3

The Discourse Bulletin Board

3.1 Information packaging

In the previous chapter, a three-way division of the domain of information structuring has been proposed, with independent but interrelated subsystems for the management of the cognitive status of mental extensions in discourse (referent management), the construal and maintenance of semantic coherence between propositional contents (coherence management), and the identification and evaluation of information and its subsequent incorporation in discourse knowledge. The latter is referred to here as information packaging, and is given the following definition (adapted from Vallduví 1992: 15):

Information packaging. The instructions attached to the assertion according to the Speaker's intention that facilitate the correct retrieval of the information contained in it, optimize the evaluability of this information and ensure its ensuing incorporation in $M_0^W$.

In this chapter, it will be argued that the threefold purpose of information packaging is mirrored by the structure of the context set in which discourse knowledge is managed. Two dimensions of information packaging will be distinguished: actualization, which is concerned with the identification of the information contained in the assertion, and addressation, which is concerned with the allocation of information to an address in the context set.\(^1\) The interaction between the two dimensions

\(^1\)The term actualization is chosen because the instruction makes information actual, whereas without it, retrieval of the update potential of the articulation would depend entirely on the Addressee.
will be modelled tentatively in the **discourse bulletin board**, a card-based model of the structure of discourse knowledge in the context set.

Actualization and addressation are orthogonal dimensions that deal with fundamentally different aspects of information packaging. Hence, their categories are not mutually exclusive, but can be assigned to the same target in the linguistic structure. The structure of discourse knowledge hence gives rise to a number of sets of informational instructions that are part of the linguistic message. These sets, which will be referred to as an **informational articulation** (a term coined by Vallduvi 1992: 28ff), will be discussed in more detail in chapter 5.

**Information packaging and illocution** In anticipation of later chapters, one important restriction is imposed on information packaging as it is discussed here. Only information packaging in declarative statements will be considered, while the informational behaviour of statements with another illocutionary force is disregarded. The reason for this is mainly practical: most grammars simply tend not to contain a large enough body of properly contextualized questions, commands, adhortations, et cetera to analyse. Also it could be argued that declarative, interrogative and imperative statements have different targets in terms of knowledge management. While a declarative statement serves to inform an interlocutor of something he supposedly does not know yet, an interrogative statement informs the Addressee of something the Speaker does not know. Imperative statements are not concerned with discourse knowledge management at all; they are aimed at manipulating the interlocutor’s actions, rather than his knowledge.

### 3.2 Introducing DBB

To represent information packaging, use is made of a model for discourse knowledge management called the Discourse Bulletin Board (DBB). The DBB is an adaptation of Vallduvi’s **theory of informatics** (abbreviated as ToI; see Vallduvi 1992, 1994), which in turn is based on Heim’s **file change semantics** (abbreviated as FCS; see Heim 1983). All three models share the idea that language users keep track of the flow of knowledge in discourse by categorising propositions as sets of attributes of **discourse referents** (Karttunen (1969); see below). The attribute sets are modelled as **file cards**. The attributes themselves are seen as **records** on these cards (Vallduvi 1994: 5ff). Hence, discourse knowledge is organized as a kind of Rolodex, and information packaging is concerned with getting the Addressee to look up the proper file card and have him make the intended changes to that card. The components of the Discourse Bulletin Board and the procedures pertaining to those components are introduced separately below.

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2 The model takes its name from an early joint presentation by the author and Marina Dyakonova at the 2005 SLE conference in Valencia, Spain. At the time, the structure of the model strongly resembled a regular bulletin board. This resemblance is now largely lost.
DBB and other models Although labelling and graphical design differ slightly, DBB inherits its basic components from the two theories mentioned above. There is only one fundamental difference between it and its predecessors, as will be explained below: while ToI and FCS are reference-oriented, DBB is topicality-oriented. The rationale behind this decision is a desire to maintain a strict separation between the substance of the communicative exchange, and the way the substance is organized: between the ‘what’ and the ‘how’ of communication, so to speak. This separation is in line with insights in Functional Discourse Grammar (see chapter 4), where the two are also separately analysed (at the Representational and Interpersonal Levels, respectively).

3.3 Static description

In this section, a brief introduction of the static components of DBB will be given. The number of these is limited, as the DBB contains only one kind of element: cards. In the next section, the dynamic architecture of the model will be discussed.

3.3.1 Addresses

The DBB’s domain of operation is the context set, the contents of which are governed by a relation of relevance between them and a Discourse Topic, as was explained in section 2.4.2 above. Context set and Discourse Topic interact in a continuous cycle of renegotiation due to the Cooperative Principle. This entails that the boundaries of the context set are not fixed, but adapt to the interlocutors’ communicative intentions.

The context set is not considered to be a simple ‘bag’ to which new presuppositions are appended. It is thought to have a rich internal structure that is geared towards the swift evaluation of incoming assertions, efficient storage of new knowledge and optimal retrievability of what has been stored earlier. To this end, the context set is divided into addresses at which presuppositions are stored. The presuppositions entered at an address provide the background against which the contents of new assertions are evaluated; when found admissible, the presupposition is subsequently entered at the address and will serve as part of the background for any new assertions allocated to the same address. Similar to ToI, addresses are modelled as file cards in the Discourse Bulletin Board.

The cards in the context set are understood as a temporary structure, providing a form of intermediate storage: they are tied to a specific communicative exchange about a specific discourse topic. Once the exchange is concluded, the knowledge at the addresses is integrated in the language user’s Mw. For the next discourse, a new address structure is then construed. This is not to say that a Speaker assumes the address structure of his Addressee to be empty at the start of discourse. On

3In addition, it is likely that interlocutors also retain a simplified image of the communicative exchange as a whole, seen that they can refer back to, and even comment on, them.
the contrary, as has been argued earlier, interlocutors entertain a detailed model of the other’s knowledge, including estimations of the initial address structure that is activated when a context set is construed. It is this estimation that helps them to decide what assertions to make.

