

# Comprehending non-canonical and indirect speech acts in German

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In this paper, we compare the comprehension of the speech act meaning of non-canonical speech acts (i.e., rhetorical questions and surprise-disapproval questions) with the comprehension of indirect speech acts (i.e., indirect requests). Both speech act types are ‘mixed’ in the sense that they involve secondary and primary illocutionary forces, but our hypothesis is that they differ in their degree of how salient their primary illocutionary force is: On the one hand, the primary illocution is signaled by non-contextual cues (non-canonical speech acts); on the other hand, it is derived via pragmatic inferencing (indirect speech acts). We thus expect their comprehension processes to be different. We conducted a judgment experiment to test whether both speech act types differ regarding how accurate the primary illocutionary force is identified and regarding how fast that force can be identified. Our results suggest that non-canonical speech acts and indirect speech acts are indeed two distinct pragmatic and psychological phenomena: While non-canonical speech acts are more accurately identified with their primary illocutionary force than indirect speech acts, participants need more time to perform this identification for non-canonical speech acts than for indirect speech acts. Our findings shed new light on the mapping between linguistic form and illocutionary force and on the pragmatic typology of speech acts in general.

**KEYWORDS:** German, illocutionary indicators, indirect speech act, non-canonical speech act, pragmatic inferencing

## 1. INTRODUCTION

This paper compares two empirical domains at the interface of syntax and speech act meaning that have not been explored in a comprehension study before. In particular, we will compare the comprehension of two speech act types that are ‘mixed’ in the sense that they involve secondary and primary illocutionary forces. Have a look at the following two examples:

- (1) (a) After all, who likes reading that book?  
 (b) Can you pass that book?

(1a) is a typical case of a rhetorical question, and in the literature those are often characterized as being mixed because they express both a question and an assertion. In cases like (1a) where their interpretation as an assertion is signaled by linguistic/non-contextual cues (e.g., *after all*), we will refer to these speech acts as non-canonical speech acts. On the other hand, (1b) is a classical example for the class of indirect speech acts: Although they can be interpreted ‘literally’ (here: as an ability question; secondary illocutionary force), their pragmatic interpretation in a given context will most likely be something else (here: a request; primary illocutionary force). Accordingly, (1b) is also mixed in its speech act interpretation, and the goal of this paper is to explore this parallel empirically by studying to what extent similar structures for the two phenomena (non-canonical speech acts such as (1a) and indirect speech acts such as (1b)) differ or behave alike when investigated in a comprehension study on speech act meaning.

Since this study thus concerns the basic mechanisms of mapping between linguistic form and illocutionary force, in [Section 2](#) we will first introduce seminal concepts for that mapping, with a particular focus on where indirect speech acts and cases like rhetorical questions might fit in within the fundamental debates about syntax and speech act meaning. In [Section 3](#), we will then introduce the types of non-canonical speech acts in more detail that will play a role in our empirical study. We will argue why we think that those types differ from indirect speech acts like *Can you pass me the salt?* [Section 4](#) summarizes some previous empirical findings on the interpretation of both types of speech acts and ends with the presentation of our hypothesis. In [Section 5](#), we will present the judgment experiment and [section 6](#) summarizes and concludes the paper.

## 2. MAPPING SYNTAX AND SPEECH ACTS: SOME BASIC CONCEPTS

According to classic speech act theory, an illocutionary force is characterized by a set of felicity conditions that hold for performing an act via a proposition-level linguistic utterance (Searle 1969). In other words, a set of sentences feature the same illocutionary force if they are subject to the same set of felicity conditions. At the syntax-pragmatics interface, most of the existing literature identifies a group of ‘major’ or ‘canonical’ sentence types (see Sadock & Zwicky 1985 for seminal work and Siemund 2018 for a recent comprehensive overview). This group commonly contains interrogatives (2a), imperatives (2b), and declaratives (2c)—all of which instantiate distinct illocutionary forces (indicated by small capitals):

- (2) (a) Have you already done your homework? QUESTION  
 (b) Please do your homework! REQUEST  
 (c) I have already done my homework. ASSERTION

Those examples have traditionally been accounted for by a literalist conception of speech acts, according to which the sentence types above differ in their syntax-semantics, and these differences determine their respective illocutionary forces (see Recanati 2005 and Meibauer 2019 on the distinction between ‘literalist’ and ‘contextualist’ approaches). In more recent research at the syntax-pragmatics interface, this conception has been articulated by a branch of syntax-semantics which postulates a syntactic representation of illocutionary force operators in their analyses (e.g., Speas & Tenny 2003; Krifka 2015; Portner et al. 2019; Krifka 2023; and others). When we look at the contrasts between (2a) and (2c), it is trivial to see that those utterances differ in the respective speech acts they convey as well as in their word order. We are thus looking at different sentence types. Some of the formal literalist accounts propose a formal language that helps representing those differences, including designated illocutionary operators like ‘?’ and ‘ASSERT’ in Krifka’s (2015) approach.

Assertion and question have been well described and are relatively indisputable speech acts characterized by a straightforward mapping between syntax-semantics and illocutionary force. The imperative in (2c) is already more controversial in this context. Non-literalist approaches such as Kaufmann’s (2012) account have proposed a modal analysis of imperatives because they observe no difference in illocutionary force between forms such as (2c) and declarative imperatives such as *You {must, should} do your homework!* The aim of this paper is to have a closer look at the mapping between syntax-semantics and illocutionary force in the domain of so-called ‘non-canonical’ and ‘indirect’ speech acts. Pace some of the literature, we hypothesize that those speech act classes are not the same and must be distinguished (see the following sections for the relevant phenomena and Section 4 for concrete predictions). Our paper is the first to provide some empirical support for such a distinction.

In particular, according to Searle’s (1975) seminal paper an indirect speech act is defined as follows:

In indirect speech acts the speaker communicates to the hearer more than he actually says by way of relying on their mutually shared background information [...] together with the general powers of rationality and inference on the part of the hearer. [...] Unless a hearer has some inferential strategy for finding out when primary illocutionary points differ from literal illocutionary points, he has no way of understanding indirect illocutionary acts.

(Searle 1975: 60–63)

In his discussion, Searle (1975) thus places a premium on the context and pragmatic inferencing based on Gricean implicatures (he speaks about ‘mutually shared background information’ and the ‘power of rationality’, which is obviously related to Grice’s 1975 cooperation principle). In Searle’s (1975) paper, classic examples for indirect speech acts are indirect requests performed by means of interrogatives such as *Can you pass the salt?*

However, in the more linguistically-oriented literature on speech acts an indirect speech act has been defined along the following lines:

*Indirect speech act*

A speech act realized by sentence type *x* whose illocutionary force in context type<sub>1</sub> does not correspond to the illocutionary force that is prototypically (normally, standardly...) assigned to an utterance of this sentence type in context type<sub>2</sub>. A deviation from prototypical speech act assignment may be signaled by indicators of indirectness.

(Meibauer 2019: 79)

Meibauer (2019), like Searle (1975), emphasizes the importance of the context, but, in contrast to Searle (1975), he also highlights the concept of sentence type and the possibility of so-called ‘indicators of indirectness’. It is this latter part of the concept of indirect speech acts that allows linguistic concepts like Meibauer’s to include utterance types that are non-ambiguous and therefore not solely based on pragmatic inferencing like Searle’s *Can you pass the salt?* Based on this, Meibauer (2019) classifies cases as indirect speech acts that are often referred to as ‘non-canonical questions’. Look at the following example illustrating a German rhetorical question (Meibauer 2019: 75–76):

- (3) (a) Wer mag Merkel?  
           who likes Merkel
- (b) Wer mag schon Merkel? [ASSERTION / QUESTION]  
           who likes PART Merkel  
           ‘After all, who likes Merkel anyway? (Nobody!)’

Without a specific context and by default, (3a) is an information-seeking question. However, the version in (3b) containing the particle *schon* is unambiguously a rhetorical question (and therefore, according to Meibauer and most of the literature on rhetorical questions, equivalent to an assertion speech act ‘Nobody likes Merkel.’)—and this interpretation is irrespective of the specific context the utterance appears in. The important point here is that an utterance can be an indirect speech act while still explicitly signaling (by its linguistic form, e.g., dedicated particles) its ‘indirect’ (or in our view not so indirect) interpretation. Meibauer (2019: 76) makes this very clear:

I would not like to argue that [those examples] are, because of the modal particle, direct speech acts; instead, I want to treat the modal particles as dominating indicators and still respect the illocutionary force potential of the respective sentence types.

