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Reportive *sollen*+infinitive in interrogative sentences[1]

In this paper, the reportive construction *sollen*+infinitive is treated as merely agnostic, with the negative epistemic component emerging qua conversational implicature. The paper aims to test whether the interrogative sentence type can be seen as a contextual trigger for this implicature. It concludes that the negative epistemic implicature can be triggered or strengthened by proper questions and mirative questions, but not by rhetorical or unresolvable questions as defined by Celle (2018).

Keywords: *sollen*+infinitive, conversational implicature, interrogative sentence type, rhetorical questions

Reportatives *sollen*+Infinitiv in Interrogativsätzen. – In dem Beitrag wird davon ausgegangen, dass die reportative Konstruktion *sollen*+Infinitiv lediglich agnostisch ist, während eine epistemische Zweifelskomponente allenfalls qua konversationelle Implikatur entsteht. Die Untersuchung gilt der Frage, ob diese Implikatur durch den interrogativen Satztyp ausgelöst werden kann. Es zeigt sich, dass dies bei echten und sog. mirativen Fragen möglich ist, nicht aber bei rhetorischen Fragen und unlösbaren Fragen im Sinne von Celle (2018).

Schlüsselwörter: *sollen*+Infinitiv, konversationelle Implikatur, interrogativer Satztyp, rhetorische Fragen

1. *sollen*+infinitive as a marker of hearsay in German

1.1. Reportive meaning and its expression in German

The modal verb construction *sollen*+infinitive functions in German as a marker of hearsay; or, in other words, as a reportive marker. In Example (1) it occurs together with other reportive

expressions: the sentence adverb *angeblich* and the prepositional phrase *nach Firmenangaben* 'according to the company's statements'.

(1)   In die Atmosphäre   **soll**   nach Firmenangaben   aber   angeblich
       into the atmoshere soll.prs.3sg according to company's statements but   angeblich
       keine Radioaktivität   **entwichen**   **sein**. (*Berliner Morgenpost*, 3 August 1999)
       no   radioactivity   escape.PST.PTCP   be.INF
       'According to the company's statement allegedly no radioactivity is sad to have been released
       into the atmosphere.'[2]

Reportive, or hearsay, expressions can be defined as elements that

> "i. justify the use of a proposition P by the speaker S, by
> ii. evoking the notion of a source completely unrelated to S from which P originated, thus signalling that
> iii. S has only indirect access to P." (Vanderbiesen 2016: 45)

Hearsay is a subdomain of evidentiality, a notional category dealing with the "source of evidence for some information; that includes stating that there is some evidence, and also specifying what type of evidence there is" (Aikhenvald 2003: 1).

1.2. *sollen*+infinitive between the deontic and the reportive meaning

The reportive *sollen*+infinitive does not necessarily refer to a concrete communicative act with an identifiable speaker, as evidence can also consist of common beliefs, traditional knowledge or folkloric wisdom. Therefore, *sollen*+infinitive is rather unspecific as regards the (lack of) anonymity of the original speaker (cf. Mortelmans / Stathi forthcoming, Wiemer p.c.). The verb *sollen* appears exclusively in its indicative form and most typically as the third-person singular present (cf. Vanderbiesen 2015: 27).

The reportive meaning *of sollen*+infinitive is relatively rare: for example, in the corpus of Diewald (1999) it accounts for only eight per cent of all occurrences of this modal verb construction. On the other hand, like other modal verb constructions, *sollen*+infinitive also allows the so-called deontic meaning which can be paraphrased as a 'weak obligation'.[3]

(2)   Du   sollst   dich   beim   Dekan   melden.
       You   soll.PRS.2SG   you.ACC   at-the.SG.DAT   dean   report.INF
       'You have to get in touch with the dean.'

The expansion of the deontic meaning into the reportive evidentiality has been explained by Weiss (2009: 136f.)

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[2]   The translations of all examples except (9) are my own.
[3]   As an anonymous reviewer pointed out, the deontic meaning of *sollen*+infinitive can also be determined by a direct comparison with the modal verb construction *müssen*+infinitive, which is treated as the featureless part of the opposition whereas *sollen*+infinitive bears an additional feature, namely "remote source" (cf. Kotin 2011: 36f., Kotin / Schönherr 2012).

"as a conventionalized switch of figure and ground between subparts of a complex communicative constellation [that consists of] at least three participants who partially correspond to different roles [and] at least two speech events, an actually realized and a virtual (reported or anticipated) one. The virtual speech act may have the illocutionary force of a directive (command, request, suggestion) or of an assertion (statement about facts or epistemic assessment, prediction)." (Wiemer / Socka, forthcoming)

