

# Degrees of Synonymity as the Basis of a Network for German Communication Verbs in the Online Reference Work *Kommunikationsverben* in OWID

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## Abstract

This contribution presents the procedure used in the *Handbuch deutscher Kommunikationsverben* and in its online version *Kommunikationsverben* in the lexicographical internet portal OWID to divide sets of semantically similar communication verbs into ever smaller sets of ever closer synonyms. *Kommunikationsverben* describes the meaning of communication verbs on two levels: a lexical level, represented in the dictionary entries and by sets of lexical features, and a conceptual level, represented by different types of situations referred to by specific types of verbs. The procedure starts at the conceptual level of meaning where verbs used to refer to the same specific situation type are grouped together. At the lexical level of meaning, the sets of verbs obtained from the first step are successively divided into smaller sets on the basis of the criteria of (i) identity of lexical meaning, (ii) identity of lexical features, and (iii) identity of contexts of usage. The stepwise procedure applied is shown to result in the creation of a semantic network for communication verbs.

**Keywords:** communication verbs; speech act verbs; synonymity; synonymy; conceptual field; semantic network; access structures; advanced search options

## 1 Kommunikationsverben in OWID

This contribution deals with the synonymy relations of German communication verbs and the way in which they were used to create a semantic network for these verbs in the *Handbuch deutscher Kommunikationsverben* (cf. Harras et al. 2004, Harras/Proost/Winkler 2007) and in its online version *Kommunikationsverben*, which has recently been integrated into the lexicographical internet portal OWID ('Online Wortschatz- und Informationssystem Deutsch') of the Institut für Deutsche Sprache. In both the print and the online reference work, the meaning of German communication verbs is described on two levels: a conceptual and a lexical level. The distinction between these two levels of meaning derives from two-levels-semantic (cf. Bierwisch & Lang 1989, Bierwisch & Schreuder 1992, Lang 1994). On the conceptual level, communication verbs are described as referring to different types of situations in which a speaker utters something to a hearer. The situation types referred to by communication verbs are represented as consisting of several components relating to the attitudes of the speaker,

to properties of the propositional content of the speaker's utterance and to specific aspects of the situation in question. Verbs used to refer to the same specific situation type constitute a "paradigm" or conceptual field. On the lexical level, communication verbs belonging to the same field are differentiated with respect to their lexical meaning and their lexical features. Verbs which are identical with respect to their lexical meaning are subsumed under the same lemma and hence appear in the same dictionary entry. Of a set of verbs having the same lexical meaning, only one is lemmatised – usually the one which is least specific with respect to its contexts of usage – while the others are listed as synonyms of the verb lemmatised. *Kommunikationsverben* contains about 800 verbs, 241 of which are lemmatised and appear with an entry of their own. All other verbs are listed as synonyms of the verbs lemmatised. On the whole, *Kommunikationsverben* lists 170 fields of German communication verbs.

In *Kommunikationsverben* in OWID, the conceptual and the lexical level of the meaning of communication verbs have each been implemented in different types of access structures (cf. Müller-Spitzer & Proost 2013). Particularly, the online version provides some advanced search options allowing the user (i) to combine components of situations to "create" many different situation types and find the verbs matching them, and (ii) to search for verbs sharing a smaller or larger number of lexical features.

Since the conceptual and the lexical level of the meaning of communication verbs are each associated with different degrees of semantic specification, verbs grouped together on each of these two levels are synonymous to different degrees. In this contribution, we will show that the notion of the graded nature of synonymy may be used to divide sets of semantically similar communication verbs into ever smaller sets of increasingly closer synonyms, a procedure which ultimately results in the creation of a semantic network for communication verbs. By providing the two advanced search options, not available in the print version, the online version facilitates the user's access to the different degrees of similarity in meaning among synonymous communication verbs, thereby enhancing the structure of *Kommunikationsverben* as a semantic network.