For us, the relevant part in this statement is the concept of ‘dominating indicators’, suggesting that we could look at illocutionary indicators in terms of hierarchies (i.e., some linguistic means indicate illocutionary forces to a stronger extent than

others). Interestingly, this is indeed what some of the most recent psycholinguistic literature on indirect speech acts has done, referring to the ‘degree of illocutionary force salience’ (see Ruytenbeek 2021: Chapter 4 for an overview). In particular, the rise of the field of Experimental Pragmatics in the last twenty years or so has sparked a flurry of research on the processing of conventionalized versus non-conventionalized indirect speech acts like requests performed by using an interrogative (e.g., *Can you pass me the salt?/ Is it possible to pass me the salt?*; see Noveck & Sperber 2004; Ruytenbeek et al. 2017; Marocchini & Domaneschi 2022). However, while conventionalization (as well as the notion of this term in the first place) has been a huge factor in those studies, there is no experimental research in this field on the effect of explicit markers like English *please* in, e.g., *Can you please VP* versus *Is it possible to please VP*? In his overview, Ruytenbeek (2021: 126) acknowledges the role of such markers (or ‘indicators of indirectness’ in Meibauer’s 2019 terminology) in the comprehension of indirect speech acts: “constructions used as ISAs vary in terms of the extent to which they make their indirect illocutionary force linguistically explicit.” In our study below, we, for the first time, compare ‘conventionalized’ forms such as *Can you pass me the salt* with the comprehension of utterances containing explicit markers (see Section 4 below).

Given both these theoretical differences in defining indirect speech acts versus non-canonical speech acts and the recent psycholinguistic literature on the topic, we start with the following hypothesis and main prediction: Non-canonical speech acts (e.g., rhetorical questions) and indirect speech acts (e.g., indirect requests) vary to the degree of illocutionary force salience. Accordingly, due to their explicit force marking, non-canonical speech acts (i) are more accurately identified with their primary meaning and (ii) this identification is processed faster than in indirect speech acts. We conducted a judgment experiment comparing the interpretation of interrogative sentences when used either as REQUESTS (indirect speech acts) or as ASSERTIONS and COMPLAINTS (non-canonical questions); see details in Sections 3 and 4 below. But let us first look at both types in more detail again. We begin with the type of non-canonical speech acts that will be investigated in our study.

### 3. NON-CANONICAL SPEECH ACTS: RHETORICAL AND SURPRISE-DISAPPROVAL QUESTIONS

The most prominent speech act class that has been referred to as ‘non-canonical’ are probably so-called non-canonical questions. This class contains utterances where the main point is not to get information from the addressee. Rather, those questions express aspects having to do with the speaker’s epistemic state or her attitude (which can sometimes be emotional). Canonical forms and interpretations of questions have been well investigated in the linguistic literature for many decades (see Krifka 2011 and Dayal 2016). However, theoretical work on the topic of non-canonical questions has gained some more attention quite recently (Trotzke 2023)—and psycholinguistic work on non-canonical questions is still scarce; most of the

more recent experimental work focuses on prosody and not on the processing of the pragmatics of such speech acts (e.g., Dehé et al. 2022a, 2022b).

Let us focus here on two of the most pertinent types of non-canonical questions: rhetorical questions and surprise-disapproval questions. Both types can be considered ‘non-canonical’ at the level of illocutionary force because they can be shown to instantiate mixed speech act types. According to some of the literature, we could even analyze them as multiple speech acts (e.g., Asher & Reese 2007). Consider first rhetorical questions, which are the classic example of such mixed cases because many in the literature characterize them as being both a question and an assertion. The following patterns involving discourse markers such as *after all* and *tell me* can help illustrating this point (see Asher & Reese 2007: 14 for the following examples; and Sadock 1971, 1974 for the original observation):

- (4) (a) After all, your adviser is out of the country.  
(b) #After all, is your adviser out of the country?
- (5) (a) Tell me, does John own a car?  
(b) #Tell me, John owns a car.

While *after all* can co-occur with assertions (4a), it is infelicitous with questions (4b). For the expression *tell me*, it is just the other way around: *tell me* is felicitous with questions (5a), but it cannot co-occur with assertions (5b). If we now turn to rhetorical questions (in the following examples, questions conveying a bias toward a negative answer),<sup>1</sup> we observe that they are fine with both discourse markers (Asher & Reese 2007: 18):

- (6) (a) After all, does John lift a finger to help around the house?  
(b) Tell me, does John lift a finger to help around the house?

In the English examples in (6), the idiomatic negative polarity item *lift a finger* indicates that a rhetorical-question interpretation is intended (this reading can be even further strengthened by adding additional polarity items such as *ever* as in *ever lift a finger*). Other languages feature even more grammaticalized means to express the rhetorical reading. In our paper, we focus on German, which has modal particles to force the rhetorical-question interpretation in an unambiguous way (see already Meibauer’s 2019 key example in Section 1 above). Look at the following example:

- (7) Wer lebt schon gerne im Chaos?  
who likes PART gladly in.the chaos  
‘After all, who likes living in chaos? (Nobody!)’

Due to the modal particle *schon* (lit. ‘already’), (7) cannot be interpreted as an information-seeking question—but as soon as the *wh*-questions appears without the

[1] We hasten to add that rhetorical questions can of course also feature a bias towards a positive answer (e.g., *Is the pope Catholic?*).

particle, it is perfectly fine as an information-seeking question. We can easily see that the German questions featuring the modal particle *schon* behave like the English mixed speech acts illustrated above: Both German counterparts of the relevant discourse markers (*und überhaupt* ‘after all’ and *sag mir* ‘tell me’) are fine with such questions:

- (8) (a) Und überhaupt: Wer lebt schon gerne im Chaos?  
           ‘After all, who likes living in chaos?’  
       (b) Sag mir: Wer lebt schon gerne im Chaos?  
           ‘Tell me, who likes living in chaos?’

All in all, rhetorical questions have often been classified as ‘non-canonical’ because they are a case of mixed illocutionary force—and in languages like German where we can unambiguously convey the rhetorical reading via a dedicated linguistic form, this type of non-canonical speech act clearly differs from indirect speech acts such as indirect requests performed by means of an interrogative. Let us now turn to the second type of non-canonical questions we will be concerned with in the paper: so-called ‘surprise-disapproval questions’.

Munaro & Obenauer’s (1999) seminal work was the first to have a careful look at this type of question, which is characterized cross-linguistically by question syntax and, at the same time, conveying surprise, many times mixed with the emotion of disapproval. Observe the following examples in Munaro & Obenauer (1999) from Bellunese (9a) and German (9b):

- (9) (a) Cossa zìghe-tu?!  
           what shout-CL  
           ‘Why are you shouting?!’  
           (Munaro & Obenauer 1999: 191)  
       (b) Was lacht der denn so blöd?!  
           what laughs he PART so stupidly  
           ‘Why is he laughing so stupidly?!’  
           (Munaro & Obenauer 1999: 238)

The crucial aspect of these examples is that in both cases, the *wh*-pronoun ‘what’ conveys an interpretation close to ‘why’ and, in this reading, does not refer to an object in the syntactic argument structure of the respective sentences (as it would be the case in, e.g., *What does he see?* [*He sees a bird*]). In fact, the ‘why’ reading is the only reading available in examples like (9b). Here, the sentence contains an intransitive verb, and an argumental reading of ‘what’ would thus be impossible (cf. \**He is laughing [what]*).<sup>2</sup>

[2] We hasten to point out that those examples featuring a ‘why-like-what’ interpretation are—to our mind—the clearest cases instantiating the surprise-disapproval question type. Although the category is conceptualized much broader in the more recent literature (Celle et al. 2019; Celle et al. 2021), we observe that other means for conveying surprise-disapproval readings can as well

By uttering sentences such as (9b), the speaker both expresses that some event or state of affairs has not been expected on her part and at the same time conveys that she is complaining and disapproving of that unexpected proposition (hence the term ‘surprise-disapproval questions’). As we will show in the next section on empirical work in the field of non-canonical speech acts, these utterances too are truly ‘mixed’ and thus non-canonical at the level of illocutionary force.

#### 4. PREVIOUS STUDIES ON THE INTERPRETATION OF NON-CANONICAL AND INDIRECT SPEECH ACTS

In a recent experimental study, Trotzke & Czypionka (2022) have investigated the speech act status of non-canonical questions by testing the acceptability of different reactions that can follow questions conveying surprise and disapproval such as (8b) in a mini-dialogue. The design of Trotzke & Czypionka’s (2022) study is based on some well-known diagnostics from the previous literature according to which questions like (8b) should preferably be followed by an answer if they are predominantly perceived as directive speech acts requesting an answer from the addressee. However, if cases such as (9b) are mainly interpreted as expressive utterances conveying the (negative) surprise of the speaker, then they could also be felicitously followed by an affirmation (see original discussions in Grimshaw 1979: 321 for the answering patterns and in Zanuttini & Portner 2003: 47 for affirmations). Observe the following items from Trotzke & Czypionka’s (2022: 243) experimental materials:

- (10) Julia sieht, dass Marc sich mitten am Tag hinlegen möchte. Dabei dachte sie, dass sie den Nachmittag miteinander verbringen.

Julia: Was schläfst du denn jetzt?!”

