of *überhaupt* that signals that we are abandoning the current level (regarding whether method *a* works, method *b* works, method *c* works, ...) and moving to a higher question under discussion. This example used unfocused *überhaupt*, so it corresponds to what we dubbed a *doubting* move: i.e., it terminated a line of conversation about what methods work to solve the problem by raising a higher-level issue of whether or not the line of inquiry is even sensible.¹³ (If the problem has no solution, then going through various methods and asking if they will work for this problem is pointless.)*

Here is another example, this time featuring focused *überhaupt*:

Conversation 15

- | | |
|---|--|
| (i) A: <i>Wie war das Wetter, als du in Rom warst?</i> | A: How was the weather when you were in Rome? |
| (ii) B: <i>Das Wetter war toll.</i> | B: The weather was good. |
| (iii) A: <i>Wie war das Essen?</i> | A: How was the food? |
| (iv) B: <i>Sehr lecker.</i> | B: Very tasty. |
| (v) A: <i>Wie waren die Leute?</i> | A: How were the people? |
| (vi) B: <i>Die Leute waren sehr nett. Es war überhaupt_F (alles) sehr schön in Rom.</i> | B: The people were very nice. It was überhaupt_F very nice in Rome. |

In this conversation, the larger question being addressed might be *What were things like in Rome?* The actual uttered questions address only aspects of this larger question, namely if the weather was nice, the food was nice, etc. The sentence with focused *überhaupt* moves from this level to a higher level question, *What were things like in Rome?*, and then immediately resolves it. Another way of saying this is that the question with *überhaupt* resolves all

¹³ Magdalena Kaufmann makes the intriguing remark that in this conversation *überhaupt* can be used in its focused form as well, while still producing the same conversational doubting effect, which she suggests may be due to the binary nature of the adjective *lösbar* (solvable). This is a fruitful question for further investigation. Interestingly, the conversational effects seem to remain distinct in the corresponding declarative utterances. That is, in the sentence *Die Aufgabe ist überhaupt_F/überhaupt nicht lösbar* only the version with unfocused *überhaupt* signals explicitly that some previous assumption is being challenged.

the possible questions regarding subaspects of Rome (was aspect *a* nice?, was aspect *b* nice?, ...), by answering each one with *Yes*. But by resolving all subquestions of the higher question we get the answer to the higher question.

The notion I will require for my treatment of *überhaupt* is that of a hierarchy of questions. I will represent these hierarchies as trees, which allows me to talk about higher (more general, complex) questions and lower (more specific, simple) questions under discussion. Here I will motivate the basic idea behind my account of *überhaupt*, putting off the formal definitions until Section 4.2.

There are two properties it is important for such a hierarchy to have.

- (a) Daughter questions are intended to investigate parts of their parent question. As such, any possible answer to a daughter question should narrow down the possible answers to the larger question, reducing them to a strict subset.

Since in structuring discourse an interlocutor may make working assumptions (which may or may not be valid), we allow daughter questions to make assumptions not present in the parent question. Thus the parent question may have possible answers which are not consistent with the assumptions of a daughter question.

For example, if A meets B on the street and is interested in knowing about the person (the larger issue), A may ask the question *What is your job?* Yet B might turn out to be unemployed. A need not be making the assumption that B has a job; more likely, he finds it more efficient than asking *What is your job, if you are employed?*, and accepts the risk of being told that B does not actually have one.

Conversely, an interlocutor can make a working assumption, but that working assumption need not be reflected explicitly in the uttered question. For example, in Conversation (C7) speaker A may be making the working assumption that B wants alcohol, yet for the sake of brevity he would not bother to specify he is making that assumption. Therefore we only wish to require the possible answers to the subquestion to narrow down the answers to the parent question given the assumptions of the parent question.

- (b) In this model, the purpose of daughter questions is to get at all the information necessary to answer their parent question by breaking it down into manageable pieces. However, if the daughter questions are not

capable of providing a complete answer to the parent question then they will be unable to satisfy their goal of resolving it. Therefore, in a good strategy the daughter questions, once they have all been answered (or found to make assumptions inconsistent with the facts), must provide a unique answer to the parent question.

In other words, the answers to every daughter question must combine to answer the parent question uniquely.

4.2 Developing the formalism

Before embarking on a characterization of *überhaupt* we will require a formal model for discourse strategies that allows us to capture a hierarchy of questions under discussion and felicitous ways of moving between them. Various formal discourse representations have been proposed (Roberts 1996/2012, Carlson 1983, Groenendijk 1999, Büring 2003). The ones that have most influenced my treatment here are those of Groenendijk (1999) and Roberts (1996/2012). Groenendijk described a formal framework for discourse well-formedness that is, in a sense, a formalization of Grice's conversational maxims. He used the characterization of a question as a partition on the set of worlds, as used in (Groenendijk & Stokhof 1982, 1984, Lewis 1988). This approach models a question as the set of its possible answers, and identifies each answer with the set of possible worlds in which it holds true. Groenendijk formalized the Gricean maxims in terms of relationships between such partitions. In (Groenendijk 1999), every utterance, whether it be a question or statement, is incorporated into the interlocutors' common ground. These update requirements are loosened in Roberts' paper on interrogation strategies (Roberts 1996/2012), where utterances (or, as she calls them, moves) may or may not be accepted by the interlocutors. Roberts puts forward the notion of interrogation strategies, i.e., strategies that try to address some superquestion Q in terms of more specific questions, which in turn may be addressed via subquestions, and so on. In what follows, I will define what I call an S-tree, a specific type of strategy tree that roughly satisfies some of Groenendijk's formalized Gricean principles and also has some resemblance to Roberts' strategies.¹⁴

¹⁴ A certain type of strategy tree (called d-tree) was defined by Büring (2003). Büring constrains the family of admissible d-trees in two types of ways. The first type of constraints is based solely on the propositional content, while the second type of constraints, Givenness and the CT-Condition, concern the exact word choice and focus marking of an utterance.

Let W be the set of possible worlds. We will think of a question as a partition of some subset of W . More formally, we can define a *question* to be a binary relation on W which is symmetric and transitive. Equivalently, a question is an equivalence relation on a subset $W' \subseteq W$. A statement corresponds to a set of worlds, which in this framework can be viewed as a partition with just one cell (equivalence class). Thus we can model a statement as a question q such that, whenever $\langle w, w \rangle \in q$ and $\langle w', w' \rangle \in q$, then $\langle w, w' \rangle \in q$. Below we will use the word ‘question’, but it is understood that a question with just one cell (equivalence class) is in fact a statement. The question definition used here corresponds to what is called a *question relativized to an information set* in Groenendijk & Stokhof 1984, or later a *structured context* in Groenendijk 1999.

