

## The Semantics and Pragmatics of *bestimmt* and *gewiss*\*

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### 1. Introduction

In this paper we discuss the two German specificity markers *bestimmt* and *gewiss*. Both markers share a tendency to indicate wide scope of the modified DP and to require identifiability of a certain kind. In these respects they correspond to specificity markers in other languages such as *certain* in English and French or *koe-wh* in Russian, although their precise semantic and pragmatic contributions differ from these items as well as from another. To illustrate, consider the following examples<sup>1</sup>.

- (1) a. Peter sucht eine bestimmte CD.  
Peter search.for a bestimmt CD  
b. Peter sucht eine gewisse CD.  
Peter search.for a gewiss CD  
'Peter is searching for a certain CD.'  
c. Peter sucht eine CD.  
Peter search.for a CD  
'Peter is searching for a CD.'

In (1-a,b) the indefinite necessarily takes scope over the intensional verb *suchen* (*to search*), while (1-c) is ambiguous between the same wide scope reading and a narrow scope reading. In addition, (1-a,b) indicate that some agent possesses further identifying knowledge about the CD under consideration. Both markers can be used in DPs headed

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\* We would like to thank the audiences at NELS 40 and the Workshop *Reference and Discourse Structure*, Stuttgart, as well as the participants of the seminar *Current Research Topics at the Syntax-Semantics Interface* at the University of Tübingen, 2009. In particular we would like to thank Sigrid Beck, Maria Cieschinger, Judith Degen, Kai von Stechow, Andreas Haida, Irene Heim, Klaus von Stechow, Stefan Hofstetter, Sophie Repp and Henk Zeevat for valuable comments and discussion. The work of the third author is supported by the SFB 632 *Information Structure*, funded by the DFG.

<sup>1</sup> Here and in the following we will translate both *bestimmt* and *gewiss* by *certain* and *particular* in the English translations. However, this should not be understood as a claim that *certain* or *particular* patterns perfectly with either of these two markers.

by the indefinite article *ein* (*a/one*) or by a numeral, and with bare plurals, but they are unacceptable with any other quantificational DPs.

- (2) Peter sucht...
- a. (drei) bestimmte CDs.  
three bestimmt-pl CDs  
'Peter is searching for (three) particular CDs.'
  - b. \*alle/ die meisten bestimmten / gewissen CDs  
all / the most bestimmt-pl/ gewiss-pl CDs
  - c. \*jede bestimmte / gewisse CD  
every bestimmt-sg/ gewiss-sg CD

Furthermore, *bestimmt* and *gewiss* are unacceptable with the definite determiner in general. However, there are a few idiomatic cases where *gewiss* occurs in definite DPs such as *das gewisse Etwas* (*the certain something*) in (3-b)<sup>2</sup>.

- (3) a. \*Peter sucht die bestimmte / gewisse CD.  
Peter search.for the bestimmt-sg/ gewiss-sg CD
- b. Das macht auch in unserem Fußball das gewisse Etwas aus.  
this makes also in our football the certain something out  
'This is the certain something of our (way of playing) football.'

Another peculiarity of *gewiss* is its use in degree readings as illustrated in (4) where the marker merely seems to indicate that a degree of understanding mathematics should be reached by each pupil before leaving school which is above the minimum, but which need not be specified any further<sup>3</sup>.

- (4) Aber ohne ein gewisses Verständnis der Mathematik [...]  
but without a certain understanding the-gen mathematics-gen  
darf eigentlich kein Kind die Schule verlassen.  
may actually no child the school leave  
'But actually, no child must leave school without a certain understanding of mathematics.'

In the following we will discuss the specific uses of *bestimmt* and *gewiss* as illustrated in (1,2) and we will set aside the idiomatic cases as well as the degree readings with *gewiss*. To this end, we will focus on the singular indefinites *ein bestimmter X/ein gewisser X* (*a certain X*) and treat *ein bestimmter/ein gewisser* as a complex determiner. We start by a closer investigation of the semantic and pragmatic differences of the two markers.

## 2. The Semantics and Pragmatics of *bestimmt* and *gewiss*

As mentioned above, both markers seem to require some form of identifiability of the DP's denotation. As we will see, they differ in the exact condition on who this identifying knowledge is ascribed to. While *gewiss* indicates that the speaker is the agent who

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<sup>2</sup>DWDS Corpus: Die Zeit 06/2009; football player Mladen Petric talking about Croatian football.