## 2 Synonymy as a Graded Feature

Synonymy is a relation of similarity or identity of meaning among the senses of different lexical items (cf. Cruse 1986: 267; Cruse 2002: 486). Since similarity of meaning is a matter of degree, different types of synonymy relations have been distinguished, depending on the degree of similarity of the senses of the lexical items compared. Absolute synonymy involves complete identity of meaning and forms one end-point on the scale of synonymy (cf. Cruse 1986: 268). All other types of synonymy proposed encompass not only similarity of meaning, but also some degree of semantic difference between the senses of two or more lexical items. Difference in meaning is involved, for example, in the relation between propositional synonyms (e.g. *begin-commence*) and that between plesionyms or near-synonyms (e.g. *giggle-chuckle*), the difference between these two types of synonym being that substitution of one item by the other yields sentences with equivalent truth-conditions in the case of the

former but not in that of the latter (cf. Cruse 1986: 270-289; Cruse 2002: 489-490). On the scale of synonymy, propositional synonymy occupies a position in between that of absolute synonymy and that of plesionymy. The latter shades off into non-synonymous difference of meaning, which constitutes the zero-point on the scale of synonymy (cf. Cruse 1986: 268).

### 3 The Meaning of Communication Verbs

#### 3.1 Communication Verbs

Communication verbs are verbs used to refer to different types of situations in which a speaker (henceforth: S) utters something to a hearer (henceforth: H). In the default case, the speaker's utterance also contains a proposition (henceforth: P). Some but not all of these verbs lexicalise combinations of speaker attitudes such as the speaker's propositional attitude, i.e. the attitude of the speaker towards the proposition of his/her utterance, the speaker's intention and the speaker's presuppositions. This smaller set of communication verbs is called "speech act verbs" (cf. Proost 2006: 65; 2007: 8-9). Examples of German speech act verbs include *behaupten* ('assert'), *mitteilen* ('inform'), *lügen* ('lie'), *auffordern* ('demand'), *versprechen* ('promise'), *loben* ('praise'), *kritisieren* ('criticise'), *schimpfen* ('scold'), and *klagen* ('complain'). Examples of German communication verbs which are not part of the narrower set of speech act verbs in the sense outlined above are *sagen* ('to say'), *sprechen* ('to speak'), *brüllen* ('to scream'), *unterbrechen* ('to interrupt'), and *faxen* ('to fax'). *Kommunikationsverben* focuses on speech act verbs.

#### 3.2 Representing the Meaning of Communication Verbs

##### 3.2.1 The Conceptual Level of the Meaning of Communication Verbs

All situations referred to by communication verbs are characterised by the presence of four features or situational roles: a speaker, a hearer, a set of speaker attitudes, and an utterance (mostly) containing a proposition. Since these four elements are part of any situation referred to by communication verbs, they constitute the unifying feature of the meaning of these verbs (cf. Verschueren, 1980: 51-57; 1985: 39-40; Wierzbicka, 1987: 18; Harras et al. 2004: Introduction; Proost, 2006: 651). The type of situation referred to by all speech act verbs is therefore called the 'general resource situation type'.

Two of the roles of the general resource situation type, the role of the speaker attitudes and that of the utterance, may be specified in different ways. The role of the speaker attitudes may be specified as consisting of the speaker's attitude to the proposition of his/her utterance, the speaker's intention, and the speaker's presuppositions. The speaker's propositional attitude may be further specified as S's taking P to be true, S's knowing P, S's wanting P, S's evaluating P positively or negatively, and so on. Specifications of the speaker's intention include S's intention to make H recognise S's propositional attitude (for example, to make H recognise that S knows P or takes P to be true) or to get him/her to do

something. The speaker’s presuppositions may concern an attitude of H (whether H takes something to be true, whether he/she knows something), the interests of S and H concerning P (whether P is in the interest of S or in the interest of H), or properties of P (for example, whether P is the case). The role of the utterance is specified by properties of the propositional content. These include the event type of P (whether P is an action, event, or state of affairs), the temporal reference of P (whether P precedes, coincides with, or follows the time of S’s uttering P) and, in the case that P is an action, the agent of P (S, H, S & H, and so on).

Different combinations of specifications of the different types of speaker attitudes and of the properties of the propositional content constitute special resource situation types. These are referred to by distinct types of verbs. For example, verbs like *mitteilen* (‘inform’), *lügen* (‘lie’) and *loben* (‘praise’) and their synonyms are used to refer to the situation types characterised by the specifications listed in Tables 1-3:

<b>Special Resource Situation Type: Representatives. Information. mitteilen</b>	
Propositional Content (P)	
Event Type	not specified
Temporal Reference	not specified
Agent	not specified
Speaker Attitudes	
Propositional Attitude	S knows: P
Intention	S wants: H know: P
Presuppositions	H does not know: P

**Table 1: Situation type referred to by *mitteilen* (‘inform’), *informieren* (‘inform’), *instruieren* (‘advise’) and *unterrichten* (‘advise’).**