In order to capture the discourse structures that license the use of *überhaupt* questions or *überhaupt* statements, a few additional definitions are needed:

- (1) \bar{q} , the *completion* of q , is the question obtained from q by adding a cell containing all worlds not contained in q . All preexisting cells are left intact.

Definition 1 (completion). The *completion* \bar{q} of q is

$$\bar{q} \equiv q \cup \{ \langle v, w \rangle \in W \times W \mid \langle v, v \rangle \notin q \ \& \ \langle w, w \rangle \notin q \}.$$

When applied to a statement (a question with a single cell), completion has the effect of turning it into a polar question. For instance, if p is the statement *The sun is shining*, then \bar{p} is the question *Is the sun shining?*¹⁵ When completion is applied to a proper question (one that is not a statement), the effect is that of lifting any presuppositions of this question. For instance, the question $q =$ *What presents did you buy for*

Büring’s tree restrictions that are based just on the propositional content of an utterance are formulated in terms of probabilities and are rather more permissive than the conditions for S-trees, which are formulated in terms of partitions on the set of possible worlds (Büring 2003: 20-21). The set of possible d-trees is thus constrained primarily via restrictions on form, whereas S-trees are defined solely based on information content, using a possible worlds model.

¹⁵ For statements with presuppositions, this is a slight simplification. We could define completion with respect to a subset of W to keep track of presuppositions in polar questions. For the present purposes, this simpler version where the completion is always taken with respect to the whole set W is sufficient, as we do no further computation with it.

Sam's birthday? could be said to presuppose that the addressee obtained at least one present for Sam. Completing this question—i.e., forming \bar{q} —lifts this presupposition and yields the question *What presents, if any, did you buy for Sam's birthday?*

- (2) \square is a binary operation that is similar to question intersection, except that some cells lying outside the intersection are also included.

Definition 2 (combination). The *combination* $q_1 \square q_2$ of q_1 and q_2 is

$$q_1 \square q_2 \equiv (\bar{q}_1 \cap \bar{q}_2) \cap (q_1 \cup q_2).$$

The combination Q of the n questions $q_1, q_2, q_3, \dots, q_n$, written $\square_{i=1}^n q_i$, corresponds to the most general question whose answer can be determined by answering each of the questions q_1, q_2, \dots, q_n .¹⁶ Take for instance the two questions, $q_1 = \text{'What are your girls' names?}'$ and $q_2 = \text{'What are your boys' names?}'$ The first question q_1 presupposes that the addressee has daughters, and the second question q_2 presupposes that the addressee has sons. When we form the combination $Q = q_1 \square q_2$ we obtain the question *What are your children's names?* This latter question still has a presupposition, namely that the addressee has children, but it does not presuppose anything about their gender. Moreover, if the person answers the first two questions (by either providing their children's names or by indicating that they in fact don't have sons or don't have daughters), then the answer for the combination Q (or the fact that Q has no answer) will be fully determined.

- (3) $<$: $q < Q$ if the cells of q are unions of cells of Q ; this is similar to saying that q is a subquestion of Q , but entire cells can be thrown out (i.e., additional presuppositions can be made).

Definition 3 (narrowing). If q and Q are questions in $W \times W$, then we say that q *narrows* Q ($q < Q$) if and only if, for every pair of worlds $\langle v, w \rangle \in W \times W$,

$$\langle w, w \rangle \in q \text{ and } \langle v, w \rangle \in Q \implies \langle v, w \rangle \in q$$

and

$$\langle v, v \rangle \notin Q \text{ and } \langle w, w \rangle \notin Q \implies \langle v, w \rangle \in \bar{q}.$$

¹⁶ While \square is defined as a binary operation, it is associative and symmetric so the order in which we combine a sequence of questions is irrelevant.

The fact that q narrows Q tells us the following: Firstly, any answer to q provides a partial answer to Q (that is, some cells of Q are eliminated).¹⁷ Secondly, if we know the full answer to Q , then we know the full answer to q . This intuitively means that q cannot raise issues that are not raised by Q .

- (4) The *smash* \hat{q} of q is the statement that q is answerable, i.e., it is the question with one cell containing all worlds contained in q . Intuitively, it is the presupposition implicit to q .

Definition 4 (smash). The *smash* \hat{q} of q is defined by

$$\hat{q} \equiv \{ \langle v, w \rangle \in W \times W \mid \langle v, v \rangle \in q \ \& \ \langle w, w \rangle \in q \}$$

- (5) Therefore, $\bar{\hat{q}}$ is the question *is q answerable?* It contains two cells: one with all the worlds contained in q , and another with all the worlds not in q .

Now that the relevant relations between questions are defined, I turn to the definition of the strategy trees that will allow a formalization of *überhaupt*. These trees, let us call them S-trees, will be trees of questions in which the children of each node *combine* to form that node and each node *narrows* down its parent node (see terms above). The leaves are traversed from left to right. At any point, the ancestors of the uttered leaf are the questions under discussion.

Definition 5 (S-tree). A strategy tree, or S-tree, is a question tree¹⁸ satisfying the following:

- i. Every child q of a node Q satisfies the relation $q < Q$.
- ii. The children q_1, \dots, q_k of Q satisfy $Q = \square_{i=1}^k q_i \cap \hat{Q}$.

The S-trees just defined represent a hierarchy of questions that capture a possible organization of a conversation. Some nodes in the tree may correspond to questions that were actually uttered, while others correspond

¹⁷ Or implies that Q has an invalid presupposition, if the answer lies outside of Q . This can happen because the definition of narrowing does not prevent a question q that narrows Q from containing worlds not contained in Q , in other words, from having fewer presuppositions than Q .

¹⁸ I assume that the questions in the tree are proper questions, not statements.

to implicit or tacit questions. It is not claimed that a collection of explicit questions forms part of a unique strategy tree, and in fact there is usually more than one strategy tree that is compatible with the uttered questions. We also do not update the context by the implicit questions, but interlocutors can have different degrees of commitment towards the presuppositions of implicit questions in the tree. Note that a child node may lack cells from the parent node or include cells not in the parent node. This is desired, as we want to allow daughter nodes both to have additional presuppositions that the parent question does not have or lack presuppositions that the parent question has (see (T19) in Section 4.4).

For later reference, it will be useful to give a name to all the S-trees compatible with a given set of utterances U . Let us denote this set by $\text{Stra}(U)$. Different interlocutors participating in a conversation with utterances U may have different S-trees (corresponding to different views of how the conversation is organized), but each of their S-trees must be in $\text{Stra}(U)$.

The definitions made above are further motivated and exemplified in 4.3.

4.3 Relation between strategy trees and discourse

It is important to emphasize that trees satisfying the properties of the previous subsection form a very natural structure. The principle underlying them is simple: discourse has a hierarchy of issues which proceed from more complex at a higher level to simpler at a lower level, with the questions at a lower level providing partial answers to the questions which subordinate them.