In a directive speech act, such as a typical command, an original speaker issues some act of will towards a hearer, with no mediation by a third person required. Nevertheless, the hearer may further convey this directive speech act (like in Figure 1, cf. Wiemer / Socka, forthcoming). This is the preferred reading of *Du sollst dich beim Dekan melden*.
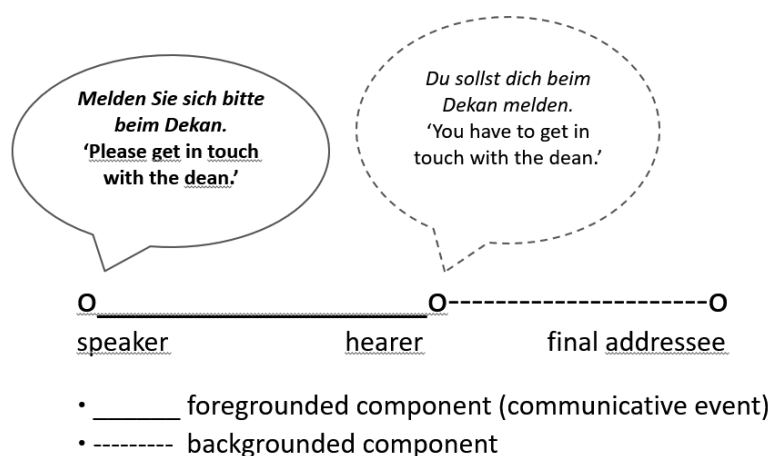

Figure 1: Communicative constellation of deontic *sollen*+infinitive (modified from Wiemer/Socka, forthcoming)

However, the directive force may be pushed into the background. It disappears completely if the speech act referred to is no longer understood as the verbalisation of somebody's will, but merely as an assertion. Reportive meaning arises when the right half of the figure becomes salient (cf. Figure 2; Wiemer / Socka, forthcoming).[4] This is the case in Example (1).

Between the strictly reportive and the deontic meaning, several intermediate stages can be assumed. They have been explicated in a semantic map by Holvoet (2012), mainly based on the contemporary distribution of *mieć* (which is the Polish equivalent of the German reportive *sollen*) across speech-act types and grammatical contexts (cf. Figure 3).

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[4]   An alternative approach to the reportive meaning of *sollen*+infinitive consists in deriving it from the deontic one via reinterpretation of the distinctive parameter "remote source" (cf. Kotin 2011: 37, Fritz 2000: 132–134, Hundt 2003: 346, Leiss 2009: 9f.). I am grateful to the anonymous reviewer for turning my attention to this approach which, however, cannot be discussed here more widely due to the lack of space.
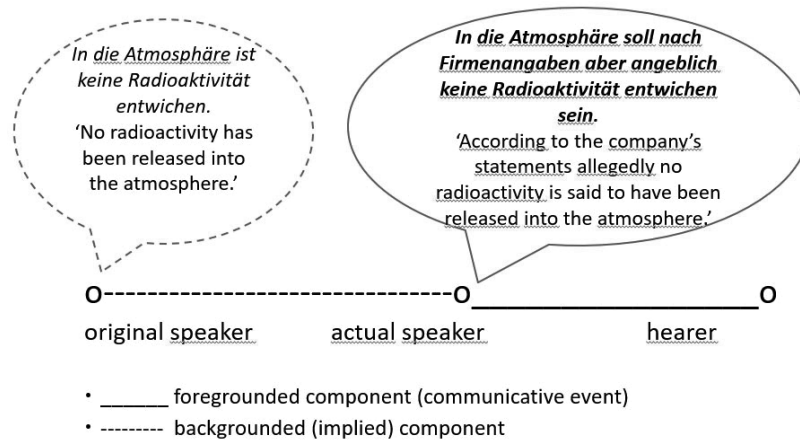
Figure 2: Communicative constellation of reportive *sollen*+infinitive (modified from Wiemer / Socka, forthcoming)
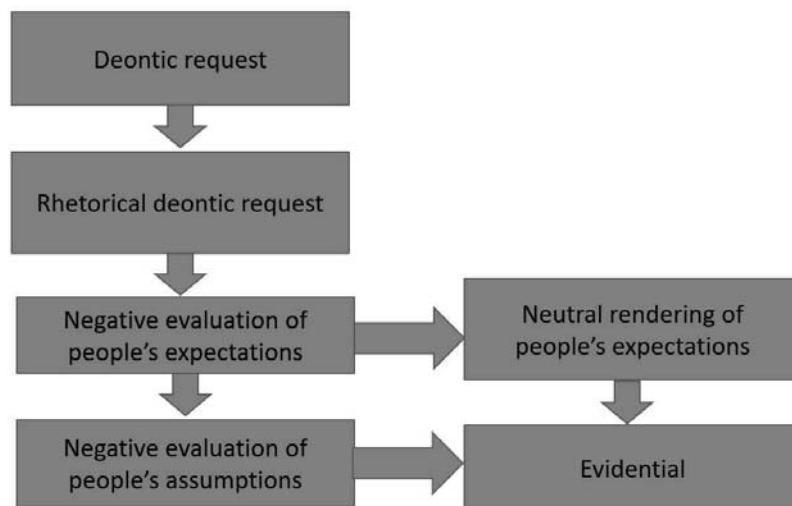
Figure 3: Semantic map of the intermediate stages between deontic and evidential meaning (cf. Holvoet 2012: 136)

The first type is that of d e o n t i c   r e q u e s t s. A deontic request is a question by means of which the speaker does not want to elicit a piece of information but a directive, such as an (anticipated) command (cf. Holvoet 2012: 132 and Example 3 below)

(3)   Was   soll   ich   ihm   sagen?
       What   soll.PRS.1SG   I   3.DAT.SG.M   say.INF
       'What should I tell him?'