<b>Special Resource Situation Type: Representatives.Assertives.lügen</b>	
Propositional Content (P)	
Event Type	not specified
Temporal Reference	not specified
Agent	not specified
Speaker Attitudes	
Propositional Attitude	S does not take to be true: P
Intention	S wants: H recognise: S takes to be true: P
Presuppositions	H does not know: P

**Table 2: Situation type referred to by lügen ('lie'), schwindeln and flunkern (both 'fib') and their prefixed forms anlügen ('lie to sb. '), belügen ('lie to sb. '), erlügen ('lie about sth. '), rumlügen ('tell lies'), vorlügen ('lie to sb. about sth. '), anflunkern ('fib to sb. '), rumflunkern ('tell fibs'), vorflunkern ('fib to sb. about sth. '), anschwindeln ('fib to sb. '), beschwindeln ('fib to sb. '), rumschwindeln ('tell fibs'), vorschwindeln ('fib to sb. about sth. ').**

<b>Special Resource Situation Type: Expressives.evaluative.positive.loben</b>	
Propositional Content (P)	
Event Type	action
Temporal Reference	past
Agent	H of 3 <sup>rd</sup> person
Speaker Attitudes	
Propositional Attitude	S considers: P good
Intention	S wants: H recognise: S considers: P good
Presuppositions	P is the case

**Table 3: Situation type referred to by loben ('praise'), huldigen ('pay tribute to'), ehren ('honour'), würdigen ('acknowledge') and honorieren ('appreciate').**

The combinations of the specifications of the speaker attitudes and of the properties of the propositional content lexicalised by verbs like *mitteilen*, *lügen* and *loben*, respectively, may also be conceived of as the concepts lexicalised by these verbs. Thus, *mitteilen* lexicalises the concept of a verbal action performed by a speaker who knows P and assumes that H does not know P with the intention that H know P, P being an action, event or state of affairs preceding, co-occurring with or following the time of S's utterance. The information in Table 2 captures the idea that verbs like *lügen* express the concept of a verbal action whereby a speaker who does not take P to be true and assumes that H does not know P intends the hearer to recognise that he/she – i.e. the speaker – takes P to be true. The verb *loben* lexicalises the concept of a verbal action performed by a speaker who evaluates P, a past action by H or a 3<sup>rd</sup> person, positively and intends the hearer to recognise this.

Verbs which are used to refer to the same special resource situation type constitute a “paradigm” or conceptual field. With respect to the examples in Tables 1-3, this means that the sets {*mitteilen, informieren, instruieren, unterrichten*}, {*lügen, anlügen, belügen, erlügen, rumlügen, vorlügen, flunkern, anflunkern, schwindeln, anschwindeln, beschwindeln, rumflunkern*} and {*loben, huldigen, ehren, würdigen, honorieren*} each represent a conceptual field.

### 3.2.2 Methods Used to Describe the Conceptual Level of the Meaning of Communication Verbs

Following a procedure proposed by Baumgärtner (1977: 260-264), the different specifications of the role of the speaker attitudes and the role of the utterance as well as the lower-level specifications of each of these are obtained from a comparison of sentences containing speech act verbs. The well-formedness of some of these and the ill-formedness of others show which elements are relevant to the meaning of the verbs they contain. For example, a comparison of the sentences in (1) and (2) shows that *to order* lexicalises the values ‘future’, ‘action’ and ‘hearer’ for the specifications of the temporal reference, the event type and the agent of P, respectively, while *to promise* lexicalises the values ‘future’, ‘action’ and ‘speaker’, respectively, for these specifications:

- (1) a. I order youi to PROi leave the room.  
 b. \*I order youi to PROi have left the room.  
 c. \*I order youi for mej to PROj leave the room.
- (2) a. Ii promise you to PROi leave the room.  
 b. \*Ii promise you to PROi have left the room.  
 c. \*Ii promise youj to PROj leave the room.

The introspective analysis exemplified in (1)-(2) has shown that the higher-level specifications of the speaker’s propositional content, the speaker’s intention, the speaker’s presuppositions and the propositional content are essential aspects of the meaning of speech act verbs. These four aspects correspond to five of the seven components of illocutionary force which Searle & Vanderveken (1985: 12-20) and Vanderveken (1990: 103-136) have argued to determine the conditions under which a particular type of speech act is both successful and non-defective. Particularly, the aspect of the speaker’s propositional attitude corresponds to the component of the sincerity conditions, the aspect of the speaker’s intention to the component of the illocutionary point, the aspect of the speaker’s presuppositions to the components ‘mode of achievement of the illocutionary point’ and ‘preparatory conditions’, and the aspect of the propositional content to the component of the propositional content conditions (cf. Harras 2001: 26-31, Proost 2006: 654-655).