[answer] Marc: „Oh, das weißt du nicht? Ich bin gestern Abend spät ins Bett gegangen, darum lege ich mich noch mal hin.“

[affirmation] Marc: „Du hast recht: Eigentlich hatte ich dir versprochen, dass wir den Nachmittag zusammen verbringen.“

Julia sees that Marc is going to lie down in the middle of the day. However, she thought that they were going to spend the afternoon together.

Julia: “What are you doing sleeping now?”

[answer] Marc: “Oh, you don’t know? I went to bed late yesterday, that is why I am lying down again.”

[affirmation] Marc: “You are right, I promised you we would spend the afternoon together.”

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be used in other types of non-canonical questions. For example, the lexical/phrasal expression *the hell* can also be used in rhetorical questions (e.g., *Who the hell cares?*, see Obenauer 2004: 376) and not only in surprise-disapproval questions (*What the hell is he buying in that shop?*). However, intransitive sentences containing a ‘why-like-what’ (such as example (8b) above) can only be interpreted as surprise-disapproval questions.



In contrast to both information-seeking questions and exclamatives, Trotzke & Czipionka (2022) demonstrate in their experimental study that both the reaction ‘answer’ and the reaction ‘affirmation’ are acceptable in a mini-dialogue where those reactions follow surprise-disapproval questions. The results in Trotzke & Czipionka’s (2022) study indicate that surprise-disapproval questions are judged by participants as having both a question and an expressive interpretation at the level of speech acts. By contrast, information-seeking questions and exclamatives in their study display a clear preference for only one of the follow-up reactions (i.e., either answer or affirmation, respectively) and can thus be characterized as conveying only one speech act interpretation. All in all, we can conclude that surprise-disapproval questions can be considered a non-canonical speech act too, in the sense that they are instantiated by mixed utterance types, which combine pragmatic features of different speech act types (questions on the one hand, and expressive speech acts on the other hand).

Let us now look at indirect speech acts, and more specifically at cases where an interrogative syntactic form can be understood either as a question or as a request. In this domain, studies show that the meaning of an interrogative sentence that is conventionally associated with the illocutionary force of a REQUEST (*Can you VP?*) and the meaning of an interrogative sentence that is not conventionally associated with a request (*Is it possible to VP?*) are processed equally fast when used for performing a request (Ruytenbeek et al. 2017), indicating that the influence of conventionalization is weaker than assumed by literalist approaches. Second, eye fixation data suggest that comprehending indirect requests does not necessarily activate their direct question interpretation (Ruytenbeek et al. 2017). And third, understanding interrogative sentences as indirect speech acts expressing a request does not involve longer comprehension times than comprehending the same expressions as direct questions (Gibbs 1979, 1983), or than understanding an imperative sentence as a direct request (Ruytenbeek et al. 2017). Thus, the results of the studies suggest that the processing of indirect speech acts expressing a request interpretation is not characterized by additional costs when compared to the processing of direct speech act comprehension.

In the present paper, we will compare the comprehension of the speech act meaning of non-canonical speech acts (i.e., rhetorical questions and surprise-disapproval questions) with the comprehension of indirect speech acts (i.e., indirect requests). All those speech acts feature interrogative syntax, but at the speech act level can be interpreted as assertions (rhetorical questions), complaints (surprise-disapproval questions), or requests (indirect requests). To the best of our knowledge, comparing the comprehension of those two pragmatic speech act categories enters new empirical territory and has not been done before in the psycholinguistic study of speech acts. Given this situation, we acknowledge that our study is rather explorative, but we nevertheless would like to try to formulate some predictions for our comparison of the two speech act classes.

Based on the findings of prior empirical research on indirect speech acts sketched above (see Ruytenbeek et al. 2017), we hypothesize that interrogative sentences with a conventionalized request interpretation (indirect speech acts, e.g., *Can you pass me the salt?*) do not incur processing costs compared to imperative sentences with a request interpretation. Furthermore, due to the strong conventionalization, we expect the degree of question interpretation to be low. For non-canonical speech acts, we expect the degree of question interpretation to be even lower. To be sure, non-canonical speech acts feature mixed interpretations, but due to the presence of force-indicating elements that are cues for non-question interpretations (i.e., the particle *schon* and the *why-like-what wh*-element), we hypothesize that the question interpretation should be less preferred than in the case of indirect speech acts. Since non-canonical questions contain those explicit markers for signaling their non-canonical readings, we also predict that the identification of the primary meaning should be fast because in a hierarchy of illocutionary force salience, we predict explicit formal cues to outdo even high degrees of conventionalization such as in *Can you pass me the salt?* With these hypotheses in mind, let us now turn to our experimental study.

## 5. COMPREHENDING NON-CANONICAL AND INDIRECT SPEECH ACTS: AN EXPERIMENTAL STUDY

The materials used in our study allowed us to clearly distinguish between non-canonical speech acts and indirect speech acts: While the cases used for indirect speech acts are in principle ambiguous and comprehended by pragmatic inferencing in a particular context (e.g. *Can you pass me the salt?*), our cases of non-canonical speech acts feature interrogative syntax (*wh*-V2 word order, see examples in Section 5.1 below), but are disambiguated by linguistic and non-contextual means: Rhetorical questions contained the German modal particle *schon* (which indicates the rhetorical-question interpretation; see our discussion in Section 2 above), and surprise-disapproval questions were only formed with intransitive verbs where the German *wh*-element *was* ‘what’ cannot refer to an object in the argument structure of the sentence (e.g., *What does he see?* [*He sees a bird*]). Rather, all the cases in our experimental study obligatorily conveyed the ‘why-like-what’ interpretation with its negative emotivity (e.g., *Why is he laughing so stupidly?* [cf. *\*He is laughing [what]*]).

All in all, non-canonical speech acts and indirect speech acts feature a different mapping from linguistic form to illocutionary force (non-canonical speech acts formally encode the force reading, while indirect speech acts do not), and our study is the first to investigate whether they also differ in how they are comprehended by native speakers of German as compared to their canonical and direct speech act counterparts. Our method also enables us to compare the intended interpretation of non-canonical speech acts and indirect speech acts with the question interpretation of both speech act categories.

5.1. *Methods*

*Participants.* 60 students from the University of Cologne took part in the web-based study (11 male/ 49 female, mean age 21.3). All were self-declared native speakers of German, except for five speakers. The data of these five speakers were excluded from the data analysis.

*Materials.* We created sentence pairs of two different non-canonical/canonical speech acts and one indirect/direct speech act involving interrogative sentences: a non-canonical rhetorical question vs. a canonical assertion (11), a non-canonical surprise-disapproval question vs. a canonical complaint (12),<sup>3</sup> and an indirect request vs. a direct request (13). For each group, eight sentence pairs were created, leading to 24 sentence pairs.

- |      |     |   |                 |
|------|-----|---|-----------------|
| (11) | (a) | Wer mag schon gerne kalten Kaffee?            | [non-canonical] |
|      |     | ‘After all, who likes cold coffee? (Nobody!)’ |                 |
|      | (b) | Niemand mag gerne kalten Kaffee.              | [canonical]     |
|      |     | ‘Nobody likes cold coffee.’                   |                 |
| (12) | (a) | Was regnet das denn jetzt?                    | [non-canonical] |
|      |     | ‘Why is it raining now (of all times!)?’      |                 |
|      | (b) | Wie bescheuert, dass das jetzt regnet!        | [canonical]     |
|      |     | ‘How stupid that it’s raining now!’           |                 |
| (13) | (a) | Kannst du mir das Salz reichen?               | [indirect]      |
|      |     | ‘Can you pass me the salt?’                   |                 |
|      | (b) | Gib mir bitte das Salz!                       | [direct]        |
|      |     | ‘Please pass me the salt!’                    |                 |

Each pair was embedded in a short story that ended with the respective speech act (14)–(16):

- (14) Tom kommt nach der Arbeit mit Melanie nach Hause. Beide sind sehr müde; sie brauchen erst mal einen Kaffee. In der Küche steht die noch halbvolle Kaffeekanne von heute Morgen. Melanie hält Tom die Kanne hin und möchte wissen, ob sie den Kaffee wegschütten soll.  
 ‘Tom and Melanie come home after work. They are both very tired, and so they need a coffee. In the kitchen, there’s still the half-full coffeepot from this morning. Melanie shows the coffeepot to Tom and wants to know whether she should pour away the coffee.’
- |     |  |                 |
|-----|--|-----------------|
| (a) | Tom: Klar! Wer mag schon gerne kalten Kaffee?                  | [non-canonical] |
|     | ‘Tom: Sure thing! After all, who likes cold coffee? (Nobody!)’ |                 |

[3] Our examples for canonical complaints are based on Searle & Vanderveken’s (1985: 213) corresponding English examples for the expressive speech act of complaining within their speech act typology.