The primary advantage of an address-based discourse knowledge organization is its economy. By structuring knowledge in subsets and allocating assertions to such subsets for evaluation, the evaluation is likely to take into consideration all accepted facts that are relevant to the decision whether or not new information is compatible with the model of the world, and not more than these. Obviously, the efficiency claimed here is entirely ‘systemic’. The account of discourse knowledge organization that is given here cannot claim cognitive, let alone (neuro)physiological adequacy. It is therefore not to be understood as an abstraction of the processes that take place in the human brain during communication: it simply aims to describe the system, and provide a background for the patterns of knowledge management that manifest themselves linguistically. In this sense, the present model is entirely in line with the ambitions of Functional Discourse Grammar to provide an architecture in which to capture the patterns, but not the processes of natural language and its use in communication (see section 4.1.1).

It was stated above that the addresses in DBB form a temporary, intermediate storage facility, the contents of which are integrated in the language user’s general knowledge base when the communicative exchange is concluded. Importantly, the Speaker’s communicative intentions in a future exchange may happen to require different centers of interest, incompatible with a knowledge structure inherited from previous conversations. The model hence benefits from a generic architecture, consisting of cards that can be used on multiple occasions. For that reason, cards are provided with a generic indexed header, referred to as $\Delta_n$ as illustrated in Figure 3.1.

![Figure 3.1](image)

Figure 3.1 Context set and empty cards with address headers

### 3.3.2 Entries

Addresses can be seen as locations in discourse knowledge that, in the words of Lambrecht, delimit an individuable “center of interest or matter of concern in the
conversation” (Lambrecht 1994: 151). The presuppositions that form the contents of an address are modelled as the entries on the cards. On account of the basic stipulation that all declarative knowledge takes propositional form, entries are propositions.

A distinction is made between two types of entries, identifying and informative. Identifying entries ensure that the generic domain provided by the address $\Delta_n$ is identified with a discourse referent (see below). Identifiability of the address is thought to be a prerequisite for evaluation of assertions at the address. The identifying proposition takes the form $p \mid [ (\Delta_n ) (\alpha ) ]$, whereby $\alpha$ is a Layer that represents the denotation of a discourse referent (see chapter 4). Identifying entries, of which a card can only have one, are signalled by $\star$. Informative entries hold the actual information that is allocated to the address. They are signalled by $\triangleright$ preceding the proposition. Figure 3.2 illustrates the internal structure of a card.

3.3.3 Discourse referents

A discourse referent (Karttunen 1969: 368) will be defined here as a mental extension denoted by a non-zero entity, evoked at some point by means of a Subact of Reference. This definition reflects the fact that the elements able to identify an address in the context set must meet two requirements, one representational, and one interpersonal in nature. The requirements are related in that both contribute to the individuability of the address, necessary for it to serve its purpose as a domain of evaluation. Representationally, entities of semantic types above zero (see also 4.2.3.2) are individuable in some sense or other: they are either locatable in space or time, or evaluable in discourse knowledge, which can be seen as a ‘cognitive space’. Interpersonally, it is important that in order for it to identify an address in discourse knowledge, the mental extension at some point has to be evoked as an individuable object rather than a non-individuable property. In FDG, this status is ensured by using a Subact of Reference ($R_i$) at the Interpersonal Level to evoke the extension (see Hengeveld and Mackenzie (2008: 113ff), and section 4.2.3.1). For example, in the expression my uncle is a carpenter, two first-order entities are used: nevertheless, carpenter is not evoked to serve as an object in the mental
representation of this propositional content, but as a property. Therefore, it is not a discourse referent by the definition proposed here.\textsuperscript{4}

**Discourse referent.** A mental extension denoted by a referential non-zero entity, evoked by means of a Subact of Reference.

This concludes the introduction of static components of DBB. In the next section, the dynamic interaction between those parts will be examined.

### 3.4 Dynamic use

The architecture discussed in the previous section provides the background for the two main processes of information packaging: addressation, (the allocation of assertions to a particular address in the context set), and actualization of the contents of the address by modifying an existing entry or adding a new one. They will be discussed in turn.

#### 3.4.1 Addressation

**Addressation** (a notion coined in Jacobs 2001: 650) is one of the two actions the Speaker intends the Addressee to perform with regard to the informational processing of his assertion. The following definition of addressation will be used:\textsuperscript{5}

**Addressation.** The process by which the Addressee identifies the address at which the Speaker intends him to evaluate the assertion, locates or construes the address in the context set, and allocates the assertion to it.

A number of elements in this definition require further attention. They will be discussed in turn below.

#### 3.4.1.1 Address identification

It has been stated in section 3.3.2 that a generic address requires identification during a communicative exchange. Identifiability of the address is a prerequisite for the evaluation of assertions: an address that has no identification cannot be allocated in the context set, and hence no information can be appended to it. To ensure its identifiability, the address contains an identifying proposition that

\textsuperscript{4}It would be easier to say that topics are referential Subacts. However, Subacts are short-lived, momentaneous units which play a role during the act of communicating: what is stored in the discourse knowledge organization are their ideational counterparts, not the Subacts of reference themselves. Therefore, the more cumbersome definition is appropriate.

\textsuperscript{5}Note that, while the definition is phrased from the perspective of the Addressee, discourse knowledge management in this study is modelled from the perspective of the Speaker. As was explained in section 2.3.4, the Speaker’s discourse knowledge contains a model of the Addressee’s discourse knowledge, in which these Addressee-bound processes are monitored according to the Speaker’s best estimate.
equates the generic address header ($\Delta_n$) to the denotatum of a discourse referent. The discourse referents that serve as address identifier are occasionally referred to as topic in this study. It is important to note that topic used in this sense refers to an extralinguistic entity. It will be used sparingly to avoid confusion with the linguistic notion Topic (with capital T), which will be introduced later on.

**Separating topicality from referentiality** It is assumed that, while being a discourse referent is a prerequisite to serve as an address identifier, not every discourse referent necessarily identifies an address in the discourse knowledge organization. Whether or not a discourse referent identifies an address to which information can be appended is dependent on interpersonal and not on representational criteria: the choice to construe an address and use a DR to identify it is a strategic decision made by the Speaker, on the basis of his own communicative intention and his estimation of the Addressee's context set.