The rhetorical deontic request "actually reflects the impracticability of a course alternative to the actually taken or about to be taken" (Holvoet 2012: 132).

(4) Was   soll   ich   unter solchen Umständen   machen?
     What   soll.PRS.1SG   I   in such circumstances   do.INF
     'What am I to do in such circumstances?'

The negative evaluation of people's expectations is an utterance type that is expressively marked by means of question or exclamations marks. Overtones of indignation or sarcasm are always present (cf. Holvoet 2012: 133).

(5) Ich   soll   einem   Dieb   helfen?
     I   soll.prs.1sg   a.dat.sg.m   thief   help.inf
     'Am I supposed to help a thief?'

The negative evaluation of people's assumptions is formally similar to the previous type, but it conveys "the rejection not so much of a demand as of an assumption uttered by another person", reflecting the "widespread tendency to view other people's opinions as acts of volition" (Holvoet 2012: 133f.).

(6) Ich   soll   einem   Dieb   helfen?
     I   soll.PRS.1SG   a.DAT.SG.M   thief   help.INF
     'Am I said to be helping a thief?'

Other people's expectations can also be rendered in a neutral way, without their negative evaluation (cf. the neutral rendering of people's expectations on the right side of Figure 3, Example 7).

(7) Politiker sollen   den   Willen des   Volkes erfüllen.
     Politicians   soll.PRS.3PL the.ACC.M   will   the.gen.n people realise.INF
     'Politicians are expected to realise the will of the people.'

The last type – a neutral rendering of people's assumptions – is the evidential, i.e. reportive meaning, like in Example (1).

It is worth noting that all the left-hand intermediate readings in this semantic map are realized in questions. The utterances are emotionally, expressively or rhetorically marked. In fact, this seems to be characteristic of questions with the reportive *sollen*+infinitive in general.

1.3. Epistemic doubt as an implicature

Earlier studies have claimed that the reportive *sollen*+infinitive carries epistemic overtones of doubt as a stable element of its lexical meaning, whereas the reportive component in contrast has been barely mentioned. According to Letnes (2008), this is a consequence of the comparison with other modal verbs in German, which systematically present two types of meanings, i.e. at least one root modal (deontic, circumstantial etc.) and at least one epistemic (cf. Öhlschläger 1989: 236). The root modal meanings represent modal states of the referents

of sentence subjects, while the epistemic meanings express an evaluation of the facticity of the whole proposition by the current speaker (cf. Helbig 2001: 182). Thus, epistemic modals have a wide scope, are deictic and more grammaticalised, whereas root modals have a narrow scope and are non-deictic and less grammaticalised (cf. e.g. Diewald 1999: 121). Consequently, e.g. Duden (1973: 72) has characterized the meaning of *sollen* as follows:

> "Mit *sollen* [...] distanziert sich der Sprecher von einer Äußerung, Auffassung u.ä. anderer über das Subjekt: *Karl soll dort gewesen sein* (= Irgend jemand behauptet, dass Karl dort gewesen ist)." (cit. in Letnes 2008: 28)
> 'By *sollen* the speaker distances himself from the utterance, opinion etc. of others about the subject: *Karl soll dort gewesen sein* (= Someone claims that Karl was there).'[5]

However, as Mortelmans (2000: 136) has noted, based on corpus data,

> "(a) although German *sollen* is compatible with a sceptical interpretation on the part of the speaker, (b) this possibility is in practice not very frequently made use of, and (c) the speaker`s scepticism is usually explicitly marked, for example by means of the construction in which *sollen* is embedded [...]."

Furthermore

> "since the speaker prefers an utterance marked modally by means of *sollen* to a modally unmarked one (i.e. a neutral indicative), there is some epistemic distance, but not necessarily to the extent that the speaker doubts the truth of the utterance as such." (Mortelmans 2000: 137)

In the majority of contemporary studies the reportive construction *sollen*+infinitive is treated as merely agnostic, with the negative epistemic component emerging qua conversational implicature (cf. e.g. Wunderlich 1981: 28, Öhlschläger 1989: 235, Diewald 1999: 229, Schenner 2008a: 555, 2008b: 184, Vanderbiesen 2018: 190f.). In line with these approaches, I assume that reportive *sollen*+infinitive has an inherent reportive meaning component, i.e. (i) 'I want to say what someone else says' (cf. Figure 4). Moreover, as a rule it signals that the speaker does not know whether the proposition in its scope is true (i.e. it has the epistemic-agnostic component ii). This default expresses the epistemic distance mentioned by Mortelmans (2000). Nevertheless, since it can be cancelled by a contextual negation or falsification of the proposition in question, like in Example (8) (cf. AnderBois 2014), I consider this component a generalised conversational implicature.[6]

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[5]   Obviously, in the newer editions of the Duden grammar book *sollen* is no more treated as expressing the speaker's distance from the original utterance, cf. e.g. Duden (2016: 541): "*Sollen* dient meistens der neutralen Berichterstattung" '*Sollen* is most frequently used for the neutral reporting'.

