FYI: theory and typology of information packaging
Smit, N.

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Core concepts

2.1 Introduction

The main reason why information structuring is a complex field of study has to do with its position in the wider context of verbal communication. Information structuring studies phenomena that are on the intersection of Grammar and its surrounding components. It has to deal with the Speaker’s communicative intention, but also with the environment in which the intention is to be realized. Important factors in this environment are not only the classical notion of context in the sense of linguistic structures – structural, representational and interpersonal – that were contributed previously and the physical surroundings of the communicative exchange. It also includes the interlocutors’ models of each other’s state of knowledge, as these provide an important part of the input for the decision how the Speaker’s communicative intention is best cast into linguistic form.

Given that so many different parts of the language user’s cognitive apparatus come into play in discussing information structuring, it makes sense to start out with a brief discussion of a number of foundational concepts that underlie the theoretical issues to be taken up in later chapters. This is done in the subsequent sections.

For the sake of brevity, much of the underlying literature is either presented in extremely condensed form, or is only referred to. I am well aware that this creates the impression that this chapter quickly skates over centuries of philosophical literature. It is not the goal of this chapter to provide a comprehensive overview of the foundational literature in the fields of language philosophy, pragmatics and semantics, however: others have already done a fine job in that regard (see in particular Vallduvi 1992; Von Heusinger 1999). The aim of this chapter is simply
to lay a foundation for issues to be discussed in later chapters. To give a balanced overview of all relevant literature is not its intention.

## 2.2 Knowledge

As a fairly trivial prerequisite for a language user to exploit meaning in a communicative exchange, it will be stipulated that this meaning has to be known.

### 2.2.1 Declarative knowledge

Knowledge is a rather cumbersome concept with a myriad of different definitions depending on the academic context in which it is invoked. A rather concrete definition is one that makes reference to the structure of the human brain: knowledge can be thought of as a region of well-connected nodes in a neural network, such that their collective activation requires little effort. However, such a definition is of little use to the purpose of this study. It is simply too all-encompassing, in that all behaviour beyond instinct must be regarded as a reflection of knowledge. Therefore, another ingredient has to be added into the mix: consciousness. Knowledge in this study will be understood as **declarative knowledge**, which can be subjected to conscious cognitive processes such as evaluation, comparison and combination. It follows that knowledge is subjective.

In the context of communication, knowledge must be divided into two broad categories. On the one hand, there is **interpersonal** or **pragmatic knowledge** that concerns knowledge of the communicative exchange per se: who has done what, when, in which capacity, using which morphosyntactic means, to what end, and what was the other’s reaction. On the other, there is **ideational** or **semantic knowledge**, which concerns knowledge of eventualities in a model of the extralinguistic world: the ‘mental imagery’ that is invoked and construed during the communicative exchange (**mental extensions**; cf. Keizer 2008: 202ff).

### 2.2.2 Proposition and model of the world

As far as language is concerned, it is generally accepted that the basic unit for manipulation of declarative knowledge is the **proposition**, irrespective of the source from which the knowledge originates. Whether from direct perception, verbal communication, logical inference, intuition or elsewhere, everything of which we have declarative knowledge and that we use in processes of reasoning or communication is assumed to take the form of a proposition. According to Stalnaker (1978), a proposition is essentially a functor that renders its argument amenable to evaluation. He claims that

\[\ldots\text{a proposition is a rule for determining a truth value as a function of the facts – of the way the world is. Or, a proposition is a way – any way – of picking out a set of possible states of affairs – all those for which the proposition takes the value ‘true’}.\] (Stalnaker 1978: 316)
Dik provides a similar characterization, stating that “propositions are things that people can be said to believe, know or think about. . . . They can be said to be true or false” (Dik 1997a: 52). Consequently, the contents of a proposition designate a possible fact. Stalnaker states that a proposition enables the evaluation of such possible facts against the way the world is. In this study, however, the concept of objective Reality plays no role. Instead, the evaluation of propositional contents is assumed to take place on the basis of a language user’s extant knowledge, which together forms his model of the world. In the remainder of this dissertation, such models will be referred to as $M_W$, where $P$ stands for a participant in a communicative exchange, and $W$ stands for a world.