Underlying this view is the desire to incorporate a strict separation of **topicality** (the property of being used to identify a discourse address) and **referentiality** (the property of being an individuable mental extension) in the Discourse Bulletin Board. Therefore, a discourse referent in DBB may be evoked without ever becoming an address identifier during a communicative exchange at all. Alternatively, a discourse referent may come to be used as an address identifier after it has been evoked as part of a semantic presupposition, or it may be evoked with the specific purpose of serving as the instantiation of $\Delta_n$. Finally, a referent may be evoked to serve as the instantiation of $\Delta_n$ and as part of a semantic presupposition simultaneously. Examples of these three scenarios will be given in the next section.

This mode of representation is fundamentally different from that in Vallduví’s ToI or Heim’s FCS. In both theories, the architecture of discourse knowledge is essentially based on referentiality: all individuable mental extensions command a corner of the informational space (the context set) by definition, irrespective of the interlocutors’ communicative intentions. In contrast to these theories, the principle by which the Discourse Bulletin Board is structured is topicality: only those discourse referents are given special informational status that are intended to have said status as per the communicative intention of the Speaker. In other words, information structuring is not imposed on the structure of the context set, but determines the structure of the context set. This has two clear advantages over the referentiality-based approach. In the context of a longer-lasting communicative exchange, the DBB prevents the context set from cluttering up with addresses that are erected in passing, but never actually used for the evaluation and storage of knowledge. Also, the DBB more clearly reflects the belief that the way discourse knowledge is organized is the result of ongoing negotiation between Speaker and Addressee, a process in which the automatic assignment of a particular informational status on the basis of referentiality would be somewhat of a misfit.
3.4.1.2 Scenarios for address construal

I will now briefly introduce four possible modes of address identification. The first mode concerns the identification of an address by instantiating $\Delta_n$ with a discourse referent that has not been evoked in the discourse at an earlier point. An example of a strategy used to achieve this goal is given in (1):

(1) *Once upon a time, there was a prince*

The sole purpose of (1) is to construe an address identified by the discourse referent ‘prince’, that can serve as an address to allocate and evaluate subsequent assertions. Figure 3.3 gives a representation of this in the Discourse Bulletin Board. The identifying discourse referent need not be an individual ($x_i$) semantically; as is shown in Haiman (1978) event-like constructs such as conditionals can also identify a discourse address.

![Figure 3.3 Card identification. Scenario I](whitestar.alt1/p/divides.alt0/bracketleft.alt1(Δn)(x1: [– prince –])/bracketright.alt)

A related scenario concerns the identification of an address by instantiating $\Delta_n$ with a discourse referent that has not been evoked in the discourse at an earlier point. Like in the previous scenario, it is evoked now with the specific purpose of construing a new discourse address: the difference is that the same assertion is also used to provide information pertaining to this new topic. An example of a strategy used to achieve this goal is the *as for* ... construction in (2):

(2) *As for cheese, it is not true that all non-dairy cheese tastes absolutely rancid*

The assertion in (2) is taken from a longer discussion of alternatives for dairy products. The previous few assertions all concerned substitutes for milk. At the point where (2) is uttered, the Speaker wants to change to the topic of non-dairy cheese, for which a new address is required. The *as for*-part of (2) serves this function, and can be paraphrased as ‘Please accept as true that a new address $\Delta_n$ is needed in the context set, identified by the discourse referent ‘cheese’ that is denoted by $x_1$’. This is represented on the card in Figure 3.4.⁶

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⁶Simultaneity of address construal and the allocation of an informative assertion to the address is generally considered a very dysfunctional way of presenting information (cf.
The third way in which an address can be identified is by means of a referent that has been evoked at an earlier point in a discourse in a non-topical capacity. Consider the contrived mini-discourse in (3):\footnote{It must be stressed again that cards do not represent the informational structure of the utterance, but the informational structure of the context set at a particular point in discourse. The she in (3) evokes a referent that is stipulated to be active when the mini-discourse commences. Her identity must therefore have been established earlier.}

\begin{figure}[h]
\centering
\begin{align*}
\Delta_n \\
\star & \ p \mid [ (\Delta_n) \ (x_1 : \neg \text{cheese} \ ) ] \\
\triangleright & \ p \mid [ \neg \text{not rancid} \ (x_1)_A \ ] \\
\end{align*}
\caption{Card identification. Scenario II}
\end{figure}

(3) a. \textit{She met my neighbour at a party}  \\
b. \textit{He felt attracted to her rightaway}  \\
c. \textit{Even though he was seeing someone else at the time}  \\

In (3b), the discourse referent ‘Speaker’s neighbour’ identifies the address to which the assertion is allocated: the proposition \text{NEIGHBOUR FEELING ATTRACTED TO HER} is portrayed to be about ‘neighbour’, as can be seen from the way the narrative develops in (3c). But (3b) is different from (2), in that the referent ‘neighbour’ has been evoked earlier by the time it comes to serve as the address identifier: the referent is introduced in (3a). The representation for this scenario is given in Figure 3.5. The instruction conveyed in (3b) can be paraphrased as \textit{Please accept as true that a new address} $\Delta_n$ \textit{is needed in the context set, identified by entity $x_2$ that you should be able to retrieve from earlier mention.}

Finally, addresses can be used without any identification at all. This is the case for so-called \textit{thetic} assertions (Sasse 1987: 512) which can be seen as ‘unaddressed’. That is, the contents of a thetic assertion are not evaluated against a set of propositions that pertain to a particular discourse referent: instead, these contents occupy an address of their own. It seems that a common motivation to present information in this way is to achieve various kinds of narratological discontinuity.\footnote{The occurrence of thetic assertions often coincides with changes in the time or location of the chain of events, to mark a sudden and unexpected turn of events, to alternate between the ‘thread’ of the narrative and the situational backdrop, et cetera.} As a consequence, thetic assertions are often found at the beginning of a \textit{discourse among many other Chafe 1994; Durie 2003; Du Bois 2003}. The reason for this dysfunctionality can be modelled in DBB as the simultaneous performance of two actualization procedures in a single Discourse Act, as will be explained in section 3.4.3.2.
segment (Grosz and Sidner 1986). An example of this is given in (4), which is paraphrased from a Hixkaryana story reported in Derbyshire (1965: 159). The narrative so far has touched on various issues related to child birth: the Speaker has told about the pregnancies of his wife, the duties of a father-to-be, and food items that are taboo during pregnancy. From there, the story develops into a general exposition about the origin of taboos. After a while, the Speaker makes the following assertion:

(4)   *The wife of my brother gave birth*

The ‘wife of Speaker’s brother’ is undoubtedly a discourse referent; nevertheless, the assertion in (4) is thought not to be allocated to a card identified by her. Instead, it is posited as an ‘unaddressed’ statement, with the apparent objective to ‘set the stage’ for a new stretch of discourse (and the introduction of a new referent – ‘my brother’s wife’ – in a non-topical capacity). This can be represented in DBB as in Figure 3.6.