<sup>3</sup>DWDS Corpus: Die Zeit 50/2007.

possesses this knowledge, *bestimmt* is more liberal in allowing for other agents, e.g. the subject of a verb of propositional attitude, to have further identifying information.

## 2.1 Identifiability

Let us investigate the issue of identifiability by recurrence to (1). Here, (1-a) as well as (1-b) have a reading where there is a particular CD identifiable by the speaker that Peter seeks to find. In both cases it would be sensible for the speaker to continue with stating an identifying property that yields further information about the CD under consideration, e.g. as the following.

- (5) a. Namely, *Axe to Fall* by *Converge*.
- b. Namely, his favorite CD with christmas songs.
- c. Namely, the CD that his mother gave him as a birthday present.

Note that the possession of identifying knowledge does not necessarily imply the knowledge of a name for the referent. In the case at hand, the speaker does not have to know the title of the CD Peter is looking for (as in 5-a) as long as she is able to provide a property singling out this particular CD from other CDs owned by Peter (as in 5-b,c).

But (1-a) has an additional reading that (1-b) lacks, namely one where there is a particular CD identifiable by Peter himself that he seeks to find. Crucially, the speaker does not need to have any further information about that CD. Hence, *bestimmt* allows for identification of agents other than the speaker. The following example illustrates this deviance in the requirement of speaker identifiability.

- (6) a. Peter sucht schon seit Stunden nach einer bestimmten CD  
     Peter searches already since hours after a bestimmt CD  
     – keine Ahnung, welche genau er sucht.  
     no idea which-one exactly he searches  
     ‘Peter has been looking for a certain CD for hours now  
     – I have no idea which one exactly he is looking for.’
- b. Peter sucht schon seit Stunden nach einer gewissen CD  
     Peter searches already since hours after a gewiss CD  
     – #keine Ahnung, welche genau er sucht.  
     no idea which-one exactly he searches

The felicitous continuation in (6-a) shows that the speaker may be ignorant w.r.t. identification of the CD Peter is looking for. In fact, the only sensible interpretation for (6-a) is one where Peter has a particular CD in mind, which he seeks to find. In contrast, this interpretation is not available for (6-b) as the oddity of the continuation shows.

That *bestimmt* is compatible with non-identifiability by the speaker is supported by the observation that it may be combined with *irgendein* (*any x whatsoever*), which signals speaker-ignorance or speaker-indifference<sup>4</sup>:

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<sup>4</sup>IDS-DSaV corpus, PF294.

- (7) Diese Murmeln haben unter den Kindern untereinander  
 These marbles have among the children among-each-other  
 irgendeinen bestimmten Wert, Glasmurmeln zum Beispiel die Werte  
 irgendein bestimmt value glass-marbles for example the values  
 von zwei einfachen Murmeln.  
 of two simple marbles  
 ‘These marbles have certain values among the children, marbles made of glass,  
 for example, have the same value as two simple marbles.’

The only sensible reading for (7) is one where the children know the values of the marbles, while the speaker is ignorant about them. Note that the speaker just provides an example; the use of *irgendein* would be infelicitous if s/he could list the values of all marbles. In contrast, *irgendein* is incompatible with *gewiss*, which is expected if *gewiss* requires identifiability by the speaker.

- (8) Wenn irgendein bestimmter / \*gewisser Verwandter von Peter stirbt,  
 if irgendein bestimmt / gewiss relative of Peter dies,  
 erbt er ein Vermögen.  
 inherits he a fortune  
 ‘If a certain relative of Peter dies, he inherits a fortune.’

In (8), the variant with *gewiss* is infelicitous since it simultaneously contributes the contradictory meanings of speaker-ignorance (by *irgendein*) and speaker-identifiability (by *gewiss*). On the other hand, *bestimmt* in the same position yields the sensible reading that there is a certain relative of Peter that makes Peter rich if he dies<sup>5</sup>. Crucially, it is not the speaker that possesses identifying knowledge of the respective relative (indicated by *irgendein*), but (most reasonably) Peter himself. The following examples illustrate the same difference w.r.t. identifiability in questions.

- (9) a. Geht Paul immer in eine bestimmte Kneipe?  
 Goes Paul always in a bestimmt pub  
 b. Geht Paul immer in eine gewisse Kneipe?  
 Goes Paul always in a gewiss pub  
 ‘Does Paul always go to a certain pub?’