### 2.2.3 Presupposition

The combination of a proposition and the truth value assigned to it as the result of its evaluation will be referred to as a presupposition. Knowledge is stored in $M_W$ in the form of presuppositions: following the distinction between pragmatic and semantic knowledge made above, we can consequently distinguish between pragmatic and semantic presuppositions.\(^1\) On the basis of the definitions given so far, the following pseudo-formal characterization can be given of the interaction of possible fact, $M_W$ and ‘truth’:

\[
\begin{align*}
\text{prop. content} & \equiv \text{possible fact, } M_W \\
\text{presupposition} & \equiv t/f
\end{align*}
\]

whereby the notion of ‘truth’ must be interpreted as ‘compatibility with $M$’.

### 2.3 Communication

Communication refers to the intentional transmission and reception of messages between agents. It is a central belief in Functional Discourse Grammar (chapter 4) that language is in the first place an instrument of communication, which must be treated as one component of a more encompassing model of the human communicative competence. It was stipulated in the previous section that all knowledge takes propositional form in its interaction with the linguistic system. This allows

\(^1\)The use of presupposition in this study is slightly different from that proposed in Stalnaker (1998) and adopted in Lambrecht (1994), who seem to imply that a presupposition entails acceptance of its contents by the person who entertains it. Also note that it has little to do with logical presupposition. According to Stalnaker (1998: 17), in the logical sense “a proposition that $p$ presupposes that $q$ if and only if $q$ must be true in order that $p$ have a truth value at all”. The famous example used in this context is Russell’s *the king of France is bald*, which can only be assigned a truth value if there is a king of France to begin with. This argument is somewhat void in the present discussion, because language users in a communicative exchange readily make up such logical preconditions as they are needed, as will be argued below.
for the further stipulation that the contents of the messages that are transmitted in communication are propositional: they constitute assertions.

### 2.3.1 Assertion

Unlike objective Reality, $M_W$ is personal. Each individual entertains his own set of presuppositions that can only be accessed directly by himself. By consequence, $M_W$ is incremental: one of the ways in which it can be augmented is by evaluating propositional contents proffered by other language users, and adding the resulting presupposition. Language users proffer such propositional contents as what will be called an **assertion**: an invitation by a Speaker to an Addressee to accept the Speaker’s evaluation of a proposition.

\[
\text{‘}\ p\ (\text{possible fact, } M_W^{\text{Addressee}}) = t/f' \\
\text{‘please accept my evaluation of this possible fact’}
\]

Despite the Speaker’s invitation, the Addressee may decide not to accept the Speaker’s evaluation, and assign the proposition the opposite truth value, depending on the contents of $M_W^{\text{Addressee}}$ and the willingness of the Addressee to abandon his current model of the world in favour of the alternative the Speaker suggests. Although this yields a different presupposition than the one the Speaker intended the Addressee to entertain, it is a presupposition nonetheless, the contents of which are known to the Addressee.

#### 2.3.2 Common ground

The assumption that language users entertain their own personal models of the world makes it difficult to arrive at a principled limitation of the knowledge that language users draw on when making their assertions. What causes a Speaker to make an assertion, and how is it that the acceptability of an assertion can be assessed at all by the Addressee? Both problems are commonly referred to by the term **common ground**, but their origin is quite different. I will refer to them below as **ideational common ground** and **interpersonal common ground**.