While the higher-level specifications of the speaker’s propositional attitude, the speaker’s intention, the speaker’s presuppositions and the propositional content are obtained from the type of analysis exemplified in (1)-(2), the lower-level specifications of each of these are calculated systematically, i.e. irrespective of any existing lexicalisations. For example, the specification ‘temporal reference of P’ is

assumed to have the specifications ‘Past’, ‘Present’ and ‘Future’, the specification of the event type of P the specifications ‘action’, ‘state’ and ‘event’, and so on. The question of which values are lexicalised by a particular verb was decided on the basis of examples from the Mannheim German Reference Corpus DeReKo (“Deutsches Referenzkorpus”). Methodological issues are dealt with in detail in the introductions to both volumes of the *Handbuch deutscher Kommunikationsverben* (cf. Harras et al. 2004, Harras 2007), which are also available in the online version.

### 3.2.3 The Lexical Level of the Meaning of Communication Verbs

Verbs which belong to the same conceptual field but differ from each other with respect to their lexical meaning appear with an entry of their own. In the *Handbuch deutscher Kommunikationsverben* and its online version in OWID, lexical meanings were differentiated on the basis of examples from the IDS-corpora of written German. All other verbs are listed as synonyms of the verbs lemmatised. With respect to the *lügen*-field, this means that *lügen* (‘lie’) and *schwindeln* (‘fib’) each appear with a separate entry. These verbs differ from each other in that *schwindeln* but not *lügen* expresses an evaluation by a discourse situation speaker, i.e. a speaker who uses this verb to comment on the utterance of the resource situation speaker. Particularly, a speaker who uses the verb *schwindeln* to refer to the resource situation speaker’s act of lying thereby indicates that he/she does not consider S’s act of lying to have serious consequences for H. In the *Handbuch deutscher Kommunikationsverben* and its online version *Kommunikationsverben* in OWID, this difference in the lexical meaning of *lügen* and *schwindeln* is reflected by the meaning paraphrases of these verbs in their respective entries. Since the evaluation expressed by *schwindeln* is an evaluation by a discourse situation speaker, it is not an element of the resource situation referred to by this verb. Hence, within the framework of *Kommunikationsverben*, it is not part of the conceptual component of its meaning. Rather, it is an essential part of the lexical meaning of this verb. With respect to the *lügen*-field, this means that this contains two lemmatised verbs, *lügen* and *schwindeln*. The verb *flunkern* is subsumed under the lemmatised verb *schwindeln*, because it has the same lexical meaning.

Verbs which belong to the same field *and* have the same lexical meaning are differentiated with respect to the following lexical features: (i) expression of thematic roles, (ii) syntactic realisation of the thematic roles, (iii) passivisation, (iv) resultativity, (v) evaluation by a discourse situation speaker (a speaker describing the speech act performed by the reference situation speaker), (vi) polysemy, (vii) performativity (the possibility for a verb to be used performatively), and (viii) stylistic markedness. Each member of a field is characterised as possessing or lacking each of these features as exemplified for the verb *lügen* und its prefixed forms *anlügen*, *belügen*, *rumlügen* and *vorlügen* by the screenshot in Figure 1:

Lexikalische Merkmale								
Verben	Merkmale							
	Seman- tische Rollen	Argu- ment Struktur	Passiv	Resulta- tivität	Bewer- tung	Poly- semie	Performa- tivität	stilistische Markiert- heit
lügen	H (block)		+	-	-	-	-	-
	P (block)							
anlügen	H (obl)	NP<Akk>	+	-	-	-	-	-
	P (block)							
belügen	H (obl)	NP<Akk>	+	-	-	-	-	-
	P (block)							
erlügen	H (block)		+	-	-	-	-	-
	P (obl)	NP<Akk>						
rumlügen	H (block)		+	-	-	-	-	+
	P (block)							
vorlügen	H (obl)	NP<Dat>	+	-	-	-	-	-
	P (obl)	NP<Akk> SE Inf						

**Fig. 1: Lexical Features of lügen ('lie') and its prefixed forms. “block” (“blocked”) means that the thematic role in question either cannot be realised at all or can be realised only by a prepositional phrase headed by vor ('before') or by an adpositional phrase headed by gegenüber ('in front of'); “obl” (obligatory) means that the thematic role in question must be realised.**