In the course of a long and involved conversation the interaction between strategy and discourse will be complex, but there is a simple model that can be used to generate discourse from strategy trees which will suffice in many exchanges. This model characterizes discourse as uttering a sequence of nodes within the tree, with the sequence of traversal determined by the answers the interlocutor receives after each question.

Definition 6 (Rules of traversal). An S-tree can be traversed as follows: We may proceed from a node to a sister node or to a child node.¹⁹ However,

¹⁹ As the idea is that the daughter nodes q_1, q_2, \dots, q_n of a node Q serve to break down Q into less complex questions, a move from a mother to a child node happens only if we have not received a full answer to the mother question yet.

we may only move to a parent or ancestor node if we are doing one of the following:

- (i) Resolution: We are resolving the parent node Q by providing a full answer to it. Or we are requesting a full answer by raising a possible full answer as a polar question.
- (ii) Doubting: We show that the parent node Q is not answerable, by stating the negation of its presupposition, $\neg\hat{Q}$. Or we raise the presupposition as a polar question, uttering $\overline{\hat{Q}}$.

The four types of utterances just mentioned, a full answer to Q , the polar question version of a full answer to Q , $\neg\hat{Q}$ and $\overline{\hat{Q}}$, can allow us (in the case of the questions, only if they elicit an answer that is an ascending move) to move upward in the tree. These are the only ways that we may move upward in the tree. I will term these *ascending moves*.

We also impose one additional requirement, namely that an ascending move not be a relevant reply (whether in proposition or question form) to the immediately preceding question. Relevance for propositions is defined here as in Groenendijk 1999: 115, and expanded to questions.

Definition 7 (Relevance). A proposition or question q_2 is said to be a relevant reply to a question q_1 if the intersection of q_1 and q_2 can be obtained from q_1 only by removing an integer number of cells (0 or more).

Definition 7 captures the intuition that an ascending move represents a move away from the current level of inquiry in the tree to a higher level.

Thus the full definition of an ascending move is:

Definition 8 (Ascending move). An ascending move is a move (or, in the case of questions, an attempt at such a move) up an S-tree that

- (i) respects the rules of traversal.
- (ii) is not a relevant reply to the immediately preceding question traversed in the tree, in other words violates the requirement of relevance.

Suppose q_1, q_2, \dots, q_n are the questions at our current level in the tree, and that the question Q is their parent node. Then at this point the possible ascending moves can be classified into four logical possibilities:

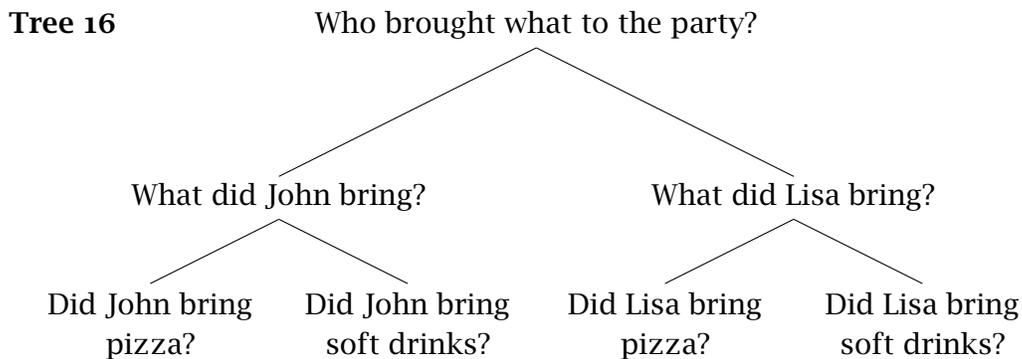
$$\neg\hat{Q}, \overline{\hat{Q}} \text{ (the } \textit{doubting} \text{ moves)}$$

and

$$\bigcap_{i=1}^n \text{ans}(q_i), \overline{\bigcap_{i=1}^n \text{ans}(q_i)} \text{ (the } \textit{resolving} \text{ moves)}$$

where for each i , $\text{ans}(q_i)$ represents some choice of answer to the question q_i and n is the number of sibling questions at the current level.²⁰

It is important to understand that S-trees are a natural discourse structure, which have no *a priori* relation to *überhaupt*. In an S-tree, each question is divided into a collection of related questions which, when answered, provide just enough information to answer the original question. This reflects a common situation in discourse where, for various reasons, a primary question of interest is investigated by dividing it into smaller pieces.²¹ An example of this principle is provided by the following tree:



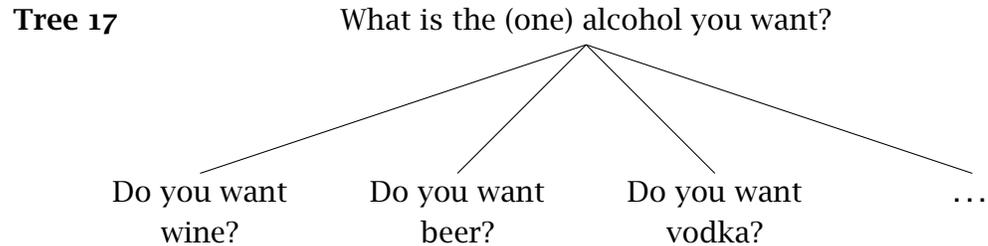
The intuition for an S-tree is that the daughter nodes of a question Q are questions that are simpler to answer as they are more coarse-grained than Q . In tree (T16) each cell of the question *What did John bring?* is a union of (one or more) cells of the question *Who brought what to the party?*. In tree (T16) the daughter nodes are subquestions of the mother nodes in the sense of Groenendijk 1999. General S-trees are somewhat more permissive, however. Thus, in an S-tree a daughter question may contain a presupposition not contained in the mother question or it may lack a presupposition that was present in the mother question.

If a person offers someone a range of alcoholic drinks, each time by asking a simple polar question with no presuppositions (e.g. *Do you want wine?*), they may be doing this in pursuit of the question *What is the (one) alcohol you want?*. That is, even though none of the uttered questions actually express any presupposition, a line of interrogation may be serving a larger question

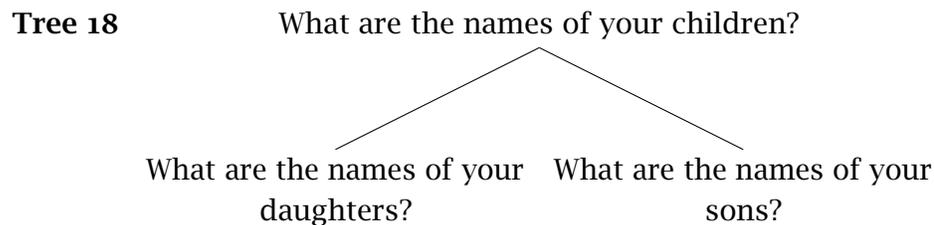
²⁰ In other words, $\text{ans}(q_i)$ is a proposition corresponding to one of the cells denoted by the question q_i .

