A prototype approach to sentences and sentence types*

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This paper proposes a new solution to the age-old problem of defining the sentence and sentence types. Arguing against traditional definitions, we propose that the category SENTENCE exhibits a complex prototypical structure on the levels of morphosyntactic form, conceptual content, and pragmatic function. By positing that the central member of the category SENTENCE is the declarative sentence type, we can show how imperative sentences are related to the prototypical declarative sentence type and that imperatives exhibit an internal prototypical structure of their own. Finally, using a scenario approach, we show how the conceptual and pragmatic functions of declarative and imperative sentences may overlap.

Keywords: sentence, sentence type, declarative sentence, imperative sentence, prototype, speech act scenario

1. Introduction

Perhaps there is no other linguistic category whose nature is so controversial and is characterized by such a multitude of heterogeneous definitional attempts than the category SENTENCE (for overviews of sentence definitions see e.g. Seidel, 1935; Fries, 1952; Lindgren, 1973; Hoffmann, 1992; Heidolph, 1992). These definitional attempts usually focus on morphosyntactic, semantic, or pragmatic attributes of the sentence, which typically are regarded as being incompatible with one another. Furthermore, there seems to be a tendency to view the sentence as a "classical" category, i.e. a category that is defined by a set of necessary and jointly sufficient properties. Such definitions stipulate a clear-cut distinction between sentences and non-sentences, without admitting the possibility of varying degrees of sentencehood.[1]

We argue that classical definitions of the category SENTENCE have a number of drawbacks. In this article we propose that sentences, as well as individual sentence

Annual Review of Cognitive Linguistics 6 (2008), **83–112**. DOI 10.1075/arcl.6.05pan
ISSN 1572–0268 / E-ISSN 1572–0276

types such as declaratives and imperatives, are prototypically organized categories. In our view a prototypical sentence, and more specifically a sentence type, consists of a bundle of morphosyntactic, semantic, and pragmatic attributes that characterizes the best exemplars of the category. Sentence tokens may more or less fit the prototype. This approach allows us to overcome a number of problems with traditional definitions.

The article is organized as follows. In Section 2 some basic assumptions of prototype theory are briefly introduced. Section 3 discusses typical traditional definitions of the sentence and their shortcomings. In Section 4 the prototypical attributes of the category SENTENCE are presented and illustrated with examples from English. We provide evidence that the declarative sentence type is the central member of the category SENTENCE. In Section 5 additional prototypical properties of declarative sentences are developed and the prototype approach is extended to the imperative sentence type. We show that imperatives *per se* exhibit internal prototypical structure and discuss cases that are more or less distant from the central instances of the declarative and the imperative sentence types. We demonstrate how these examples formally, conceptually, and pragmatically relate to their respective prototypes. Section 6 discusses a case of conceptual and functional overlap between the declarative and the imperative sentence types and offers an account of this overlap in terms of the notion of speech act scenario (see Thornburg & Panther, 1997; Panther & Thornburg, 1998, 2005). Section 7 summarizes the results of the article and formulates some implications of our approach.

2. Some basic assumptions of prototype theory

Prototype theory is motivated by some obvious deficiencies of the "classical" approach to categories, which is generally attributed to the Greek philosopher Aristotle. In modern semantic terms the classical theory is guided by four assumptions (see Taylor, 2005, p. 21):

(1) i. Categories can be defined in terms of necessary and sufficient properties (features).
ii. These properties are positively or negatively specified, i.e. binary.
iii. Categories have well-defined boundaries.
iv. All the defining properties of a category have equal status.[2]

The origins of prototype theory can be found in Wittgenstein's critique of classical theories of categorization, as discussed in his treatise *Philosophical Investigations*. As an example, Wittgenstein analyzed the concept GAME and showed that games cannot be characterized by a common denominator, i.e. a feature or set of features

that is shared by all games. This observation led Wittgenstein to sketch a model of categorization that centers around two main assumptions: (i) the concept of family resemblance and (ii) the idea that categories are characterized by fuzzy boundaries (Wittgenstein, 1968, pp. 31f.).

The inadequacy of the classical approach to categorization has also been demonstrated by various cognitive psychologists and linguists (e.g. Rosch, 1973, 1977; Smith & Medin, 1981; Lakoff, 1987; Lakoff & Johnson, 1999; Mangasser-Wahl, 2000; Taylor, 2005). These authors argue that prototypical instances, i.e. *best exemplars* of a category, are defined by a maximal number of attributes. Consequently, a distinction has to be made between the central and the more peripheral members of a category. In linguistics, prototype theory has proved its utility in various grammatical and semantic domains, e.g.: transitivity (Hopper & Thompson, 1980; Taylor, 2005), atypical passives (Rice, 1987), control theory (Köpcke & Panther, 2002; Panther, 1994, 2007), word classes (Hopper & Thompson, 1984), prepositions and particles (Brugman, 1981; Radden, 1985), inflectional morphology (Bybee & Moder, 1983; Köpcke, 1995), and concepts like LYING and ANGER (Coleman & Kay, 1981; Lakoff, 1987 *inter alia*). In what follows, we apply this approach to the notions of sentence and sentence type.

3. Some traditional definitions of the sentence

Most traditional definitions of the sentence emphasize syntactic, semantic, logical, psychological, or pragmatic aspects, or sometimes a combination of these. By way of illustration, we will give a (non-exhaustive) list of such attempts to define the sentence. Many of these definitions are insufficient because they focus on merely one property that all sentences are supposed to exhibit. Nevertheless, even if these characterizations are deficient in various respects, they contain important elements needed for an adequate concept of sentencehood. In what follows we briefly review some sentence definitions based on formal criteria (3.1), semantic criteria (3.2), and pragmatic criteria (3.3).

3.1 Definitions based on syntactic form

A typical example of a formal definition is Bloomfield's (1933, p. 170) famous dictum that "each sentence is an independent linguistic form, not included by virtue of any grammatical construction in any larger linguistic form". In an earlier publication Bloomfield (1926, p. 158) claimed that "even such utterances as Latin *pluit* ['it is raining'], English *Fire!* or *Ouch!* are sentences" since they are maximal in not being able to be integrated into larger grammatical constructions.

Within Bloomfield's formalist framework this conclusion seems to be stringent; nevertheless, exclamations like *Fire!* and *Ouch!* intuitively do not look like very convincing examples of sentences. This intuition is confirmed by the fact that *Ouch!* can neither be conjoined with another sentence nor can it be embedded as a subordinate clause. For example, strings of words like *I feel a pain in my heart and ouch* or *He exclaimed that ouch* are ungrammatical. However, it is possible to embed the verb form *pluit* into a subordinate clause. Witness a sentence such as *Si pluit incidunt guttae in aquam* 'When it rains the (rain) drops fall into the water'.[3]

3.2 Definitions based on propositional content

A number of definitions of the sentence focuses on the propositional content of sentences. In some cases, the correspondence between propositional content and reality is an essential criterion, as in Waismann's (1965) famous definition that a sentence is something that can be true or false. Such a truth-conditional definition implicitly assumes that the declarative sentence type is basic and that it exemplifies the concept of sentence in its purest form, since other sentence types such as interrogatives, exclamatives, and imperatives cannot be characterized in terms of truth conditions.[4]

3.3 Definitions based on communicative function

Some linguists and philosophers have argued that sentences are the formal correlates of (elementary) linguistic actions. This view goes back at least to Bühler (1920, 1934) and was later also independently proposed by Alston (1964, p. 33), who regards "a sentence [as] the smallest linguistic unit that can be used to perform a complete action […]".