In addition to being differentiated with respect to their lexical features, verbs with the same lexical meaning may be distinguished with respect to their typical contexts of usage. Information on the range of contexts the non-lemmatised verbs may occur with is provided in the section *Kommentar* ('commentary') in the dictionary entry of the corresponding lemmatised verb. *Schwindeln* and *flunkern*, for example, are identical with respect to the specific type of situation they are used to refer to and regarding their lexical meaning but differ with respect to the contexts in which they are typically being used. Particularly, *flunkern* is used more frequently than *schwindeln* when reference is made to situations involving children telling lies, as illustrated in (1):

(1) Fast jeder fünfte Schüler (19 Prozent) verschweigt seinen Eltern schlechte Noten. 32 Prozent der Kids flunkern, wenn es allgemein um das Thema Schule geht. [Frankfurter Rundschau, 03.02.1999] [‘Almost every fifth pupil (19 Percent) keeps quiet to his parents about bad marks. 32 percent of the kids fib when the topic school is dealt with in general.’]

Because of this restriction on the range of contexts in which it is typically used, *flunkern* is not lemmatised and hence does not appear with an entry of its own. Rather, it is mentioned as a synonym of the verb *schwindeln*, which is less restricted than *flunkern* with respect to its contexts of usage and is therefore lemmatised and appears with an entry of its own.

## 4 Criteria for the Synonymy of Communication Verbs

As shown in the previous section, both the *Handbuch deutscher Kommunikationsverben* and its online version *Kommunikationsverben* in OWID describe communication verbs on different levels of analytical



detail. Communication verbs may be grouped together on each of these levels. Depending on the analytical level on which they are grouped together, communication verbs may be regarded as being synonymous in either a broader or a narrower sense. As an illustration of how the different criteria apply, they will be explained with respect to the verbs of the *lügen*-field, which has been introduced in the previous section. Additional examples will be discussed in section 5.

#### **4.1 The Criterion for Synonymy in the Broader Sense: Membership in the Same Field**

On the lowest level of specification, verbs which are used to refer to the same special resource situation type and hence constitute a field in the sense outlined in section 3.2.1 may be regarded as synonyms in a broader sense. The corresponding criterion for synonymy on this level is membership within the same conceptual field. This means that all of the verbs mentioned underneath Tables 1-3 are synonyms in a broader sense. The degree of synonymy relating these lexical items is low. Membership within the same conceptual field is the minimum requirement for communication verbs to be considered synonyms at all. All other criteria for synonymy concern the lexical level of meaning and/or restrictions of usage. Verbs grouped together by these criteria are synonyms in a narrower sense.

#### **4.2 Criteria for Synonymy in the Narrower Sense**

##### **4.2.1 Identity of Lexical Meaning**

The first criterion relating to the lexical level is identity of lexical meaning. When applied to the verbs of the *lügen*-field, this criterion groups together *schwindeln* and *flunkern* as synonyms, distinguishing them from *lügen* by virtue of the fact that they both express an evaluation by a discourse situation speaker not part of the meaning of the latter verb (see section 3.2.3).

##### **4.2.2 Number of Shared Lexical Features**

The degree of synonymy of communication verbs is additionally determined by the number of their shared lexical features. For example, *anlügen* and *belügen* are identical regarding all lexical features including their argument structure properties (see Figure 1). By contrast, *anlügen* and *belügen* on the one hand and *lügen* on the other differ in their argument structure properties while being identical with respect to all other lexical features. Specifically, *lügen* blocks the realisation of the roles of H and P while *anlügen* and *belügen* both obligatorily realise the role of the hearer as an NP in the accusative case and block the realisation of the role of P (see Figure 1). Due to these differences in the argument structure properties of *anlügen* and *belügen* on the one hand and *lügen* on the other, the degree of synonymy between the former two verbs is higher than that between either of them and *lügen*.