![Figure 3.5 Card identification. Scenario III](image)

![Figure 3.6 Card identification. Scenario IV](image)

### 3.4.2 Address, Topic and Aboutness

In section 3.4.1.1 it was stated that the architecture of the Discourse Bulletin Board is topicality-oriented rather than referentiality-oriented. This orientation means that the quality of serving as an address identifier (i.e., being a topic) is not just an
interpersonally negotiated – and possibly, a grammatically favoured – interpretive property of a discourse referent, but a choice that has a direct impact on the structure of discourse knowledge. This view has two important repercussions.

### 3.4.2.1 Gradient topicality

First, topicality is considered a discrete notion. Every discourse referent used in a communicative exchange either serves as an address identifier (in which case it is a topic) or it does not. Accordingly, every discourse referent evoked in an assertion either is used to instruct the Addressee to allocate an address (i.e., used as a Topic with capital T), or it is not. A gradient or hierarchical notion of topicality, as suggested by Givón (1979) among others, therefore has no place in DBB.

Consider an assertion that conveys the proposition CARL DRIVING THE HORSES INTO A RIVER. In the Givónian understanding of topicality, the referents in this proposition can be ranked according to their topicality, based on certain combinations of their interpersonal and representational characteristics. ‘Carl’ would probably be considered the most topical referent, followed by ‘horses’. ‘River’ is the least topical referent. In the Discourse Bulletin Board, this deterministic view on topicality is replaced with the assumption that what determines the topicality of the referents is the Speaker’s communicative intention to have the Addressee allocate the assertion to a certain address in his context set. Clearly, the properties of the referents in the propositional content affect their eligibility to serve as the linguistic target of such an allocation instruction (i.e., the Topic with capital T). In English, an indefinite non-human Undergoer generally requires a special expression strategy to be interpretable as the Topic of the assertion, and this is even more true for an inanimate referent with a peripheral semantic function. Nevertheless, the Speaker can easily override preferential interpretation with the aid of morphosyntactic means, and instruct the Addressee to allocate the assertion to the address of his choice.

**A closer look at Topic-promoting factors** The influence of intrinsic and extrinsic properties of referents such as specificity, animacy, referent continuity, activation status and person on Topic eligibility has been studied in great detail for many languages, and has given rise to a number of scales that can collectively be referred to as topicality hierarchies (see in particular Givón (1979), as well as the topic acceptability scale in Lambrecht (1994: 165ff), which links topic eligibility to activation status in a straightforward manner). These hierarchies reflect the eligibility of a discourse referent to assume the function of topic. Generally speaking, specific referents are more eligible to serve as topic than non-specific ones; animate referents are more eligible than inanimate ones; active referents are more eligible than inactive ones; human referents are more eligible than non-human referents, and speech act participants are more eligible than non-speech act participants.

Besides properties of referents, their relation to other elements in the assertion is a strong determinant of topic eligibility. This is particularly true for semantic functions: a referent that is not explicitly integrated in the semantic structure of
the proposition will generally resist an interpretation as its topic, while certain semantic functions – in particular, Actor – strongly favour a topic interpretation. Likewise, certain syntactic functions are better suited to combine with a topic interpretation than others: while privileged syntactic arguments (such as Subject; see Van Valin 2005: 94ff) are generally highly eligible as topic candidates, Object arguments often resist a topic interpretation.

Although the preference for certain characteristics of topics is probably identical cross-linguistically, the relational and non-relational properties of discourse referents contribute differently to Topic eligibility in different languages. Therefore, what is still construable as the topic of an assertion without explicit marking of this status in one language may be completely unacceptable in the next, and vice versa. In some languages for instance, the relational status of a discourse referent need not be marked in order for that referent to be interpreted as Topic, if the referent has the right combination of properties. For instance, the status of speech act participant is sufficient to warrant the construal of relevance in Samoan:

(5) \[ a \ o \ matou \ ma \ isi \ e, \ leai \ se \]
\[ \text{but PRS 1.EXCL.PL and other SPEC.PL GENR not } \_\text{exist ART.NONSPEC.SG} \]
\[ \text{pasi e } \text{alu atu i palauni} \]
\[ \text{bus GENR go DIR LD palauni} \]
‘But we and the others, there was no bus going to Palauni’

(Samoan, Malayo-Polynesian. Mosel and Hovdhaugen 1992)

In (5), there are no linguistic clues that signal the relation between the discourse referent ‘we and the others’ and the assertion: the constituent that corresponds to the topic of the assertion is not marked as a core participant in the propositional content, nor is it inflected for any particular syntactic function. Nevertheless, the surrounding context makes clear that a relevance relation is intended to be construed. According to the original English translation of (5), the referent of the extrapositional constituent should be interpreted as a beneficiary. Likewise, certain lexical taxonomic relations warrant the construability of relevance in Mandarin Chinese, like in (6a) and (6b):

(6) a. \[ n\text{èi-zhòng dòuzì, yì-jùn sān-shí qùài qián} \]
\[ \text{that-kind bean one-catty three-ten dollar money} \]
‘That kind of beans, a catty is thirty dollar’

b. \[ zhè kè shù yèzi hěn dà} \]
\[ \text{this CLF tree leaf very big} \]
‘This tree, the leaves are very big’

(Mandarin Chinese, Sinitic. Li and Thompson 1981: 15, 96)

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\[^9\] As is pointed out in Du Bois (1987), Actor arguments are generally more eligible as topic than Undergoer and more peripheral arguments because the Actor role strongly correlates to a type of referent – animate, volitional, given, specific – that favours a topic interpretation anyway.
In (6a), the construability of relevance with (and hence, topic eligibility of) ‘this kind of beans’ depends on the presence of a classifier-classified relation. In (6b), the part-whole relation between the ‘leaves’ and the ‘tree’ has the same effect.