**Ideational common ground** The acceptance of an assertion relies on the evaluability of the proposition it contains. The evaluability of the proposition relies in turn on the interpretability of its propositional content.\(^2\) This introduces the rather crucial distinction between knowledge and denotation. Knowledge was defined above as declarative, propositional knowledge, stored in the shape of pragmatic and semantic presuppositions. The contents of semantic presuppositions designate possible facts. It is assumed that the primitives used to designate these possible facts (**semantic entities**, cf. chapter 4) are shared among speakers of the same

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\(^2\)The evaluability of a proposition also relies on the interpretability of $M_W$. However, given that $M_W$ consists of presuppositions, it is regarded to be interpretable by definition.
language, as are the principles by which they can be combined to designate mental extensions that are more complex. This is not to say that the primitives are entirely undisputed: on the contrary, there is assumed to be an ongoing cross-pollination between language users’ MW and the denotation of the primitives they rely on to communicate about that model. Also, because the primitives are considered to be shared, they do not capture exactly what is in each language user’s MW, but only a category-based approximation. In this way, the available means to denote possible facts are assumed to be sufficient to capture enough of the models of the world of speakers of the same language to allow them to exchange beliefs in a meaningful way.

**Interpersonal common ground** The other question is more pertinent to the research at hand: why does a Speaker choose to make an assertion? That is, of the countless presuppositions that constitute MW, why is one considered to be worth asserting in a given communicative exchange, and is another left unexpressed? In order to address this issue, a characterization is needed of what is the aim of communication. Roughly two views are found in the literature, which I will refer to as the decremental and incremental view.

### 2.3.3 Aims of communication

A decremental view on communication states that the aim of communication is to reduce the amount of uncertainty that exists between interlocutors about the world. The *Mathematical Theory of Communication* (coined by Shannon and Weaver 1949) is the most prominent representative of this view. The theory assumes the existence of a set of uncertainties (equivalent to propositions in the terminology introduced above) shared between communicating agents at any time $t$ in a communicative exchange. The Speaker selects an uncertainty, evaluates it against his MW, and makes an assertion. This process is repeated until the set of uncertainties is exhausted. The appeal of a decremental model like the Mathematical Theory is obvious: because the total amount of uncertainty is known (the mutually shared set of propositions is assumedly finite), the extent to which an assertion contributes to the knowledge of the agents in the exchange can be quantified. However, the notion of a mutually agreed, finite set of propositions is problematic in human communication.\(^3\) There is no way to estimate, let alone to test, whether it is indeed the case that interlocutors consider the same set of possible facts at any point in discourse. Human communication, that is, has a high level of unpredictability: although *scripts* (Schank and Abelson 1977) govern the development of a communicative exchange to a certain extent, the content of the actual assertions is largely left for the interlocutors to decide. There is very little that enforces the sets of possible facts that they consider to be identical.

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\(^3\)The Mathematical Theory was designed initially to describe one-way communication between mechanical agents. In such a setting a decremental approach works quite well, given that the ‘models of the world’ of such agents, and thereby the possible facts they are capable of considering, are extremely restricted.
An incremental view on communication therefore seems more suitable to represent the aim of human communication. In this view, communication is not propelled by the elimination of uncertainty, but by each interlocutor’s desire to bring $M^S_W$ in accordance with selected parts of his own. In other words, the aim of communication is understood to be the partial harmonization of interlocutors’ models of the world.

### 2.3.4 Recursive model estimation

The question remains how interlocutors can engage in the harmonization of world models if all knowledge they have access to is their own $M^S_W$. For this, we need to invoke the assumption that language users are capable of maintaining estimates of their interlocutors’ models of the world as part of their own. The assumption consists of four parts, summarized in (3).

\begin{enumerate}
    \item Assumption of recursive model estimation
        \begin{enumerate}
            \item $M^S_W$ contains partial estimations of interlocutors’ $M^A_W$
            \item Estimations can be recursive, such that $M^S_W \supset M^S_{M^A_W} \supset \ldots$
            \item Estimations are non-transitive: a single proposition may be evaluated differently
            \item Estimations are amenable to evaluation
        \end{enumerate}
\end{enumerate}

The estimations that language users maintain of their interlocutors’ models of the world are recursive in the sense that a Speaker’s estimate of an Addressee’s model of the world may contain the Addressee’s assumed estimate of another person’s model of the world, et cetera. Importantly, these nested models of the world may be in conflict ((3c)): that is, language users are capable of dealing with their own model of the world and various derived models, in which the same possible fact may be evaluated differently. Finally, it is assumed that a language user can evaluate interlocutors’ models of the world in terms of compatibility with his own model of the world, in the same way as he is capable of evaluating propositions. A combination of those abilities is nicely illustrated in (4):

\begin{enumerate}
    \item ‘I know that José believes that Karel expects Ronald to pay for the budget overrun. She thinks it’s a fool’s hope, so that actually makes three of us’
\end{enumerate}