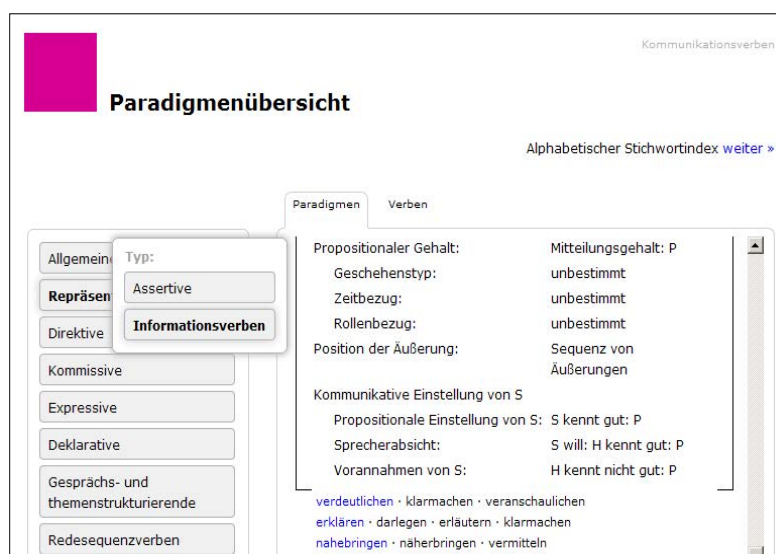
### 4.2.3 Substitutability *salva veritate*

The verbs *schwindeln* and *flunkern* are identical with respect to (i) the specific type of situation they are used to refer to, (ii) their lexical meaning, and (iii) their lexical features. As discussed in section they differ merely with respect to the contexts in which they are typically used: *flunkern* is used more frequently than *schwindeln* when reference is made to situations involving children telling lies as illustrated by example (1). Since substitution of *flunkern* by *schwindeln* in (1) does not yield a sentence with different truth-conditions, *flunkern* and *schwindeln* are substitutable *salva veritate*. Substitutability *salva veritate* is commonly regarded as an essential condition for propositional or cognitive synonymy. For a more detailed discussion of this particular type of synonymy, see Harras (2007b: 329-365).

## 5 Some Applications

### 5.1 Example I: Representatives of the Type ‘verdeutlichen’ (‘explain’)

Different degrees of synonymity may also be observed among the verbs of the field containing the lemmatised verbs *verdeutlichen* (‘explain’), *erklären* (‘explain’) and *nahebringen* (‘bring sth. home to sb.’). These verbs and the synonyms of each of these all express the concept of a verbal action whereby a speaker who knows something (P: a past, present or future action, event or state of affairs) well and assumes that H does not have sufficient knowledge of P makes several utterances to make H know P well. In *Kommunikationsverben* in OWID, information about special resource situation types is represented in the section *Paradigmenübersicht* (‘overview of paradigm’). The screenshot in Figure 2 represents the special resource situation type referred to by *verdeutlichen*, *erklären* and *nahebringen* and the synonyms of each of them:



**Fig. 2: Situation type referred to by *verdeutlichen* (‘explain’), *erklären* (‘explain’) and *nahebringen* (‘bring sth. home to sb.’) and their synonyms.**

Since the verbs *verdeutlichen* (‘explain’), *klarmachen* (‘make sth. clear to sb.’), *veranschaulichen* (‘illustrate’), *erklären* (‘explain’), *darlegen* (‘explain’), *erläutern* (‘explain’), *nahebringen* (‘bring sth. home to sb.’), *näherbringen* (‘bring sth. home to sb.’) and *vermitteln* (‘pass on knowledge’) are all used to refer to the same special resource situation type, they are synonyms in a broader sense.

On the lexical level of meaning, *verdeutlichen*, *erklären* and *nahebringen* are differentiated on the basis of their lexical meaning as follows:

- *verdeutlichen*: ‘to make sth. more comprehensible; to explain the crucial aspects of an issue or problem to sb. in order to make that person understand this issue or problem well’. Since *klarmachen* and *veranschaulichen* have the same lexical meaning as *verdeutlichen*, these three verbs are synonyms in a narrower sense.
- *erklären*: ‘to represent difficult and/or complex facts exactly and comprehensibly to sb. in order to make that person understand them well’. The verbs *darlegen*, *erläutern* and *klarmachen* are listed as having the same lexical meaning. *Erklären*, *darlegen*, *erläutern* and *klarmachen* may therefore be regarded as synonyms in a narrower sense.
- *nahebringen*: ‘to make sb. familiar with sth., usually with knowledge concerning a specific field, in order to arouse that person’s interest’. Since *näherbringen* and *vermitteln* are listed as having the same lexical meaning, these two verbs and *nahebringen* may be considered synonyms in a narrower sense.