A specific variant of Alston's proposal is Ross's (1970) 'performative hypothesis', according to which every declarative sentence contains a higher performative verb in its deep structure, which defines the illocutionary potential of the sentence. For example, a sentence such as *Prices slumped* is regarded as having the same deep structure as *I (hereby) tell you that prices slumped*. Even though the performative hypothesis is not considered to be plausible any longer in contemporary linguistics, it tried to account for an important aspect of sentences: A sentence is a coding device for illocutionary potential. In this regard, the performative hypothesis prefigures the notion of construction as a conventional pairing of form and meaning, including pragmatic meaning (see Goldberg, 1995).

3.4 The essentialist approach

Apart from focusing on specific aspects (form, content, or communicative function) of sentencehood, traditional sentence definitions tend to rely on what we call an 'essentialist' approach: They aim at providing a set of criterial properties that determines whether some linguistic entity is a sentence or not. A typical instance of such a definition is Ries's (1931, pp. 51f.) stipulation that an adequate account should capture the *essence* ("Wesen") of the sentence:

> "Die Aufgabe der Definition ist es, das *Wesen* des Satzes zu bestimmen und ihn damit im allgemeinen System der Begriffe an seiner Stelle einzureihen. […] Erforderlich ist […] zur richtigen und vollständigen Bestimmung des Satzes die Erfassung seines *ganzen* Wesens, nicht nur des Innern, des Gehalts, sondern auch des Äussern, der Gestalt."
>
> 'It is the task of the definition to determine the *essence* of the sentence and to assign it its proper place in the general system of (linguistic/grammatical) concepts. […] For an adequate and exhaustive definition of the sentence it is necessary to capture its *total* essence, i.e. not only its content but also its form.'

Ries (1931, p. 99) then proposes a definition that emphasizes both the grammatical and the denotational characteristics of the sentence:

> "Ein Satz ist eine grammatisch geformte kleinste Redeeinheit, die ihren Inhalt im Hinblick auf sein Verhältnis zur Wirklichkeit zum Ausdruck bringt."
>
> 'A sentence is a grammatically constructed minimal unit of speech that expresses its content with regard to its relation to reality.'

Ries's definition incorporates three criteria for sentencehood that are based on Saussurean distinctions:

(2) i. A sentence is a unit of speech (*parole*, i.e. 'Redeeinheit');
ii. it has a grammatical structure (*langue*);
iii. it denotes some extralinguistic reality.

Ries's essentialist characterization of the sentence is by definition classical: conditions (2) (i)–(iii) list a set of necessary and jointly sufficient properties that are supposed to characterize the very nature of the sentence. We argue below that an essentialist definition of the sentence is impossible. Moreover, Ries's definition contains another questionable assumption. It is problematic to regard the sentence as a unit of speech (*parole*), rather than a unit of the linguistic system (*langue*). Ries's characterization of the sentence as a unit of speech appears to be at odds with his second criterion that the sentence is a grammatically constructed unit. Nevertheless, Ries's characterization contains two important definitional elements

that have to be worked into an adequate concept of sentencehood: the grammatical (morphosyntactic) structure of (prototypical) sentences and the way sentences relate to "reality" (propositional content).

3.5 Interim conclusion

To summarize our discussion so far, traditional definitions of the sentence tend to be essentialist and focus on one or more of the following aspects:

(3) i. Sentences are the maximal units of grammar.
ii. Sentences relate to 'reality', i.e., their propositional content has a 'truth value'.
iii. Sentences have communicative potential, i.e., they have a potential illocutionary force.

However, as Müller (1985, p. 27) points out more than fifty years later than Ries, no satisfactory (classical) definition of the sentence has been given as yet that integrates grammatical, semantic, and pragmatic properties. The reason for this failure might simply be that sentences are not classical but prototypically organized categories.

4. Towards a prototypical approach to sentences

Prototype theory assumes that the members of a category are distributed along a continuum. At one pole of this continuum are those category members that are defined by a maximal number of properties; the opposite pole represents those members that have only one or very few of the relevant properties characterizing the prototype. Members at the periphery of the category may easily lose their category membership in one class and be reassigned to a contrastive category. The members of a category are not regarded as a homogeneous set; rather, they exemplify the category as a whole to varying degrees. We will demonstrate that the category SENTENCE exhibits prototypical structure in the sense outlined above.

In the last two decades, various linguists (e.g. Altmann, 1987, 1993; Harnish, 1994; König & Siemund, 2007; Liedtke, 1998, pp. 241–281; Sadock & Zwicky, 1985; Schlobinski, 1992, pp. 114–122) have implicitly or explicitly assumed that the sentence is at least a triple of morphosyntactic, semantic, and pragmatic information. It is our goal to develop a definition of the sentence that integrates these different aspects. To our mind, the necessary tool to achieve this goal is the prototype approach to categorization. Prototype effects are indeed detectable on the syntactic, semantic, and pragmatic level. The prototype approach entails that the classical

definitions of sentencehood in terms of necessary and sufficient features are inadequate. Rather, prototype theory predicts varying degrees of membership in the category SENTENCE.

We contend that language users have intuitions about what constitutes a "good" sentence. When adults are requested to produce sentence tokens spontaneously, they usually come up with simple affirmative declarative sentences. The intuition of the layperson is reflected in studies in linguistic typology: Such investigations usually take the simple affirmative declarative sentence as being the basic sentence type (see e.g. the data used by Keenan, 1976 and Comrie, 1989).[5]

Additional support for this hypothesis comes from the observation that every interrogative and imperative sentence can be paraphrased by means of a declarative sentence. The pragmatic force of the imperative *Open the door* can be rendered by a variety of declarative sentences, e.g. *I order you to open the door* or *You must/should/will open the door.* The *yes-no* interrogative sentence *Are you coming to the movies?* is paraphrasable as *I'm asking you if you want to come to the movies.* The *wh*-question *What time is it?* can be paraphrased as *I would like to know what time it is.* In contrast, a declarative sentence is usually not paraphrasable as an imperative or an interrogative sentence, e.g. *Paris is the capital of France.* Only under very restricted circumstances can an interrogative sentence be used to convey an assertive speech act, e.g. in a 'rhetorical question' such as *Isn't Paris the capital of France?* The same holds for imperatives: Again the context in which an imperative can be used for expressing a statement is very restricted. A possible example would be *Take it from me that Paris is the capital of France.*

A third reason why we assume that the declarative sentence is the prototypical member of the category SENTENCE is based on the observation that the conditions or presuppositions for the felicitous use of the other sentence types, e.g. imperatives and interrogatives, are *factually* given for speakers. For example, a speaker who utters *Open the door* implicitly assumes the factual existence of *the door* and believes in the ability of the hearer to open it. Such knowledge, when verbalized, has to be expressed by means of declarative sentences.