- (b) Tom: Klar! Niemand mag gerne kalten Kaffee. [canonical]  
 ‘Tom: Sure thing! Nobody likes cold coffee.’
- (15) Simone und Richard sind am Strand angekommen und wollen den ganzen Tag dort verbringen. Gerade als sie den Windschutz aufgebaut haben und ihre Handtücher ausgebreitet haben, spüren sie, wie einige Tropfen vom Himmel kommen.  
 ‘Simone and Richard arrived at the beach and want to spend the whole day there. Just as they have put up the windbreak and arranged their towels, they feel some raindrops coming from the sky.’
- (a) Richard: Was regnet das denn jetzt? [non-canonical]  
 ‘Richard: Why is it raining now (of all times!)?’
- (b) Richard: Wie bescheuert, dass das jetzt regnet! [canonical]  
 ‘Richard: How stupid that it’s raining now!’
- (16) Aurelia und Mario sitzen am Frühstückstisch. Mario möchte gerne sein Frühstücksei essen, allerdings steht das Salz am anderen Ende des Tisches.  
 ‘Aurelia and Maria are sitting at the breakfast table. Mario would like to eat his breakfast egg, but the salt is at the other end of the table.’
- (a) Mario: Kannst du mir das Salz reichen? [indirect]  
 ‘Mario: Can you pass me the salt?’
- (b) Mario: Gib mir bitte das Salz! [direct]  
 ‘Mario: Please pass me the salt!’

All 24 sentence pairs and their contexts can be found in the Appendix. The pairs were divided into two lists so that participants only saw one version of a sentence pair, leading to 24 critical items per list. We added 24 filler sentences that comprised of eight canonical assertions, eight canonical complaints and eight canonical requests—all differing in form from the canonical speech acts presented above.

*Procedure.* The unsupervised web-based study was executed via the experiment software Gorilla (Anwyl-Irvine et al. 2020). Participants were presented with the context sentences and target sentences (performing a specific speech act) in written form in black letters on a white screen. Context and target sentences were presented separately. Participants first saw the context sentence and after pressing a button, the target sentence appeared. After reading the target sentence, participants had to decide what kind of action the speaker performs: ‘behaupten’ (asserting), ‘fragen’ (questioning), ‘beschweren’ (complaining), or ‘bitten’ (requesting). The judgment had to be executed with the help of four emojis (see Figure 1). The numbers [1]–[4] next to the speech act terms refer to the keys on the keyboard that had to be pressed in order to give the answer.

The order of the four emojis and the respective keys were held constant to not overexert the participants. Before reading the critical items, participants were instructed by means of practice items involving explicit direct speech acts. Participants were asked to make their decision as fast and as precisely as possible. We measured the responses and the reaction times of the responses.

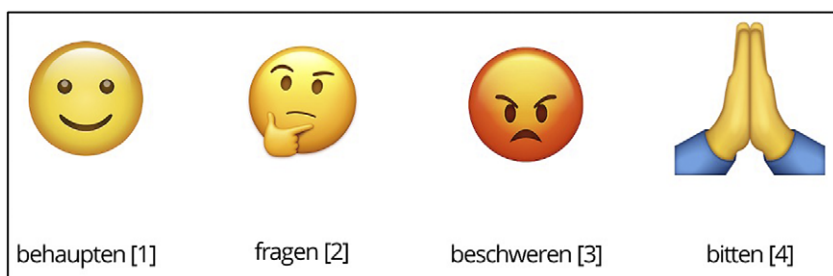


Figure 1.

Emojis used to facilitate the choice between different speech act verbs.

## 5.2. Results

*Response data.* In a first step, we coded whether a response was correct or incorrect according to our design of the materials. In the case of canonical and direct speech acts, each speech act had only one correct response (assert, complain, request). In the case of non-canonical and indirect speech acts, however, we coded question responses and the intended speech acts (assert, complain, request) as correct responses. The overall accuracy was with 92% relatively high. The filler sentences had an overall accuracy of 90%, the canonical speech acts of 93%, the non-canonical speech acts of 96%, the direct speech act of 93%, and the indirect speech act of 99%. For the further analysis, we excluded all incorrect answers. Figure 2 depicts the correct responses for the experimental conditions.<sup>4</sup> In the case of non-canonical speech acts, unintended question interpretations occurred in 31.8% (assert: 32.2%, complain: 31.3%), and in the case of indirect speech acts, unintended question interpretations occurred in 48.9%). A binomial mixed effects model on the question responses in R (R core Team 2017, package lme4, Bates et al. 2015) with the fixed-effects factor condition (ASSERT/COMPLAIN), and by-participant intercepts as random factor (inclusion of a random intercept for items led to convergence issues; the significance of a factor was tested by comparing a model with this factor to a model that excluded it but had an otherwise identical structure) indicates that the percentage of question interpretations did not differ between both non-canonical speech act conditions ( $t = 0.99$ ). In the following analyses, we aggregate over both non-canonical speech act conditions (see Figure 3).

To find out whether the unintended interpretation as a question differs between non-canonical speech acts and indirect speech acts, we performed a binomial mixed

[4] Incorrect question responses were low in the case of canonical and direct speech acts: 3.2% question responses for canonical assertions, 1.4% question responses for canonical complaints, and 4.1% question responses for direct requests; the complete statistical analyses and analysis scripts can be downloaded here:

[https://ling.sprachwiss.uni-konstanz.de/pages/home/trotzke/download/trotzke\\_reimer\\_script\\_r](https://ling.sprachwiss.uni-konstanz.de/pages/home/trotzke/download/trotzke_reimer_script_r)

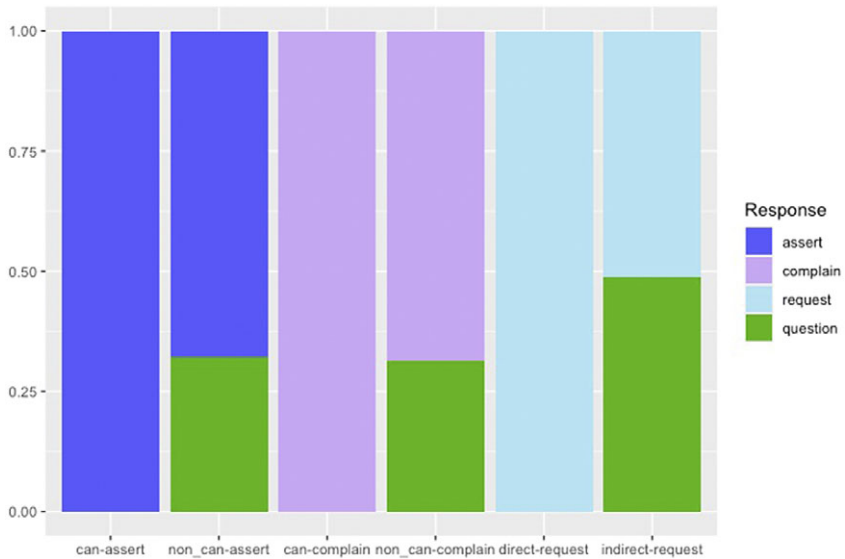


Figure 2.

Correct responses for the critical conditions. can-assert = canonical speech act 'assert', non\_can-assert = non-canonical speech act 'assert', can-complain = canonical speech act 'complain', non\_can-complain = non-canonical speech act 'complain', direct-request = direct speech act 'request', indirect-request = indirect speech act 'request'.

effects model on the question responses. The fixed-effects factor was speech act (NONCAN/INDIRECT), and the model included by-participant intercepts as random factor (inclusion of a random intercept for items led to convergence issues). The results show that participants interpret the speech act more often as a question in the case of indirect speech acts (48.5%) than in the case of non-canonical speech acts (31.9%) ( $\beta = -0.91$ ,  $SE = 0.19$ ,  $t = -4.72$ ,  $p < .001$ , see Figure 3).

*Reaction time data.* For the analysis of the reaction time data (only for correct responses), we excluded all data points exceeding 10000 ms and deceeding 500 ms<sup>5</sup> (2.8% data loss). The mean reaction time was 3658.7 ms (SD 1754.2 ms). The results of a linear mixed effects model with condition (CAN| NON\_CAN) as fixed effect, and with by-participant and by-item intercepts as random factor show a significant effect of condition, in that canonical speech acts are processed faster (3659.2 ms) than the non-canonical speech acts (4064.1 ms) ( $\beta = 493.2$ ,  $SE = 114.7$ ,  $t = 4.30$ ,  $p < .001$ , see Figure 4). For the indirect speech acts, it is the other way around. Results of a linear mixed effects model with condition (DIRECT| INDIRECT) as fixed effect, and with by-participant and by-item intercepts as random factor show a significant effect of condition, in that the direct speech act is processed more slowly (3608.2 ms) than the indirect speech act (3161.0 ms) ( $\beta = -399.8$ ,  $SE = 133.0$ ,  $t =$

[5] The lowest reaction time was 719 ms.