The utterance in (4) describes a situation that involves three persons’ beliefs about a possible fact, namely the likelihood of Ronald paying for the budget overrun. The Speaker only has access to his own model of the world, with which the possible fact under consideration is not compatible. As part of $M^S_W$, the Speaker also maintains estimations – which he believes to be correct – of the models of the world of Karel and José. In both models, the possible fact is also evaluated as false. Finally, the Speaker’s estimation of José’s model of the world contains an estimation of Karel’s model of the world. In this model, the possible fact under evaluation is true; in view of the Speaker’s own evaluation of the same possible
fact and his estimation of Karel’s own evaluation of the possible fact, he evaluates José’s model of Karel’s model of the world as false. In (5), the various beliefs and derived beliefs of the Speaker are represented pseudo-formally:

\[(5) \quad e = \text{‘Ronald paying for the budget overrun’} \]

\[a. \quad p\left(e, M_{\text{Speaker}}^{\text{World}}\right) = f \]

\[b. \quad p\left(M_{\text{Speaker}}^{\text{José}} , M_{\text{Speaker}}^{\text{World}}\right) = t \quad \Rightarrow \quad p\left(e, M_{\text{José}}^{\text{World}}\right) = f \]

\[c. \quad p\left(M_{\text{Speaker}}^{\text{Karel}} , M_{\text{Speaker}}^{\text{World}}\right) = t \quad \Rightarrow \quad p\left(e, M_{\text{Karel}}^{\text{World}}\right) = f \]

\[d. \quad p\left(e, M_{\text{José}}^{\text{Karel}} , M_{\text{Speaker}}^{\text{World}}\right) = t \quad \Rightarrow \quad p\left(M_{\text{José}}^{\text{Karel}} , M_{\text{Speaker}}^{\text{World}}\right) = f \]

The utterance in (5) is but one example of the sophisticated ways in which language users can keep track of their interlocutors’ assumed state of knowledge and its compatibility with their own. While the recursion is probably not infinite, chains of the kind ‘I know that you know that he knows that I know that she doesn’t know e’ can reach a surprising level of complexity.\(^4\)

The assumption of recursive model estimation makes it possible to represent the flow of knowledge in communication as a process owned by a single interlocutor. The actual transmission of knowledge from one interlocutor to another by means of uttering an assertion, and everything that can go wrong as part of that, can be removed from the equation. It is replaced by the internal transmission of knowledge from the Speaker’s own model to his estimation of the Addressee’s model. This is what I will refer to as **knowledge management**.

### 2.3.5 Conversational maxims

The process of knowledge management is motivated by a number of mutual assumptions that language users have about each others’ contributions to a communicative exchange. These are captured by the **Cooperative Principle** and the four supplementing categories of **conversational maxims** (Grice 1975), two of which will be discussed below. A communicative exchange in which interlocutors adhere to the Cooperative Principle and the conversational maxims is occasionally referred to as ‘happy discourse’ (following Reinhart 1981).

**Quality** Interlocutors in a communicative exchange operate under a mutual assumption that the other does not just assert anything: rather, they assume a