From the observations made above, we derive our basic hypothesis that the prototypical sentence is *an affirmative declarative sentence*. This claim entails that non-declarative sentences, e.g. imperatives and interrogatives, constitute less prototypical sentences than declaratives. In this article, we will restrict ourselves to the analysis of one non-declarative sentence type, viz. the imperative, and its relation to the declarative sentence type. In principle, our analysis should be applicable to other sentences types not considered here, such as interrogatives and exclamatives.

4.1 Prototypical attributes of sentences

4.1.1 *Morphosyntactic attributes*

The prototypical sentence, which we assume to be an affirmative declarative sentence, in English exhibits a number of morphosyntactic properties that can be spelled out in more detail in the following way:

(4) i The prototypical sentence has the word order SVX.[6]
ii It has a lexically realized subject.
iii. The subject is in the nominative case.
iv. The prototypical sentence contains a finite verb form that agrees with the subject in person and number.
v. The verb form is in the indicative mood.
vi. The verb is in the active voice.
vii. The intonation is falling.[7]

To illustrate these attributes, consider the following sentences:

(5) Most professors own a computer.

(6) A computer most professors own.

(7) They own a computer.

(8) Arrive tomorrow.

(9) God save the Queen!

(10) Computers are used by most professors.

(11) Most professors own a computer? (rising intonation)

Sentence (5) satisfies all seven criteria and, according to the formal attributes, is therefore a "perfect" example of the category SENTENCE. Sentence (6), in which the object NP is topicalized, is slightly less prototypical because it deviates from the prototypical word order pattern (cf. (4i)). Criterion (4ii) implies a scale of subjecthood that ranges from a lexical subject via a pronominal subject to an understood subject. These different kinds of subjects are exemplified in sentences (5), (7), and (8), respectively. Telegraphic-style sentences like (8) are restricted to highly specific communicative contexts. In sentence (9) criterion (4v) is not fulfilled because the sentence occurs in the subjunctive mood. Sentence (10) does not satisfy criterion (4vi) and sentence (11) does not comply with criterion (4vii).

Consider finally one-word-expressions, as exemplified by speaker B's answer in the following dialogue:

(12) A: What did you do yesterday?
B: Nothing.

Speaker B's reply is a very marginal example of the category SENTENCE, as far as formal attributes of prototypical sentencehood are concerned. First, there is no overt subject; second, there is no finite verb form; and, third, the only linguistically manifest form is the direct object. Of course, all of these constituents are recoverable ('I did nothing'), but their recoverability depends on the context (here: the previous *wh*-question).

4.1.2 *Semantic-pragmatic properties of a prototypical sentence*

The discussion of the examples (7), (8) and (12) reveals an important pragmatic property of sentences: Apart from sentences expressing general truths or natural laws, the interpretation of sentences in actual communicative use is often dependent, at least to some degree, on the situational context. We follow Bühler (1934, pp. 356ff.) in assuming that an "ideal" sentence is maximally independent of the situational context in which it is used.[8] This property is reflected in the formal characteristics (4ii) and (4iv) given above: a lexical subject is more context-independent than a pronoun or a null subject, and a finite verb that is marked for tense, mood, aspect, and person/number is more context-independent than a non-finite verb form. Figure 1 represents the correlation between grammatical coding and context dependence.

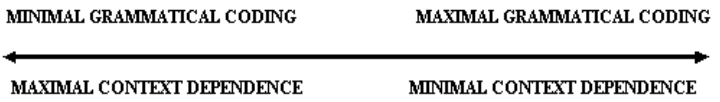

Figure 1. Correlation between grammatical coding and context-dependence

An expression like *Nothing* in (12) would be at the far left of the continuum; a sentence like (5) would be fairly close to the right end of the continuum; sentence (7) would be somewhere in the middle.

Apart from being maximally context-independent, prototypical sentences seem to be ideally suited to perform elementary speech acts. Speech acts typically have a propositional content and an illocutionary force; and prototypical sentences code both semantic-pragmatic functions. By illocutionary force we mean (a) the conventional communicative function (cf. Sadock & Zwicky, 1985) that is linguistically coded by a sentence, i.e. the illocutionary potential of a sentence, and (b) the generalized conversational implicatures that are derivable from it. More specifically, following Levinson (1995, 2000) we distinguish three levels of meaning:

(13) i. sentence meaning proper, i.e., the meaning coded by means of linguistic devices such as word order, standard intonation, lexical meaning, etc. (first level);
ii. pragmatic meaning derived through generalized conversational implicatures, i.e. conventionalized pragmatic implications that are defeasible (second level);
iii. particularized conversational implicatures that arise only in specific contexts (third level).

As a typical example of a generalized conversational implicature on the lexical level consider the noun *drink*, which has the conventionalized reading 'alcoholic beverage'. Following Levinson (2000, pp. 37–38), it can be argued that the meaning component 'alcoholic' is not part of the meaning proper of the word, but that it is conversationally implicated, since this property is defeasible.[9] One can say without contradiction *I need a drink without alcohol*. This observation carries over to the sentence as a whole: *I need a drink* has an assertive illocutionary potential (first level), but in addition often evokes the request interpretation 'Give me a drink' (second level), a generalized conversational implicature that can be cancelled. Thus it is possible to cancel the request interpretation of *I need a drink* by saying *I need a drink but that does not mean that I'm asking you to pour me one*. We claim that only the first two levels of Levinson's taxonomy of meanings are relevant to the definition of sentencehood. Sentence meaning is obviously relevant, and generalized conversational implicatures are relevant because they are default inferences. The third level of meaning, particularized conversational implicatures, can be neglected since it deals with highly context-dependent aspects of pragmatic meaning.

As pointed out above, we assume that the prototypical sentence is an affirmative declarative sentence, whose typical communicative function is assertive. The semantic-pragmatic properties of a prototypical sentence are then the following:

(14) i. The ideal sentence has a high degree of context-independence.
ii. It has a coded assertive illocutionary potential[10] and additional pragmatically derived illocutionary potentials conveyed through generalized conversational implicatures;
iii. It expresses a propositional content; following Searle (1969) we assume that the propositional content is analyzable into two components: a referential part and a predicative part.[11]

4.1.3 *Discussion of examples*

We now apply the criteria listed in (4) and (14) to some examples, which are "deviant" from the prototype in one or more respects:

(15) a. He will arrive tomorrow.
b. I expect [him to arrive tomorrow].
c. I believe [that [he will arrive tomorrow]]
d. If you will please sit down now, I will start with my lecture.

Consider first the difference in sentencehood between (15a) and the bracketed part of (15b): Sentence (15a) has an assertive illocutionary potential and a propositional content, whereas the embedded infinitival clause in (15b) has no illocutionary potential at all, although it definitely expresses a propositional content, namely, that 'he arrives tomorrow'. This non-prototypicality of the bracketed part of (15b) on the semantic-pragmatic level correlates with two non-prototypical morphosyntactic properties: the subject of the embedded clause in (15b) is non-nominative and the verb is non-finite. Sentence (15c) contains an embedded finite clause. Our account predicts that this clause will be felt to be closer to the prototype than the embedded non-finite clause in (15b): the subject in (15c) is in the nominative case and, furthermore, the clause contains a finite verb form. The clause expresses a propositional content but has no illocutionary force. However, in some cases an embedded clause reaches such a degree of independence that it can express both a propositional content and is usable as an autonomous illocutionary act. A good example is (15d), in which the *if*-clause is used with the force of a request (see Panther & Thornburg, 2003, 2005).