²¹ Which particular strategy people use for this subdivision, i.e. which S-tree is ultimately used, is partly influenced by factors such as contrastive accent. See Büring 2003, for example.

that does have a presupposition or assumption. Using an S-tree, we can make these presuppositions overtly visible in the hierarchy.



Similarly, it may happen that we pursue a question by asking daughter questions that have presuppositions not present in the mother question. This is exemplified below:



In an S-tree, daughter nodes are questions that can be asked in lieu of addressing a mother question directly. This is done when the daughter nodes are simpler to answer. This is to be distinguished from the case when we ask a follow-up question that is more specific so as to obtain additional information. If, for instance, I asked the question q_1 *What vehicle do you use for your commute?* and get the response *car* I could ask the follow-up question q_2 *What kind of car do you commute with?* This latter question q_2 is more specific in that it asks for finer-grained information, the type of the car. However, q_2 does not narrow q_1 because q_2 is obtained from q_1 by taking the cell corresponding to the answer *car* and subdividing it into several cells, one for each car type.²²

²² In fact, in this case q_1 narrows q_2 . This is a borderline case. While the answers to q_1 are coarser than those to q_2 , asking q_1 with the goal of answering q_2 is not useful. I decided to keep the definition of S-trees as simple as possible. There are conversational principles that would keep us from using q_1 as a way of getting at the answers of q_2 . However, we could easily expand the definition of an S-tree to prevent this case by requiring, in addition to the other constraints on S-trees, that each daughter question q of a mother question Q have the property that $q \cap \hat{Q} \neq \hat{Q}$. This would prevent us from including trivial daughter nodes, i.e. ones the answering of which does not bring us closer to finding the answer to the parent question. I am grateful to Jan Anderssen for calling my attention to this type of example.

4.4 Main result: a formal proposal for *überhaupt*

We are now ready to propose a meaning for *überhaupt*. When *überhaupt* can be used felicitously and what it means are two notions that are intertwined. I will use the letter²³ \mathfrak{q} to denote either a question or a declarative sentence. Let $\mathfrak{q} \setminus \ddot{u}$ denote the same utterance but with *überhaupt* removed. This is always a legitimate utterance of German, though it has different distributional properties in discourse.

Say the set of utterances so far in the conversation is U . Then $\text{Stra}(U)$ is the set of all compatible strategy trees. The tree “favored” by each interlocutor i after the set of utterances U is denoted $S(i, U)$. It is an element of $\text{Stra}(U)$. The tree $S(i, U)$ represents i ’s view of how the discourse is organized.

Main Claim \star

The meaning of überhaupt: After utterances U , interlocutor i may felicitously utter a sentence \mathfrak{q} which includes *überhaupt* if and only if $\mathfrak{q} \setminus \ddot{u}$ is an ascending move in $S(i, U) \in \text{Stra}(U)$. Thus the presence of *überhaupt* in \mathfrak{q} signals that $\mathfrak{q} \setminus \ddot{u}$ is an ascending move in $S(i, U)$.

We know that there are exactly two types of ascending move in an S-tree, *doubting* moves and *resolving* moves, each of which can appear either in question or statement form. Thus there are the two *doubting* expressions $\neg\hat{Q}$ and \hat{Q} , and the two *resolving* expressions $\bigcap_{i=1}^n \text{ans}(q_i)$ and $\overline{\bigcap_{i=1}^n \text{ans}(q_i)}$. In Section 2, we gave examples suggesting that unfocused *überhaupt* corresponds to a *doubting* move, while focused *überhaupt* corresponds to a *resolving* move. This leads us to the following formulae for *überhaupt*.

Proposal (Unfocused *überhaupt*). Unfocused *überhaupt* appears in *doubting* moves in the form of either:

- (i) *Polar questions querying validity of the parent question*:

$$\overline{\hat{Q}}$$

- (ii) *Statements negating validity of the parent question*:

$$\neg\hat{Q}$$

Proposal (Focused *überhaupt*). Focused *überhaupt* appears in *resolving* moves in the form of either:

²³ Gothic letters refer to the sequence of words uttered when asking a question, as distinct from the partitions corresponding to that question.

A discourse model for *überhaupt*

- (i) *Polar question querying the verity of a possible answer to the parent question:*

$$\overline{\bigcap_{i=1}^n \text{ans}(q_i)}$$

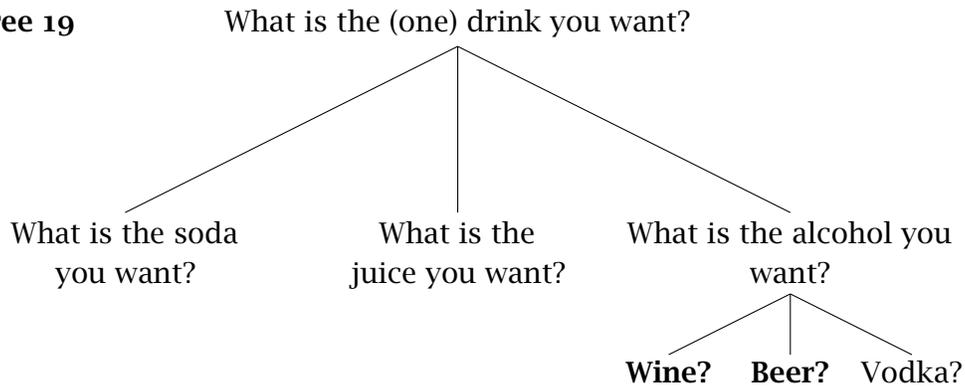
- (ii) *Statement resolving the parent question:*

$$\bigcap_{i=1}^n \text{ans}(q_i)$$

According to this proposal, if p_i is the statement obtained from q_i by answering q_i positively then focused *überhaupt* plus negation corresponds to $\bigcap_{i=1}^n \neg p_i$ and focused *überhaupt* plus universal quantifier corresponds to $\bigcap_{i=1}^n p_i$.

It is convenient to use trees to illustrate the process. Consider the following trees, where uttered questions are marked in bold type (The abbreviations at the leaves stand for the questions “Do you want wine (beer, vodka)?”):

Tree 19



Assume, for simplicity, that wine, beer and vodka are the only types of alcohol that exist. Then the *combination* of the three daughter questions intersected with the presupposition of the parent, equals the parent question Q (*What is the alcohol you want?*). We may exit Q by asking *Möchtest du überhaupt Alkohol?* or by stating *Ich möchte überhaupt keinen Alkohol.*

When the presupposition of an utterance is spelled out, as in the example below (*Is the alcohol you want wine?* as opposed to just *Do you want wine?*), then an *überhaupt* question or statement could be uttered after just a single utterance.