[6]   According to Levinson (2000: 16):
"a. An implicature I from utterance U is **particularized** if U implicates I only by virtue of specific contextual assumptions that would not invariably or even normally obtain.
b. An implicature I is **generalized** if U implicates I unless there are unusual specific contextual assumptions that defeat it."
Thus, an implicature is generalised if it takes place as a preferred, or default, interpretation that can be cancelled by an unusual context of use.

(8) Ein Daniel Gottlob Moritz Schreber **soll** im 19. Jahrhundert die deutsche Kleingärtnerbewegung in Leipzig **initiiert haben**. <u>Aber das stimmt nicht</u>. Die ersten Anlagen waren von Dr. Karl Gsell gegründete Schulgärten, die er nach seinem verehrten Schwiegervater, dem erwähnten Schreber, benannte. (*Braunschweiger Zeitung*, 29 July 2010)
'Daniel Gottlob Moritz Schreber is said to have initiated the German allotment garden movement in Leipzig in the 19th century. However, that is not the case. The first facilities were school gardens started by Dr Karl Gsell, which he named after his beloved father-in-law, the aforementioned Schreber.'

This epistemic-agnostic component is the basis of the "proper" epistemic component (iii) 'I think that P can be not true' which however is triggered by an appropriate contextual element. It can therefore be treated as a particularised conversational implicature. The validity of the "agnostic stance" (ii) is a necessary condition for the emergence of the doubt component (iii), because a proposition can only be doubted if its logical value is unknown.

sollen P.
(i) I want to say what someone else says. (= reportive component)
(ii) I don't know whether P. (= epistemic component, "agnostic stance")
(iii) I think that P can be not true. (= "proper" epistemic component)

Non-cancellable lexical meaning

Generalised conversational implicature (GCI)

Particularised conversational implicature (PCI)

Figure 4: Meaning of the reportive *sollen*+infinitive

2. Does interrogative sentence type trigger the epistemic doubt implicature?

2.1. The corpus study

According to Mortelmans (2000: 136, 139), the contextual factors that can trigger or strengthen the epistemic overtones of *sollen*+infinitive include: explicit naming of the information source, contextual indication of its unreliability, first-person subjects, introductory clauses containing negated *verba sentiendi* (e.g. *ich kann mir nicht vorstellen* 'I cannot imagine') and non-declarative, i.e. the interrogative and the exclamative sentence types. As regards the interrogative sentence type, Mortelmans provides the following examples:

(9) a. Ich **soll unterschrieben haben**, dass der Rudi mir 50 Mark Schweigegeld gegeben hat? Die hat er mir nur geborgt [...]. (cited in Mortelmans 2000: 136)
'I am supposed to have signed a statement that Rudi gave me 50 DM by way of hush money? He has only lent it to me.'[7]

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[7] Examples (9a), (9b) and (9c) were translated by Tanja Mortelmans.

    b.   Ich? Ich **soll hysterisch sein**? Ich doch nicht. (cited in Mortelmans 2009: 183)
         'I? I'm supposed to be hysterical? Not me.'
    c.   Bitte?? Kannst du das nochmals wiederholen? **Ich soll daran schuld sein**?? Du warst doch diejenige, die mit ihm Schluss gemacht hat. (cited in Mortelmans 2009: 183)
         'What? What did you say? It's my fault? You were the one who broke up with him.'

The present paper aims to test:

– to what extent the interrogative sentence type can be deemed as a contextual trigger for the negative epistemic implicature of the reportive sollen+infinitive; and

– which question types are involved.

To answer these questions, I analyzed a number of reportive occurences of *sollen*+infinitive in the Deutsches Referenzkorpus (DeReKo), namely in four different text types: literary fiction, non-fiction, daily press and parliamentary debate.

    To increase the likelihood of finding non-deontic examples, I made use of the tendency of stative full verb infinitives and of *Perfekt* infinitives to favour the reportive meaning of the *sollen*+infinitive. Therefore, I checked the combinations *sollen* followed by *haben* or *sein* in the same sentence. Table 1 presents the number of records of each text type that were considered.

Table 1: Direct questions with reportive *sollen*+infinitive – text types and occurrences

Text type	Number of occurrences	Polar questions	Content questions
Daily press	66	32	34
Literary fiction	49	10	39
Non-fiction	24	5	19
Parliamentary debate	61	12	49
Total	200	59	141

2.2. First-person subjects

Given that in all the examples cited by Mortelmans (cf. 9) as well as in the intermediate utterance types discussed by Holvoet (2012) (cf. 4 – 7), the *sollen*+infinitive construction cooccurs with first-person subjects, the questions arise of whether the reportive *sollen* can also appear with other subjects, and whether the negative epistemic overtones are then present as well.

    In fact, first-person reportive questions seem to be relatively rare. Indeed, in the corpus presented in Table 1 they occurred only twice: once with a singular and once with a plural subject (cf. 10).