Example (16) is formally very similar to the bracketed part of (15b). It illustrates the class of sentences that has been called 'mad magazine sentences' (Lambrecht, 1990), which also deviates from the prototype in various respects:

(16) Him arrive tomorrow?! (I don't believe it!)

Sentence (16) has a clear illocutionary potential (it expresses derogatory incredulity) and it conveys a propositional content, cf. (14iii), yet it is non-assertive. This is reflected in its grammatical form, which is far from being prototypical. As in the embedded clause in (15b), the subject has non-nominative case and the verb is non-finite. All three sentences (15a,b) and (16) are highly context-dependent; their content depends on the reference assignments to the pronouns *he* and *him*. In general, the more explicit the propositional content, the more prototypical the sentence, other things being equal.

On the basis of our morphosyntactic and semantic-pragmatic criteria, we are now in a position to give a more adequate account of exclamations such as

(17) Fire!

Recall that Bloomfield (see Section 3) categorizes this utterance as a sentence without further specification. However, example (17) does not meet our morphosyntactic criteria of prototypical sentencehood since it does not satisfy any of the

attributes given in (4). Furthermore, from a semantic-pragmatic perspective, the interpretation of (17) is highly context-dependent, i.e., it does not accord with (14i). Still, the expression clearly has a communicative function, such as a warning about a dangerous situation or a cry for help, cf. (14ii), and is thus implicitly assertive. It does not express an explicit propositional content, cf. (14iii), since there is no referential component. On the other hand, there does seem to be an implicit predication, namely, that something is on fire. Given the context and this predication, the propositional content can be inferred. In conclusion then, *Fire!* is a rather peripheral exemplar of the category SENTENCE.

Even more peripheral than (17) is an expression such as

(18) Hello!

With regard to our formal parameters, example (18) behaves like (17). However, in contrast to (17), it has no propositional content, not even an implicit one. But as an act of greeting or an attention-getting device, it definitely has a context-dependent illocutionary force. However, in contrast to *Fire!*, it never has an assertive force. For both (17) and (18) the number of contexts in which they can be felicitously used is fairly limited. In conclusion, (18) is even more peripheral on a scale of sentencehood than (17).

At the very end of the sentencehood continuum one finds expressions such as

(19) Ouch!

None of the morphosyntactic parameters is satisfied; furthermore, there is no propositional content, yet there is possibly a (non-assertive) expressive function that can easily be identified independently of the situational context. One might question, however, whether this expression of pain is genuinely communicative (illocutionary). Thus, (19) is an even more peripheral instance of the category SENTENCE, and possibly even lies outside the boundaries of the category.

4.1.4 *Summary*

The discussion so far can be summarized as follows: We have seen that the sentence is not a purely formal autonomous construct detached from semantic content and pragmatic function. Rather, the prototypical sentence is a cluster of parameters of form and content/function, whose most important features are listed again in (20):

(20) *Form*:
word order: SVX
subject: nominative case, lexical

predicate: finite verb
mood: indicative
voice: active
intonation: falling

Content/Function:
context: independent
linguistically coded illocutionary potential: assertive
illocutionary potential derivable through generalized conversational implicatures: e.g. directive
propositional content: no restrictions

5. Sentence types: Declaratives versus imperatives

So far we have discussed the prototypical sentence and its attributes. We now focus on the content and function of specific sentence types, in particular *declaratives* and *imperatives.* We claim that sentence types — just like sentences in general — exhibit prototypical categorial structure, both in their central uses and in cases where overlap between the pragmatic functions of sentence types occurs.

We start from the assumption that sentence types are associated with specific illocutionary types and mental attitudes. Our assumption is in accordance with e.g. Kiefer (1992), Sadock & Zwicky (1985, p. 155), and König & Siemund (2007), who assume that sentence types are pairings of a specific grammatical structure with a conventional pragmatic use. The usual assumption, which we share, is that declaratives and imperatives are canonically used to perform assertive and directive illocutionary acts, respectively.

In accordance with developments in cognitive semantics and artificial intelligence, we assume that meanings, including illocutionary meanings, can be accounted for insightfully in terms of *frames*, *scenes*, *scripts*, *cognitive models*, *schemata*, *scenarios*, etc. Speech acts can be analyzed in terms of more general *action scenarios*. An action scenario can be viewed as a cognitive frame that consists of four main components, which we will refer to as the BEFORE, the CORE, the pragmatic RESULT, and the AFTER (see Thornburg & Panther, 1997; Panther & Thornburg, 1998, 2007). The BEFORE names the background conditions and motivations that must be given for a felicitous performance of the speech act. The CORE states the illocutionary point with its immediate pragmatic RESULT. The AFTER refers to the non-immediate consequences of the speech act, which include the conditions under which the speech act is satisfied (see Vanderveken, 1990ab). We elaborate and illustrate these notions in more detail below.

5.1 Prototypical attributes of declaratives

The form and content/function attributes of the prototypical sentence given in (20) above also hold for the declarative sentence type. By way of illustration we begin with an analysis of the cognitive scenario evoked by the (utterance of a) declarative sentence such as

(21) John is back in town.

The standard communicative function of a declarative sentence is, as has been often observed in the literature, assertive. In accordance with many speech act theorists, we assume that the CORE (illocutionary point) and the pragmatic RESULT of a declarative are characterized by a commitment of the speaker to the truth of a certain proposition, in this case, a commitment to the truth of the proposition 'John is back in town'. The CORE presupposes a BEFORE component, which states background assumptions and motivations for performing the speech act, e.g. that the speaker has evidence for his claim. Furthermore, we assume that there are motivations that constitute good reasons for performing the speech act, e.g. the speaker's belief that John is back in town, and that this fact is noteworthy and relevant news to the hearer. The speech act scenario for declaratives is diagrammed in Figure 2. It contains not only a BEFORE and a CORE and its immediate RESULT but also a component that states what the intended consequence(s) of the speech act are (AFTER). Finally, we also include OTHER CONSEQUENCES, not necessarily intended, that are close to, or may be even outside, the boundaries of the assertive

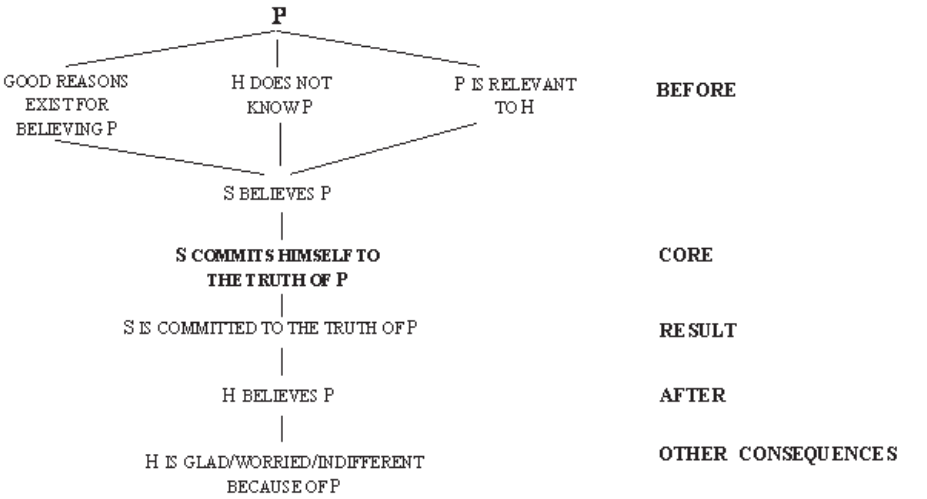

Figure 2. Scenario for declaratives with an assertive function (P = Proposition, S = Speaker, H = Hearer)

scenario proper. One possible CONSEQUENCE of an act of informing a hearer of something noteworthy may be that the hearer is emotionally moved, but, of course, there might also be other consequences.