With (9-a) a speaker asks (in its most salient reading) whether there is a particular pub which Paul visits regularly. Here the speaker does not have a particular pub in mind and the existence of any pub whatsoever that is regularly visited by Paul would be enough to answer the question affirmatively. For instance, the hearer could answer (9-a) by

- (10) Yes, but I won’t tell you which pub it is.

and hence not disclose the identity of the pub in question. In contrast, in (9-b) *gewiss* again indicates that the speaker possesses identifying knowledge about the pub. Therefore, the hearer also has to know the identity of the pub in order to be able to

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<sup>5</sup>Note that in this reading the indefinite takes exceptional wide scope out of the *if*-clause island. Below we will discuss the scope taking behavior of *bestimmt* and *gewiss* indefinites in greater detail.

answer the question. (9-b) can thus be paraphrased as ‘*Does Paul regularly go to this particular pub that we both know?*’. Even if the hearer knows that there is a pub that is regularly visited by Paul, he cannot answer the question affirmatively if he is not sure which pub the speaker has in mind. In particular, (10) would not be a felicitous answer to (9-b) since it contradicts the explicitly stated speaker knowledge concerning the identity of the pub. Likewise (11) would not be an adequate response to (9-b), but to (9-a).

(11) Yes, but I don’t know which pub it is.

To sum up the findings of this section, we note that *gewiss* requires speaker identifiability while *bestimmt* only requires that some salient agent is in possession of identifying knowledge. This salient agent might be the speaker, but in a variety of cases a different agent might be even more salient.

## 2.2 Scope Behaviour

Let us now turn to a closer investigation of the scope taking behavior of the two markers. As we will see, only *gewiss* induces widest scope for the marked indefinite in various contexts, while *bestimmt* generally allows for narrow scope. Exceptional in this respect are intensional operators, where also *bestimmt* indefinites do not seem to take narrowest scope. We proceed by investigating the scopal interaction of *bestimmt/gewiss* indefinites with negation, nominal quantifiers, conditionals and intensional operators.

### 1. Negation

The following example<sup>6</sup> can serve to illustrate that a *bestimmt* indefinite can in principle scope under negation while this is strictly impossible for *gewiss*.

(12) Die USA unterstützen ein Wirtschaftsprogramm, nicht eine bestimmte Person.  
The USA support a economy-program not a bestimmt person  
‘The USA support economy programs, not a particular person.’

The most salient, out-of-the-blue reading of (12) is one according to which the USA in general do not support persons, but economic programs, i.e. the *bestimmt* indefinite scopes under negation. A second reading, according to which there is a particular person that is not supported by the USA, is also available but needs heavy contextual support. However, after substituting *gewiss* for *bestimmt* in (12) this is the only reading that is available.

Furthermore, *bestimmt*, but not *gewiss*, can be combined with *kein(e)*, which has been argued by Penka and Zeijlstra (2005) to be the phonetic spellout of the combination of *nicht* (*not*) and *ein* (*a/one*), where *nicht* has scope over *ein*:

(13) Ich habe keine bestimmte / \*gewisse Person für die Stelle im Kopf.  
I have not-a bestimmt / gewiss person for the position in-the head  
‘I don’t have a certain person in mind for the position.’

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<sup>6</sup>COSMAS-II, SZ corpus

(13) in its grammatical variant with *bestimmt* has the expected narrow scope reading according to which the speaker does not have anybody in particular in mind for the position under discussion. The ungrammaticality of the version with *gewiss* on the other hand is also expected, if *gewiss* cannot take scope under negation.

### 2. Nominal Quantifiers

The following example illustrates that indefinites marked with *bestimmt* can in principle take narrow scope with respect to c-commanding nominal quantifiers.

- (14) Jeder Student hat ein bestimmtes / gewisses Gedicht analysiert.  
Every student has a bestimmt / gewiss poem analyzed  
'Every student analyzed a certain poem.'

(14) in the version with *bestimmt* is ambiguous: it has a reading according to which the poems vary with the students, i.e. where the *bestimmt* indefinite takes narrow scope w.r.t. the universal, as well as a reading where there is a particular poem that every student analyzed, i.e. where the *bestimmt* indefinite takes wide scope. In contrast, (14) with *gewiss* is unambiguous and lacks the first, narrow-scope reading for the indefinite. Similar to the case of negation, *gewiss* seems to induce wide scope, here with respect to nominal quantifiers.

### 3. Conditionals

It is by now a well-established fact, that indefinites are able to take (exceptional) scope outside of conditionals, despite the fact that *if*-clauses constitute scope islands for other quantifiers (cf. Endriss 2009 and the references cited therein). Concerning indefinites marked by *bestimmt* and *gewiss*, we observe the contrast from above. While *bestimmt* indefinites can take both narrow and (exceptional) wide scope, *gewiss* indefinites exhibit only the latter.