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\(^4\)It should be stressed that this nesting is seldomly reflected by a single linguistic utterance, as has been attempted here. However, the linguistic properties and the extent to which (4) is interpretable as a linguistic utterance is not at issue. The point is that it reflects the kind of calculations language users make continuously in their communication with others.
commitment of the Speaker to the compatibility of the asserted proposition with his own $M_W$. This is captured in the **conversational maxim of quality**: interlocutors expect each other to be truthful. The mutual assumption of truthfulness has two important consequences. First, it means that asserted propositions are accepted unless the Addressee entertains presuppositions to the contrary. If such conflicts arise, the Addressee can still choose to accept the assertion, and reconcile the incompatibility by revisiting the extant presuppositions that cause the conflict. Alternatively, he may decide to reject the asserted proposition and enter it into his $M_W$ as a false presupposition. In the model given in Figure 2.1 below, two steps rely on the mutual observance of the maxim of quality: the Speaker’s transmission of the presupposition to his model of the Addressee’s model of his own knowledge (step 1) relies on the fact that the Speaker assumes the Addressee to believe that he is sincere in making the assertion, and that the proposition truly is compatible with $M_W$. Second, ‘silence is acceptance’ (step 4) also relies on the observance of quality. Because the Speaker is understood to be committed to the truthfulness of his own assertions, the Addressee conversely is expected to make it explicit if he has moving reasons to reject the part of $M_W$ that the Speaker revealed to him through the assertion.

**Quantity** The maxim of quantity dictates that interlocutors provide precisely as much information as is necessary for the current purpose in the communicative exchange. In regard to knowledge management, it dictates that interlocutors should not assert presuppositions which they know the Addressee already takes for granted, or presuppositions that they have asserted before.

### 2.3.6 A model of interpersonal knowledge management

In Figure 2.1, a flowchart-like representation is given of the way knowledge is managed in communication. The figure reflects knowledge management on the part of the Speaker.

In the initial state of the process, the Speaker entertains a presupposition the contents of which he deems ‘suitable’ for communication. The first step is to verify the Addressee’s assumed state of knowledge of $M_W$. If the Speaker assumes that the Addressee already has knowledge of his presupposition, asserting it again would constitute a breach of the maxim of quantity. The second step is a similar check: only now the Speaker verifies whether, according to his estimation, the Addressee already agrees with him of his own account. If he does, asserting the presupposition would again constitute a quantity violation in most contexts.

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I use *suitable* here to designate a wealth of additional extralinguistic factors that a Speaker has to consider prior to making an assertion. Such factors are in part social: the contents of the presupposition may be taboo, or inappropriate to discuss with the interlocutor because of differences in social position. Another part is ‘opportunistic’: a Speaker may have an interest to keep certain knowledge from his Addressee. All these factors are beyond the scope of the present discussion.
Figure 2.1  Interpersonal knowledge management
If both requirements are met, the presupposition may be asserted. Upon doing so, the Speaker updates his model of the Addressee’s knowledge of his own knowledge: that is, assuming the transfer is successful, the Speaker can now safely assume that the Addressee knows his position regarding the truth of the proposition, irrespective of the question whether he agrees with it. The next step depends on feedback given by the Addressee. Under the cooperative principle and the maxim of quality, the Speaker assumes that silence on the part of the Addressee is tantamount to acceptance of the presupposition: hence, if the assertion is not challenged by a counter-assertion, the Speaker assumes the Addressee to have adopted his view of the facts. \( M_W^S \) and \( M_{MA}^S \) are then harmonized as regards the truth of the proposition that \( e_1 \). If a counter-assertion is made, the Speaker registers the presupposition in his estimate of the Addressee’s model of the world with the opposite truth value. This may trigger him to re-evaluate the original presupposition, upon which a new cycle begins.

\subsection{Information}

A definition of (potential) information follows naturally from the interpersonal model of knowledge management: it is the set difference between the Speaker’s model of the world and his estimation of the Addressee’s model of the world.

\begin{equation}
I = M_W^S \sim M_{MA}^S
\end{equation}

I contains those propositions that the Speaker owns and of the contents of which he estimates that the Addressee has no knowledge at all, and those propositions to which in his estimation the Addressee has assigned a wrong truth value. Potential information turns into actual information if asserting it serves the Speaker’s communicative intention. Assertions are structured in such a way that the chance at felicitous transfer of the information contained in them is maximized.

It will be assumed that, at the penalty of violating the maxim of quantity, Speakers operate under a requirement to be informative in their assertions. That is, they will be assumed to ‘say things the other probably doesn’t know yet’. In what follows, the informativity will invariably be semantic in nature. This is obviously not a necessity: the propositions that are offered for evaluation may also be largely interpersonal in nature, or even entirely.