(10)   a. Was passiert, wenn ich Alkohol trinke? Warum **soll** gerade ich Vitaminmangel **haben**? So könnte man zu dem Schluss kommen: "Der Mensch ist so gesund wie sein Stoffwechsel." Es gibt ein Buch mit diesem Titel [...] (*Frankfurter Rundschau,* 4 December 1999)
        'What is happening when I am drinking alcohol? Why is it me who is supposed to have a vitamin deficiency? Why is it better to quit smoking? One may come to the conclusion that men are as healthy as their metabolism. There is a book with such a title.'

b. "Wir sind ja auch nicht gegen Bio-Erzeugnisse. Für was **sollen** wir denn sonst **sein**, wenn nicht für Bio?" Allerdings sei die Gemeinde gegen die "erhebliche Konzentration dieser Anlagen", stellte das Gemeindeoberhaupt klar [...]. (*Nordkurier*, 27 April 2012)
'"We are not against organic products. What else are we supposed to be for, if not for organic?" However, the community is said to be against the "considerable concentration of these facilities", the community leader made clear.'

According to Mortelmans,

"*sollen*+infinitive are (more than the German Konjunktiv I) suited for contexts, in which the emotional involvement of the speaker is foregrounded, especially if he/she is distancing himself/ herself from the proposition in question or rejecting it" (2009: 183).

Contextual signals of emotional involvement are present in all the first-person subject questions cited by Mortelmans (2000, 2009) and Holvoet (2012). This is likely due to other people's opinions about oneself being especially annoying, the more so as everyone tends to believe that he or she has the most appropriate knowledge about oneself. On the other hand, the third-person questions may be emotionally marked as well (cf. 11), but there are also some rather emotionally neutral third-person questions (cf. 12).

(11)   "Dieser Säufer da **soll** dein Mann **sein**? Dieser, dieser ..." Er lachte jetzt. Sein Lachen klang höhnisch, bösartig, verletzend. Wahrscheinlich sollte es so klingen. [...]."Hattest du nicht gesagt, dein Mann wäre Privatdetektiv und er würde für sein Alter noch einigermaßen gut aussehen?" (W. Zander: *Hundeleben*, 2011)
'"This drunk over there is said to be your husband? This, this ... " He laughed now. His laughter sounded scornful, malicious, hurtful. That's probably how it was supposed to sound. [...] "Didn't you say your husband was a private eye and he would still look reasonably good for his age?"'

(12)   Frankreichs Ex-Präsident Mitterrand **soll** Helmut Kohls Wahlkampf **finanziert haben**? In Paris hält das niemand für undenkbar. Es wäre nur eine Facette mehr im "Elf"-Skandal der geschmierten Geschäfte. (*Salzburger Nachrichten*, 27.01.2000)
'Former French President Mitterand is said to have financed Helmut Kohl's election campaign? In Paris nobody finds this unthinkable. It would only be one more facet in the "Elf" scandal of the bribed businesses.'

Consequently, Mortelmans' and Holvoet's first-person questions provide especially good examples of the contextual signals of emotional involvement that are characteristic of the majority of reportive *sollen* questions. I believe that this is the case because most of them are rhetorical, unresolvable or mirative questions. Therefore, in the following sections I will examine these question types.

2.3. Rhetorical questions

Rhetorical questions are frequently analyzed as indirect speech acts with the illocutionary force of an assertion:

"Rhetorical questions are examples of utterances whose form does not match their function. They have the structure of a question but the force of an assertion and are generally defined as questions that neither seek information nor elicit an answer." (Rohde 2006: 168, cf. e.g. Meibauer 1986: 163)

The statement indirectly asserted by a rhetorical polar question is ¬P, where P is the proposition in scope of *sollen*. The semantic contribution of the sentence operator *sollen* is not up for discussion. A positive rhetorical polar question equals a negative indirect assertion (cf. 13), while a negative rhetorical polar question equals a positive indirect assertion (cf. 14).

(13) Über 90 Prozent dieses Haushalts haben Sie Mitte letzten Jahres im Grunde mit erarbeitet. **Soll** das alles jetzt falsch **sein**? (German Bundestag, 22 January 2010)
      'In the middle of last year, you basically helped create more than 90 percent of this budget. Is that all supposed to be wrong now?'
      → *Nein, es ist nicht falsch*. 'No, it is not wrong.'

(14) Bei der Haltestelle Rottenmann sind das monatlich rund 200.000 Euro – das **soll** nicht kostendeckend **sein**? (*Kleine Zeitung*, 8 December 2000)
      'In case of the Rottenmann station it is €200.000 per month. And this is allegedly not covering the expenses?'
      → *Doch, es ist kostendeckend*. 'Yes, it is covering the expenses.'

The statement suggested by the rhetorical question is sometimes uttered explicitly in the subsequent text (cf. 15). And sometimes the speaker rejects the proposition unambiguously without explicitly denying it (cf. 16).