- (15) Wenn morgen wieder alle Kinder ein bestimmtes / gewisses Pferd reiten  
If tomorrow again all children a bestimmt / gewiss horse ride  
wollen, haben wir ein Problem.  
want have we a problem.  
'If tomorrow all children want to ride a certain horse again, we will have a problem'.

(15) is ambiguous in its variant with *bestimmt*: according to the first reading, trouble only obtains if there is one particular horse such that all children want to ride this particular horse, i.e. the indefinite takes scope over the *if*-clause. According to the second reading, there already is trouble if all children are picky with respect to the horses they want to ride, i.e. if for each child there is one particular horse that this child wants to ride. In this reading, the indefinite takes scope within the *if*-clause. Concerning the *gewiss* variant of (15), in contrast, only the first, wide scope reading for the indefinite is available.

### 4. Intensional Operators

Matters become more intricate once we turn to intensional operators. As we noted above for (1-a) and (1-b), both *bestimmt* and *gewiss* force the indefinite to take scope over the

intensional operator. To be precise, (1-a) is twofold ambiguous if we take the issue of identifiability into account. It can mean that there is a certain CD identifiable to either the speaker or Peter such that Peter is looking for that CD. In contrast, (1-b) only has the reading where identifiability is attributed to the speaker. Crucially, all these readings are *de re* readings of the indefinite. Neither (1-a) nor (1-b) has the *de dicto* meaning that Peter is looking for any CD whatsoever, which (1-c) without specificity marker exhibits. The same pattern is found in the following example with the deontic modal *muss* (*must*).

- (16) Paula muss einen bestimmten / gewissen Mann heiraten.  
 Paula must a bestimmt / gewiss man marry  
 ‘Paula must marry a certain man.’

Both variants lack the plain narrow scope reading, where Paula is obliged to marry some man or other and both exhibit a *de re* reading according to which there is a specific man, identifiable by the speaker, such that Paula has to marry this particular man. In addition, the *bestimmt* variant has a reading where Paula has to marry some man that she (or some other salient agent such as the individual issuing the order to Paula to marry the man) can identify further.

To conclude that *bestimmt* and *gewiss* pattern in the case of intensional operators by inducing widest scope of the indefinite would be to hasty, however. The following example contains two such operators.

- (17) Peter glaubt, dass Paula einen bestimmten / gewissen Mann heiraten muss.  
 Peter believes that Paula a bestimmt / gewiss man marry must  
 ‘Peter believes that Paula must marry a certain man.’

Both variants of (17) exhibit a widest scope reading of the indefinite according to which there is a man identifiable by the speaker such that Peter believes that Paula has to marry this man. In fact, this is the only reading that is available for the *gewiss* variant of (17). For the *bestimmt* variant, however, there is an additional reading, where the indefinite can be said to take intermediate scope between the two operators. In this reading, (17) with *bestimmt* expresses that Peter believes that Paula is obliged to marry a man who she can identify further. According to this reading it does not have to be the case that there is a particular man of whom Peter believes that Paula has to marry him. Peter does not even have to have any belief concerning the identity of the man in question. The only thing that is required for the sentence to be true is that Peter believes such a man to exist. And there are yet other options – and hence further readings – w.r.t. the determination of the salient agent. For instance, the individual issuing the order to Paula is also a reasonable agent that most likely possesses identifying information. So (17) in the *bestimmt* variant is multiply ambiguous in the intermediate readings where Peter has a *de dicto* belief about a man identifiable for some salient agents.

We sum up the findings of this section as follows. While *gewiss* indefinites always have to take widest scope with respect to other operators such as negation, nominal quantifiers and conditionals, *bestimmt* indefinites may in principle take narrow scope with respect to these. The only exception seem to be sentences with intensional operators. In such cases, both *bestimmt* and *gewiss* indefinites do not allow for narrow

scope. While *gewiss* indefinites take widest scope, i.e. scope over all intensional operators, *bestimmt* allows for wide scope readings as well as a particular type of ‘intermediate’ readings.