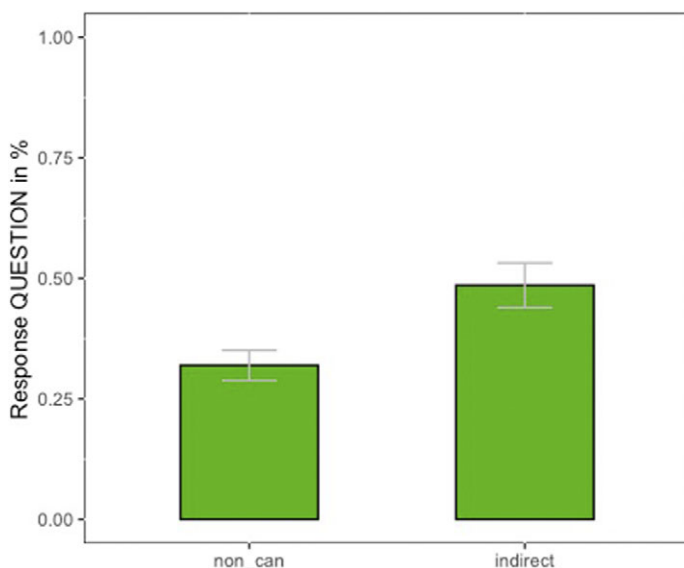


Figure 3.

Question responses for non-canonical and indirect speech acts. Error bars refer to the standard error of the mean.

-3.01,  $p < .01$ , see Figure 4). Interestingly, the reaction times to canonical and direct speech acts do not differ.

A linear mixed effects model on the responses (intended vs. question) to the non-canonical and indirect speech acts shows two effects. First, responses to non-canonical speech acts (4064.1 ms) are generally slower than to the indirect speech act (3161 ms) ( $\beta = 888.7$ ,  $SE = 140.0$ ,  $t = 6.35$ ,  $p < .001$ ). Second, question responses (3333.1 ms) are faster than intended responses (3997.7 ms) ( $\beta = -365.7$ ,  $SE = 154.0$ ,  $t = -2.38$ ,  $p = .018$ ). There is no significant interaction between both factors, indicating that question responses are faster than intended responses for non-canonical as well as for indirect speech acts (see Figure 5).

### 5.3. Discussion

The aim of the present paper was to compare the comprehension of the speech act meaning of non-canonical speech acts (i.e., rhetorical questions and surprise-disapproval questions) with the comprehension of indirect speech acts (i.e., indirect requests). We further compared the comprehension of non-canonical/indirect speech acts with the comprehension of canonical/direct speech acts. And finally, we compared the comprehension of the intended meaning of non-canonical/indirect speech acts with the comprehension of their question meaning. Based on the experimental literature, we hypothesized that interrogative sentences with a

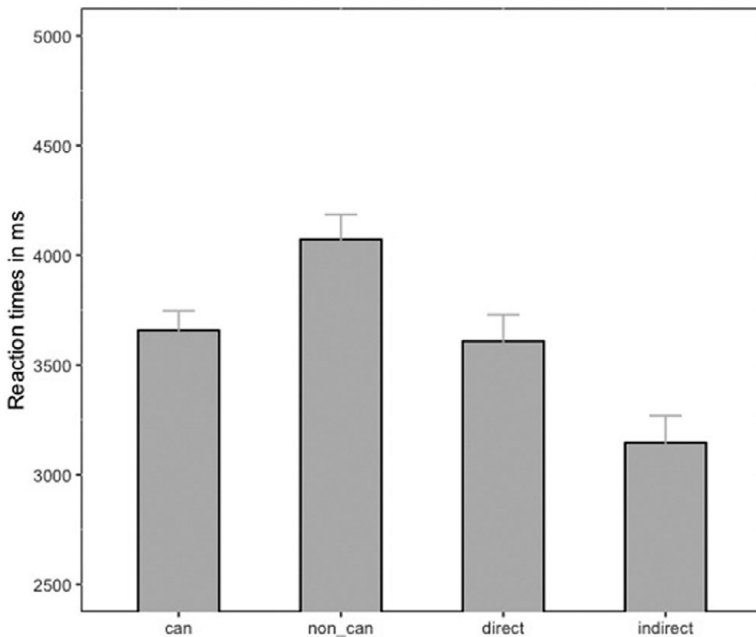


Figure 4.

Reaction times for all categories. Error bars refer to the standard error of the mean.

conventionalized request interpretation (indirect speech act) do not incur processing costs compared to imperative sentences with a request interpretation (direct speech act). This was borne out by the results of our judgment experiment. Participants had to decide which action a speaker performs in a specific context, and it did not take longer to make a decision when the indirect speech act was interpreted as a request than when a direct speech act was interpreted as a request. On the contrary: The interpretation of the indirect speech act was even significantly faster.<sup>6</sup> However, compared to the question interpretation of the indirect request, the request interpretation of the indirect request was slower, suggesting that the question interpretation is more prominent and the request interpretation is less so. It is possible, though, that ‘asking’ is generally easier to process than other speech acts, such as

[6] We do not have a good explanation for this pattern. A reviewer suggests that our label ‘bitten’ (requesting) in our choice of four responses might be too soft, given that participants look at imperatives in the case of our category of direct requests. This might be perceived as a mismatch because imperatives are rather typically used for orders and not for (polite) requests, and that mismatch could result in slowing down the processing time. We agree that this might be a reasonable explanation, but we would like to highlight that every item in our category ‘direct request’ contained the particle *bitte* (‘please’; see Appendix), which we intentionally added to the imperatives to ‘soften’ their interpretation and to make them more compatible with the request reading. Accordingly, while we acknowledge the reviewer’s point that there potentially is a mismatch, we are not so sure whether this is a good explanation for the pattern either.



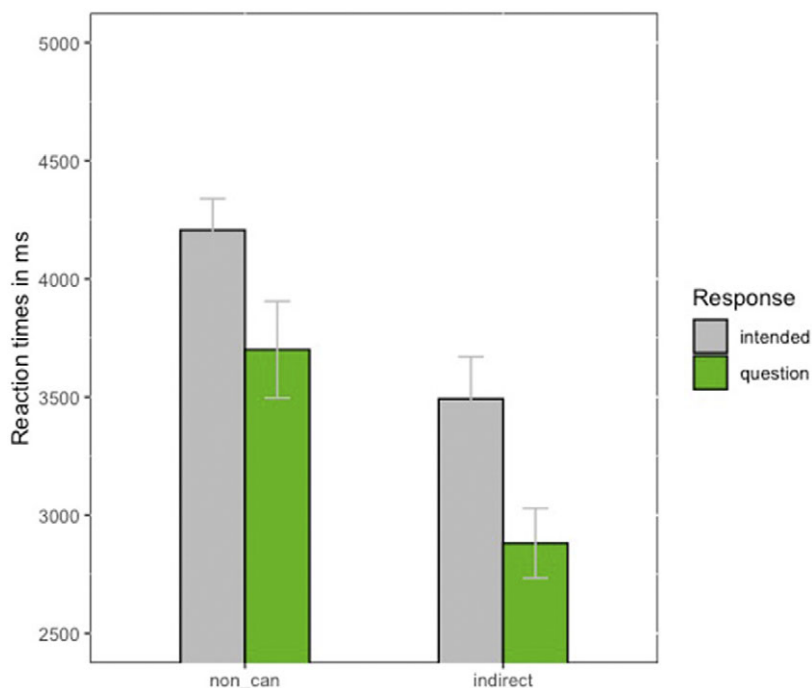


Figure 5.

Reaction times for intended and question responses for non-canonical and indirect speech acts. Error bars refer to the standard error of the mean.

‘requesting’, due to several reasons (e.g., seeing a question mark at the end of the utterance). As we did not include filler sentences that unambiguously functioned as questions, we cannot exclude this possibility. Furthermore, we included a fixed ordering of the response options, with ‘asking’ always being in second position, preceding two other speech act responses. It might be the case that this led to faster response times for question responses. This is a methodological issue that could have been prevented by counterbalancing the order of the responses between participants. However, ‘asserting’, which was always in first position, generally induced the highest response times, which excludes an explanation in terms of the fixed ordering of the response options.

Due to the strong conventionalization of indirect requests, we expected the degree of question interpretation to be low. The response data, however, show that the degree of question interpretation is rather high. In fact, nearly half of the cases were interpreted as questions, and thus the interpretation was at chance. This indicates that the degree of conventionalization is not that influential as previously assumed—a result also reported by Ruytenbeek et al. (2017), based on a comparison of conventionalized and non-conventionalized indirect speech acts that did not reveal any differences.

For non-canonical speech acts, we expected the degree of question interpretation to be lower because those speech acts contained explicit markers that indicated a non-question interpretation. This was borne out by our results: The question interpretation was significantly less frequent than for indirect speech acts. This suggests that the force-indicating elements (the modal particle *schon* in the case of rhetorical questions, the *why-like-what* *wh*-element in surprise-disapproval-questions) triggered a specific interpretation that deviates from the canonical interpretation of the interrogative sentence type. In the course of interpretation, these elements lead the reader/hearer to the intended interpretation by the speaker and therefore contribute to a successful communication. However, an unexpected result of our study was that those explicit markers do not speed up the recognition of the intended speech act. Rather, the force-indicating elements induced processing costs compared to the canonical counterparts (canonical assertions and complaints), and compared to the question interpretation of the non-canonical speech acts.