(15) Das Filmkorn wurde immer bekämpft, solange es Filmmaterial gab – und jetzt **soll** es plötzlich ein ästhetischer Vorteil **sein**? Nein, wirklich nicht. (*Süddeutsche Zeitung*, 1 October 2013)
      'The film grain was always fought against as long as there was film material—and now suddenly it's supposed to be an aesthetic advantage? No, indeed.'

(16) Das **soll** eine wettbewerbsorientierte Hochschulpolitik **sein**? Ich lache mich tot! (Landtag of Hesse, 25 September 2001)
      'That's supposed to be a competitive higher education policy? I'm laughing my head off!'

A positive rhetorical content question is equivalent to a statement in which the *wh*-element is replaced by a negative element (in which case the existence implicature is cancelled; cf. 17),[8] or by a qualifying element (cf. 18).

(17) Sie fordern zum Beispiel ernsthaft, bei Medikamenten auf 4 Milliarden Euro Steuereinnahmen zu verzichten, obwohl wir nach der Erfahrung mit der Hotelsteuerermäßigung davon ausgehen müssen, dass das Geld bei den internationalen Konzernen hängen bleibt. Was **soll** daran gerecht **sein**? Ich bitte Sie! (German Bundestag, 7 October 2010)
      'For example, they are seriously calling for tax revenue of €4 billion to be waived on medicines, although experience with the hotel tax reduction suggests that the money will remain in the hands of international corporations. What's supposed to be fair about that? I ask you!'
      → *Nichts daran ist gerecht*. ,Nothing about it is fair.'

(18) Was für eine Bildung **soll** das **sein**, und sollte man unsere Kinder nicht vor dieser Art „Bildung" schützen? (Landtag of Saxony, 6 March 2008)

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[8]   In the so-called propositional approach, the meaning of a question is identified with the set of possible (cf. Hamblin 1973) or true answers to it (Karttunen 1977). According to some authors, asking a content question presupposes the existence of at least one argument which replacing the *wh*-variable yields a true answer (cf. Higginbotham / May 1981: 43). However, the alleged presupposition does not pass the constancy-under-negation test (cf. Meibauer 2008: 51). Therefore I agree with authors treating it as a conversational implicature that can be cancelled for example in rhetorical questions like (17) (cf. e.g. Reis 1992).

'What kind of education is that supposed to be, and shouldn't our children be protected from this kind of "education"?'
→ *Es ist eine schlechte Bildung*. 'It is a bad education.'

Negative rhetorical content questions are equivalent to statements in which the *wh*-word is replaced by a positive element. The *wh*-word is in most cases *warum, weshalb* or *wieso* 'why'. The question then asks for the supposed reason of the nonexistence or impossibility of a state of affairs and thereby indirectly confirms its facticity or possibility.

(19) Warum **soll** nicht auch in Deutschland ein Abitur in zwölf Jahren zu machen **sein**?
      (Landtag of Saarland, 22 November 2000)
      'Why shouldn't it be possible to graduate from high school in twelve years in Germany, too?'

The existence implicature can be explicitly negated (cf. 20) or unambiguously rejected in the subsequent text (cf. *Ich bitte Sie!* in 17). In most cases however, the following speech acts are actually comments on the indirect assertions made by the rhetorical question (cf. Meibauer 1986: 181, Example 21 below).

(20) „Passiert?" Ein krächzendes Lachen. „Dem Bajic? Was **soll** dem schon passiert **sein**? Diesem Verbrecher passiert schon nichts. Leider. Außerdem ist der längst über alle Berge." (Vertacnik, Hans-Peter: *Abfangjäger: Ein Fall für Peter Zoff,* 2008)
      '"What happened?" A raspy laugh. "Bajic? What's happened to him? Nothing will happen to that criminal. Unfortunately. Besides, he's miles away by now."'
(21) Die Ausstellung zeigt, daß Soldaten mehr getan haben als ihre Pflicht. Wie **soll** das auch anders **sein**?! Wie soll in einem Vernichtungskrieg – das frage ich mich jedenfalls – eigentlich zwischen Pflicht und Verbrechen unterschieden werden können?! Diese Frage zu stellen, wie die Ausstellung es macht, heißt nicht, wie Sie behaupten und den Machern der Ausstellung unterstellen, daß jeder Soldat der Wehrmacht ein Verbrecher war. (Landtag of Lower Saxony, 11 November 1998)
      'The exhibition demonstrates that soldiers overstepped their duty. How could it be otherwise!? In a war of extermination – this is what I ask myself anyway – how can you distinguish between duty and crime? Asking this question, as the exhibition does, doesn't mean, as you claim and as you suggest the creators of the exhibition are saying, that every soldier in the Wehrmacht was a criminal.'

Being actually indirect assertions, rhetorical questions cancel the agnostic generalised implicature of *sollen*+infinitive 'I don't know whether P' (cf. Figure 4). Consequently, the epistemic doubt implicature 'I think that P can be not true', which grounds on it, cannot even emerge. Therefore, rhetorical question can be considered a question type which never strengthens the epistemic doubt implicature of *sollen*+infinitive.