### 3. A Formal Analysis

Our formal analysis<sup>7</sup> is based on a quite literal understanding of identifiability which both markers add: a modified indefinite such as *eine bestimmte/gewisse CD* (a certain CD) communicates that some agent/the speaker knows that CD (cf. Jayez & Tovena 2006 for a related idea for French *un certain*). The next step is therefore to take a closer look at what it means to ‘know that CD’. In fact, the DPs in these knowing-DP constructions have been argued to stand for *concealed identity questions* (Heim 1979). Thus to ‘know that CD’ actually means to ‘know what CD it is’. Therefore we propose that both specificity markers add the information that some agent/the speaker knows the answer to the concealed question, what/who the corresponding referent is (cf. Abusch & Rooth 1997, p.20), e.g. which CD it is in the example above. Yet another step towards a full analysis of these markers is hence to think about answers to such identity questions. It has been argued by Aloni (2001, 2008) that a correct analysis of such knowing-wh constructions requires a relativization of the knowledge states of agents to descriptions under which the individuals in questions are known. The first ingredient to our formal analysis will thus be Aloni’s (2008) approach to concealed questions in terms of *conceptual covers*, which we will use to capture the contribution of both *bestimmt* and *gewiss*.

We locate the differences between *bestimmt* and *gewiss* in the by now well-established distinction of asserted/at-issue meaning and non-asserted meaning. More to the point, we propose that *bestimmt* and *gewiss* make the same meaning contribution, but on different levels. While *bestimmt* adds to the asserted/at-issue meaning, the meaning of *gewiss* enters the scene as a *conventional implicature* (CI; Potts 2005) and hence at a level of non-asserted meaning (cf. Scheffler 2008, who discusses further pairs of items that exhibit this distinction). We start with an analysis of the basic semantic component of both markers by means of conceptual covers and the meaning of *bestimmt*.

#### 3.1 Conceptual Covers and the Meaning of *bestimmt*

Aloni (2001) argues that satisfying answers to identification questions crucially depend on the method of identification by means of *conceptual covers* (CCs). A *conceptual cover* is a set of individual concepts (i.e. functions from worlds to individuals) such that for a domain of individuals D and a set of worlds W each element of D is identified by exactly one concept in each element of W. Different conceptual covers with identical domains therefore stand for different ways of conceiving of one and the same set of individuals. The following example (from Aloni 2008) may serve to illustrate this concept. Consider a situation where two face-down cards are lying in front of you, and while you know that one is the Ace of Hearts and one is the Ace of Spades, you don’t know which card is which. Furthermore, you are playing a game where you have to choose one card and are going to win 10 Euros if you choose the Ace of Spades, while you are going to lose 10

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<sup>7</sup>see (Ebert, Ebert and Hinterwimmer to appear) for a more detailed description of the following analysis as well as for a closer investigation of other specificity markers and approaches.



Euros if you choose the Ace of Hearts. In this scenario the truth of (18) depends on the mode of identification with respect to which the embedded question in (18) is interpreted.

(18) You know which card is the winning card (Aloni 2008).

On the one hand, it is true: you know that the Ace of Spades is the winning card. On the other hand, it is false: you don't know whether the card on the left or the card on the right is the winning card. In other words, if the embedded question is interpreted with respect to the conceptual cover  $\{\lambda w.ace\_of\_spades(w), \lambda w.ace\_of\_hearts(w)\}$ , you know its true answer. If it is interpreted with respect to the cover  $\{\lambda w.card\_on\_left(w), \lambda w.card\_on\_right(w)\}$ , you don't know it.

To facilitate a formal analysis of identification questions by means of conceptual covers (Aloni, 2008), a special index  $n \in N$  is added to the variables in the meaning language, which range over individual concepts instead of individuals. A conceptual perspective  $\wp$  in a model  $M$  is defined as a function from indices in  $N$  to conceptual covers. Sentences are then interpreted with respect to assignments under a perspective, where an assignment under a perspective  $g_\wp$  is a function mapping variables  $x_n$  to concepts in  $\wp(n)$ , rather than individuals in  $D$ . An identification question like  $?x_n P x_n$  groups together the worlds in which the denotation of  $P$  is identified by means of the same set of elements of the conceptual cover selected for  $n$ . Finally, the interpretation of a DP as a concealed question is modelled via a type shift  $\uparrow_n$  that maps an entity denoting expression  $d$  into the identity question 'who is/what is  $d$ ?'

(19)  $\uparrow_n d =_{\text{def}} ?x_n. x_n = d$

At this point it is important to point out that available methods of identification (i.e. conceptual covers) are restricted by contextual factors, e.g. to those that are informative and hence different from those employed in the sentence (see Aloni 2001). For instance, in (1-a,b), repeated here as (20-a), the method of identification paraphrasable as *the CD Peter is looking for* cannot license *gewiss/bestimmt*. After all, this would make the additional identifying meaning component of *bestimmt* and *gewiss* redundant. However, as has been pointed out by Aloni (2001), identification questions suffer from the same problem. A question such as (20-b) cannot receive a satisfying answer by *the president of Mali*, despite the truth of this answer.