Our response latencies included the time participants took to read the target utterance and the time participants took to make their decision. We tried to match the target utterances in each utterance pair (e.g. canonical vs. non-canonical; direct vs. indirect) as close as possible, ensuring that similar lexical items were used. At the same time, the length of the utterances was very closely matched in terms of syllables (canonical 10.5 syllables, non-canonical 10 syllables; direct 7 syllables, indirect 8 syllables). In fact, the pattern of reaction times is not in accordance with the pattern of utterance length (canonical slightly longer than non-canonical, but significantly faster; indirect slightly longer than direct, but significantly faster). We are thus confident that reaction times can be used to compare the processing of the different conditions within the different classes of speech acts.

## 6. SUMMARY AND CONCLUSIONS

Let us summarize and conclude our paper. Our driving hypothesis was that the two speech act classes non-canonical speech acts and indirect speech acts are actually two distinct pragmatic and psychological phenomena. This hypothesis is in line with the classic claims by Searle (1975), but it contradicts more recent conceptions in the linguistics literature, according to which non-canonical speech acts such as rhetorical questions are indirect speech acts as well.

We tested our hypothesis in the domain of non-canonical questions versus indirect requests performed by utterances with question syntax. What we found is that participants interpreted the speech act more often as a question when it instantiated an indirect speech act than when it was a non-canonical speech act. This suggests that conventionalization as a cue for interpretation is less strong than explicit force-indicating elements (e.g., modal particles) as part of the sentence. In all cases, the question interpretation was faster than the intended assertion/complaint/request-interpretations. Note that all sentences had the form of an interrogative sentence, which, apparently, was taken as the first source of information during sentence comprehension. This is compatible with the claim by Meibauer (2019) and

others that the category ‘sentence type’ plays a major role in interpreting both indirect speech acts and non-canonical questions (see our discussion in [Section 1](#) above).

However, while the indirect and non-canonical speech acts have in common that the question interpretation has a processing advantage over the intended interpretation, both types of speech acts differ when they are compared to their direct/canonical counterparts. The indirect speech act was processed faster than its direct counterpart. The non-canonical speech acts, however, were processed slower than their canonical counterparts. This suggests that elements indicating illocutionary force (e.g., modal particles or *why*-like-*what wh*-elements) help hearers to correctly identify the intention of a speaker, but that these formal markers make the comprehension process harder when they contradict other formal information such as word order and sentence type.

All in all, our comprehension data reflect that non-canonical speech acts and indirect speech acts feature a different mapping from linguistic form to illocutionary force (non-canonical speech acts formally encode the force reading, while indirect speech acts do not). Both our response data and our reaction-time data point towards differences between both types of speech acts, with the non-canonical speech acts inducing more processing costs, but at the same time being interpreted more accurately. In both cases, the unintended question interpretation, which was compatible with the sentence type, was processed faster than the intended interpretations that deviated from the sentence type, indicating that the process of accurate speech act comprehension is preceded by purely syntactic processes and that the literalist conception of speech acts is thus right in referring to the central role that sentence types play in the comprehension of illocutionary force.

#### COMPETING INTERESTS

The author(s) declare none.

#### APPENDIX

##### GERMAN CRITICAL ITEMS (INCL. TRANSLATIONS)

###### *Assertion*

1. Tom kommt nach der Arbeit mit Melanie nach Hause. Beide sind sehr müde; sie brauchen erst mal einen Kaffee. In der Küche steht die noch halbvolle Kaffeekanne von heute Morgen. Melanie hält Tom die Kanne hin und möchte wissen, ob sie den Kaffee wegschütten soll.

‘Tom and Melanie come home after work. They are both very tired, and so they need a coffee. In the kitchen, there’s still the half-full coffeepot from this morning. Melanie shows the coffeepot to Tom and wants to know whether she should pour away the coffee.’

Tom: Klar! Wer mag schon gerne kalten Kaffee? NON-CANONICAL

‘Tom: Sure thing! After all, who likes cold coffee? (Nobody!)’

Tom: Klar! Niemand mag gerne kalten Kaffee. CANONICAL

‘Tom: Sure thing! Nobody likes cold coffee.’

2. Theo und Leonie haben endlich eine größere Wohnung gefunden. Leider sind sie zur Zeit etwas knapp bei Kasse, weshalb sie gut überlegen müssen, wofür sie Geld beim Umzug ausgeben wollen. Leonie fragt Theo, ob sie ein Umzugsunternehmen beauftragen sollen.

‘Theo and Leonie have finally found a larger apartment. Unfortunately, they are currently a bit short on cash, which is why they have to think carefully about what they want to spend money on when moving. Leonie asks Theo if they should hire a moving company.’

Theo: Klar! Wer trägt schon gerne Kisten? NON-CANONICAL

‘Theo: Sure thing! After all, who likes to carry boxes? (Nobody!)’

Theo: Klar! Niemand trägt gerne Kisten. CANONICAL

‘Theo: Sure thing! Nobody likes to carry boxes.’

3. Finn und Maria wohnen zusammen in einer WG. Leider sind gleichzeitig der Geschirrspüler und der Wäschetrockner kaputt gegangen und nun überlegen sie, welches elektrische Gerät sie sich zuerst anschaffen sollen. Finn schlägt vor, erst mal einen neuen Geschirrspüler zu kaufen.

‘Finn and Maria live together in a shared flat. Unfortunately, the dishwasher and tumble dryer broke down at the same time, and now they are trying to decide which electrical appliance to buy first. Finn suggests buying a new dishwasher first.’

Maria: Auf jeden Fall! Wer wäscht schon gerne ab? NON-CANONICAL

‘Maria: Sure thing! After all, who likes to clean the dishes? (Nobody!)’

Maria: Auf jeden Fall! Niemand wäscht gerne ab. CANONICAL

‘Maria: Sure thing! Nobody likes to clean the dishes.’

4. Pia und Gustav treffen sich auf ein Bier in der Stadt. Es ist viel los und alle Kneipen sind an diesem Abend komplett überfüllt. Nur in einer Kneipe gibt es noch einen freien Tisch, allerdings ist es eine Raucherkneipe. Pia schlägt vor, lieber nach Hause zu gehen und dort was zu trinken.

'Pia and Gustav meet for a beer in town. There is a lot going on and all the pubs are completely overcrowded that evening. There is only one free table in one bar, but it is a smoking bar. Pia suggests going home and having a drink there.'

Gustav: Sehe ich genauso! Wer riecht schon gerne nach Rauch? NON-CANONICAL

'Gustav: I agree! After all, who likes to smell like smoke? (Nobody!).'

Gustav: Sehe ich genauso! Niemand riecht gerne nach Rauch. CANONICAL

'Gustav: I agree! Nobody likes to smell like smoke.'

5. Miriam und Paul haben den Tag über noch nicht das Haus verlassen und sind noch im Schlafanzug. Nun wollen sie einkaufen gehen, da sie nichts mehr im Kühlschrank haben. Miriam fragt Paul, ob sie sich noch umziehen sollen.

'Miriam and Paul haven't left the house all day and are still in their pyjamas. Now they want to go shopping because they have nothing left in the fridge. Miriam asks Paul if they should change their clothes.'

Paul: Auf jeden Fall! Wer geht schon gerne im Schlafanzug vor die Tür? NON-CANONICAL

'Paul: Sure thing! After all, who likes to go outside in pyjamas? (Nobody!).'

Paul: Auf jeden Fall! Niemand geht gerne im Schlafanzug vor die Tür. CANONICAL

'Paul: Sure thing! Nobody likes to go outside in pyjamas.'

6. Betty und Samuel machen Urlaub in der Stadt. Abends wollen sie mit der U-Bahn zum Theater fahren. Betty hat kein Kleingeld für den Fahrkartenautomaten. Sie fragt Samuel, ob sie noch Geld wechseln sollen, damit sie sich eine Fahrkarte kaufen können.

'Betty and Samuel are vacationing in the city. In the evening they want to take the subway to the theater. Betty doesn't have any change for the ticket machine. She asks Samuel if they should change money so they can buy a ticket.'

Samuel: Klar! Wer wird schon gerne beim Schwarzfahren erwischt? NON-CANONICAL

'Samuel: Sure thing! After all, who likes to get caught fare dodging? (Nobody!).'

Samuel: Klar! Niemand wird gerne beim Schwarzfahren erwischt. CANONICAL

‘Samuel: Sure thing! Nobody likes to get caught fare dodging.’

7. Susi und Peter wollen eine Fahrradtour machen. Nach langer Zeit holen sie mal wieder ihre Räder aus dem Keller. Susi will sofort aufsteigen und losfahren, da merkt sie, dass die Reifen kaum noch Luft haben. Sie bittet Peter darum, die Reifen aufzupumpen.

‘Susi and Peter want to go on a bike ride. After a long time they get their bikes out of the basement again. Susi wants to get on and drive off immediately when she notices that the tires are almost empty. She asks Peter to inflate the tires.’

