

Post-modal Concessive Meanings: A Contrastive Corpus Study of French and German Modal Verbs

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1 Introduction

This paper aims at characterizing the modal meanings of French and German modal verbs by looking at their textual argumentative environments. Our idea is that the argumentative patterns in which a modal form occurs have an impact on the values that the forms can endorse. On the other hand, the basic meaning of a modal form constrains the argumentative patterns in which it can occur.

In previous studies (Rossari 2018, Rossari et al. 2018), we have investigated the relationship between French and Italian modal expressions and the argumentative pattern with the adversative connectors fr. *mais* and it. *ma*. Using the newspaper corpus data from 21th century, we have seen that modal forms with the basic meaning of necessity (NEC) tend to behave differently from modal forms with the basic meaning of possibility (POS). More specifically, some of POS forms display a statistically highly significant attraction to *mais/ma*, whereas this is not the case for NEC forms (Rossari et al. 2016, Rossari 2018, 2019, Rossari et al. 2018). This is particularly intriguing because the non-attraction of NEC forms cannot be accounted for in terms of grammatical, semantic or pragmatic incompatibility. In the literature, it has been pointed out that NEC and POS forms can convey epistemic values in inferential contexts (Kronning 1990, 1996, Dendale 1994, Vettters 2012), cf. (1)–(2):

- (1) Marie **doit** être fatiguée après ses examens, il vaut mieux ne pas la déranger.
'Mary must be tired after her exams, it is better not to disturb her.'
- (2) Paul **peut** être fatigué après ses examens, il vaut mieux ne pas le déranger.
'Paul may be tired after his exams, so it is better not to disturb him.'

It has also been noticed (see e.g. Vettters 2012) that some modal expressions display so-called “post-modal” values, as e.g. in (3)–(4). In this case, the form no

longer seems to express the value associated with its basic modal meaning, in this case POS, but has concessive reading.

- (3) Je suis **peut-être** une femme, mais ... \neq il est possible que je sois une femme, mais ...
 'Maybe I am a woman, but ... \neq it is possible that I am a woman, but ...'
- (4) Je **peux** être un homme, mais ... \neq il est possible que je sois un homme, mais ...
 'Maybe I am a man, but ... \neq it is possible that I am a man, but ...'

The difference between (1) and (2) has been usually accounted for in terms of the strength of inference (Dendale 2000, Desclés & Guentchéva 2001). According to Tasmowski and Dendale (1994), *pouvoir* can be used when several possibilities are at stake, whereas *devoir* selects only one possibility as the most probable due to the reasoning of the speaker (see Dendale & De Mulder 1996, Desclés & Guentchéva 2001). Post-modal uses as in (3) and (4) are usually treated as cases of pragmaticalisation (Vetters 2012), or as polyphonic variants (Nølke 1988, 2014). However, no explanation has been presented so far for the fact that only *pouvoir* and *peut-être*, and not *devoir*, display such post-modal uses.

Things get more complicated when modal verbs are used in the conditional mood. Dendale (2000) examines the effect of the conditional marking of inferential *devoir* and argues that it does not affect the inferential interpretation of the verb; instead, it weakens the degree of certainty of the conclusion. In our previous research (Rossari et al. 2018), we have analysed it. *dovere* and fr. *devoir* and demonstrated that the conditional marking does not show the same effect in both languages, especially if the argumentative patterns and contextual environment of the modal expressions are taken into account. The purpose of this paper is to elaborate further on the theoretical framework that models different uses of modal expressions with POS and NEC values, focusing on French and German.

The paper is structured as follows: Section 2 introduces our model of modal meanings and its general application to French and German modal verbs. Section 3 formulates the hypotheses of the present study. In Section 4, we briefly describe the data and method of the corpus study. Section 5 discusses the results of our corpus study, and Section 6 concludes.

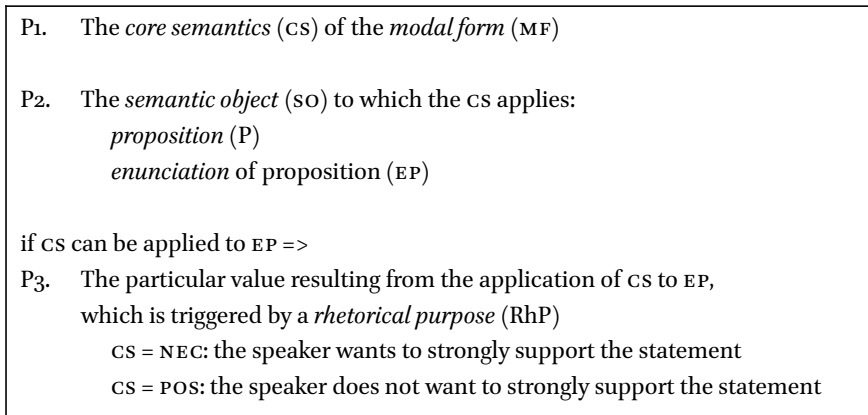


FIGURE 11.1 General three-layer model of modal meanings

2 A Unified Approach to Modal Meanings

2.1 *The General Three-Layer Model of Modal Meanings*

Our model consists basically of three parameters which are used to represent the contribution of the modal form to the utterance in which it occurs.

With these three layers, our model accounts for different values a modal form can convey in different contexts of use. The set of parameters P1 and P2 is conventional. Each form conveys a particular CS which may be applied to P and/or EP. P3 is relevant only if the MF can apply to EP. If the CS is POS, the RhP involves a weak endorsement by the speaker, if the CS is NEC, the RhP involves a strong endorsement by the speaker. Strong endorsement often results in a conjunctural interpretation as in (5); weak endorsement may result either in a concessive interpretation (6) or in an interpretation where the speaker takes a dismissive attitude towards the proposition (7).

- (5) Avec tout ce qu'il a bu il **doit** être saoul, ??**mais** j'en sais rien.
'With all he has drunk, he must be drunk by now, ?? but I don't know.'
- (6) Je **peux** être une femme, **mais** je sais m'imposer.
'Maybe I am a woman, but I know how to impose myself.'
- (7) Je **pourrais** le faire **mais** il vaut mieux ne pas faire appel à moi.
'I could do it, but it's better not to ask me.'

2.2 *French pouvoir and devoir*

As mentioned above, *pouvoir* can occur in concessive contexts, whereas *devoir* cannot. It can only occur in strong endorsement contexts.

- (8) Je **peux** être une femme, **mais** ...
 'Maybe I am a woman, but ...'
- (9) *Je **dois** être une femme, **mais** ...
 'I must be a woman, but ...'
- (10) Avec tout ce qu'il a bu, il **doit** être saoul (= il est forcément saoul).
 'With all he has drunk, he must be drunk by now (= he is certainly drunk).'