- (20) a. Peter sucht eine gewisse/bestimmte CD.  
       'Peter is looking for a certain CD.'  
       b. Who is the president of Mali?

Which methods of identification (i.e. which conceptual covers) are available for answers to identification questions and ultimately for identification in the case of *bestimmt* and *gewiss* is therefore highly dependent on contextual factors.

With this formal apparatus we can now turn to the meaning of *bestimmt*. It contributes the information that some salient agent  $\alpha$  knows the answer to an identity question concerning the discourse referent introduced by the indefinite under some

pragmatically licensed conceptual cover. We therefore propose that the complex determiner *ein bestimmt* has the following denotation.

$$(21) \quad \llbracket \textit{ein bestimmt} \rrbracket = \lambda P \lambda Q. \exists x [P(x) \ \& \ Q(x) \ \& \ K_{\alpha}(\uparrow_n x)]$$

The meaning of *ein bestimmt* is hence a function that takes two predicates as its argument and returns a proposition that is true if 1. there is an individual  $x$  that satisfies the two predicates and 2. a salient individual  $\alpha$  knows that individual  $x$  under a contextual perspective, i.e. a conceptual cover  $\wp(n)$ .

First let us note that the contribution of *bestimmt* is in no way incompatible with negation, which explains its felicity in combination with *kein* as in (13). As pointed out above, Penka and Zeijlstra (2005) argue that *kein* is the phonetic spellout of the combination of *nicht* (*not*) and *ein* (*a/one*), where *nicht* has scope over *ein*. Therefore our analysis of (13) in its *bestimmt* variant comes out as follows. Note that in absence of any special context the only reasonable choice for the identifying agent  $\alpha$  is the speaker, as indicated.

$$(22) \quad \neg \exists x [\textit{person}(x) \ \& \ \textit{in\_mind}(\textit{speaker}, x) \ \& \ K_{\textit{speaker}}(\uparrow_n x)]$$

This reading can be paraphrased as follows: it is not the case that there is a person  $x$  such that the speaker has  $x$  in mind (as a candidate) for the position such that the speaker can identify this person (with respect to some salient conceptual cover). Crucially, (22) can be true for the reason that the last conjunct is false, i.e. that the identification fails, while the first two conjuncts are true. This is compatible with a situation where the speaker does consider some people as possible candidates for the position under discussion, but none among them is singled out as having some special property that would make him/her the ideal candidate. In fact, the minimal variant in (23) without *bestimmt* is incompatible with such a situation, i.e. it is only felicitous if the speaker has nobody at all in mind as a candidate for the position.

- (23) Ich habe keine Person für die Stelle im Kopf.  
 I have not-a person for the position in-the head.  
 ‘I don’t have any person in mind for the position.’

This shows that it is possible for negation to target the contribution of *bestimmt*. Furthermore, it is important to note again that the availability of suitable conceptual covers for matters of identification is contextually constrained. The reading under discussion does not express that there is no way whatsoever for the speaker to identify the persons she has in mind – for instance, she might very well know all of them by name. What this reading expresses is rather that she has no means to identify them w.r.t. contextually salient covers. In the context we have set up, those covers are salient which somehow relate to the suitability of filling the position. Hence, (22) correctly expresses that the speaker has some persons in mind, which she might be able to identify in some way, but not in a way that is relevant for the question of suitability for the position. This illustrates how our approach accounts for the possibility for narrow scope of *bestimmt* with respect to negation.

Concerning the co-variation of *bestimmt* indefinites with c-commanding quantifiers, we assume that the variable standing for the agent  $\alpha$  can not only receive a value from the context, but can also be bound by a quantifier under c-command. For instance, in the case of (14), we do not only derive a wide scope reading for the *bestimmt* indefinite (24-a), where there is one poem identifiable by the speaker such that every student analyzed that poem, but also a narrow scope reading (24-b), where every student analyzed some poem that (s)he is able to identify.