In Figure 2, the lines connecting the components of the speech act scenario form potential inferential (metonymic) links. We call these links 'metonymic', because in mentioning one component the speaker can evoke the whole scenario (PART FOR WHOLE) or other components of the scenario (PART FOR PART). Suppose that a speaker wants to inform the hearer of the propositional content 'John is back in town'. There are various ways to achieve this illocutionary intent. A selection of possibilities is given in (22):

(22) a. (I claim that) John is back in town. (CORE)
b. I think/believe John is back in town. (BEFORE)
c. Did you know that John is back in town? (BEFORE)
d. Don't you think John is back in town? (AFTER)
e. Aren't you glad that John is back in town? (OTHER CONSEQUENCES)

In using one of the sentences in (22) the speaker addresses one component of the speech act scenario for declaratives (either by asserting or questioning the component) and in doing so may perform (a more or less direct) assertive illocutionary act. The most direct way of asserting the propositional content 'John is back in town' is obviously (22a), where the speaker addresses the CORE of the scenario. Sentences (22b) and (22c) can also be used with an assertive force, but they are more indirect. The most indirect speech act in (22), given its conceptual distance from the CORE of the assertive scenario, is (22e). In this case, the propositional content 'John is back in town' is embedded under an emotive predicate (*glad*) with a factive presupposition. The speaker uses this presupposed propositional content to inform the hearer that John is back in town.

Let us now consider another declarative sentence that can be used with more than one illocutionary force:

(23) There are pickpockets in the crowd.

Sentence (23), in addition to its assertive function, could also be used as a warning, i.e. a directive speech act, an illocution that is prototypically associated with imperatives. As in the case of (21), the CORE and the pragmatic RESULT of (23) are characterized by a commitment of the speaker to the truth of a certain proposition, in this case the proposition 'There are pickpockets in the crowd'. The BEFORE component contains background assumptions and motivations for performing the speech act, e.g. that the speaker has evidence for existence of pickpockets in the crowd. The speaker also conveys his belief that there are pickpockets in the crowd and that this is relevant news to the hearer. If the assertive speech act is suc-

cessful, the hearer will also believe that there pickpockets in the crowd (AFTER). As a consequence the hearer might behave with circumspection in the crowd, watch his or her purse, etc. (OTHER CONSEQUENCES).

Sentence (23) has thus an illocutionary potential that goes beyond that of a mere statement of fact: As pointed out above, it would normally also be interpreted as a warning. This particular illocutionary potential however coincides with the functional domain of another sentence type, i.e. the imperative. In Section 6 we demonstrate how the scenario for declarative sentences like (23) overlaps with that of imperative sentences like *Beware of pickpockets in the crowd*. Before turning to the question of this functional overlap between declaratives and imperatives the prototypical attributes of imperative sentences must be determined.

5.2 Prototypical attributes of imperatives

As members of the category SENTENCE, imperatives are less prototypical than declaratives. However, as a type of their own, they exhibit prototypical structure, as will be shown below. First, they differ from declaratives in that they have no overt subject. Traditionally it is assumed that the subject of an imperative is the understood addressee, i.e. a specific person or a specific group of persons. In contrast to other languages, in English the verb is not inflected in the imperative.

There is no agreement in the linguistic literature on the kinds of constructions that can legitimately be called 'imperatives' (for fuller treatments see Davies, 1986 for English; for imperatives in German see Fries, 1992; for non-assertive sentence-types in German see Diessel, 1997). We propose that imperatives can be ordered along a scale of prototypicality. The prototypical imperative has the following attributes:

(24) *Form:*
word order: VX
subject: understood, refers to addressee, definite
predicate: bare verb stem
voice: active
intonation: level

Content/Function:
context: independent
illocutionary potential: directive (impositive, manipulative)
propositional content: future action of addressee
mental attitude: speaker wants addressee to perform future action
background assumption: addressee can perform future action

A more detailed scenario for imperatives is given in Figure 3.

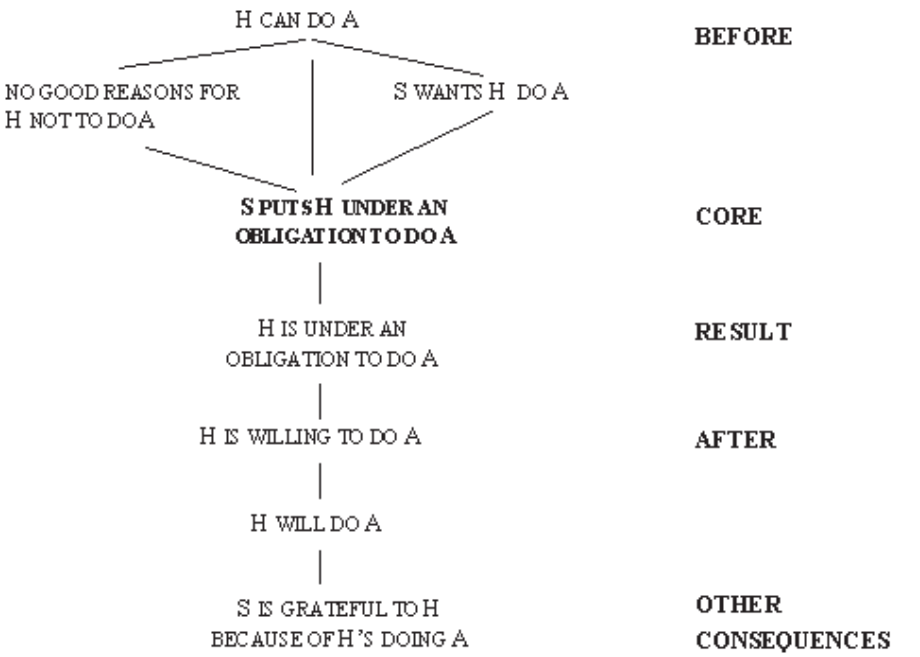

Figure 3. Scenario for imperatives with a directive function (A = Action, S = Speaker, H = Hearer)

From (24) it follows that (25ab) are not prototypical instances of imperatives (see Davies, 1986, p. 6):

(25) a. You go outside.
b. Someone go outside.

Sentence (25a) is slightly less prototypical than the 'best' examples, because the addressee is overt. Note however that it fulfills the criterion of definiteness. In pragmatic terms, utterances like (25a) are much more forceful than the corresponding prototypical imperative *Go outside*. Utterances like (25a) are in fact often used as emphatic imperatives (orders, commands), i.e. with stress on *you*, when a prototypical imperative has not been successful. Sentence (25b), like (25a), deviates from the prototype in having an overt subject. However, it is less prototypical than (25a) because the noun phrase that denotes the overt addressee is indefinite.