Conversation 20

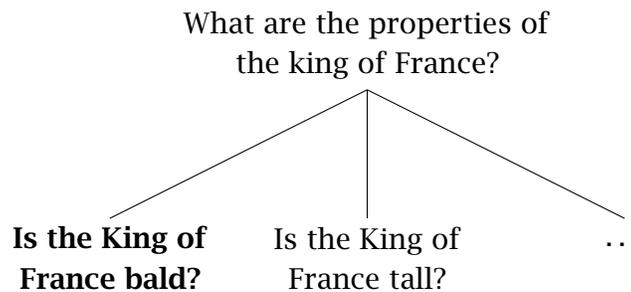
- (i) *A: Ist der Alkohol, den du möchtest, Bier?* A: Is the alcohol you want beer?
- (ii) *B: Ich möchte überhaupt keinen Alkohol.* B: I want *überhaupt* no alcohol.

In the same vein, we can explain the following exchange:

Conversation 21

- (i) *A: Hat der König von Frankreich eine Glatze?* A: Is the King of France bald?
- (ii) *B: Hat Frankreich überhaupt einen König? / Ist Frankreich überhaupt eine Monarchie? / Frankreich hat überhaupt keinen König.* B: Does France have *überhaupt* a king? / Is France *überhaupt* a monarchy? / France has *überhaupt* no king.

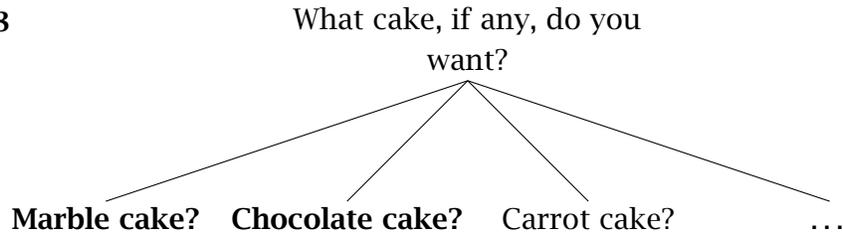
This corresponds to the following tree, where the utterance explicitly reflects the presupposition of the parent node:

Tree 22

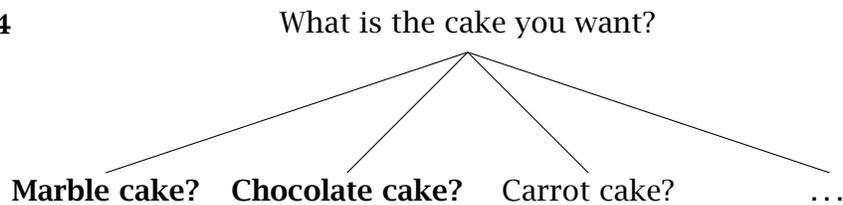
Note at this point that the two expressions corresponding to unfocused *überhaupt* make some predictions as to when they can be used. Namely, if Q has no presupposition, $\neg\hat{Q}$ and \hat{Q} do not make sense; $\neg\hat{Q}$ would be the statement corresponding to the empty set of worlds (in other words, a contradictory statement) and \hat{Q} would be a question with just one cell containing all worlds. Therefore these expressions automatically capture the fact that unfocused *überhaupt* can only be used when there was a presupposition in the S-tree.

Here are some examples of S-trees modeling the discourse structure of conversations in Section 2.

Tree 23



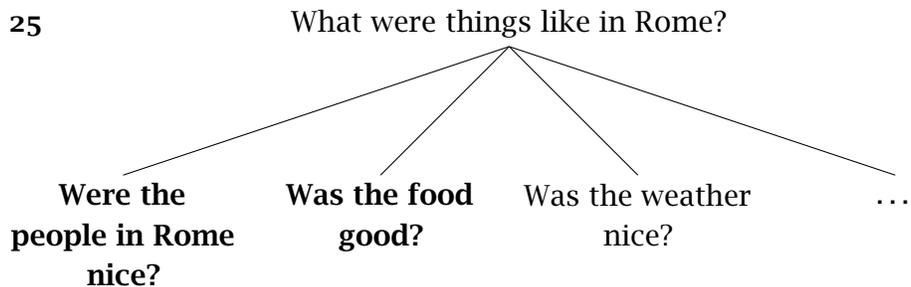
Tree 24



If either of the two trees above is the S-tree of interlocutor i , then i can make an utterance with focused *überhaupt*. The interrogator can say (if all answers to the uttered questions are *No*) *Möchtest du überhaupt_F Kuchen?* The answerer can say *Ich möchte überhaupt_F keinen Kuchen*. The formulas $\bigwedge_{i=1}^n \neg p_i$ and $\bigwedge_{i=1}^n \neg p_i$ make sense for either of the trees above. Thus the formalism explains why, when focused *überhaupt* is used, the speaker is taking no stance as to whether there was a presupposition. Thus, while a sentence using focused *überhaupt* may go against a previous presupposition, the fact that someone utters a sentence with focused *überhaupt* does not mean they are claiming there was a presupposition.

Finally, consider the tree below:

Tree 25



If all answers to the uttered questions are *Yes*, the interrogator can ask *War überhaupt_F alles schön in Rom?* (Was it generally nice in Rome?). Alternatively, the answerer could say *Es war überhaupt_F alles schön in Rom*. (It was generally nice in Rome.)

It is important to emphasize that the formalism does not rely on the idealized shape of the conversations we have used as our examples. For instance, the formalization of conversation strategy in terms of trees makes

no reference to speaker alternation, and could be applied equally well to any organized monologue.

Moreover, even if we're analyzing a text without questions, we can extract the necessary structures using Wittgenstein's assumption (Wittgenstein & Anscombe 1953) that any statement p corresponds to raising the question of whether or not p is true, and then resolving it.

5 Syntactic and discourse constraints on *überhaupt*

I believe the main issues surrounding *überhaupt* to be the following:

- (I) The construction of a syntactically well-formed *überhaupt*-sentence: How can *überhaupt* be incorporated into sentences, what governs its syntactic combinatorial behavior? (e.g. why can *überhaupt* appear with negation, with universal quantifiers and with scalar predicates?)
- (II) The distribution of syntactically well-formed *überhaupt*-sentences in discourse: Given a well-formed utterance that includes *überhaupt*, where can it be used felicitously in discourse?
- (III) Unifying the uses of *überhaupt*: What ties together the different uses of *überhaupt* and what is their (common) meaning?

In this paper, I set out to address (II) and (III), taking the well-formed *überhaupt*-utterances as given and asking only where we can place these utterances in discourse. I regard (II) as the key to (III), getting the unifying characteristics and the common meaning of *überhaupt*. However, even though (II) and (III) together can be investigated in a logically self-contained manner, it remains an interesting question how (I) works. This is essentially what Anderssen investigates. His paper sets out, among other things, to explain why *überhaupt* can occur both with negation and with a universal quantifier.