Much more could be said on this topic, and the impact in linguistic expressions of the various topic-promoting factors identified above is clearly something that would warrant systematic investigation. A final remark that should be made on the subject is that most languages appear to have special topifying strategies,\(^{10}\) that can be exploited if a not-so-eligible referent is to be interpreted as the address identifier. The as for-construction mentioned earlier is one of them; another would be the ordinary passive construction in English which, besides other functions (collectively referred to as perspectivation, cf. Graumann and Kallmeyer 2002), can promote the Undergoer argument to topic status.

### 3.4.2.2 Topic uniqueness

It was argued above that topicality is a discrete, and not a gradient notion. Every referent in every assertion can be identified as a Topic or a non-Topic. In addition, it is assumed that the contents of an assertion are never allocated to more than a single address. This means that at most one Topic is present in any assertion.

The motivation for this stipulation derives from the function of addresses as subsets of discourse knowledge that have the purpose of enhancing the assessment of new information. That is, the contents of an assertion that is allocated to a specific address only have to be checked for their compatibility with the entries that are filed already at that address. The efficiency of this system would be severely impaired if multiple addressation were possible. At the very least, the assessment procedure would be complicated by the fact that a larger body of extant knowledge has to be considered. What is worse, different addresses contain different subsets of propositions, which may yield different, conflicting compatibility judgements. To avoid such conflicts, evaluation and storage are stipulated to take place at a single address in the context set.

Like many other issues in pragmatics, Topic uniqueness remains a heavily disputed notion. Its rejection or acceptance appears to be intertwined with the question as to the overall purpose of information packaging: does it convey instructions that target the ways in which interlocutors manipulate each other’s discourse knowledge organization, or does it merely convey interpersonally determined, grammatically favoured interpretive relations between the elements in the proposition? My reasons for embracing topic uniqueness derive entirely from the model in which information packaging is couched, which provides a rather rigorous framework to decide what is a topic and what is not on the basis of the development of the discourse, and in isolation of the way this is marked. Therefore, the approach addresses a primary methodological concern for work in pragmatic typology, which is the multitude of considerations that co-determine the encoding of informational categories (see also

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\(^{10}\)I am eschewing the downright confusing notion topicalization here, which has assumed a syntactic rather than an informational meaning in most frameworks.
chapter 6). If the latter view is adhered to instead, there is not much reason to impose an a priori restriction on the number of interpretive relations that interlocutors can add to the representational structure of their assertion to enrich its function in the discourse. Indeed, some evidence has been presented that suggests that multiple grammatically encoded topicality relations may occur simultaneously (this appears to be the case in Ostyak; cf. Nikolaeva 2001), and the point has been made that English provides no structural evidence for a topicality relation at all (Mackenzie and Keizer 2004).

3.4.2.3 What about aboutness?

A final issue that must be settled with regard to addressation is the inference of aboutness as an interpretive relation that obtains between the topic referent and the propositional content. As should be abundantly clear by now, information packaging and its linguistic correlates are approached ‘mechanistically’ in this study, and are treated in terms of interpersonally negotiated knowledge structuring rather than interpersonally determined interpretive relations. While this choice of perspective yields a plausible picture of what information packaging does, it is undeniable that it also feels a certain way.

Virtually every characterization of topic invokes a notion of aboutness. To quote some random authors, the topic is “the entity about which something is said” (Crystal 2003: 468), “what the sentence is about” (Davison (1984: 804); Gundel and Fretheim (2004: 176)), “whatever the proposition is about” (Nikolaeva 2001: 4), et cetera. Aboutness, like its cousin Relevance, has proven sadly resistant to more acute definition. One problem is that an assertion to an extent is about all of its referents. The proposition Carl driving the horses into a river is about ‘Carl’, but also about ‘the horses’ and ‘river’. If it were any different, the Speaker would commit a serious violation of the maxim of Relevance, by including things in his contribution to the communicative exchange that do not further the mutual understanding between the interlocutors. To address this issue, it must be assumed that the aboutness associated with topic is of a special kind that sets it apart from the general relevance that must obtain anyway between a proposition and the referents that figure in it. It could be argued that such interpersonally favoured aboutness fulfils a ‘licensing’ function in information packaging; in order for its contents to be evaluable at the address, a relation of aboutness must be construable between the address identifier (topic) and the proposition allocated to the address. However, such a characterization of the function of aboutness does not get us any closer to its substance. It was pointed out in section 2.4.2 that the elaboration of a discourse topic is an ongoing dynamism, due to the Cooperative principle that requires interlocutors to do their utmost to make sense of the information they are being offered. Therefore, Addressees will try hard to make new information fit their model of the world. In the same sense, the construal of aboutness between

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11Aboutness is used here to distinguish the relation between the topic and the contents of the assertion from the more general notion of relevance that was discussed in section 2.4.2. The two notions are qualitatively identical.
a topic and the contents of an assertion is a matter of interpersonal negotiation. The Addressee may accept a topic as a topic because he can construe a relation of aboutness between it and the assertion; conversely, the Addressee may infer a relation of aboutness because the Speaker instructs him to allocate a particular address and use its contents to evaluate the assertion. In this process, a cooperative interlocutor will go at lengths to accommodate the apparent construal of aboutness between a discourse referent and a propositional content, even when his model of the world offers little justification for it.