We argue that this difference may be accounted for in terms of the application of the third parameter P₃ of our model presented above. *Pouvoir* conveys a basic meaning of POS, which can apply to P or to EP. When it applies to EP, the CS is still active and *pouvoir* indicates that the utterance of the proposition is possible (= POS). This is to say that the speaker makes a statement, but at the same time, s/he indicates that s/he does not completely endorse it, as the realization of the utterance is only *possible*. These mode of employment of the modal verb is analogous to the rhetorical figure where the speaker explicitly utters that s/he is not saying it, but at the same time, s/he is saying it, as in the following sentence:

- (11) Je ne dis pas que Paul est stupide.
 'I'm not saying that Paul is stupid.'

By means of *pouvoir*, the speaker marks her/his utterance as possible, and this allows for an interpretation where the speaker distances her/himself from the statement, meaning that it should be put in the background of the discourse flow. We can rephrase (8) as follows:

- (12) Je **peux** être une femme, **mais** ...
 "what really matters is not that I am a woman or not, as it can be assessed as incompatible with my capacity of doing this or that, but that I can do this or that"

On the other hand, the CS of *devoir* is NEC. If it is applied to EP, it indicates that the utterance of a statement is necessary (= NEC). This indication is incompatible with an interpretation where the speaker distances her/himself from the

<p>P1. The <i>core semantics</i> CS of the <i>modal form</i> MF = POS</p> <p>P2. The <i>semantic object</i> (SO) to which POS applies <i>proposition</i> POS(P) => possibility, capacity, permission <i>enunciation</i> of proposition POS(EP)</p> <p>if POS is applied to EP =></p> <p>P3. The particular value resulting from the application of CS to EP, which is triggered by a <i>rhetorical purpose</i> (RhP) the speaker wants to weakly endorse the statement => concessive value</p>

FIGURE 11.2 *Pouvoir* in the present tense indicative form

<p>P1. The <i>core semantics</i> CS of the <i>modal form</i> MF = NEC</p> <p>P2. The <i>semantic object</i> (SO) to which NEC applies <i>proposition</i> NEC(P) => necessity, obligation <i>enunciation</i> of proposition NEC(EP)</p> <p>if NEC is applied to EP =></p> <p>P3. The particular value resulting from the application of CS to EP, which is triggered by a <i>rhetorical purpose</i> (RhP) the speaker wants to strongly endorse the statement => epistemic value, strong inferences</p>
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FIGURE 11.3 *Devoir* in the present tense indicative form

statement. When applied to EP, *devoir* always indicates that the speaker has to say what s/he does. Therefore, s/he cannot weakly endorse the statement, as shown in (9). ~~In our model, the difference between *pouvoir* and *devoir* can be noted as follows:~~

■ please rephrase

2.2.1 *Pouvoir* and *devoir* in the Conditional Mood

The uses of *devoir* and *pouvoir* in the conditional mood are different from those in the indicative. On the one hand, the conditional form of *pouvoir* cannot have concessive readings, cf. (13); but it can be used in contexts when the speaker shows a dismissive attitude, cf. (14):

- (13) ??Je **pourrais** être une femme, **mais** ...
'Maybe I am a woman, but ...'

- (14) Je **pourrais** le faire, **mais** ...
 'I could do that, but ...'

On the other hand, *devoir* cannot be used in "pure" inferential contexts:

- (15) Pourquoi a-t-il pris froid?
 'Why did he catch a cold?'
 Il **doit** encore être sorti sans se couvrir / ??Il **devrait** encore être sorti sans se couvrir
 'He *devoir.PRES.IND* have gone out without warm clothes. ??He *devoir.COND* have gone out without warm clothes.'

The core semantics changes when both forms are used in the conditional mood. As for *pouvoir*, the form can apply to both P and EP; *devoir*, on the other hand, can only apply to P. With *pouvoir*, the application to EP involves an interpretation according to which the speaker not only wants to weakly endorse the statement, but s/he adds a condition to endorse it. This allows *pouvoir* to be used in dismissive contexts, such as (7) above. On the contrary, it does not allow the use of *pouvoir* in a concessive context, because the indication of a condition to utter the statement cannot be relevant in a context where the statement is self-obvious. As for *devoir*, the form applies only to P. Thus, the values that it can endorse are linked to necessity or obligation plus condition. Such values are not compatible with pure inferential contexts, where a necessity or an obligation interpretation cannot hold. On the other hand, some inferential contexts can be ambiguous between a necessity submitted to condition interpretation and an epistemic one:

- (16) A l'heure qu'il est il **devrait** être arrivé.
 'By now he should have arrived.'
 = Il est nécessaire qu'il soit arrivé si tout se passe comme prévu.
 'It is necessary that it has happened if everything goes as planned'
 = Tout porte à croire qu'il est arrivé.
 'All indications are that he has arrived.'

Instead of considering the functioning of *devrait* as qualifying EP, we consider it as qualifying P. *Devrait* always conveys a flavour of necessity even if it is used in inferential contexts. Therefore, when the necessity interpretation is not available, as it is in the pure inferential contexts, the use of *devrait* is not possible. The use of *doit* is instead natural, because the form applies to EP indicating that it is necessary to utter P since the speaker has strong evidences, even if s/he does not explicitly address them, as in (15) above.

<p>P1. The <i>core semantics</i> CS of the <i>modal form</i> MF = POS + COND</p> <p>P2. The <i>semantic object</i> (SO) to which POS + COND applies <i>proposition</i> POS(P) => possibility, capacity, permission <i>enunciation</i> of proposition POS + COND (EP)</p> <p>if POS + COND is applied to EP =></p> <p>P3. The particular value resulting from the application of CS to EP, which is triggered by a <i>rhetorical purpose</i> (RhP) the speaker wants to weakly endorse the statement => dismissive attitude</p>

FIGURE 11.4 *Pouvoir* in the conditional mood form

<p>P1. The <i>core semantics</i> CS of the <i>modal form</i> MF = NEC + COND</p> <p>P2. The <i>semantic object</i> (SO) to which NEC + COND applies <i>proposition</i> NEC + COND (P) => conditional necessity, obligation</p>
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FIGURE 11.5 *Devoir* in the conditional mood form

2.3 German Modal Verbs

The paradigm of German modals consists of six verbs: *können*, *sollen*, *müssen*, *mögen*, *dürfen*, and *wollen*. Unlike French, several modal verbs are associated with each of the core values POS and NEC, whereby a distinction between epistemic and non-epistemic uses is usually made for all of them (cf. e.g. Öhlschläger 1989, Diewald 1999, Mortelmans 1999, Abraham & Leiss 2009, Maché 2013, Baumann 2017). In this study, we focus on two different modal verbs from the POS domain, *können* and *mögen*, and one NEC verb *müssen*.¹ In terms of frequency, *können* and *müssen* are the most frequent ones, *mögen* is much less frequent, independently of which corpora of present-day German are consulted (see Maché 2013: 31–33 and references therein).