2.4. Unresolvable question

In the following example, a MP reacts to a statement by the previous speaker with the question: "Who is that? Who's that supposed to be?"

(22)   Tarek Al-Wazir (BÜNDNIS 90/DIE GRÜNEN): Herr Innenminister, wer ist das denn? Wer
        soll das denn **sein**? Das ist eine Unverschämtheit! Herr Innenminister, das lasse ich mir nicht
        sagen! So nicht! (Landtag of Hesse, 21.06.2006)
        'Tarek Al-Wazir (Alliance 90/The Greens): Mr. Minister of the Interior, who is that? Who's that
        supposed to be? This is an outrage! Mr. Minister of the Interior, I won't allow anyone to say that
        to me! Not like that!'

In Example (23), a hitchhiker who entered a car is asked: "Where do you want to go?". He
is astonished, because his destination was visible on his sign, and he thinks: "What's that
supposed to be?"

(23)   „Wo willst du eigentlich hin?"
        Was **soll** das bitte schön **sein**? Auf meinem Schild, das weiß ich von früherem Trampen, kann
        man eindeutig erkennen, wohin ich möchte, aber wenn der das nicht gelesen hat, finde ich
        mich womöglich auf irgendeiner Dorfstraße in Lützen wieder. (Didt, Sebastian A.: *Dicker
        Daumen*, 2005)
        '"Where do you actually want to go?"
        What's that supposed to be? On my sign — and I know this from earlier hitchhiking — you can
        clearly see where I want to go, but if he hasn't read it, I may find myself on some village street in
        Lützen again.'

In both examples, some new information is violating the speaker's expectations to such an
extent that the speaker neither knows the answer nor requests it from the addressee, because
he does not expect the addressee to know it. "Given the extreme character of the situation,
any informative answer is epistemically pointless" (Celle 2018: 219).

Following Celle (2018), I label this question type "unresolvable questions". Unresolvable
questions typically contain interjections or emotive modifiers (like *bitte schön*) and modal
particles (e.g. *denn*). Pragmatically, they are speaker-oriented, like exclamative utterances.
There is no proposition that can be asserted as an answer to them and/or epistemically assessed.
Hence, unresolvable questions do not strengthen the epistemic doubt implicature because
there is not really a proposition P that can be unknown (the agnostic GCI) or doubted
(the epistemic proper PCI). Rather, the evidential *sollen* together with modal particles
and emotive modifiers "shifts the interpretation of questions, which take on an ignorance
meaning" (Celle 2018: 220).

2.5. Mirative polar questions

The next question type, which can be distinguished based on the corpus data, consists entirely
of polar questions with the syntax of declarative sentences, i.e. with the finite *sollen* form in
the second position in the sentence (cf. Examples 24 and 25).

(24)   Das Dorf scheint leer und ruhig. Das **soll** ein Markttag **sein**?! (*Frankfurter Rundschau*, 9 January
        1999)
        'The village seems empty and quiet. This is supposed to be a market day?!'

(25)   Sein Blick wirkt lieb, streift durch die Bäume und Büsche, in denen Vögel zwitschern. „Schön hier, ne?“, brummt mein Gegenüber und lehnt sich entspannt zurück. Dieser Mann **soll** Deutschlands härtester Jugendrichter **sein**? (*Mannheimer Morgen*, 21 September 2013)
       'His gaze seems sweet, roaming through the trees and bushes where birds chirp. "Beautiful here, eh?" hums my counterpart who leans back relaxed. This man is supposed to be Germany's toughest juvenile judge?'

Like unresolvable questions, mirative polar questions express surprise grounded in the incongruence of the perceived situation with expectations of the speaker. However, the speaker knows the answer (unlike in the case of unresolvable questions), which is always "yes" (unlike in the case of rhetorical questions).

Signalling the incongruence of the perceived situation with the speaker's knowledge, these questions become a kind of mirative strategy.

Mirativity can be defined as "a linguistic category that characterizes a proposition as newsworthy, unexpected, or surprising" – for either the speaker or for the addressee (cf. Hengeveld / Olbertz 2012: 488). The category is not encoded morphosyntactically in German. Therefore, like in English, it can be seen as a "covert semantic category" (DeLancey 2001: 377–378). On the other hand, it is well known that in many languages mirativity and certain types of indirect evidentiality are expressed by the same formal means. In the above examples *sollen*+infinitive seems to co-create mirative overtones.

There are also numerous opinions about the relation between mirativity and epistemicity. To quote just one, according to Plungian they (at least partially) cover each other:

> "While [...] the admirative[9] value is not evidential, it is certainly modal, because it deals with a special kind of judgment: a judgment concerning the speaker's expectations. [...] everything which is unlikely is unexpected." (Plungian 2001: 355)

Hence, in mirative polar questions like those in Examples (24) and (25), even though the answer may not be unknown, through the use of the question mark the speech act of putting the relevant proposition into question is realized. Together with the emotive modifiers and/or contextual mirativity indicators they produce a sense of surprise and subsequently, via implicature, the epistemic doubt. In other words, the question type mirative polar question is one of the contextual factors evoking the epistemic doubt implicature.