Switching from the prototypical form of imperatives to their content/function, we start out with the assumption that while declarative sentences say something about how things are ('it is so'), imperative sentences are about how things should be ('so be it'). Imperative sentences, then, are prototypically associated with the directive illocutionary type. The notion of prototypicality implies, as we have demonstrated in connection with declarative sentences, that there are good examples

of imperatives and other more peripheral ones, which, although they can be realized in the imperative mood, do not exhibit all of the content/function attributes of prototypical imperatives.

Prototypical instances of imperative sentences with a directive function are orders, commands, and requests:

(26) a. Shut up!
b. Make your bed right now!
c. Close the window, please.

For example, (26a), which is a very rude command or order, perfectly fits the criteria given in (24). Obviously, the speaker's goal is to induce the hearer to shut up, the sentence is about a future action of the hearer, the hearer should (intentionally) act in such a way that the propositional content of the illocutionary act is made true, the speaker expresses her/his desire or wish that the hearer shut up, and the speaker seems to assume that the hearer is able to shut up. The same holds for sentences (26bc).

Let us now consider some cases that, in appropriate contexts, are not likely to be interpreted as prototypical instances of the imperative sentence type:

(27) a. Take an aspirin for your headache. (Quirk *et al.*, 1985, p. 831)
b. Lock the door before you go to bed. (Quirk *et al.*, 1985, p. 831)

Depending on the context, the speaker of these sentences may very well be taken to recommend or advise the hearer to take an aspirin for a headache or to lock the door before going to bed. In the above sentences (27ab), there is explicit information, viz. the prepositional phrase *for your headache* in (27a) and the *before*-clause in (27b), that provides clues for an interpretation of (27ab) as recommendations. A look at Table 1 shows that the illocutionary acts with the force *recommendation* or *advice* do not constitute 'best' instances of imperatives because they are not 'ideal' directives in the sense defined above:

Table 1. "Good" vs. "peripheral" imperatives

attributes	**order/command/request**	**recommendation/advice**
S PLACES H UNDER AN OBLIGATION TO DO A	yes	not necessarily
H WILL DO A	yes	yes
S WANTS H TO DO A	yes	not necessarily
H CAN DO A	yes	yes

Illocutionary acts of recommending and advising are not prototypical directives because they are obviously less manipulative than canonical directives. When a

speaker recommends that the addressee lock the door before going to bed, that does not necessarily place the addressee under an obligation to lock the door, nor does it necessarily imply that the speaker wants the addressee to lock the door. Thus one cannot give a recommendation or a piece of advice in uttering

(28) I want you to lock the door before you go to bed, Harry.

The reason is that the speaker's desire is simply not part of the scenario of a recommendation. Thus the utterance of (28) is much more likely to be taken as a strong request or even as an order. Recommending or advising is more like telling the hearer what is beneficial for or desirable to the addressee (see Searle, 1969). On the other hand, recommendations are like requests or orders in that they involve future actions of the addressee and in that they are satisfied if the action in question is actually carried out by the hearer. They are also like good directives with respect to the background assumption that the hearer is able to carry out the action. But by and large, recommending and advising are illocutionary acts that are clearly more marginal members of the category of directives than orders and requests. While people feel that orders are naturally coded by the imperative construction, intuitions about recommendations are less clear. It is not obvious that genuine recommendations should be grammaticalized as imperatives rather than as declaratives, such as

(29) You'd better lock the door before you go to bed.

Example (29) is a declarative sentence, and as such there is an assertive element in it. But in addition, there is an element of subjectivity, an evaluation expressed by the comparative form *better*. Thus, just as (28) is a marginal member of the category DIRECTIVE, (29) is not an ideal member of the category ASSERTIVE. In conclusion, cases like (28) and (29) show that some illocutionary acts can be coded by various grammatical means and that there is no way of telling which is the 'best' way of coding them. There is no prototypical grammatical realization of the illocutionary acts *advise* or *recommend* because they have properties that link them to both assertives (declaratives) and directives (imperatives).

Clark (1993) has developed a theory of imperatives (and pseudo-imperatives) that is built on Sperber & Wilson's (1995) and Wilson & Sperber's (1988) analysis of this sentence type. Sperber & Wilson claim that imperatives describe states of affairs in potential and desirable worlds, where a potential world for a given individual is "a possible world which is compatible with everything that is known (by that individual) about the actual world" (Clark, 1993, p. 83), whereas desirability can be "unrealistic", i.e., a person may have desires that can never become true. According to Sperber & Wilson, imperatives cannot be used to express unrealizable states of affairs.

We agree with Sperber & Wilson in regarding potentiality and desirability as central features of imperatives, but unlike them we do not regard desirability as unspecified with regard to *who* has the desire. Clark (1993, p. 88), following Sperber & Wilson (1995, pp. 250f.), claims that the difference between requesting and advising can be accounted for on the basis of the contrast 'desirability for the speaker' vs. 'desirability for the hearer':

(30) Pass the salt. (request)

(31) A: How do I get to the station?
B: Go to the traffic lights and turn right. (advice)

In most contexts (30) conveys the idea that the speaker wants the hearer to pass the salt, whereas in the case of (31) speaker B quite possibly does not care whether A follows his advice or not. But the context suggests that the information delivered in B's utterance is desirable from A's, that is, the hearer's point of view — going to the traffic lights and turning right is beneficial to the hearer in the given circumstances.

The analysis of imperatives suggested in this paper starts out from the assumption that there is a prototypical use of the imperative as described in (24) and diagrammed in Figure 3. One of its components is the desire of the speaker that a certain state of affairs come true. From this perspective, advice and recommendations are more marginal members of imperatives than are requests, exactly because they do not necessarily express a desire of the speaker — although something desirable or beneficial to the addressee is conveyed. We assume that when asked to come up with typical examples of imperatives, native speakers will utter tokens like (30), rather than (31). Note that the imperative in (31) is placed into a context that makes its interpretation as a speech act of advising plausible; (30) is given without any context and is intuitively interpreted as a typical token of an imperative sentence, although it could also be made into a recommendation or a piece of advice, given the appropriate linguistic or extralinguistic context.

There are other illocutionary acts that, although they can be realized as imperatives, are not ideal instances of the category of directives. Suppose that at a dinner party the host offers you a drink by means of the imperative sentence

(32) Have a drink.

Offers can be accepted or rejected, whereas "real" directives can either be complied with or not. Although ultimately one might interpret the utterance of (32) as expressing the speaker's wish that the hearer have a drink, it is quite obvious that there are other attributes of offers that are not typical of ideal imperatives. For example, in the standard situations in which (32) occurs, the speaker assumes

that the hearer has a desire for the object offered. Furthermore, if the offer is accepted, the speaker places her/himself under an obligation to do something — in the case under discussion to give the hearer a drink. This is a property that is associated with a different illocutionary type, viz. the commissive type. As in the case of recommending and advising, the manipulative strength of offers is weak or non-existent and it would be misleading to say that an offer amounts to an attempt by the speaker to place the hearer under an obligation to carry out some action. So without having to go into a detailed analysis of offers, it is clear that offers are more marginal members of the category DIRECTIVE and are therefore less likely to be verbalized as imperatives than orders, commands and requests.