On a more detailed level of analysis, verbs which are synonymous in as far as they have the same lexical meaning may be further differentiated by their lexical features. As indicated by Figures 3 and 4, *verdeutlichen*, *klarmachen* and *veranschaulichen* on the one hand and *nahebringen*, *näherbringen* and *vermitteln* on the other are completely identical with respect to all of their lexical features, including the syntactic realisation of their arguments:

Lexikalische Merkmale								
Verben	Merkmale							
	Semantische Rollen	Argument Struktur	Passiv	Resultativität	Bewertung	Polysemie	Performativität	stilistische Markiertheit
<b>verdeutlichen</b>	H (fak)	NP<Dat>	+	-	-	-	-	-
	P (obl)	NP<Akk> SE						
<b>klarmachen</b>	H (fak)	NP<Dat>	+	-	-	-	-	-
	P (obl)	NP<Akk> SE						
<b>veranschaulichen</b>	H (fak)	NP<Dat>	+	-	-	-	-	-
	P (obl)	NP<Akk> SE						

Fig. 3: Lexical features of *verdeutlichen*(‘explain’), *klarmachen* (‘make sth. clear to sb.’) and *veranschaulichen* (‘illustrate’).

Verben	Merkmale							
	Seman- tische Rollen	Argu- ment Struktur	Passiv	Resulta- tivität	Bewer- tung	Poly- semie	Performa- tivität	stilistische Markiert- heit
<b>nahebringen</b>	H (obl)	NP<Dat>	+	-	-	-	-	-
	P (obl)	NP<Akk> SE						
<b>näherbringen</b>	H (obl)	NP<Dat>	+	-	-	-	-	-
	P (obl)	NP<Akk> SE						
<b>vermitteln</b>	H (obl)	NP<Dat>	+	-	-	-	-	-
	P (obl)	NP<Akk> SE						

**Fig. 4: Lexical features of nahebringen, näherbringen (both ‘bring sth. home to sb.’) and vermitteln (‘pass on knowledge’).**

Since all of the verbs mentioned in Figures 3 and 4 are identical with respect to all of their lexical features, they are very close synonyms.

Within the set {*erklären, darlegen, erläutern, klarmachen*}, *darlegen, erläutern* and *klarmachen* are also identical with respect to all of their lexical features. Like the verbs of the two other sets mentioned above, these three verbs are therefore synonymous to a very high degree. Since *erklären* differs from each of the three other verbs in that it is polysemous while the others are not, the degree of synonymity between this verb and each of the other three verbs is lower than among the other three verbs. Figure 5 lists the lexical features of *erklären* and its synonyms *darlegen, erläutern* and *klarmachen*:

Verben	Merkmale							
	Seman- tische Rollen	Argu- ment Struktur	Passiv	Resulta- tivität	Bewer- tung	Poly- semie	Performa- tivität	stilistische Markiert- heit
<b>erklären</b>	H (fak)	NP<Dat>	+	-	-	+	-	-
	P (obl)	NP<Akk> SE						
<b>darlegen</b>	H (fak)	NP<Dat>	+	-	-	-	-	-
	P (obl)	NP<Akk> SE						
<b>erläutern</b>	H (fak)	NP<Dat>	+	-	-	-	-	-
	P (obl)	NP<Akk> SE						
<b>klarmachen</b>	H (fak)	NP<Dat>	+	-	-	-	-	-
	P (obl)	NP<Akk> SE						

**Fig. 5: Lexical features of erklären (‘explain’), darlegen (‘explain’), erläutern (‘explain’) and klarmachen (‘make sth. clear to sb.’)**

## 5.2 Example II: Expressives of the Type ‘klagen’ (‘complain’).

None of the verbs which are part of the field represented in Figures 2-5 share any special contextual restrictions on the basis of which they may be claimed to be even closer synonyms. Synonymy relations of this kind may be observed from a comparison of the contextual restrictions associated with the use of the verbs *klagen* (‘complain’), *jammern* (‘moan’) and *lamentieren* (‘lament’). These verbs are used to refer to situations in which a speaker who feels sorrow because of something (P: a past action, event or state of affairs) makes one or more utterances with the intention that the hearer recognize that he/she, i.e. the speaker, feels sorrow because of P. The situation referred to by *klagen* and its synonyms is represented by the screenshot in Figure 6:



Fig. 6: Situation referred to by *klagen* (‘complain’) and its synonyms.