2.6. Proper questions

The last question type are proper questions, i.e. questions through which the speaker requests a piece of information.

The speaker's interest in acquiring a missing piece of information can be associated with a surprise (cf. Example 26).[10] In non-dialogic text types, for example in the press, the question

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9   Plungian (2001) uses the term *admirative* instead of *mirative*.
10   As suggested by Hengeveld / Olbertz (2012: 489), the mirative overtones may be then interpreted not so much as an expression of „the speaker's surprise about a proposition, but rather as his eagerness to acquire the new information that the answer will contain".

may follow from the course of the article's text (cf. *inferential questions* in Celle et al. 2019: 24) and be answered by the author through highlighting a circumstance that has not yet been mentioned (e.g. in 27: arthritis as a reason for a lack of physical activity).

(26) „Sagt Ihnen der Name Kuno Krimmel etwas?" [...] „Kuno Krimmel? Wer **soll** das denn **sein**?" Konz war ehrlich ahnungslos. Oder er war ein sehr talentierter Schauspieler. (Wark, Peter: *Ballonglühen*, 2011)
'"Does the name Kuno Krimmel mean anything to you?" "Kuno Krimmel? Who's that supposed to be?" Konz was honestly clueless. Or he was a very talented actor.'

(27) Gold über 800 m bei den Halleneuropameisterschaften 1975 und der Weltrekord 1976 mit der 4-mal-800-Meter-Staffel [...] waren die größten sportlichen Erfolge der für den SC Neubrandenburg startenden Athletin. Warum also **soll** sie nicht auch heute noch sportlich aktiv **sein**? Ganz einfach: Weil ihre Knochen – oder richtiger: ihre Gelenke – ihr lange Zeit einen Strich durch diese Rechnung machten und die 57-Jährige deshalb heute ein künstliches Hüftgelenk hat. (*Nordkurier*, 23 November 2012)
'For this athlete, competing for SC Neubrandenburg, winning gold in the 800 m at the European Indoor Championships in 1975 and the world record in 1976 in the 4 x 800-metre relay, were her greatest sporting successes. So why shouldn't she still be active in sports today? It's quite simple: because her bones – or rather, her joints – put an end to that aspiration long ago, and because of that the 57-year-old now has an artificial hip joint.'

In press articles, proper questions typically have a text-controlling function, insofar as they occur at the beginnings of paragraphs and formulate their topics succinctly (cf. Meibauer 1986: 178, Examples 28 and 12).

(28) Aber man kann bei sich selbst anfangen, im ganz, ganz kleinen Mikrokosmos des eigenen Umfelds etwas bewirken. Jeder kann das — so lautet die zugegeben sehr amerikanische Botschaft der Dokumentation, die Sozialunternehmer in sieben Ländern vorstellt.
Moment mal, Sozialunternehmer? Was **soll** das denn bitteschön **sein**? Unter Social Entrepreneurship versteht man, grob gesagt, Unternehmen, die sich in den Bereichen Umweltschutz, Menschenrechte, Eingliederung von Menschen mit Behinderungen etc. einsetzen. (*Nürnberger Nachrichten*, 6 September 2014)
'But you can start with yourself, in the very, very small microcosm of your own environment. Anyone can do that — that's the admittedly very American message of this documentary, which introduces social entrepreneurs from seven countries.
Hold on. Social entrepreneurs? What's that supposed to mean? Social Entrepreneurship refers, roughly speaking, to companies that work in the areas of environmental protection, human rights, the integration of people with disabilities, etc.'

By pinpointing areas of knowledge deficit, proper questions can, together with other contextual factors, strengthen the epistemic doubt implicature. Unlike in rhetorical questions, in proper questions the scope proposition or the existence implicature may be challenged, but they are not negated.

3. Conclusion

There seem to be two main groups of question types containing the reportive *sollen*+infinitive:

I.   Proper questions and mirative questions

Both of these communicate a certain lack or inconsistency of knowledge related to the scope proposition of *sollen* and seek its elimination. By doing so, they trigger or strengthen the epistemic doubt implicature.

II.   Rhetorical questions and unresolvable questions

These types of questions do not realize any interrogative speech act. Instead, rhetorical questions assert the negation of the scope proposition (or its existence implicature), while unresolvable questions are signals of confusion without reference to the scope proposition. Thus there is no place for the epistemic doubt implicature that could by triggered by the question form.

In the corpus of this study the second group is much larger, primarily because rhetorical questions constitute almost three quarters of the total number of records (cf. Table 2). Therefore, at least with respect to this corpus it must be concluded that in the majority of cases the interrogative sentence type does not affect the proper epistemic particularised conversational implicature 'I think P can be not true' potentially connected to the reportive *sollen*+infinitive.

Table 2: Frequency of question types containing *sollen*+infintitive

Corpus	Rhetoric	Unresolvable	Mirative declarative	Proper	Σ
Daily press	51	1	5	9	66
Literary fiction	17	2	3	27	49
Non-fiction	20	0	0	4	24
Parliamentary debate	57	2	0	2	61
Total	145	5	8	42	200

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