Being a matter of interpersonal negotiation, the relationship between aboutness as an interpretive, and addressation as a mechanistic notion must also be a cyclic process in which cause and consequence cannot be distinguished. It is simply not possible to determine whether the inference of aboutness is caused by a particular organization of the discourse knowledge, or whether the construability of aboutness is a prerequisite for a particular discourse knowledge organization. It is at least a simple fact that there is a very strong correlation between topicality and aboutness, but compelling arguments for a causal relation in either direction are hitherto lacking. Therefore, the stance taken towards aboutness in this study is the same as that defended for discourse topic: the construal of aboutness is assumed to have been successful whenever the interlocutor does not challenge the Speaker’s instruction to allocate the assertion to a particular address, i.e., take a certain referent as the topic of the assertion.

3.4.3 Actualization

So far, the discussion touched on the issues related to the identification by the Addressee of the address in his context set where the Speaker intends him to evaluate and store the contents of the assertion. It was stated in the previous section that topicality and referentiality are kept separate in the Discourse Bulletin Board, that each assertion is allocated to a single address, and that cooperative interlocutors accept that the contents of the assertion are in some sense about the address identifier. The question is left unanswered whether this aboutness is the cause or consequence of the allocation.

However, it is not enough for the Speaker to instruct the Addressee where to evaluate his assertion. It should also be indicated how its contents are to affect the address. That is, a cooperative Speaker is expected to obey the maxim of Quantity, and thereby only to make assertions that in some sense or other constitute information for the Addressee. This new information has to be processed somehow at the address it is allocated to. It leads to a new, actualized state of the address. This ‘update’ is the essence of actualization: the contribution of something new (at least, according to the Speaker’s estimation) that is capable of changing the current state of an address. A cooperative language user is expected only to make assertions which have this potential.

**Actualization.** The process by which the Addressee manipulates the structure of the address as instructed by the Speaker, due to which a
Actualization is a relational notion, as an assertion or a part thereof can only be informative in comparison to the current state of the address. For instance, a referent per se cannot result in the actualization of an address. Rather, it is the hitherto unknown, irretrievable relationship of that referent to extant knowledge at the same address that effectuates a change of the state of the address. No particular cognitive status of the referent(s) involved is required for actualization to take place. That is, an address can be actualized by relating to its contents a referent whose mental image has to be construed from scratch at the spot, but it can also relate an active referent to the contents of the address in a new way, which equally results in the state of the address being changed. The assertion in (7b) illustrates this point:

(7) a. He tried to hit her, and then
b. she tried to hit him

The case in (7b) is an extreme example, the assertion of which has the effect that the address changes despite the fact that its contents consist entirely of known elements. The referents are both active, seeing that they have just been used; even the predicate that relates them, hit is known. Nevertheless, the fact that the two referents have changed semantic functions leads to a completely different assertion, the consideration of which results in the state of the address being changed.

### 3.4.3.1 Types of actualization

Actualization (and its corresponding grammatical domain, Focus) can be categorized in many different ways. It seems that two broad angles can be distinguished: one that concentrates on the portion of the Speaker’s assertion that has the potential to trigger the address to become actualized, and one that concentrates on the type of manipulation that the Addressee has to carry out in order for the address to become actualized. Both will be discussed briefly below.

**Actualization: manipulations** One way to break down actualization is in terms of the manipulation that the Speaker intends the Addressee to perform on his context set. Dik (1997a: 331) refers to this as the **communicative point of focusing**. The two top-most categories of the complex notional typology that he proposes are incorporated in the Discourse Bulletin Board, namely the distinction between manipulations that aim at the saturation by the Speaker of a perceived gap in the Addressee’s knowledge, and manipulations that aim at the substitution of one piece of knowledge – believed by the Speaker to be amenable to correction – for another. These categories will be referred to as **addition** and **substitution**, respectively. Two examples of addition are given in (8):

(8) a. A: What are you eating?
    B: — bananas
b. A: Will you be coming along to Carl’s party?
B: — no

In both (8a) and (8b), A makes explicit that he entertains a presupposition in which an element is not instantiated. In (8a), the presupposition can be paraphrased as ‘B eating _’; the non-instantiated element is an argument. In (8b), the presupposition is something like ‘B ± coming along to Carl’s party’; the non-instantiated element is a polarity value.

The second type of actualization is substitution. In substitution, the actualization of the address is brought about by the substitution of an element of an extant entry at the address for another element. An example is given in (9), adapted from Lambrecht (1994: 215).

(9)  A: Are you sure he was talking with the pigs?
      B: (No,) he was talking to the pigs

In (9), B’s assertion triggers the address to become actualized by replacing the currently presupposed function of the referent ‘pigs’ in the predication (that of ‘responsive addressee’) with another (‘non-responsive addressee’).

**Actualization: scope**  Alternatively, actualization can be categorized in terms of what Dik (1997a: 330) calls **scope of the Focus function**: the portion of the Speaker’s assertion that has the potential to trigger the address to become actualized. This portion may differ greatly in shape or size. In (9), the portion of the assertion that triggers actualization is the fact that a known referent changes semantic function; but actualization potential may also result from the introduction of a new referent, from the attribution of a new property to a referent, from the introduction of a new predicate or a combination of a predicate and one or several new arguments, from the specification of a time or place of occurrence of the event, from a change of modality or polarity, ... the possibilities are infinite; it appears that every component or combination of components of the propositional content can trigger actualization. Nevertheless, the extent to which these infinite possibilities can be expressed unambiguously depends on the inventory of linguistic structure available to any particular language. For instance, the role reversal in the example in (8) can be expressed in Dutch as follows:

(10) a.  *Hij probeerde haar te slaan*
        he tried her to hit

b.  *en toen zij hem*
        and then she him

The grammar of Dutch allows for the inflected verb to be omitted as in (10b), with the specific function of expressing semantic role reversal. In English, the inflected

---

12 It is assumed that presupposed knowledge cannot be ‘depresupposed’, i.e. stricken from the language user’s context set: the original presupposition will linger in the Addressee’s mind. Consequently, the substituted element is assumed to be retained at the address somehow. See also Lambrecht (1994: 45ff).
verb cannot be omitted in this way. The English construction to express the same actualization has to include a verb, which makes it ambiguous: the construction in (9b) could be used to convey a number of other actualization instructions besides role reversal.\textsuperscript{13}

The scope of actualization can be characterized in terms of representational units but also in terms of interpersonal units, in particular those relevant to the organization of discourse knowledge on the DBB: the entries. That is, besides a representational element that is part of a presupposition registered as an entry, the scope of actualization can also be an entry in its entirety. In this case, the actualization potential of the Speaker’s assertion consists in the addition of an entirely new entry at the address. An example is given in (11B), which triggers the actualization of A’s address on ‘Carl’ by supplying a whole new entry. Incidentally, note that A’s question can be seen as an instruction to B to construct an address ‘Carl’ in his $M_{W}^{A}$ (see also section 3.1).