Depending on the particular context of use, *können* may be associated with three basic modal readings: 1. dynamic ability/capacity reading, 2. situational

1 The verbs *wollen* and *sollen* will not be considered in this study, as they differ from the other four verbs in several respects (see e.g. Maché 2013, Ch. 7). First, *wollen* is a modal verb with volitive semantics, and thus does not correspond to the core notions of POS and NEC focused on in this study. Second, the epistemic readings of these verbs are of evidential kind, expressing reportative modality/evidentiality. Third, there is no formal distinction between the preterit indicative and the preterit subjunctive forms of these verbs (*sollte*, *wollte*).

possibility reading, and 3. epistemic possibility reading. The ability reading of *können* represents a prototypical instance of dynamic modality, where *können* ascribes an ability or capability to the first argument participant of the infinitive verb, which is usually the agent participant realized as the subject of the clause.


- (17) Sie **kann** schwimmen.
‘She can swim.’

In its situational reading, *können* denotes possibility which is not ascribed to a particular individual but is inherent in the state of affairs, cf. (17).

- (18) Es **kann** hier manchmal regnen.
‘It can rain here sometimes.’

In its epistemic reading, *können* involves an estimation of the likelihood of the proposition expressed in the clause. More specifically, *können* expresses epistemic possibility.

- (19) Er **kann** zu Hause sein.
‘He may [lit.: can] be at home.’

With respect to the general model of modal meanings introduced above, we propose to treat all three readings of *können*, i.e. those of physical ability, situational possibility, and epistemic possibility, in a unified manner. We argue that in each case, *können*, similarly to its French pendant *pouvoir*, invokes its basic meaning of POS, and ascribes this possibility value on the propositional level. That is, the proposed notation of the semantic contribution of *können* is in any case: POS(P), that is, the propositional content is evaluated by the speaker as possible. Whether the POS value is ascribed to the first argument participant of the lexical verbs, as in the case of ability/capability reading in (17), or to the state of affairs as a whole, as it is the case with the situational (18) and epistemic readings (19), our semantic model does not differentiate between these usages, because the core contribution of *können* remains in each case the same (see Figure 11.6). 

What is important for the purposes of the present study, is that *können* can be used in the indicative as well in the preterit subjunctive (Konjunktiv II) form. The function of the German preterit subjunctive is usually described as indication of the non- or counter-factual status to the proposition (Kasper 1987, Diewald 1999). Additionally, it has been noted that its function may be

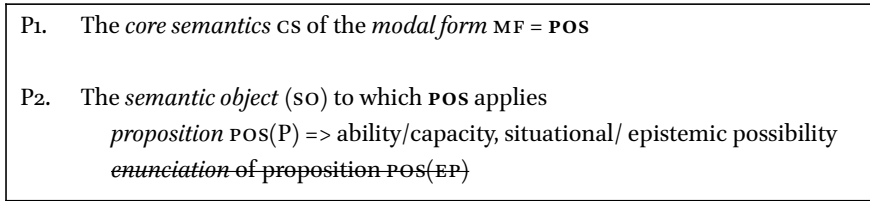


FIGURE 11.6 *Können* in the present tense indicative form

described as an implicit reference to some non-fulfilled condition(s) preventing the proposition from being a fact.

Können with the preterit subjunctive marking mostly results in a compositional meaning, as exemplified in (20) for the dynamic reading of *können*: as *können* operates at the level of the proposition, its respective semantics is modified by the subjunctive morphology so that the ability reading remains the same, but the state of affairs is marked as non-factual due to the non-fulfilled status of some condition(s).

- (20) Ich **könnte** schwimmen (, wenn ich meinen Badeanzug dabei hätte).
 => Ich kann im Moment nicht schwimmen.
 'I could swim (, if I had my swimsuit with me).'
 => 'I cannot swim at the moment.'

With respect to the epistemic reading of *können*, the situation with indicative vs. preterit subjunctive forms is more complicated, however. Maché (2013: 54 ff.) for example proposes to see the major difference between the epistemic *kann* and *könnte* in the way they qualify the evidence underlying the epistemic judgment of the speaker. The degree of certainty is weakened, when the subjunctive form *könnte* is used, mainly due to the fact that the speaker does not know whether his/her premises hold, i.e. it is the premises whose status is questioned and thus non-fulfilled, which can be paraphrased as follows: "if my premises are correct, it is possible that p".

- (21) Er **könnte** zu Hause sein. (Wenn meine Information stimmt, dass er um diese Zeit nicht arbeitet.)
 'He could be at home. (If my information is correct that he is not working at this time.)'

In any case, epistemic *kann* and *könnte* seem to be not mutually replaceable (cf. Coates 1983, Lötscher 1991, Fritz 1997: 101, Mortelmans 1999: 205, Maché 2013: 63), as the degree of certainty decreases as soon as a subjunctive form is used.

<p>P1. The <i>core semantics</i> CS of the <i>modal form</i> MF = POS + COND</p> <p>P2. The <i>semantic object</i> (SO) to which POS + COND applies <i>proposition</i> POS + COND (P) => conditioned ability/capacity, weakened degree of situational/epistemic possibility</p>
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FIGURE 11.7 *Können* in the preterit subjunctive form

Müssen is usually associated with four different modal readings: 1. dynamic reading of a physical need, 2. dynamic circumstantial reading, 3. deontic reading of obligation, and 4. epistemic necessity reading.

In its first dynamic necessity reading, *müssen* indicates a physical need of the first-argument participant, cf. (22):

- (22) Ich **muss** etwas essen, ich bin so hungrig.
‘I must eat something, I am so hungry.’

In its dynamic circumstantial reading, *müssen* refers to the necessity that is conditioned by external factors (“participant-imposed” modality in Nuyts 2016; “participant-external” modality in van der Auwera & Plungian 1998), cf. (23):

- (23) Sie **muss** viel lernen, um die Prüfung zu bestehen.
‘She has to learn a lot to pass the exam.’

Deontic *müssen* indicates an obligation which is imposed upon the first-argument participant by some laws and regulations, see (24):

- (24) Dieses Gebäude **muss** überwacht werden. (Niemand darf es ohne Erlaubnis betreten)
‘This building needs to be monitored. (Nobody is allowed to enter without a permission)’

Epistemic *müssen* indicates that the proposition is not part of the speaker’s knowledge and expresses high degree of certainty of the epistemic judgment of the speaker, cf. (25).