I think Anderssen pointed to an important and intriguing issue by highlighting (I). However, unlike Anderssen, I believe that (II), not (I), is the key to getting at the meaning of *überhaupt*.

There might still be a way to bring together Anderssen's and my account fruitfully. A wild speculation would be that maybe *überhaupt* started out with a narrower set of uses describable by widening (let's call them 'widening uses' for short). These widening uses explain most of the syntactic co-occurrence

behavior of *überhaupt* (what determiners and quantifiers it can occur with) quite well. *überhaupt* may then later have evolved to work as a more general question-under-discussion-navigating-device,²⁴ for which widening is just a special case (as explained in Section 7). However, the syntactic restrictions on where *überhaupt* may occur within a sentence may have stayed the same, explaining why the narrower set of widening cases seems more suitable when explaining the syntactic behavior of *überhaupt*. Thus, it would be exciting to pursue a historical investigation of the development of *überhaupt*, as this may shed light on how (I), (II) and (III) fit together.

In the remainder of this section, I would like to discuss a number of additional examples illustrating constraints on *überhaupt*. These constraints can be discourse constraints or syntactic constraints or sometimes both.²⁵

In the following example, interlocutor A is asking a series of questions of the form *Are you from X?* A possible parent question would be *Where are you from?* Even though (C26.iv) answers this parent question, *überhaupt* is not felicitous in this sentence. This is because (C26.iv) is a relevant reply to (C26.iii) and thus fails to satisfy one of the requirements for an ascending move. Therefore **Main Claim**★ correctly predicts that *überhaupt* cannot be used in this utterance.

Conversation 26

[Parent question: <i>Woher kommst du?</i>]	[Parent question: Where are you from?]
(i) A: <i>Kommst du aus Kalifornien?</i>	Are you from California?
(ii) B: <i>Nein.</i>	No.
(iii) A: <i>Kommst du aus Washington?</i>	Are you from Washington?
(iv) B: <i>Ja, ich komme (#überhaupt/ überhaupt_F) aus Washington.</i>	Yes, I am (#überhaupt/ überhaupt _F) from Washington.

In conversation (C27.iv) below, *überhaupt* is ruled out for different reasons. While (C27.iv) is not a relevant reply to (C27.iii), thus satisfying one of the requirements of an ascending move, it does not explicitly settle all questions of the form *Would you like X drink?* In particular, it does not settle the question of whether B wants sherry or not. Thus (C27.iv) is not a full

²⁴ Thanks to Jan Anderssen for this term.

²⁵ I would like to thank Jan Anderssen and an anonymous reviewer for these insightful examples, which helped in improving the presentation of my formalism.

answer to the parent question and therefore is not an ascending move. Hence *überhaupt* is not felicitous here, as predicted by [Main Claim *](#).

Conversation 27

- | | |
|--|--|
| [Parent question: <i>Was möchtest du trinken?</i>] | [Parent question: What would you like to drink?] |
| (i) A: <i>Möchtest du ein Glas Wein?</i> | A: Would you like a glass of wine? |
| (ii) B: <i>Nein, Danke.</i> | B: No, thank you. |
| (iii) A: <i>Hättest du gerne ein Bier?</i> | A: Would a beer appeal to you? |
| (iv) B: <i>Nein. Ich möchte (#überhaupt/
überhaupt_F) etwas Gin.</i> | B: No. I would like (#überhaupt/
überhaupt_F) some Gin. |

If we change (C27.iv) by adding an exhaustifier, the sentence becomes an ascending move. It is thus predicted to allow *überhaupt*. In fact, this is what happens, as illustrated below.

Conversation 28

- | | |
|---|--|
| [Parent question: <i>Was möchtest du trinken?</i>] | [Parent question: What would you like to drink?] |
| (i) A: <i>Möchtest du ein Glas Wein?</i> | A: Would you like a glass of wine? |
| (ii) B: <i>Nein, Danke.</i> | B: No, thank you. |
| (iii) A: <i>Hättest du gerne ein Bier?</i> | A: Would a beer appeal to you? |
| (iv) B: <i>Nein. Ich möchte etwas Gin und
sonst überhaupt_F nichts.</i> | B: No. I would like some Gin and
überhaupt_F nothing else. |

Interestingly, *überhaupt* must be located where the exhaustification takes place. Thus (C29.iv) in the following conversation is infelicitous. This simply reflects that discourse is updated dynamically (see [Roberts 2004](#) or [Bittner 2003](#)), and it is to be expected that a discourse particle is sensitive to this (see [Roßdeutscher & von Stutterheim 2006](#)).

Conversation 29

- | | |
|---|--|
| [Parent question: <i>Was möchtest du trinken?</i>] | [Parent question: What would you like to drink?] |
| (i) A: <i>Möchtest du ein Glas Wein?</i> | A: Would you like a glass of wine? |
| (ii) B: <i>Nein, Danke.</i> | B: No, thank you. |
| (iii) A: <i>Hättest du gerne ein Bier?</i> | A: Would a beer appeal to you? |
| (iv) B: <i>Nein. Ich möchte (#überhaupt/
überhaupt_F) etwas Gin und sonst
nichts.</i> | B: No. I would like (#überhaupt/
überhaupt_F) some Gin and nothing
else. |

As mentioned above, either syntactic or semantic restrictions, or both, can be at play. I explained how discourse requirements preclude (C26.iv), (C27.iv) and (C29.iv) from being felicitous in their respective contexts. In addition, these utterances do not sound well-formed, at least to this native speaker. That is, the restrictions on the placement of *überhaupt* within an utterance are involved as well (concern I). So (I) and (II) can work together in ruling out some uses of *überhaupt*. By contrast, the infelicitous uses of *überhaupt* given in 2.2.2 are due to conditions on (II) alone. Lastly, the following is an example that is ruled out just for syntactic reasons, the concern of (I):

Conversation 30

[Parent question: <i>Wieviele Kinder hast du?</i>]	[Parent question: How many children do you have?]
(i) A: <i>Hast du zehn Kinder?</i>	A: Do you have ten kids?
(ii) B: <i>Nein.</i>	B: No.
(iii) A: <i>Hast du neun Kinder?</i>	A: Do you have nine kids?
(iv) B: <i>Ich habe (#überhaupt/ überhaupt_F) vier Kinder</i>	B: No. I have (#überhaupt/ überhaupt _F) four kids.

Utterance (C30.iv) resolves the parent question, so it should allow the use of focused *überhaupt* if we go just by the felicity restrictions. What goes wrong here, however, is that the sentence (C30.iv) is not syntactically well-formed in the first place.