(11) A: What about Carl?
B: He went fishing last week
<ongoing conversation about Carl’s fishing achievements>
B: He caught an enormous bass last summer

On the DBB, the locus of actualization is signalled by the solid versions of both symbols mentioned earlier, ★ and ▶. Both are illustrated in Figure 3.7, which is a representation of B’s estimation of A’s card on ‘Carl’ immediately after the last assertion in (11) has been made.

\[
\begin{array}{|c|c|}
\hline
\Delta_n \\
\hline
★ p | [ (\Delta_n) (x_1 : [\neg \text{Carl }]) ] \\
\hline
▷ p | [ \neg \text{went fishing last week} (x_1)_A ] \\
\hline
▷ ... \\
\hline
▷ p | [ \neg \text{caught enormous bass} (x_1)_A ] \\
\hline
\end{array}
\]

Figure 3.7 Actualization of A’s address on ‘Carl’

In exactly the same way actualization of the language user’s context set can be achieved by construing a new address, either by instantiating its identifying proposition (as was illustrated above in Figure 3.3) or by making a thetic assertion

\textsuperscript{13}Of course, the English example presents a case of functionally underspecified morphosyntax. That is, the example is only ambiguous if both the preceding context and the prosodic contour are neglected. Conversely, the Dutch construction without the verb is contextually restricted in the sense that it is only ‘grammatical’ in this specific informational context.
Dynamic use

(Figure 3.6). Both are repeated below in Figure 3.8, with the solid symbols that indicate actualization.

\[
\Delta_n \\
P \mid [ (\Delta_n) (x_1 : [- \text{ prince } -]) ] \\
\triangleright \ldots
\]

(Fig. 3.3 adapted)

\[
\Delta_k \\
P \mid [ \text{WoB giving birth}]
\]

(Fig. 3.6 adapted)

**Figure 3.8** Actualization: address construal

Actualization as an extragrammatical domain corresponds to the linguistic dimension of Focus, as will be explained in more detail in chapter 5. In Table 3.1, the two dimensions of actualization – type of manipulation and scope – are combined. This classification sheds some light on a part of the myriad of focus terminologies that are found in the literature.

<table>
<thead>
<tr>
<th>Scope</th>
<th>Element</th>
<th>Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operation</strong></td>
<td><strong>Addition</strong></td>
<td>Dik (1997a)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>questioning focus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>completive focus</td>
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<tr>
<td></td>
<td></td>
<td>expanding focus</td>
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<tr>
<td></td>
<td></td>
<td>rejecting focus</td>
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<tr>
<td></td>
<td></td>
<td>expanding focus</td>
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<tr>
<td></td>
<td></td>
<td>selecting focus</td>
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<tr>
<td></td>
<td></td>
<td>replacing focus</td>
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<tr>
<td></td>
<td></td>
<td>restricting focus</td>
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<tr>
<td></td>
<td></td>
<td>predicate focus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sentence focus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(counterassertive focus)</td>
</tr>
<tr>
<td><strong>Substitution</strong></td>
<td>K\text{\textsc{s}}s (1998)</td>
<td>identificational focus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>information focus</td>
</tr>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**Table 3.1** Actualization and focus terminology

The authors in Table 3.1 have been chosen because their terminologies have proven especially influential. The table makes explicit that all three authors appear to have different descriptive preoccupations. Dik devotes considerable attention to the communicative function of focusing. He states that focal information “will concern the changes that S wishes to bring about in the pragmatic information of A” (Dik 1997a: 326); however, for reasons that are not made entirely clear, he goes on to assume that the Speaker’s *reasons* for instigating such changes are of critical importance. The impact of the change on the *structure* of A’s pragmatic
information (my context set) is largely left out of consideration. Thus, while Dik discerns no less than eight communicative points of focusing, they may all result in the same changes being made in A’s context set as far as he is concerned. Kiss (1998) takes a different stance. She argues that the relevant distinction is that between actualization of extant presuppositions by filling gaps or making changes (her \textit{identificational focus}), and actualization that results in an augmentation of the Addressee’s knowledge (her \textit{information focus}). The motivations of the Speaker to restrict, replace, expand or otherwise affect A’s knowledge are not taken into consideration. Yet another classification is given by Lambrecht (1994). His \textit{predicate focus} and \textit{sentence focus} aim at the actualization of entries at addresses in the Addressee’s context set. A third category, tentatively termed \textit{counterassertive focus} and not further explored by him, also affects the entries, but aims at substitution of knowledge rather than at completion.\footnote{Lambrecht (1994) distinguishes a fourth category: \textit{argument focus}. Argument focus roughly corresponds to Kiss’s \textit{identificational focus}.}

\subsection*{3.4.3.2 Multiple actualization}

So far, actualization has been characterized as an operation that results in the state of an address being changed: if an address \( \Delta \) is in state \( x \) at \( t-1 \), and in state \( y \) at \( t+1 \), then actualization must have occurred at \( t \). While two broad types of changes have been proposed – changes to extant representational structure registered at entries at the address, and changes to the entries themselves – the question has not been addressed whether multiple changes of that kind can be effectuated ‘in one go’. In this study, Hengeveld and Mackenzie’s notion of a \textit{Discourse Act} (see chapter 4) is taken as the unit in which contributions to discourse are cast. The defining functional characteristic of an Act is set to it having a single illocution: an Act is an Act because it has a unified purpose of telling, instructing, asking, warning or otherwise influencing the interlocutor.