- (25) Dieses Gebäude **muss** überwacht werden. (Im Garten sind Polizisten zu sehen)
‘This building needs to be monitored. (One can see police officers in the garden)’
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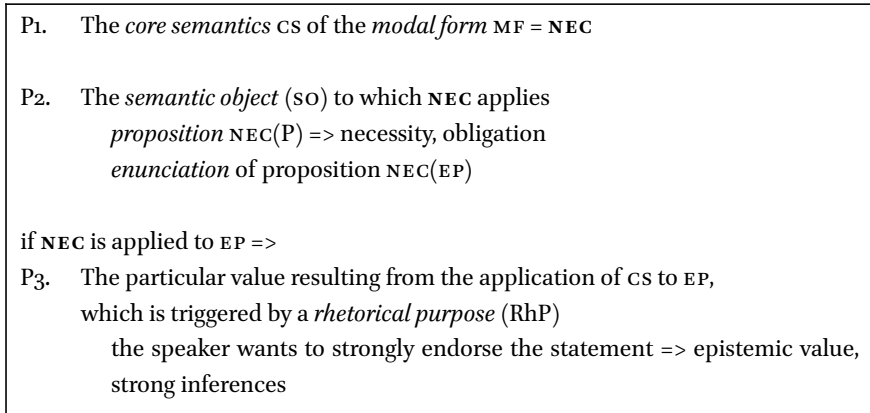


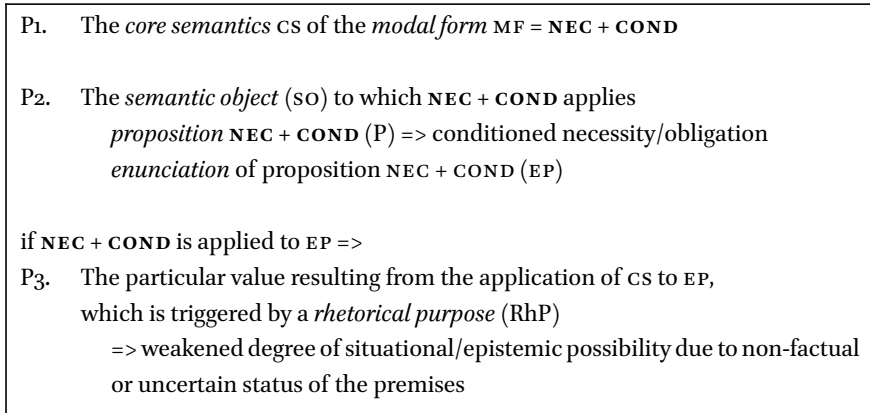
FIGURE 11.8 *Müssen* in the present tense indicative form

In our model of modal meanings introduced above, different readings of *müssen* receive two different notations (see Figure 11.8). The dynamic and the deontic meanings introduced in (22), (23) and (24) invoke the basic meaning of necessity and modify the event expressed in the proposition: NEC(P). *Müssen* ascribes this necessity value to the proposition: NEC value may be either to the first argument participant of the lexical verb, as in the case of physical need and deontic readings, or to the state of affairs as a whole, as it is the case with the circumstantial reading.

On the other hand, if *müssen* is used in its epistemic reading, as in (25), the basic semantic contribution NEC, which remains the same, is applied not at the level of the proposition, but at the level of enunciation: NEC(EP), and the resulting interpretation may be paraphrased in the following manner: “it is necessary to say (E) that P”. In our view, this fact explains why *müssen* is often associated with evidential nuances, in the sense: “in view of what I know, it is necessary to conclude that P”.

As is the case with *können*, *müssen* comes across in two morphological realizations: as indicative *muss* and as preterit subjunctive *müsste*. Non-epistemic *müsste* can be treated along the same lines as the dynamic readings of the preterit subjunctive forms of *könnte*, cf. (26). As *müssen* operates at the level of the proposition, its respective semantics is modified by the subjunctive morphology so that the obligation reading remains the same, but the proposition is marked as non-factual due to the non-fulfilled status of some condition(s).

- (26) Er **müsste** jetzt eigentlich arbeiten (wenn er nicht krank wäre).
=> Er muss im Moment nicht arbeiten.

FIGURE 11.9 *Müsste* in the preterit subjunctive form

‘He would have to work now (if he wasn’t sick).’
=> ‘He does not have to work at the moment.’

As in the case of epistemic *könnte*, the interplay of the subjunctive marking and the epistemic reading of *müssen* is rather complex. For the sake of simplicity, we can say at this point that *müssen* behaves more or less analogously to *können* in that the degree of certainty is weakened when the subjunctive form *müsste* is used (see Figure 11.9). U

(27) Er **müsste** zu Hause sein.
‘He should be at home.’

Mögen is probably the most difficult verb to analyse, as it involves a whole range of usages which do not seem to be related to each other (any more). It can be used as a volitive verb, and it always exhibits a concessive value whenever used as an epistemic modal verb, whereas its epistemic possibility reading has been lost in the last centuries. Additionally, its preterit subjunctive form *möchte* exists as an independent lexeme.

Volitive *mögen* is very similar to the other volitive modal verb *wollen* and is mostly restricted to negative contexts, as exemplified in (26) (see Welke 1965: 115, Öhlschläger 1989: 179, Weinrich 1993: 307, Fritz 1997, Diewald 1999, Maché 2013):

(28) Ich **mag** jetzt nicht darüber reden.
‘I don’t want to talk about it right now.’

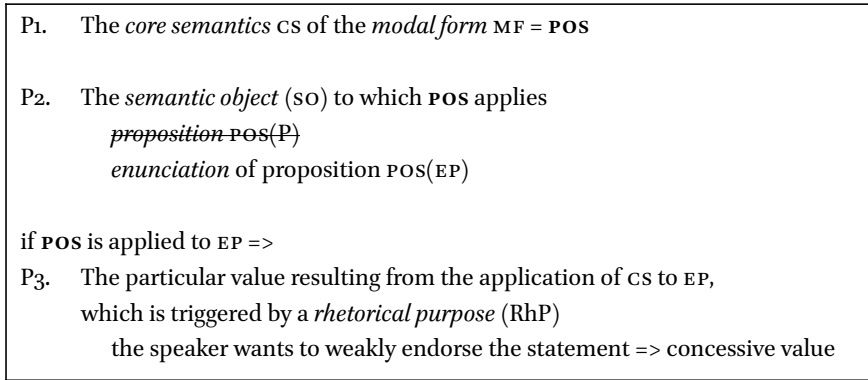
Interestingly, *mögen* was able to express any type of circumstantial and epistemic possibility until the Early New High German period, and ceased to do so in present-day German (cf. Bech 1951, Fritz 1997, Diewald 1999). Diewald (1999: 392) argues that this semantics shift was due to the rise of another possibility modal verb *können*, which replaced *mögen* in the most relevant possibility contexts. As one of the outcomes of this competition, *mögen* has developed a more specialized volitive meaning and promoted it as its primary semantics.

The epistemic uses of *mögen* are restricted to the indicative form *mag* and are rather complicated to capture. As has been pointed out in multiple studies (e.g. Becker 1836, Bech 1949, Welke 1965, Öhlschläger 1989, Fritz 1991, Diewald 1999, Maché 2013), the so-called “epistemic” *mag* is mostly concessive and not at all epistemic. The speaker does not seem to judge the proposition as more or less likely. Instead, s/he is indifferent as to the epistemic status of the proposition. *Mag* signals that there is another speaker that believes the proposition to be true, and states at the same time that this is irrelevant in the actual discourse situation. Usually, another statement follows the sentence with *mag* in which a proposition is presented which the speaker treats as a fact, cf. e.g. (29):

- (29) Er **mag** der beste Schauspieler sein, aber ich finde ihn nicht gut.
 ‘Let him be the best actor, but I don’t think he’s good.’