Peter: Klar! Wer will schon gerne mit platten Reifen fahren? NON-CANONICAL

‘Peter: Sure thing! After all, who likes to drive with flat tires? (Nobody!)’

Peter: Klar! Niemand will gerne mit platten Reifen fahren. CANONICAL

‘Peter: Sure thing! Nobody likes to drive with flat tires.’

8. Julia und Tobi sind im Restaurant. Als das Essen kommt und Paul den ersten Bissen nimmt, merkt er, dass das Essen total versalzen ist. Er fragt sich, ob er das Essen besser zurückgeben soll.

‘Julia and Tobi are in the restaurant. When the food comes and Paul takes the first bite, he realizes that the food is totally oversalted. He wonders if he should better return the food.’

Julia: Auf jeden Fall! Wer isst schon gerne versalzenes Essen? NON-CANONICAL

‘Julia: Sure thing! After all, who likes to eat oversalted foot? (Nobody!)’

Julia: Auf jeden Fall! Niemand isst gerne versalzenes Essen. CANONICAL

‘Julia: Sure thing! Nobody likes to eat oversalted foot.’

### *Complaint*

1. Simone und Richard sind am Strand angekommen und wollen den ganzen Tag dort verbringen. Gerade als sie den Windschutz aufgebaut haben und ihre Handtücher ausgebreitet haben, spüren sie, wie einige Tropfen vom Himmel kommen.

‘Simone and Richard have arrived at the beach and want to spend the whole day there. Just as they set up the windbreak and spread out their towels, they felt a few drops fall from the sky.’

Richard: Was regnet das denn jetzt? NON-CANONICAL

‘Richard: Why is it raining now (of all times!)?’

Richard: Wie bescheuert, dass das jetzt regnet! CANONICAL

‘Richard: How stupid that it’s raining now!’

2. Julia sieht, dass Marc sich mitten am Tag hinlegen möchte. Dabei dachte sie, dass sie den Nachmittag miteinander verbringen.

‘Julia sees that Marc wants to lie down in the middle of the day. She thought that they would spend the afternoon together.’

Julia: Was schläfst du denn jetzt? NON-CANONICAL

‘Julia: Why are you sleeping now (of all times!)?’

Julia: Wie gemein, dass du jetzt schläfst! CANONICAL

‘Julia: How stupid that you are sleeping now!’

3. Die Eltern treffen die letzten Vorbereitungen für den Geburtstag ihrer Tochter. Sie haben nicht mehr viel Zeit und nun sieht die Mutter, dass der Vater das anscheinend lustig findet.

‘The parents are making the final preparations for their daughter’s birthday. They don’t have much time left and now the mother sees that the father apparently thinks this is funny.’

Mutter: Was lachst du denn jetzt? NON-CANONICAL

‘Mother: Why are you laughing now (of all times!)?’

Mutter: Wie blöd, dass du jetzt lachst! CANONICAL

‘Mother: How stupid that you are laughing now!’

4. Der Chef unterhält sich mit seinem Mitarbeiter über einen neu eingestellten Lehrling, der nachmittags immer die Werkstatt ausfegen soll. Da sehen sie genau diesen Lehrling auf der Bank im Pausenraum liegen.

‘The boss is talking to his employee about a newly hired apprentice who is supposed to sweep out the workshop every afternoon. There they see exactly this apprentice lying on the bench in the break room.’

Chef: Was liegt der denn jetzt faul hier herum? NON-CANONICAL

‘Boss: Why are you sleeping now (of all times!)?’

Chef: Wie frech, dass der jetzt faul hier herumliegt! CANONICAL

‘Boss: How cheeky that he is lying around here!’

5. Maja hat eine Bolognese aufgesetzt, die schon seit Stunden bei niedriger Hitze köchelt. Als sie in die Küche kommt, sieht sie, wie Nathan am Herd steht und an den Knöpfen dreht.

‘Maja has put on a Bolognese that has been simmering on a low heat for hours. When she comes into the kitchen, she sees Nathan standing at the stove, turning the knobs.’

Maja: Was fummelst du denn da am Herd rum? NON-CANONICAL

‘Maja: Why are you fumbling around on the stove now (of all times!)?’

Maja: Wie frech, dass du da am Herd rumfummelst! CANONICAL

‘Maja: How cheeky that you are fumbling around on the stove!’

6. Herr und Frau Schmidt sind auf dem Weg zu einer Geburtstagsfeier. Sie sind viel zu spät dran und Herr Schmidt drückt aufs Gaspedal. Plötzlich sieht er die Polizei am Straßenrand.

‘Mr. and Mrs. Smith are on their way to a birthday party. They are far too late and Mr. Schmidt is stepping on the gas pedal. Suddenly he sees the police at the side of the road.’

Herr Schmidt: Was stehen die denn da und blitzen? NON-CANONICAL

‘Herr Schmidt: Why are they standing around flashing (of all times!)?’

Herr Schmidt: Wie nervig, dass die da blitzen! CANONICAL

‘Herr Schmidt: How annoying that they are flashing!’

7. Anton hat nach einer Stunde endlich seine kleine Tochter zum Einschlafen gebracht. Gerade, als er sie in die Wiege legen möchte, klingelt sein Telefon.

‘Anton finally put his little daughter to sleep after an hour. Just as he is about to put her into the cradle, his phone rings.’

Anton: Was klingelt denn jetzt das Telefon? NON-CANONICAL

‘Anton: Why is the telephone ringing now (of all times!)?’

Anton: Wie bescheuert, dass das Telefon jetzt klingelt! CANONICAL

‘Anton: How stupid that the telephone is ringing now!’

8. Peter hat gestern sein Auto aus der Werkstatt geholt. Die Reparatur hat viel gekostet und Peter hofft, dass er jetzt eine Weile lang Ruhe hat. Am nächsten Tag hört sich das Auto aber gar nicht gut an.

‘Peter got his car from the workshop yesterday. The repairs cost a lot and Peter hopes that he won’t have any trouble for a while now. The next day the car doesn’t sound good at all.’

Peter: Was klappert das Auto denn jetzt so? NON-CANONICAL



‘Peter: Why is the car rattling now (of all times!)?’

Peter: Wie blöd, dass das Auto jetzt klappert!

CANONICAL

‘Peter: How stupid that the car is rattling now!’

### *Request*

1. Aurelia und Mario sitzen am Frühstückstisch. Mario möchte gerne sein Frühstücksei essen, allerdings steht das Salz am anderen Ende des Tisches.

‘Aurelia and Mario are sitting at the breakfast table. Mario would like to eat his breakfast egg, but the salt is at the other end of the table.’

Mario: Kannst du mir das Salz reichen?

INDIRECT

‘Mario: Can you pass me the salt?’

Mario: Gib mir bitte das Salz!

DIRECT

‘Mario: Please pass me the salt!’

2. Tina und Basti wohnen zusammen in einer WG. Tina muss für eine wichtige Klausur lernen und weiß, dass Basti genau die gleiche Klausur schon geschrieben hat.

‘Tina and Basti live together in a shared flat. Tina has to study for an important exam and knows that Basti has already written exactly the same exam.’

Tina: Kannst du mir die Lösungen geben?

INDIRECT

‘Tina: Can you give me the solutions?’

Tina: Gib mir bitte die Lösungen!

DIRECT

‘Tina: Please give me the solutions!’

3. Konstantin hat sein Auto über Nacht in der Garage geparkt. Jetzt bekommt er morgens die Garage nicht mehr auf und sieht, dass das Auto seiner Freundin immer noch vor der Garage steht, da sie es heute nicht braucht.

‘Konstantin parked his car in the garage overnight. He can’t open the garage in the morning and sees that his girlfriend’s car is still in front of the garage. She doesn’t need it today.’

Konstantin: Kannst du mir deinen Wagen leihen?

INDIRECT

‘Konstantin: Can you borrow me your car?’

Konstantin: Leih mir bitte deinen Wagen!

DIRECT

‘Konstantin: Please borrow me your car!’

4. Mutter und Tochter warten auf die Oma, die sie besuchen wollte. Die Tochter möchte ihrer Oma unbedingt ein altes Foto von ihr und ihrem verstorbenen Opa präsentieren, das ihr die Mutter letztsens noch gezeigt hat.

‘Mother and daughter are waiting for the grandma who wanted to visit them. The daughter really wants to show her grandmother an old photo of her and her deceased grandfather that her mother recently showed her.’

Tochter: Kannst du dieses tolle Foto heraussuchen? INDIRECT

‘Daughter: Can you pick out the great picture?’

Tochter: Such bitte dieses tolle Foto heraus! DIRECT

‘Daughter: Please pick out the great picture!’

5. Trainer und Spieler treffen sich auf dem Weg zur Umkleide. Dem Trainer fällt ein, dass noch eine Menge Bälle auf dem Platz liegen, die in das Vereinsheim gebracht werden müssen.