As a final example let us consider imprecations like (33a) or expressions of good wishes like (33b):

(33) a. Go to hell! (Quirk *et al.* 1985, p. 832)
b. Enjoy your meal. (Quirk *et al.* 1985, p. 832)

Sentences like (33a) are sometimes adduced as evidence that imperative sentences cannot be associated with the communicative function DIRECTIVE. In present-day English, the speaker obviously does not try to place the hearer under an obligation to go to hell although this interpretation was probably quite plausible when people still literally believed in the existence of hell or heaven as real places where you go after death. Nor is the imprecation satisfied when its propositional content is made true. Nevertheless, the use of the imperative in cases like (33a) is motivated even today. There is an element of 'so be it' in (33a), i.e., the direction of fit goes from the world to the words. In uttering the sentence the speaker usual conveys the wish that the hearer stop behaving in a way that has aroused the speaker's anger. Thus there is the speaker's attempt to influence the hearer, which is typical of directives. Note that you can tell somebody to go to hell by focusing on a background assumption (BEFORE) for directives:

(34) You can go to hell!

As to (33b), it is even more peripheral than (33a) with regard to its status as a directive. One prototypical feature of directives is that they predicate a future action of the addressee of the illocutionary act. However, the situation described by *enjoy* is not an action, but rather a state. Literally, it does not make sense to ask someone to enjoy a meal. Consequently, (33b) cannot be regarded as an attempt to place the hearer under an obligation to enjoy her meal. The utterance of (33b) violates a constraint on the propositional content of prototypical directives (imperatives), namely the condition that the hearer is supposed to carry out an *action*. But the direction of fit of the illocutionary act is the same as with the central members of the category DIRECTIVE. The illocutionary act is satisfied ('so be it') if the hearer

actually enjoys the meal. Thus the direction of fit is from world to words. It is the speaker's wish that the world be such that it corresponds to his words.

6. Conceptual and pragmatic links between declaratives and imperatives

We have claimed that the prototypical function of declarative sentences is to convey utterances of the assertive type. It should be borne in mind, however, that the very notion of prototypicality implies that declarative sentences can also be used for other purposes than making statements, assertions, claims, and their kin. Indeed, there are declarative sentences that can be used with an illocutionary force that is clearly not, or at least, not only, assertive in the sense given in (20) and in Figure 2.

We now demonstrate non-prototypical uses, i.e. pragmatic functions, of declaratives that, with respect to their formal properties, correspond to the prototype or are very close to it. Furthermore, we show how certain declaratives are conceptually related to imperatives. This relationship is illustrated by a detailed discussion of two pragmatically related sentences that can both be used to express a warning, namely sentence (23) (repeated here as (35a)) and sentence (35b). Our thesis is that declaratives and imperatives are not mutually exclusive categorial types but that, because of their prototypical structure, they are interrelated and overlap to a certain degree.

(35) a. [Be careful!] There are pickpockets in the crowd.
b. Beware of the pickpockets in the crowd.

Warnings are not prototypical members of the illocutionary type ASSERTIVE. Utterance (35a) satisfies the form and conceptual-pragmatic criteria given under (20). However, in addition, it conveys a negative *evaluation* of the propositional content. From this evaluation an implicit mental attitude can be inferred, namely, that the speaker *wants* the hearer to beware of pickpockets. Thus, (35a) amounts to a warning to beware of pickpockets and often has the same pragmatic force as the imperative (35b). Warnings thus have a twofold communicative structure: They both have an element of factuality (evaluative assertiveness) and an element of appeal (directiveness) to do something in order to avoid a potentially detrimental situation. The grammatical construction of a warning as either declarative or imperative is thus highly motivated. In choosing one of the two possible sentence types over the other the speaker highlights different aspects of the communicative act of warning. If the speaker selects the declarative sentence type, the assertive property of warnings is highlighted, i.e. the property that warnings are based (or should be based) on facts. Asserting that something is the case may therefore

amount to (implicitly) inviting the hearer to evaluate the factual information presented by the speaker and to asking the addressee to act in such a way as to avoid negative consequences that may result from the factual situation. If, on the other hand, the speaker selects the imperative sentence type, the hearer is explicitly asked to do something, with the implication that the action asked for will save the hearer from potentially harmful consequences. In this case the speaker highlights the directive aspect of warnings. Examples (35ab) thus demonstrate that there is no one-to-one relationship between sentence type and communicative function (see Altmann, 1993).

The discussion of examples (35ab) is summarized in Figure 4 below. Correspondences between components of the declarative and imperative scenarios are indicated by double-headed arrows. The single-headed arrow in the left column symbolizes a pragmatic implication (conversational implicature): The direct force of utterance (35a) is that of an assertion, but usually the speaker implicates a directive speech act given his world knowledge about pickpockets. Thus (35a) is a direct assertive and an indirect directive illocutionary act.

To explain the relationship between (35a) and (35b) in more detail the following components of the corresponding speech act scenarios are relevant: BEFORE conditions, the CORE of the speech act, the EVALUATION of the propositional content, and the GOAL that can be inferred on the basis of what we call the *Coded Function/Content* and the *Contextually Derived World Knowledge*. With regard to (35a), the BEFORE condition (mental attitude) is the speakers's belief that *pickpockets are in the crowd*. The CORE defines the illocutionary point of the declarative, namely, the speaker's commitment to the truth of its propositional content. These two components can be regarded as linguistically coded, i.e. conventionally associated with the declarative sentence type. In addition, there is a contextually derived EVALUATION ('Pickpockets in the crowd are potentially detrimental'), which is based on the negative connotation of the denotatum of *pickpockets*. From these components, i.e. BEFORE, CORE, and EVALUATION, the implicit GOALS of the speech act can be inferred, i.e. the desire of the speaker that the hearer beware of pickpockets, which amounts to *asking* the hearer to beware of pickpockets. The overall illocutionary potential of (35a) is thus that of a warning.

A warning with approximately the same force as (35a) could be accomplished in uttering the imperative sentence (35b). To see the conceptual-pragmatic interrelationship between the two sentences it suffices to compare the corresponding components of the two speech act scenarios: Notice first that there is an exact correspondence between the BEFORE and CORE of the imperative (35b) and the two GOALS of the declarative (35a); in other words, the coded function/content of (35b) is identical to the pragmatic inferences derivable from (35a). Furthermore, there is identity between the BEFORE/CORE of (35a) and the components BEFORE_1/