An advantage of keeping (I) and (II) separate is that it may make it easier to adapt the analysis presented here to other languages. There are particles in a number of languages that exhibit all, or sometimes a subset, of the discourse uses of *überhaupt* (Migron 2005a,b, Greenberg & Kharizman 2012). But I suspect that in some cases these particles will have different syntactic restrictions at the level of a single sentence. One case in point is the Russian particle *voobshche*, which can be used in all the discourse situations described in Section 2.1 (Kuznecov 1998, Migron 2005a,b). However, in contrast to *überhaupt*, the particle *voobshche* has more syntactic freedom in terms of where it can appear within a sentence. For example, I have been told by native informants that *voobshche* could be used in (C30) without disturbing well-formedness. This motivates why (I) and (II) should be treated as separate and orthogonal issues.

6 A question about focus behavior

I proposed in 4.4 that the function of *überhaupt* is to signal an ascending move in an S-tree. The examples from Section 2 suggest moreover that unfocused *überhaupt* corresponds to a *doubting ascending move*, whereas focused *überhaupt* corresponds to a *resolving ascending move*. This characterization provides a precise formal expression for each type of *überhaupt* in the table. Ideally, we would like the distinction between focused and unfocused *überhaupt* to follow from an independent principle, rather than requiring it to be an explicit component of the definition.

This leads us to the following question:

Question: Why do unfocused versions of *überhaupt* correspond to *doubting* moves and focused versions to *resolving* moves? Is it possible to derive this from independent linguistic considerations? In particular, why doesn't unfocused *überhaupt* resolve, or focused *überhaupt* doubt?

In response to this question, I claim that there is independent evidence from focus theory indicating that unfocused *überhaupt* signals a *doubting* move and focused *überhaupt* a *resolving* move (and not vice versa). I will make this case using two representative examples, one involving unfocused *überhaupt* and the other involving focused *überhaupt_F*. The argument presented here is only a brief outline, I hope it will inspire more detailed investigations into the rich interactions of discourse particles with focus.

Consider the following two sentences:

Example 31

- | | |
|---|--|
| (i) <i>Ich trinke überhaupt keinen Alkohol.</i> | I drink <i>überhaupt</i> no alcohol. |
| (ii) <i>Ich möchte überhaupt_F keinen Kuchen.</i> | I want <i>überhaupt_F</i> no cake. |

Neither of these sentences is good in isolation. Both require a prior set of utterances, with respect to whose S-tree the utterance with *überhaupt* represents an ascending move. It seems that in cases like the first, where *überhaupt* is unfocused, the verb always gets the focus.²⁶

²⁶ I continue to restrict attention to sentences without embedded clauses.

A discourse model for *überhaupt*

Here are the two sentences, with the primary focus in each marked:

Example 32

- (i) *Ich **trinke**_F überhaupt keinen Alkohol.* I **drink**_F überhaupt no alcohol.
(ii) *Ich möchte **überhaupt**_F keinen Kuchen.* I want **überhaupt**_F no cake.

Let us look at the non-*überhaupt* version of sentence (E32.i):

- (iii) *Ich **trinke**_F keinen Alkohol.* I **drink**_F no alcohol.

The past tense of this sentence (with the same meaning, except for the tense) is:

- (iv) *Ich **habe**_F keinen Alkohol getrunken.* I **have**_F drunk no alcohol. (I **haven't**_F drunk alcohol.)

Compare this to another possible focus structure, namely:

- (v) *Ich habe keinen Alkohol **getrunken**_F.* I have **drunk**_F no alcohol.

While in (E32.iv) the auxiliary, which does not carry the predicate's lexical meaning, is focused, in (E32.v) it is the lexical part of the verb, namely the participle *getrunken*, that is focused. The latter emphasizes the lexical meaning of *drink* and has the standard effect of creating focus-alternatives to the verb *drink* (as described by Jackendoff (1972), von Stechow (1981), Rooth (1985), Taglicht (1984)). This is illustrated by the example below:

- (vi) *Ich habe keinen Alkohol **getrunken**_F, ich habe Alkohol **ausgeschenkt**_F.* I have not **drunk**_F alcohol, I have **served**_F alcohol.

By contrast, (E32.iv), where the auxiliary is focused, has a different effect. Höhle (1992) argued that, when the non-lexical component of the verb is focused, the only reading that is available is the one contrasting the binary possibility of the predicate/statement holding true or not holding true. That is, in (E32.iv) the focus structure is creating the alternatives *drink* versus *not drink*, or arguably even of the whole statement and its negation, as opposed to *drink* versus *serve*, versus some other verb like *produce*. Höhle introduced the term VERUM focus to describe this.

In (E32.iii), the finite verb **trinke**_F is ambiguous between the "alternatives" reading and the VERUM reading. However, by the remarks above, it is enough to put this statement into past tense to figure out which reading is appropriate. If, upon putting the verb into past tense, the focus falls on the auxiliary,

then (E32.i) has the VERUM reading; if, in the past tense, the focus falls on the participle, then it has the alternatives reading. The past tense of (E32.iii) is

- (vii) *Ich habe_F überhaupt keinen Alkohol getrunken.* I have_F drunk überhaupt no alcohol.

Thus, sentence (E32.i) has only the VERUM reading.

The fact that the truth of this statement versus its negation is raised as an issue is reminiscent of the binary nature of the *doubting* moves $\neg\hat{Q}$ and \hat{Q} , which address the two-way distinction of whether or not the presupposition of the parent question is true, or in other words whether the parent question Q is answerable or not.

This gives a natural explanation why unfocused *überhaupt* corresponds to $\neg\hat{Q}$ and \hat{Q} , and not to the large class of possible answer sequences represented by $\bigcap_{i=1}^n \text{ans}(q_i)$ and $\overline{\bigcap_{i=1}^n \text{ans}(q_i)}$.

Now consider the second sentence, *Ich möchte überhaupt_F keinen Kuchen.* This kind of focused *überhaupt* tends to occur when very salient alternatives are presented as issues, such as in the following:

Conversation 33

- (i) *A: Verkaufen Sie Marmorkuchen?* A: Do you sell marble cake?
(ii) *B: Nein.* B: No.
(iii) *A: Verkaufen Sie Schokoladenkuchen?* A: Do you sell chocolate cake?
(iv) *B: Leider nicht. Ich verkaufe überhaupt_F keinen Kuchen.* B: Unfortunately not. I sell überhaupt_F no cake.