‘Coaches and players meet on the way to the locker room. The coach remembers that there are still a lot of balls on the pitch that need to be taken to the clubhouse.’

Trainer: Kannst du die Bälle holen? INDIRECT

‘Trainer: Can you get the balls?’

Trainer: Hol bitte die Bälle! DIRECT

‘Trainer: Please get the balls!’

6. Claudia und Alexander erwarten Besuch von ein paar Freunden. Alexander hat hierfür schon einen leckeren Kuchen besorgt, zu dem es dann Kaffee geben soll.

‘Claudia and Alexander are expecting a visit from some friends. Alexander has already gotten a delicious cake for this, which will then be accompanied by coffee.’

Alexander: Kannst du den Kaffee machen? INDIRECT

‘Alexander: Can you make the coffee?’

Alexander: Mach bitte den Kaffee! DIRECT

‘Alexander: Please make the coffee!’

7. Rosa und Eva wohnen mit ihrem Bruder zusammen. Als sie morgens in die Küche kommen, sehen sie, dass er gestern Nacht noch gekocht hat und nun überall dreckiges Geschirr steht.

‘Rosa and Eva live with their brother. When they enter the kitchen in the morning, they see that he cooked last night and now there are dirty dishes everywhere.’

|                            |          |
|----------------------------|----------|
| Eva: Kannst du ihn wecken? | INDIRECT |
| ‘Eva: Can you wake him?’   |          |
| Eva: Weck ihn bitte!       | DIRECT   |
| ‘Eva: Please wake him!’    |          |

8. Ulrike und Stefan haben mit ihrer Mutter eine längere Radtour gemacht und es war sehr heiß. Nach der Radtour geht es der Mutter gar nicht gut und Ulrike ist sehr besorgt.

‘Ulrike and Stefan went on a long bike ride with their mother and it was very hot. After the bike ride, the mother is not feeling well and Ulrike is very worried.’

|                                       |          |
|---------------------------------------|----------|
| Ulrike: Kannst du einen Arzt anrufen? | INDIRECT |
| ‘Ulrike: Can you call a doctor?’      |          |
| Ulrike: Ruf bitte einen Arzt an!      | DIRECT   |
| ‘Ulrike: Please call a doctor!’       |          |

## REFERENCES

- Anwyl-Irvine, Alexander L., Jessica Massonnié, Adam Flitton, Natasha Kirkham, & Jo K. Evershed. 2020. Gorilla in our midst: An online behavioral experiment builder. *Behavior research methods* 52, 388–407.
- Asher, Nicholas & Brian Reese. 2007. Intonation and discourse: Biased questions. *Interdisciplinary Studies on Information Structure* 8, 1–38.
- Bates, Douglas, Martin Mächler, Benjamin M. Bolker & Steven C. Walker. 2015. Fitting linear mixed-effects models using lme4. *Journal of Statistical Software* 67, 1–48.
- Celle, Agnès, Anne Jugnet, Laure Lansari & Tyler Peterson. 2019. Interrogatives in surprise contexts in English. In Natalie Depraz & Agnès Celle (eds.), *Surprise at the intersection of phenomenology and linguistics*, 117–137. Amsterdam: John Benjamins.
- Celle, Agnès, Anne Jugnet & Laure Lansari. 2021. Expressive questions in English and French: *What the hell* versus *Mais qu’est-ce que*. In Andreas Trotzke & Xavier Villalba (eds.), *Expressive meaning across linguistic levels and frameworks*, 138–166. Oxford: Oxford University Press.
- Dayal, Veneeta. 2016. *Questions*. Oxford: Oxford University Press.
- Dehé, Nicole, Bettina Braun, Marieke Einfeldt, Daniela Wochner & Katharina Zahner-Ritter. 2022a. The prosody of rhetorical questions: A cross-linguistic view. *Linguistische Berichte* 269, 3–42.
- Dehé, Nicole, Daniela Wochner & Marieke Einfeldt. 2022b. The interaction of discourse markers and prosody in rhetorical questions in German. *Journal of Linguistics*, 1–25. [First View]
- Gibbs, Raymond W. 1979. Contextual effects in understanding indirect requests. *Discourse Processes* 2, 1–10.
- Gibbs, Raymond W. 1983. Do people always process the literal meanings of indirect requests? *Journal of Experimental Psychology: Learning, Memory, and Cognition* 9, 524–533.
- Grice, H. Paul. 1975. Logic and conversation. In Peter Cole & Jerry L. Morgan (eds.), *Speech acts*, 41–58. New York: Academic Press.
- Grimshaw, Jane. 1979. Complement selection and the lexicon. *Linguistic Inquiry* 10, 279–326.
- Kaufmann, Magdalena. 2012. *Interpreting imperatives*. Dordrecht: Springer.
- Krifka, Manfred. 2011. Questions. In Klaus von Heusinger, Claudia Maienborn & Paul Portner (eds.), *Semantics: An international handbook of natural language meaning, Vol. 2*, 1742–1785. Berlin: Mouton de Gruyter.
- Krifka, Manfred. 2015. Bias in Commitment Space Semantics: Declarative questions, negated questions, and question tags. *Proceedings of SALT* 25, 328–345.

- Krifka, Manfred. 2023. Layers of assertive clauses: Propositions, judgements, commitments, acts. In Jutta Hartmann & Angelika Wöllstein (eds.), *Propositionale Argumente im Sprachvergleich: Theorie und Empirie*, 116–183. Tübingen: Narr.
- Marocchini, Eleonora & Filippo Domaneschi. 2022. “Can you read my mind?” Conventionalized indirect requests and Theory of Mind abilities. *Journal of Pragmatics* 193, 201–221.
- Meibauer, Jörg. 2019. What is an indirect speech act? Reconsidering the literal force hypothesis. *Pragmatics & Cognition* 26, 61–84.
- Munaro, Nicola & Hans-Georg Obenauer. 1999. On underspecified *wh*-elements in pseudo-interrogatives. *University of Venice Working Papers in Linguistics* 9, 181–253.
- Noveck, Ira & Dan Sperber (eds.). 2004. *Experimental pragmatics*. Basingstoke: Palgrave Macmillan.
- Obenauer, Hans-Georg. 2004. Non-standard *wh*-questions and alternative checkers in Pagotto. In Horst Lohnstein & Susanne Trissler (eds.), *The syntax and semantics of the left periphery*, 343–384. Berlin: Mouton de Gruyter.
- Portner, Paul, Miok Pak & Raffaella Zanuttini. 2019. The speaker-addressee relation at the syntax-semantics interface. *Language* 95, 1–36.
- R Core Team. 2017. *R: A language and environment for statistical computing*. R Foundation for Statistical Computing, Vienna, Austria. <https://www.R-project.org/>.
- Recanati, François. 2005. Literalism and contextualism: Some varieties. In Gerhard Preyer & Georg Peter (eds.), *Contextualism in philosophy: Knowledge, meaning, and truth*, 171–196. Oxford: Oxford University Press.
- Ruytenbeek, Nicolas. 2021. *Indirect speech acts*. Cambridge: Cambridge University Press.
- Ruytenbeek, Nicolas, Ekaterina Ostashchenko & Mikhail Kissine. 2017. Indirect request processing, sentence types and illocutionary forces. *Journal of Pragmatics* 119, 46–62.
- Sadock, Jerrold. 1971. Queclaratives. *Proceedings of the Annual Meeting of the Chicago Linguistic Society* 7, 223–231.
- Sadock, Jerrold. 1974. *Towards a linguistic theory of speech acts*. New York, NY: Academic Press.
- Sadock, Jerrold & Arnold Zwicky. 1985. Speech act distinctions in syntax. In Timothy Shopen (ed.), *Language typology and syntactic description. Clause structure, vol. 1.*, 155–196. Cambridge: Cambridge University Press.
- Searle, John R. 1969. *Speech acts: An essay in the philosophy of language*. Cambridge: Cambridge University Press.
- Searle, John R. 1975. Indirect speech acts. In Peter Cole & Jerry L. Morgan (eds.), *Syntax and semantics. Speech acts, vol. 3.*, 59–82. New York: Academic Press.
- Searle, John R. & Daniel Vanderveken. 1985. *Foundations of illocutionary logic*. Cambridge: Cambridge University Press.
- Siemund, Peter. 2018. *Speech acts and clause types: English in a cross-linguistic context*. Oxford University Press.
- Speas, Margaret & Carol Tenny. 2003. Configurational properties of point of view roles. In Anna Maria Di Sciullo (ed.), *Asymmetries in grammar*, 315–345. Amsterdam: John Benjamins.
- Trotzke, Andreas. 2023. *Non-canonical questions*. Oxford: Oxford University Press.
- Trotzke, Andreas & Anna Czapionka. 2022. The pragmatics of surprise-disapproval questions: An empirical study. *Linguistics Vanguard* 8, 239–249.
- Zanuttini, Raffaella & Paul Portner. 2003. Exclamative clauses: At the syntax-semantics interface. *Language* 79, 39–81.

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