Zooming in, for the sake of brevity, on the verbs *klagen*, *jammern* and *lamentieren*, these verbs differ regarding the contexts in which they are typically used. Though *klagen* and *lamentieren* may be used in most of the contexts in which *klagen* is used, *klagen* is used more frequently in combination with expressions designating diseases:

- (2) Seltener wird über Kopfschmerzen geklagt. [‘People rarely complain about a headache.’]
- (3) ?Seltener wird über Kopfschmerzen gejammert. [‘People rarely moan about a headache.’]
- (4) ?Seltener wird über Kopfschmerzen lamentiert. [‘People rarely lament about a headache.’]

To the extent that *jammern* and *lamentieren* are less restricted with respect to their typical contexts of usage than *klagen*, the degree of synonymy between them is higher than that between either of them and *klagen*. As indicated by Table 7, the degree of synonymy between *jammern* and *lamentieren* is also higher than that between either of them and *klagen* by virtue of the fact that the former two verbs are identical with respect to all lexical features while *klagen* differs from *jammern* and *lamentieren* in that it is polysemous, which the latter two verbs are not:

Lexikalische Merkmale								
Verben	Merkmale							
	Seman- tische Rollen	Argu- ment- Struktur	Passiv	Resulta- tivität	Bewer- tung	Poly- semie	Performa- tivität	stilistische Markiert- heit
klagen	H (block)							
	P (fak)	PP SE PPKorrSE	+	-	-	+	-	-
bedauern	H (block)							
	P (obl)	NP<Akk> SE NPKorrSE	+	-	-	+	+	-
beklagen	H (block)							
	P (obl)	NP<Akk> SE NPKorrSE	+	-	-	+	-	-
jammern	H (block)							
	P (fak)	PP SE PPKorrSE	+	-	-	-	-	-
lamentieren	H (block)							
	P (fak)	PP SE PPKorrSE	+	-	-	-	-	-
(sich) beklagen	H (fak)	PP						

Fig. 7: Lexical features of klagen ('complain'), jammern ('moan') and lamentieren ('lament').

## 6 Conclusion: The Creation of a semantic network

The procedure whereby sets of verbs used to refer to the same special resource situation type are divided in a stepwise fashion into ever smaller sets of ever closer synonyms ultimately results in the creation of a semantic network for communication verbs. Fig. 8 represents the section of this network comprising representatives of the type 'verdeutlichen' ('explain'):

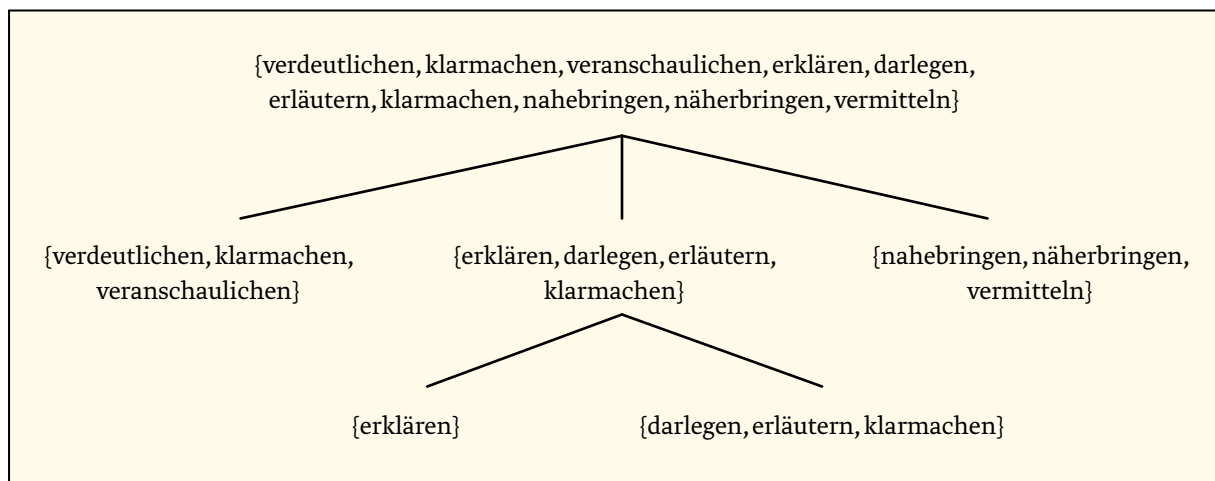


Fig. 8: Section of the network for communication verbs comprising representatives of the type 'verdeutlichen' ('explain').

Searching for verbs with varying degrees of synonymy is significantly facilitated by the online version, which provides two advanced search options allowing the user to automatically search for verbs sharing a smaller or larger number of conceptual and/or lexical features by selecting them from an input mask.

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