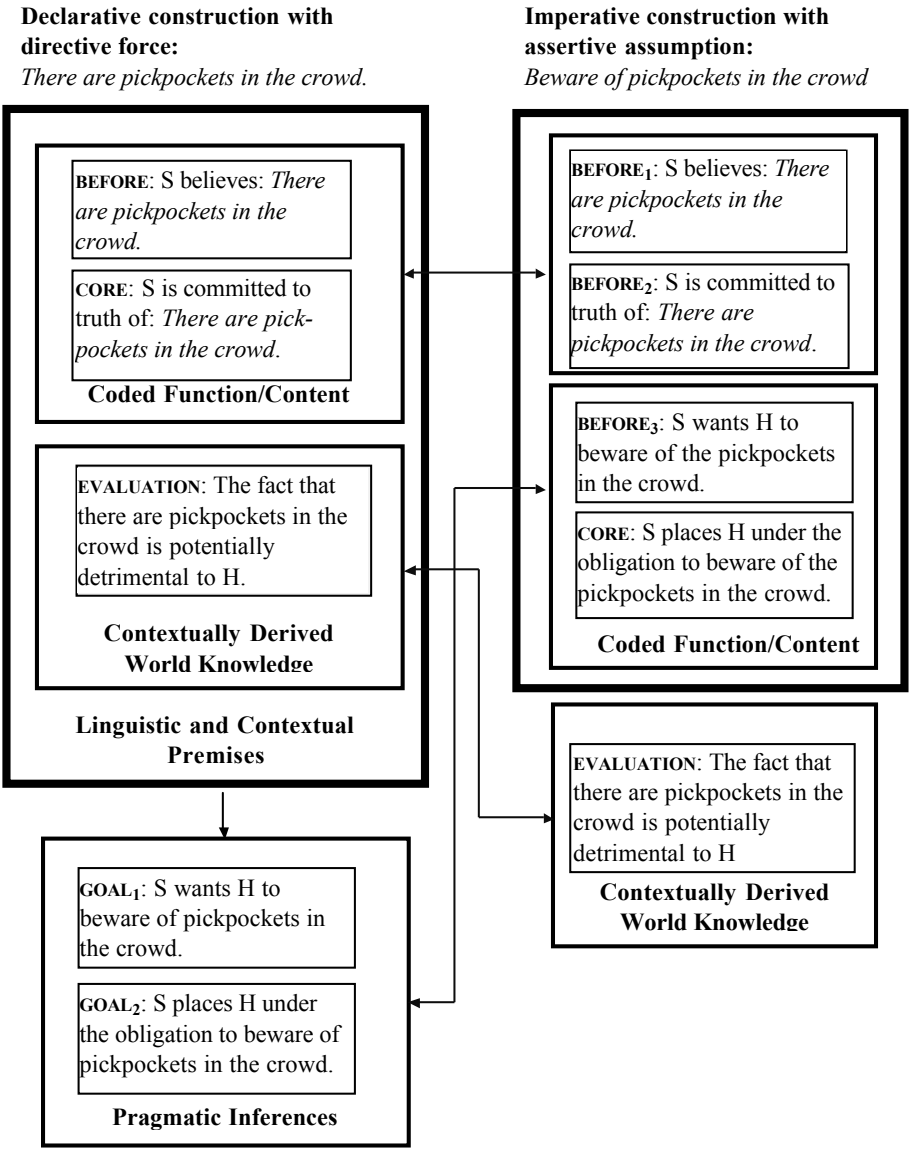

Figure 4. Conceptual-pragmatic links between declarative and imperative sentences

BEFORE$_2$ of (35b). In other words, the assertive force and mental attitude of (35a) correspond to two background assumptions of (35b). Finally, both (35a) and (35b) give rise to an EVALUATION ('pickpockets are detrimental'), which is derived from world knowledge about pickpockets.

7. Conclusion

The motivation for writing this paper stemmed from dissatisfaction with traditional definitions of the sentence. Many scholars seem to have pursued a 'checklist approach' that aims at identifying a set of necessary and jointly sufficient attributes unambiguously distinguishing every sentence from every non-sentence. In contrast to this essentialist position, we have argued that the sentence is a flexible category with members that are located relative to a prototypical center defining the best exemplars of the category.

On the one hand, we have proposed that the best instance of the category SENTENCE is the declarative sentence type. Imperatives, interrogatives and other non-assertive sentence types are thus more or less removed from prototypical sentences in terms of formal, conceptual, and pragmatic attributes. On the other hand, we have argued that each sentence type has its own prototype structure in that the members of these types are themselves more or less prototypical members of their category. We have demonstrated that the properties that define the prototypical members of the categories SENTENCE, DECLARATIVE, and IMPERATIVE are formal and conceptual-pragmatic. Given the prototypical nature of sentence types, it follows that they have flexible boundaries and that they may overlap, especially with regard to their conceptual and pragmatic functions.

The wider implications of our analysis are twofold: First, it confirms the results of previous functionalist and cognitive linguistic research, namely that linguistic categories, including grammatical categories, cannot be defined in an all-or-none fashion. Second, the results of our analysis are consistent with a basic tenet of construction grammar and cognitive grammar that linguistic units are more or less conventional pairings of form and meaning/function. Purely formal attempts to define the sentence have ignored this important property of language: Linguistic structure is not structure *per se* but structure that codes content and communicative potential.

Notes

* We are grateful to an anonymous reviewer for valuable comments on a preliminary version of this article and to Francisco Ruiz de Mendoza Ibáñez for his kind invitation to contribute to this issue of the *ARCL*.

1. There is also a tradition dating back to Chomsky (1957) that considers the sentence as an axiomatically given undefined entity. Thus, in generative grammar, at least up to the Principles and Parameters Model, *S*, *IP*, *CP*, etc. (= sentence) have been treated as the initial syntactic symbol of phrase structure rules that formally characterize the construction of sentences.

2. See especially Coleman & Kay (1981) for a detailed discussion of this claim.

3. According to Dubielzig (2002, p. 2), this sentence is a Latin rendition by the young Johann Wolfgang von Goethe of the German sentence *Wenn es regnet, fallen die Tropfen ins Wasser* […].

4. Note however that Searle (1976) uses the notion of direction of fit to define the relation between the propositional content of illocutionary acts and reality. In a similar vein, Vanderveken (1990ab) uses the concept of satisfaction condition for speech acts.

5. Note also that in early generative grammar (Chomsky, 1957) the notion of kernel sentence exactly reflects this assumption.

6. *S* and *V* stand for *Subject* and *Verb*, respectively. *X* denotes a variable constituent.

7. One might be tempted to include the property 'transitivity' (in the sense in Hopper & Thompson, 1980) into the characterization of the prototypical sentence. Transitivity is often viewed as basic conceptual property of propositional content. For example, Langacker (2000, p. 24) assumes the existence of a "canonical event model", which involves a volitional agent who carries out an action that affects a patient. Typically, this conceptual configuration is coded by a transitive clause. However, we cannot think of any reason why transitive sentences are more prototpyical than intransitive sentences.

8. Bühler uses the term *Situationsentbundenheit* 'situational independence'.

9. This inference is an instance of what Levinson (2000) calls an I-implicature, in this case a reasoning process based on the heuristic principle "What is expressed simply is stereotypically exemplified" (35).

10. This criterion has been noted by a number of linguists and philosophers (e.g. Bühler, 1934; Alston, 1964; Heringer, 1978; Müller, 1985).

11. More precisely, one should say that, in analogy to its illocutionary potential, the ideal sentence has a "propositional potential", i.e., only when a sentence token is uttered the question of truth or falsity arises (see Künne, 2007, pp. 58ff. for details). Throughout this article we use the term *propositional content* in the sense of 'propositional potential'. It should also be noted that propositional contents can be subject to generalized conversational implicatures.

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