Summing up, *mögen* is a “not well-behaved” possibility modal verb. With respect to the model of modal meanings introduced above, we focus only on the epistemic reading of *mag*, as the volitive/desire semantics of this modal verb cannot be accounted for in terms of POS (see Figure 11.10). As noted in Diewald (1999), the concessive variant of this verb has developed from the former epistemic possibility reading, which by now has almost completely been lost and has been taken over by the modal verb *können*. *Mögen* has obviously been subject to massif semantic shifts in the course of its diachrony, resulting in the lexical split introduced above.

For the concessive reading of the indicative *mag*, we argue that the core semantics POS is attached at the level of enunciation, and not at the level of proposition: POS(EP). As *mag* is used only in the indicative, there is no additional contribution of the subjunctive, and the semantic contribution of *mag* may be paraphrased as “it is possible to say that P”. However, as the short description above has revealed, this interpretation does not capture in itself the concessive semantics of *mag*, which seems to have become dominant in present-day German. At this point, however, we let it as it is, in the least specific form, and postpone the discussion of the specific semantic contribution of *mag* to Section 5, after the presentation of the results of our corpus study.

FIGURE 11.10 *Mögen* in the present tense indicative form

3 Hypotheses: POS vs NEC Modal Expressions and Concessivity

Our quantitative analysis will focus on the significance of the association between the modal verb and the conjunction fr. *mais*/germ. *aber*. A conjunction plays a non-negligible role in the liability of the modal form to occur in its left or right environment, since it gives an indication on the endorsement of the utterances it coordinates. According to the seminal work of Anscombe & Ducrot (1977), it is acknowledged that the left utterance has less argumentative strength, and thus is less strongly endorsed than the right one when both are linked by *mais/aber*. According to this background, we hypothesize that a POS form is more compatible with an utterance with less argumentative strength, in contrast to a NEC form. The conjunction indicating that the utterance in which it occurs is backgrounded in the discourse can hardly minimize the indication of necessity. On the other hand, it can strengthen the NEC value when it occurs in the utterance that follows *mais/aber*. We thus expect that the association of *mais/aber* with NEC modal forms on its left (= NEC ... *mais/aber*) is less significant than the association of *mais/aber* with NEC forms in its right context (= *mais/aber* ... NEC).

Conversely, we expect that POS modal forms are more compatible with the utterance which is discursively backgrounded, thus POS forms are expected to be associated with *mais/aber* to their right (= POS ... *mais/aber*). Additionally, we can hypothesize that POS modal forms that can occur in concessive contexts (*pouvoir* and *mögen*) show a significant attraction to the conjunction *mais/aber* in their right context. Thus, we expect, in particular for French, that *pouvoir* in the present tense shows more attraction to right *mais* than *pouvoir* in the conditional mood, which is not compatible with concessive contexts.

TABLE 11.1 Corpora used for this study

	French	German
newspaper	Le Monde 2008 ^a	ZEIT 2008 ^b
corpus size	20,410 766 tokens ■space replaced by comma, ok?	563,306 517 tokens ■space replaced by comma, ok?

- a Accessed through BTLC (Base Textuelle Lexico-statistique de Cologne, Diwersy 2014), constituted within the French-German project Presto (<http://presto.ens-lyon.fr>) and Emolex (<http://emolex.u-grenoble3.fr>).

- b Accessed through the DWDS interface (www.dwds.de).



4 Data and Methodology

To test our hypotheses, we have conducted two different corpus studies, one for the quantitative purposes, and one for the more detailed semantic analysis of the argumentative patterns the modal expressions are used in. For both studies, we used comparable corpora of German and French, namely the corpora of national newspapers (*Le Monde* for French, *Die Zeit* for German), from the same year 2008, to increase the comparability rate. Table 11.1 contains the basic information about the corpora used. ✓

For the first quantitative study, we extracted all occurrences of the respective modal verbs from the corpus, as well as their occurrences with the relevant connectors, i.e. fr. *mais* and germ. *aber*. Note that for German, we considered only the indicative forms of *mögen*, as the preterit subjunctive form *möchte* represents an independent lexical element and cannot be used epistemically at all (see Section 2.3 for details). The relevant context window was set to 10 words (to the left and to the right; see Rossari et al. 2018:107 for the test of the most efficient window). To estimate the degree of association between modal verbs and the connectors, we have calculated the loglikelihood value (= LL score) of the cooccurrence of the modal expressions in question, i.e. modal verbs, with the adversative connectors fr. *mais* and germ. *aber*. The significance level was set to 10.38.

For German, we have added to this quantitative study a qualitative inquiry concerning the modal verb *mögen* (*mag* in the present indicative form), the unique modal verb having conventionalized the concessive meaning, in order to identify relevant contextual elements. We have extracted a random sample of 200 examples of the modal verb *mögen* from the same ZEIT-corpus. Each individual example in the sample was annotated according to the following parameters:

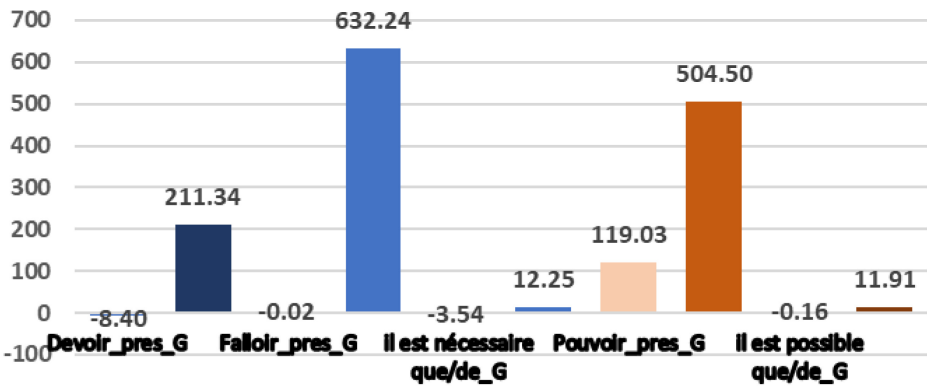


FIGURE 11.11 Association between modal expressions in the present indicative and the connector *mais* (G indicates that *mais* follows the modal expression)

- *reading* of the modal verb: dynamic, concessive, etc.;
- *connectors* present in the broader context, i.e. one sentence before and after the sentence with the modal verb;
- *infinitive verb* in the scope of the modal verb;
- *subject* of the clause: human, agentive, propositional, expletive, etc.;
- *syntactic structure*, e.g. main/embedded clause, conditional clause;
- *lexical material* in the broader context pointing towards a particular reading of the modal verb, e.g. sentence adverbials, modal particles, etc.

The rationale behind these parameters was to see whether *mag*, which, in the course of the last centuries, has obviously become conventionally associated with the concessive meaning and seized to convey any epistemic judgment of the speaker, is still tied to particular contexts of use which point to the (diachronic) origins of the concessive interpretation. In doing so, we hope to be able to understand how a potential interpretation of modal expressions of POS, which is largely due to the particular contextual and discursive environment, could have become the dominant reading of this modal verb.