- (24) a.  $\exists y[\text{poem}(y) \ \& \ K_{\alpha}(\uparrow_n y) \ \& \ \forall x[\text{student}(x) \ \rightarrow \ \text{analyze}(x,y)]]$   
 b.  $\forall x[\text{student}(x) \ \rightarrow \ \exists y[\text{poem}(y) \ \& \ K_x(\uparrow_n y) \ \& \ \text{analyze}(x,y)]]$

Concerning the interaction of *bestimmt* indefinites with intensional operators, let us take a closer look at (17) in its *bestimmt* variant, repeated below as (25-a), again. First of all, there are some possibilities for resolving the variable for the identifying agent  $\alpha$ . Assuming that *must* receives a deontic interpretation, there are four salient agents: Paula, Peter, the speaker and the ‘instructor’, i.e. the agent issuing the order to Paula. With this in mind, consider the following analyses of (17).

- (25) a. Peter glaubt, dass Paula einen bestimmten Mann heiraten muss.  
 Peter believes that Paula a *bestimmt* man marry must  
 ‘Peter believes that Paula must marry a certain man.’  
 b.  $\text{believe}(\text{peter}, \text{must}(\text{paula}, \exists x[\text{man}(x) \ \& \ K_{\alpha}(\uparrow_n x) \ \& \ \text{marry}(\text{paula}, x)]))$   
 c.  $\exists x[\text{man}(x) \ \& \ K_{\alpha}(\uparrow_n x) \ \& \ \text{believe}(\text{peter}, \text{must}(\text{paula}, \text{marry}(\text{paula}, x)))]$   
 d.  $\text{believe}(\text{peter}, \exists x[\text{man}(x) \ \& \ K_{\alpha}(\uparrow_n x) \ \& \ \text{must}(\text{paula}, \text{marry}(\text{paula}, x)))]$

The readings in (25-b) to (25-d) correspond to a narrow scope, wide scope, and intermediate scope reading of the *bestimmt* indefinite w.r.t. the two operators, respectively. First, the narrow scope reading in (25-b), where the *bestimmt* indefinite takes scope below the deontic operator is highly implausible in all possible resolutions of  $\alpha$ . In such a reading it would be a part of Paula’s obligation to bring about the identification by Peter, the speaker, the instructor, or herself of a man she must marry. We take this implausibility to be the reason for the unavailability of the narrow scope reading for the *bestimmt* indefinite. Second, the wide scope reading in (25-c) states that there is a man identifiable to  $\alpha$  such that Peter believes that Paula is obliged to marry this man. Concerning the resolution of  $\alpha$ , every of the four options mentioned before yields a reasonable reading. The intermediate scope reading in (25-d) can be paraphrased as follows: In all worlds  $w$  compatible with what Peter believes there is a man that  $\alpha$  can identify in  $w$  such that in worlds  $w'$  deontically accessible from  $w$ , Paula marries that man. At least two resolutions of  $\alpha$  yield sensible results. Peter might believe that there is a man that is identifiable to Paula, or the instructor, such that Paula has to marry this man.

This concludes our analysis of *bestimmt*. As we saw, *bestimmt* contributes an identification requirement to the at-issue meaning that interacts with negation, other quantifiers and intensional operators<sup>8</sup>. In the former cases we derive the observed narrow

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<sup>8</sup>Due to reasons of space we cannot discuss the analysis of *bestimmt* indefinites in conditionals.

scope readings straightforwardly. In the latter case, the narrow(est) scope reading is excluded due to a conflict of the identification requirement and the nature of the involved operator, in our example the deontic modal *must*. We see that here *believe* differs from other attitudes and intensional operators in general. While it leads to deviant readings when the statement of identification by an agent  $\alpha$  is embedded under deontic operators such as *must*, it is possible to embed such a statement under *believe*. In short, an attitude holder might very well believe that there is some  $x$  which some agent  $\alpha$  is able to identify. But it is implausible that he tries or that he is obliged to bring it about that some agent  $\alpha$  is able to identify  $x$ . This leads us to the following prediction that underlies an explanation of the available readings of (17): *bestimmt* indefinites must take scope over intensional operators such as *search*, *want*, *must*, that are incompatible with the identification requirement, but they can nevertheless take scope under *believe* or *know*.

### 3.2 Conventional Implicatures and the Meaning of *gewiss*

Potts (2005) argues that certain parts of sentences, while syntactically fully integrated, are nevertheless semantically processed at a separate level of interpretation. These *conventional implicatures* (CIs) function as comments on an at-issue core and are interpreted at the highest level, i.e. they are scopeless. Prime examples of CIs are nominal appositives, expressive adjectives (cf. also Potts 2007), epithets and Japanese honorifics. Potts (2005) devises a formal system of semantic composition that essentially derives the at-issue meaning and the conventional implicature meaning in parallel on separate levels. (26-b) illustrates the result of this system for (26-a), where the predication of the property of being a cyclist is conveyed as a CI, separated in the representation from the at-issue information by a bullet point.