A Discourse Act is taken to assert a single semantic presupposition; that is, the Addressee is invited to perform a single operation of addressation and evaluation, even though the presupposition offered for evaluation may itself consist of multiple eventualities. One case for which this complex scenario obtains are coordinated events, as illustrated by (12):

\begin{equation}
\text{(12) } \text{Carl bought bread at the baker’s and meat at the butcher’s}
\end{equation}

In (12), the Addressee is invited to allocate the address identified by ‘Carl’ and accept the combined events \textit{Carl buying bread at the baker’s} and \textit{Carl buying meat at the butcher’s} as compatible with other knowledge about Carl. Several factors in the expression conspire to facilitate the integration of both events into a single ‘evaluandum’: (12) is likely to have a single intonational contour, the two parts share the same Topic, they are syntactically very similar, and the referents that figure in both parts belong to partially ordered sets – posets – that enhance their respective accessibility (see below). As can be seen in Figure 3.9,
the two events are evaluated as a single fact, and their acceptance affects only a single entry at the address. Therefore, the acceptance of an assertion consisting of multiple propositional contents coordinated in this way will be considered as a single instance of actualization.

\[
\Delta_n \\
\star \quad p \mid \left[ (\Delta_n) \left( x_1 : [\neg \text{Carl} \_] \right) \right] \\
\triangleright \quad p \mid \left[ [\neg \text{buy bread at baker’s} (x_1)_A \_] \land [\neg \text{buy meat at butcher’s} (x_1)_A \_] \right]
\]

**Figure 3.9** Complex actualization of A’s address on ‘Carl’

Of a different order are cases in which a single propositional content is asserted that amounts to the actualization of multiple semantic slots. An example is given in (13):

(13)  

a. *Carl bought a Ferrari yesterday, so* 

b. *He will have to sell the Jaguar tomorrow*

The utterance in (13b) could be argued to actualize the Addressee’s knowledge of ‘Carl’ three times, because it adds a proposition whose contents have the same thematic structure as in (13a), but which contributes three new denotata. However, the fact that sell, Jaguar and tomorrow have an especially emphatic or informative ‘feel’ to them does not mean that their evocation is to be regarded as three separate instances of actualization. Instead, it is argued that their saliency derives from the fact that sell, Jaguar and tomorrow are in a special interpretive relationship to the corresponding slot-fillers in (13a). That is, the pairs of denotata are interpretable as members of the same **contextually licensed partially ordered sets** (posets; cf. Ward and Prince 1991; Ward and Birner 2003): sets of entities that are licensed by some sort of mutually agreed commonality which gives rise to the impression of contrastiveness if their members are evoked in parallel constructions (see Bolinger 1961; Chafe 1976; Umbach 2004).

Following Lambrecht (1994: 290) and Molnár (2002), it is assumed here that the signalling of poset membership (and the inference of contrastiveness associated with it) does not belong to the realm of information packaging, but to activation state management instead. That is, the inferrability of a poset relation makes the evocation of a new referent ‘easier’. It can be seen as a form of **bridging** (Prince 1978: 887), in that the new referent is connected to an active referent in the context through a mutually agreed connection. A similar point is made in Ward and Birner (2004: 159), who argue that the inferrability of a poset relationship is a precondition
for indefinite NPs to be fronted. In sum, assertions which introduce multiple new referents are understood to constitute a single instance of actualization, even though the ‘locus’ of their informativity can be identified as more than one slot in the propositional content. Simply put, there is little difference in terms of the impact on the Addressee’s context set between the two utterances in (14), as the representation in Figure 3.10 illustrates:

(14) a. Carl is reading a book in the park
b. Carl is reading a book in the park

![Figure 3.10](Image)

**Figure 3.10** Actualization: no vs. multiple contrast

There appears to be only one scenario that results in multiple actualization, namely certain contributions in which a new address is construed and knowledge is appended to that card in a single Discourse Act. An example of this has been discussed earlier, and is repeated below as (15). The representation is given in Figure 3.11.

(15) As for cheese, it is not true that all non-dairy cheese tastes absolutely rancid

Source: [www.curdsnwhey.com](http://www.curdsnwhey.com)

It seems that multiple actualization of the kind described in 3.11 imposes a heavy burden on discourse knowledge management. Typically, Discourse Acts in which this kind of information packaging obtains employ coding strategies that somehow ‘split the load’ in order not to violate processing constraints such as the one

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15Similar to the construal of topicality, the inference of a poset (partially ordered set) relation is also a double-sided phenomenon. The inferrability of a poset relation may warrant the use of (13) but conversely, the use of this construction (which in English manifests itself as a special intonational contour) instigates the Addressee to infer the existence of a poset. A cooperative Addressee will try hard to identify the ordering relation, as he expects his partner only to signal the existence of such a relation if it contributes to the discourse.

16This does not appear to be the case for all instances of multiple actualization. Cases in which a new address is identified by a referent that has been introduced earlier, as was done in (3b), seem to be fine cross-linguistically. What is problematic, is the simultaneous introduction of a new referent as topic and the allocation of information to the address it identifies.
In this chapter, a model was introduced to represent the ways in which verbal knowledge is organized in discourse. The properties of this model determine the band width that Speakers have to provide their Addressees with instructions that aim to manipulate their state of discourse knowledge, thereby making it conform to the beliefs of the Speaker.

The structure of the Discourse Bulletin Board provides the targets that language users can use to shape the information packaging instructions that they pack into their Discourse Acts. In chapter 5, a set of two orthogonal instructions will be proposed that are represented at the Interpersonal Level of Grammar. These instructions aim at manipulating the discourse knowledge organization by instructing the Addressee to allocate a particular address, and to affect the state of the address in such a way that actualization results. They are represented as the interpersonal categories Topic, Comment and Focus. Topic conveys an instruction to the Addressee that can be paraphrased as ‘please look up the address identified by __ ’; Comment conveys the instruction ‘please accept this information (and make any changes necessary to the address at which this is directed in order to fit it in) ’; Focus identifies the part of the assertion that makes it informative. These instructions are understood to interact in a limited number of pre-established configurations, the distribution of which in morphosyntax can then be investigated.