5 Results and Discussion

5.1 French Modal Expressions

Figure 11.11 shows the association strength values of the French modal forms with core meanings ^{adjusted, ok?} NEC and POS on the one hand and the connector *mais* on the other. We have extended our paradigm to all modal expressions conveying POS (*pouvoir*, *il est possible*) or NEC (*devoir*, *falloir*, *il est nécessaire*) as core

meaning, in order to demonstrate that the results are due to the core meaning and not to the idiosyncrasy of the semantics of *devoir* or *pouvoir*.

The numbers are quite clear-cut for the NEC or POS forms. The NEC forms have no specific association with *mais* when they occur in the left environment of the connector; on the contrary, they have a high degree of association with *mais* when they occur in its right environment (211 for *devoir*, 632 for *falloir* and 12.25 for *il est nécessaire que*).

The results for the POS forms are more complex. *Pouvoir* is associated with *mais* in the right and the left environment (119 left and 504 right), but *il est possible* is specific in the right environment only (11.9). This difference in the quantitative data between *pouvoir* and *il est possible* meets a difference in their distribution: *il est possible* cannot occur in concessive contexts, whereas *pouvoir*, as already seen, can:

(30) ??*Il est possible* que je sois une femme, **mais** ...
'It is probable that I am a woman, but ...'

(31) Je **peux** être une femme **mais** ...
'Maybe I am a woman, but ...'

In our model, this difference of use is accounted for by the application of CS to different semantic objects: *pouvoir* can apply to P or to EP; *il est possible* applies only to P. Therefore, it cannot appear in contexts in which the utterance is discursively backgrounded due to the content that is not relevant in the actual flow of discourse. In this context, the only way to interpret *il est possible* is to understand it as indicating that P is possible, which is a non-sense. Our model predicts thus that only POS forms that apply to EP can appear in concessive contexts.

To sum up, the quantitative data show that:

- (i) The NEC forms are more frequently used in the right context of *mais*, because of their core meaning whether they apply to P or to EP.
- (ii) The POS forms are more attracted to the left environment of *mais* when they apply to E(P) (*pouvoir* or *peut-être*) and convey a concessive value. When the form applies to P (*il est possible que* or *probablement*) it shows no attraction to the left of *mais*.

For the modal verbs in the conditional mood, we have modelled that *devoir* only apply to P and *pouvoir* to both semantic objects, but when it applies to EP it can only convey dismissive value not a concessive one. If (i) and (ii) above are correct, we should observe that *pouvoir* in the conditional mood is not attracted by *mais* to the left of it. *Devoir* should not reveal any differ-

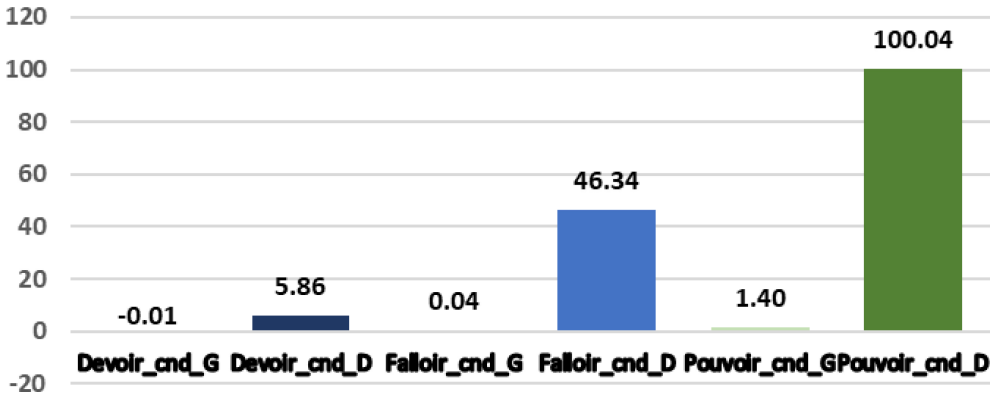


FIGURE 11.12 Association between modal expressions in the conditional mood (cnd) and the connector *mais* (G indicates that *mais* follows the modal expression and D indicates that *mais* precedes the modal expression)

ences, since the NEC forms show no attraction to the left of *mais*. We have done the inquiry for the NEC verbal modal forms *falloir*, *devoir* and POS MF *pouvoir*.

The trends are straightforward for *pouvoir*: the score shows no attraction to *mais* in the left position (1.4), whereas in the right position the score keeps on showing attraction (100). For the NEC forms, the LL score shows attraction for *falloir* in the right position but no attraction for *devoir*. This can be due to a corpus bias since in press the large majority of the occurrences of *devoir* in the conditional mood (90%) have temporal interpretation.

- (32) Le ministère de la justice a transmis lundi 9 juin, au Conseil d'État un avant-projet de loi pénitentiaire qui **devrait** être présenté au Parlement à l'automne.
 = l'avant-projet sera si tout se passe comme prévu présenté ...
 'On Monday, June 9, the Ministry of Justice sent the Council of State a draft penitentiary bill, which would be presented to Parliament in the fall.
 = the draft will be presented if everything goes as planned ...'

In this reading, *devoir* could not be rephrased with *faudrait*, which conveys very strongly a necessity value:

- (33) Le ministère de la justice a transmis lundi 9 juin, au Conseil d'État un avant-projet de loi pénitentiaire qu'il **faudrait** présenter au Parlement à l'automne.
 =/= l'avant-projet sera si tout se passe comme prévu présenté ...


‘On Monday, June 9, the Ministry of Justice sent the Council of State a preliminary draft of a prison law that should have been presented to Parliament in the fall.

=/= the draft will be presented if everything goes as planned ...’

To sum up, the quantitative data concerning the modal verbs in the conditional mood are consistent with the assumptions (i) and (ii): the blocking of the concessive value makes *pourrait* less compatible with *mais* in the right environment.

5.2 German Modal Verbs

As mentioned in Section 3, only two German modal verbs, *müssen* and *können*, may occur in both forms, the present indicative and the preterit subjunctive, thereby maintaining basically the same semantics, including epistemic readings. For reasons of comparability, we will start by presenting the first quantitative results for these two verbs; the results for (*mag*) will be presented separately.

Figure 11.13 shows the association strength of *können* and *müssen* in the present tense indicative form and the connector *aber*. Similarly to French modal expressions with the basic meaning of NEC, *müssen* shows a strong negative attraction to *aber* in the following context (-98.57), whereas both forms are strongly attracted to each other when *aber* precedes *müssen* (34.8). In view of the model and the hypotheses presented above, this is exactly what we have expected of *müssen* due to its semantic core (CS) component of NEC. 

A look at *können* reveals a similar picture: here again, there is an attraction with the preceding *aber* (50.04), and a dis-attraction with *aber* in the following context (-19.32). That *können* and *aber* show a high degree of attraction when *aber* precedes *können*, is again not surprising, and follows the same trend as in French. More specifically, *können* behaves in this respect like the French expression *il est possible que/de*, but not like French modal verb *pouvoir*. The reason for this behaviour is thus the same and is accounted for in our model by the application of the core semantics of POS to different semantic objects. As we have proposed in Section 2.3, *können* in all its readings applies only to P. For this reason, its usage in contexts where the utterance is discursively backgrounded is blocked. This is to say that the only way to interpret German *können* is to understand it as indicating that P is possible, be it dynamically, situationally, or epistemically. Moreover, as will be shown further below, it is the German modal verb *mag* which serves as a modal expression with the same basic component of POS, but applies almost exclusively at the level of EP, and, contrary to *können*, displays a very high degree of attraction to *aber* in the preceding context.