- (26) a. Lance, a cyclist, is training.  
 b. train(lance) • cyclist(lance)

We propose that the difference in meaning of *bestimmt* and *gewiss* goes back to this difference between at-issue and conventionally implicated information. While in the case of *bestimmt* the identification requirement is part of the at-issue meaning, we propose that it is a CI in the case of *gewiss*. Employing Pott's (2005) notational division of these two levels of interpretation, the meaning of *ein gewiss* can be formally specified as follows.

$$(27) \llbracket \text{ein gewiss} \rrbracket = \lambda P \lambda Q. \exists x [P(x) \ \& \ Q(x)] \bullet K_{\alpha}(\uparrow_n y)$$

In (27),  $y$  is a free variable that needs to be resolved, which is in line with the discussion of Potts (2005), who suggests such a treatment of supplements in the case of quantified anchors. In these cases a free variable at the CI level is resolved in an E-type way to an individual from the at-issue level. We propose that something similar is going on in (27), where the most salient individual to which  $y$  might be resolved is the freshly introduced  $x$  of the indefinite.

Concerning semantic effects, Potts (2005) argues that conventional implicatures are scopeless, i.e. always have widest scope and are invariably commitments attributed to the speaker of the utterance. These two characteristics are key in the explanation of the

behavior of *gewiss*, which has been investigated in the previous section. There we saw that *gewiss* always requires identification by the speaker, and that *gewiss* indefinites always take widest scope. We will illustrate how our construal derives the correct predictions with example (16) in its *gewiss* variant. (28-a) is the derivation we get for a narrow scope reading of the indefinite below the deontic modal, while (28-b) is the corresponding wide scope reading. In both cases, the identification requirement comes as a CI on a separate level.

- (28) a.  $\text{must}(\text{paula}, \exists x[\text{man}(x) \ \& \ \text{marry}(\text{paula}, x)]) \cdot K_\alpha(\uparrow_n y)$   
 b.  $\exists x[\text{man}(x) \ \& \ \text{must}(\text{paula}, \text{marry}(\text{paula}, x))] \cdot K_\alpha(\uparrow_n y)$

Crucially, in (28-a), an E-type resolution for  $y$  fails, since the indefinite scopes under the modal and hence co-varies with the accessible deontic worlds. In (28-b) however, the at-issue proposition and the CI are coherent and the E-type resolution of  $y$  succeeds. Here the at-issue proposition states that there is a man such that Paula is obliged to marry him, while the CI comments on this proposition that some agent  $\alpha$  has identifying knowledge of this man. We argue that the fact that CIs are attributed to the speaker is responsible for the fact that  $\alpha$  is resolved to the speaker, i.e. that the identifying knowledge is attributed to the speaker and not some other agent<sup>9</sup>. Hence we derive the correct analysis in (28-b), that assigns a widest scope reading of the *gewiss* indefinite to (16), with the additional requirement that it is the speaker who is in possession of identifying knowledge. The reasoning exemplified here is applicable to other cases also. We hence predict that *gewiss* indefinites always take widest scope and come with a requirement of speaker identifiability in general.

#### 4. Conclusion

In this paper we presented an empirical investigation and formal analysis of the German specificity markers *bestimmt* and *gewiss*. We observed that both *bestimmt* and *gewiss* come with a meaning component that specifies that the referent of the modified DP is identifiable. While this identifying knowledge is attributed to some salient agent in case of *bestimmt*, it is attributed to the speaker in case of *gewiss*. Concerning scopal interaction, we saw that *bestimmt* allows for narrow scope w.r.t. negation, nominal quantifiers, and conditionals, while it does not take narrow but possibly non-widest, intermediate scope w.r.t. intensional operators. In contrast, *gewiss* always induces widest scope.

We proposed to analyze ‘identifiability’ in terms of conceptual covers and to locate the difference between *bestimmt* and *gewiss* in the difference between at-issue and conventional implicature meaning. While the identification requirement is part of the at-issue semantics in case of *bestimmt*, it comes as a conventionally implicated meaning component in case of *gewiss*. We illustrated how this proposal accounts for the observed differences.

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<sup>9</sup>We found very few cases where the identifying knowledge of *gewiss* indefinites seems to be attributed to some agent different from the speaker. These could pattern with rare cases where also CIs are not attributed to the speaker (cf. Potts, 2007 and the following commentaries). We leave a closer investigation of these cases for further research.

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