Höhle showed that in German VERUM focus is only possible when the finite verb or a complementizer such as *dass* (that) is focused (Höhle 1992: 8). Therefore, the focus on *überhaupt* creates standard focus alternatives in (C33.iv) (as described in, for instance, Jackendoff 1972, von Stechow 1981, Rooth 1985, Taglicht 1984). For the purpose of creating focus contrasts, *überhaupt* can form a constituent with a following determiner.²⁷ The constituent

²⁷ I cannot do this claim full justice here. One argument would be the following behavior under extraction:

- (i) *Überhaupt_F keinen Kuchen möchte ich.*
überhaupt no.DET cake want.1SG I
(ii) *Kuchen möchte ich überhaupt_F keinen.*
cake want.1SG I überhaupt no.DET
(iii) *#Keinen Kuchen möchte ich überhaupt_F*
no.DET cake want.1SG I überhaupt

überhaupt kein could thus be said to receive focus in this case. As a result we get contrastive focus that activates the following set of alternatives:

Example 34

- (i) *Ich verkaufe X Kuchen.* I sell X cake.

This corresponds to the alternatives represented by the child questions that were asked (about whether B sells marble cake, chocolate cake, etc.). The focus structure thus activates precisely all the daughter nodes. This motivates why focused *überhaupt* is a *resolving* move, as a *resolving* move addresses, and resolves, all daughter questions at once. The definition of S-trees, which ensures that child questions essentially correspond to going through various subspects or alternatives of the parent question, guarantees that the same reasoning applies generally.

Of course, the discussion here, based on two representative examples, is only a preliminary sketch into how focus interacts with the discourse-navigating function of *überhaupt*. This would be a rich topic for additional, more large-scale investigations. Nevertheless, I believe this short discussion hints at how focus theory provides independent evidence for the identification of focused *überhaupt* with *resolving* moves, and unfocused *überhaupt* with *doubting* moves.

I hope to have motivated that using discourse strategies and focus theory we can obtain a unified account of *überhaupt* as an ascending move. What particular kind of upward move we have in each case follows from the meaning of the corresponding sentence with *überhaupt* removed, plus focus theory. In a compact way, the claim is the following:

Strong Claim★

The characterization of *überhaupt* as an upward move, combined with focus theory, produces all meanings of *überhaupt*.

In other words, with the definition of *überhaupt* that we gave in Section 4, plus a knowledge of German (ignoring *überhaupt*) and focus theory, we can reconstruct all the various meanings and intuitions that the different uses of *überhaupt* exhibit as laid out in Section 2.

That only the extractions that kept the unit *überhaupt_F keinen* intact are well-formed could be seen as an argument that regarding *überhaupt_F kein* as a constituent is a possible parse. See [Kratzer 1995](#) for related arguments.

7 Another remark regarding the domain-widening account of *überhaupt*

Conversation (C13) in Section 3 gave an example of focused *überhaupt* that cannot be explained using domain widening. Such an analysis must fail because in that case there is no sense in which *überhaupt* provides strengthening. On the other hand, the same example can be dealt with naturally in my account following the same pattern used in Section 4 to analyze Conversations (C1) and (C3).

In spite of its problems, Anderssen's account has appeal because it resonates in many cases with the intuitions of native speakers. To understand the intuitions on which the domain widening account is based and why they arise, let us now consider a conversation that apparently involves domain widening:

Conversation 35

- | | |
|--|---|
| (i) A: <i>Möchtest du Essen?</i> | A: Do you want food? |
| (ii) B: <i>Nein.</i> | B: No. |
| (iii) A: <i>Möchtest du wenigstens einen Happen?</i> | A: Do you want at least a bite? |
| (iv) B: <i>Nein.</i> | B: No. |
| (v) A: <i>Nicht einmal ein klitzekleines Häppchen?</i> | A: Not even one tiny bite? |
| (vi) B: <i>Nein.</i> | B: No. |
| (vii) B: <i>Ich möchte überhaupt_F kein Essen.</i> | B: I want <i>überhaupt_F</i> no food. |

In this example, *überhaupt_F kein Essen* appears to refer to a wider notion of the word *Essen* (food) than its use in (i). Anderssen would say that focused *überhaupt_F* causes this widening. While the widening account gives a clean analysis of this conversation, the inability of domain widening to explain all cases pushes us to search for an explanation of *überhaupt* in this conversation from a more general underlying principle.

In fact, it is not difficult to see that, if we treat *überhaupt_F* as giving an exhaustive answer to a sequence of subquestions, we can obtain the same intuitions without needing to include domain widening as an explicit component of our account. In Conversation (C35) this happens as follows: Interlocutor A is asking if B wants food. From A's second question, however, we can infer that A might consider 'food' to refer only to anything larger than a certain amount, let us call this FOOD. By asking if B wants at least a bite, we could say that A is asking whether B wants a small portion—one

not considered food normally by A. Let us call such small portions FOOD. Finally, A offers B a tiny piece, let us call this just *food*. So if we consider FOOD to refer to plate-sized portions, FOOD to those smaller than a plateful but larger than a spoonful, and *food* to quantities that fit in a spoon, then we can paraphrase the conversation in terms of alternatives as follows:

Conversation 36

- (i) A: *Do you want FOOD?*
- (ii) B: *No.*
- (iii) A: *Do you want FOOD?*
- (iv) B: *No.*
- (v) A: *Do you want food?*
- (vi) B: *No. I want **überhaupt_F** no food.* (Neither FOOD, nor FOOD, nor food.)

In other words, I claim that domain widening *does* happen here, but it is on the *interrogator's* side: for if a bite (*Happen*) were considered to be food (*Essen*) by the interrogator, then the interrogator would have been redundant or irrational in asking the first two questions. It would have been like asking *Do you like animals?* and, upon getting the answer *No*, proceeding to ask *Do you like rabbits?* To make sense out of what the interrogator is saying, we must assume that he considers these alternatives to have different and disjoint scopes. Once we accept these scopes, my account in terms of alternatives treats them in the same way as any other sequence of questions.

What this illustrates is that my account exhibits the same widening behavior that *Anderssen* rightly pointed out, *in those cases where it is appropriate*. Since domain widening does not explain all uses of *überhaupt* (see Section 3), though, it should not be part of a general analysis of *überhaupt*.

8 Conclusion

This paper presented a unified account of *überhaupt* based on discourse structure. The challenge was that *überhaupt* appears to have a variety of different usages and meanings, as well as different types of interactions with presuppositions. By developing the notion of a certain type of discourse strategy tree (S-tree), I was able to give a description of *überhaupt* as an ascending move in an S-tree or, more informally, as a move to a higher-level question under discussion. After the section presenting this main proposal (Section 4), the remaining sections served to support the claim that the full

range of *überhaupt* usage can, using focus theory, be reconstructed from this single formal description.

That the simplicity of the account is entirely due to its reliance on the concepts of discourse structure and questions under discussion suggests that similar techniques could be applied fruitfully to other particles. Such a supposition is supported by the difficulty even native speakers have in identifying the meanings of many particles, and in judging the well-formedness of sentences containing them, unless they have a detailed knowledge of the discursive context. This dependence of well-formedness on context likely indicates a concurrent relation between the distribution of such particles and the structure of the surrounding discourse.

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