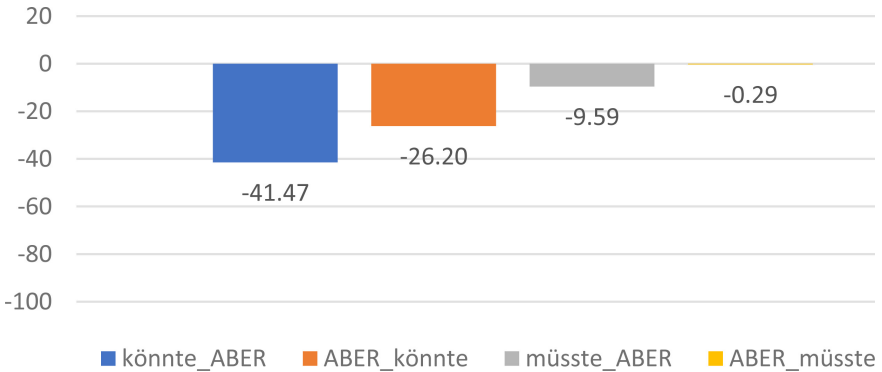


FIGURE 11.14 Association strength between modal verbs in the preterit subjunctive and the connector *aber*

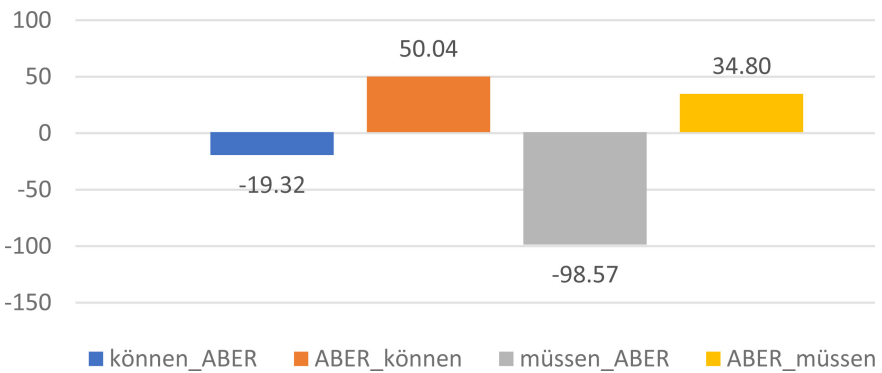


FIGURE 11.13 Association strength between modal verbs in the present indicative and the connector *aber*

Figure 11.14 presents the same association scores for the preterit subjunctive forms of the verbs *können* and *müssen*. This time, we find only negative values, but only those for *können* exceed the significance level of 10.38. *Können* shows thus a straightforward dis-preference with respect to the contexts with the adversative connector *aber*. Referring back to the point (ii) in Section 5.1: when a modal expression applies only to P, it is not likely to occur in concessive contexts and therefore should show no attraction to the following adversative connector. Therefore, we can say that this is again an expected result.

Figure 11.15 gives the association values of the modal verb *mag* (present indicative) and *aber* in the same corpus. What is particularly important, it the relation between *mag* followed by *aber*, which are extremely strongly associated with each other. Compared with the modal verbs *können* and *müssen* discussed above, *mag* is the only modal verb that is strongly associated with



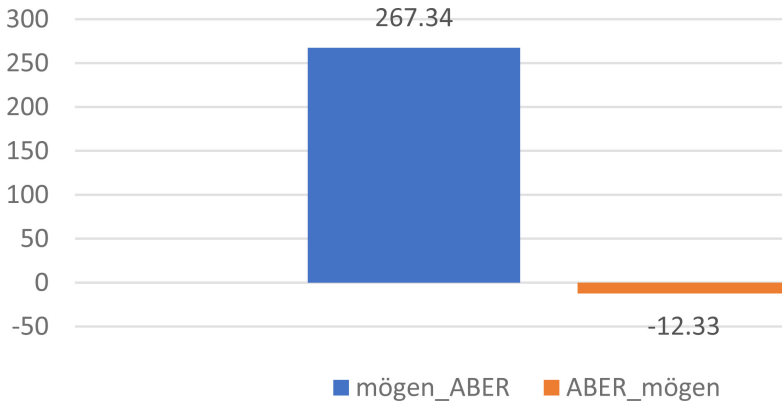


FIGURE 11.15 Association strength between modal verbs *mag* and the connector *aber*

the connector *aber* to its right in the discourse. And of course, this is what we had expected from our qualitative analysis, since *mag* is conventionally associated with the concessive value in present-day German, and, in this reading, applies exclusively at the level of EP, rendering the utterance in which it occurs as irrelevant and backgrounded in the actual discourse situation.

In the following, we will focus only on the modal verb *mag*,² and present the results of the qualitative semantic analysis of a sample of 200 examples extracted from the same newspapers corpus (ZEIT 2008). Table 11.2 gives the first overview of the readings found in this sample. As can be seen from this first overview, the concessive reading of *mag* is more frequent in our sample (ca. 60%); the rest of the examples represent the desire or preference reading of *mag*, where *mögen* only rarely combines with infinitive verbs, and instead is used with nominal complements, cf. e.g. (34):

- (34) Sehen Sie, ich **mag** auch **Schmuck**. [Zeit Magazin, 13.11.2008, Nr. 47]
 'You see, I like jewelry too.'

2 At this point, we would like to add a short remark on the diachrony of *können*. As presented in Figures 11.13 and 11.14, *können* is not associated with the following *aber* in the synchronic newspapers data. However, if one looks into the diachronic data from the 18th century, both modal verbs carrying POS value as their core semantics, i.e. *können* and *mögen*, were compatible with the adversative contexts and could be interpreted as markers of concessive value. However, whereas *mögen* established itself as a dominant expression of concessivity in German, and conventionalized this interpretation as its central semantic reading, this did not happen to *können*. Though both verbs were compatible with concessive readings in an earlier period of time, *mögen* seem to have occupied this semantic domain, and *können* has weakened its contextual ties with the adversative connective.

TABLE 11.2 Distribution of different readings of *mag* in the analysed sample

Reading	Attestations	%
concessive	119	59.5 %
desire/preference/directive	81	40.5 %
total	200	100 %

The general idea of our model is to say that the core modal semantics of POS is applied at the level of enunciation (EP), and this application results in a particular discursive or rhetorical value of the form. For *mag*, it can be said that the proposition in the scope of this modal verb is not evaluated with respect to its epistemic status (anymore) and does not bear any epistemic value. Instead, a particular status of the utterance in the discourse is indicated by using *mag*. That is, *mag* serves exclusively to mark the status of the utterance as irrelevant, from the speaker's point of view, in contrast to another—explicitly formulated or implicitly present—proposition.

Konzessive Bedeutung ist inhärent phorisch, indem sie eine Verbindung zwischen zwei Sachverhalten herstellt. Zwischen beiden Sachverhalten besteht ein Gegensatz, dem jedoch kein Gewicht beigemessen wird. Bei den meisten Verwendungen von *mag* ist diese Verbindung textuell vollständig ausgeführt: der *mag* enthaltene Satz gesteht die Möglichkeit eines entgegengesetzten Sachverhalts zu, ein nachfolgender (Teil-)Satz stellt den Sachverhalt dar, den der Sprecher trotz des möglichen Vorliegens eines Widerspruchs als faktisch bewertet.³

DIEWALD 1999: 237

We would like to argue that in the case of *mag*, which is very strongly associated with concessive semantics and has practically lost its epistemic interpretation in present-day German, the application of the core modal meaning POS at the

3 Concessive meaning is inherently phorical in the sense that it establishes a link between two facts. There is a contradiction between them, but no weight is attached to it. With most uses of *mag*, this connection is fully explained in the text: the clause containing *mag* introduces the possibility of an opposite fact, a following clause represents another fact, which is evaluated by the speaker as factual despite the possible existence of a contradiction. (our translation).

level of EP—together with the contextual information presented in the text—gives rise to the concessive semantics of the contemporary *mag*. Therefore, we would like to propose the following qualification of the modal meaning of concessive *mag* in present-day German (Note that this characterization is different from those of the French POS verb *pouvoir* that covers different types of meanings which are represented in German by at least two distinct modal verbs, *können* and *mögen*).

By shifting the modal qualification of possibility (POS) to the enunciation (EP) level by using *mag*, the speaker indicates that it is possible for him/her to utter the propositional content, **although** s/he consider it irrelevant for the current discourse.

The main point is, however, that this rhetorical interpretation is still heavily dependent on the particular communicative situation; it is always related to a particular argumentative strategy. This discursive interpretation of *mag* is still very tightly associated with different contextually present expressions which clearly express different nuances of contrast, irrelevance, adversativity, and concession.

Further above, we have shown that *mag* in general is strongly associated with the adversative connectors *aber* (32 out of 119) following the clause containing *mag*, consider (35).

(35) Man **mag** einwenden, es sei nichts Neues, dass die Chefs amerikanischer Konzerne eine Menge Geld kassieren. **Aber** es ist neu. [Die Zeit, 13.10.2008, Nr. 46]

‘One might argue that it is nothing new that the bosses of American companies collect a lot of money. But it’s new.’

In the sample analysed more thoroughly in this study, there are also other contextually present means which—together with *mag*—co-operate to trigger or support concessive interpretation. Table 11.3 below gives a list of most frequent expression types:

The following examples from the corpus illustrate these four main expression types found in the contextual environment of *mag*:

(36) adversative/concessive connectors:

Dies **mag** teilweise die Zögerlichkeit Angela Merkels, die Bernd Ulrich beschreibt, erklären. **Andererseits** ist die Kanzlerin eine strategisch denkende Frau ... [Die Zeit, 17.12.2008, Nr. 52]

TABLE 11.3 Most frequent linguistic elements in the contextual environment of *mag*

Expression type	Examples	Found in N examples
adversative and concessive connectors	<i>aber</i> 'but', <i>allerdings</i> , <i>jedoch</i> , 'however', <i>andererseits</i> 'on the other hand', <i>dennoch</i> , <i>doch</i> 'nevertheless', <i>dagegen</i> 'in contrast'	60 50.4%
infinitive verb	<i>sein</i> 'be', <i>klingen</i> 'sound'; <small>■ please check quotation marks</small> <i>daher rühren</i> 'result from', <i>daran liegen</i> 'lie in', <i>damit zusammenhängen</i> 'be connected to'	35 29.4%
irrelevance conditionals	verb-initial <i>mag</i> -clause; <i>wie auch</i> 'as well as', <i>doch so</i> 'no matter how', <i>noch so</i> 'no matter how', <i>so sehr auch</i> 'so much as'	27 22.7%
explicit lexical expressions of contrast	<i>auf den ersten Blick</i> — <i>beim näheren Hinsehen</i> 'on the first sight—upon a closer look'; <i>die einen</i> — <i>die anderen</i> 'the ones—the others', etc.	32 18.5%

'This may partly explain Angela Merkel's hesitancy, described by Bernd Ulrich. On the other hand, the Chancellor is a strategically thinking woman ...'

(37) infinitive verb *sein*:

Der moderate Präsident wird sein Land schon wieder auf Beitrittskurs bringen. **Mag sein**. Muss aber nicht sein. [Die Zeit, 28.02.2008, Nr. 10]
'The moderate president will get his country back on track for accession. May be. But it does not have to be.'

(38) irrelevance conditionals:

Doch **ganz gleich, wie gut** seine Gründe dafür sein **mögen**, das Ergebnis ist, dass am Ende die Union als Lordsiegelbewahrer der Menschenrechte dasteht ... [Die Zeit, 21.05.2008, Nr. 22]
'But no matter how good his reasons may be, the result is that, in the end, the Union stands as the lord seal holder of human rights ...'

(39) lexical material:

Im Rest von Europa mag das eine Rolle spielen. **Spanien** aber ist anders. [Die Zeit, 06.03.2008, Nr. 11]
'In the rest of Europe this may play a role. But Spain is different.'

A closer look at the individual examples of concessive *mag* and at the contextually present linguistic cues has thus revealed that there are two basic components that come together in this interpretation:

- *mag* always evokes a kind of **contrast** between two propositions (this component is called “phoric” in Diewald’s 1999 interpretation): *mag* not only modifies the clause it is used in, but it also connects this clause to another one (be it explicitly formulated in the following text or implicitly present in the discourse situation);
- *mag* qualifies the utterance as **irrelevant**, though possibly or even factually true (this component comes from the core modal semantics POS of *mögen*).

Most importantly, our qualitative study revealed that—though *mag* indeed can convey concessive meaning on its own, that is, the concessive meaning can be considered conventional semantics of this verb (form)—this reading is in most cases still supported by contextual clues and is closely tied to particular argumentative patterns, as e.g. adversative structures and irrelevance conditional structures.

6 Conclusion

In this paper, we have elaborated on the three-layer model of modal meanings developed in earlier studies. On the basis of this model, we have hypothesized that the modal expressions with the core meaning of POS are likely to be compatible with concessive contexts. We have observed that in the data, both German and French verbs show associations which very strongly support our hypotheses. At this point, we would like to interpret this tendency as a universal, cross-linguistic tendency, which of course should be tested against the data from more languages.

On the other hand, we also have found relevant differences between the two languages: Most importantly, in German, *mögen* is now strongly associated with the adversative contexts and has conventionalized concessive reading, whereas *pouvoir* in French only displays concessive reading as a possible interpretation in particular contexts. This suggests that there are relevant language-specific factors, as for example the presence of more than one modal verb in the semantic domain of POS in German, which may influence the synchronic situation as well as the diachronic development.

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