\subsection{Information structuring}

The Speaker’s communicative intention when uttering an assertion has two aspects. On the one hand, the Speaker wants the Addressee to correctly identify the information contained in the assertion; on the other, he intends this information to affect \( M_{W}^{A} \) in a particular way. The linguistic expression of the assertion is shaped in a manner that maximises the likelihood that both goals are attained: the categories that are imposed on the contents of the assertion to achieve the Speaker’s
communicative intention jointly constitute its **information structure**. The term seems to have been coined by Halliday, who states that information structure is concerned

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\ldots \text{with the status of the elements not as participants in extralinguistic processes but as components of a message; with the relation of what is being said to what has gone before in the discourse, and its internal organization into an act of communication.} \quad \text{(Halliday 1967: 199)}
\]

Information structure is included in the assertion as a specific type of pragmatic presuppositions entertained by the Speaker, which I will refer to below as **informational presuppositions**. Whereas semantic presuppositions determine the ‘what’ of the assertion, informational presuppositions determine its ‘how’. Information structuring trivially relies on the Speaker’s state of knowledge. The Speaker needs to estimate which part of his knowledge differs from that of his Addressee; at the same time, he needs to assess the structure of his Addressee’s state of knowledge, so as to achieve the intended effect of the assertion on $M_A$. In this sense, it is both Speaker-driven and Addressee-oriented. This idea is also echoed by Chafe, who notes that

\[
\ldots \text{linguistic elements may occupy various packaging statuses selected by the Speaker on the basis of his assessment of what the Addressee’s mind is capable of at the time.} \quad \text{(Chafe 1976: 55)}
\]

### 2.4.1 Evoked and entailed presuppositions

Lambrecht (1994: 56ff) points out that the possible fact contained in an assertion in many cases triggers a range of additional semantic presuppositions to become active. Consider (7):

\[
(7) \quad \text{Geoffrey graded the paper}
\]

In (7), the event **Geoffrey grading the paper** is asserted. For most language users, the acceptance of this assertion entails the acceptance of a number of other facts: that Geoffrey is a teacher, that a paper has been written, that the paper is about a subject in Geoffrey’s field of expertise, that Geoffrey has read the paper, et cetera. It could be argued that all these presuppositions are ‘co-asserted’ when (7) is uttered. However, this leads to problems that are very similar to the ones discussed above when common ground was introduced: if there is no communicative behaviour that can serve as ‘hard evidence’, and if interlocutors are assumed to entertain their personal models of the world, how can the existence of these additional presuppositions be verified? Therefore, only those semantic presuppositions will be considered that are evoked lexico-grammatically in the assertion, or that arise from the combination of the assertion and the context in which it is uttered. Regarding (7), additional presuppositions may be activated if the Speaker stresses the Subject, as in (8):
(8) Geoffrey graded the paper

The emphasis on Geoffrey highlights the fact that his occurrence in the event is particularly noteworthy. This may trigger additional presuppositions to become active that pertain to ‘Geoffrey’: the preceding or following context in such cases will shed light on the particular presupposition at issue.

2.4.2 Context set, relevance, discourse topicality

So far, it has been stated that language users evaluate assertions on the basis of their model of the world. However, from the viewpoint of procedural adequacy it is not feasible that the contents of every assertion are evaluated against an interlocutor’s entire Mw. Not only would this take up a disproportionate amount of processing resources, it would also be quite superfluous to verify, say, the validity of an assertion made in a communicative exchange about the Speaker’s cat against the Addressee’s beliefs about Peruvian politics in the 1950s. For these reasons, Stalnaker (1978: 321) introduces the notion of a context set, a subset of the language user’s beliefs ‘recognized by the speaker to be the ‘live options’ relevant to the conversation’. The context set is restricted by the relevance of presuppositions to a mutually agreed discourse topic (Van Dijk 1977).

The nature of this triplet of interrelated notions is rather elusive, most of all because relevance nor discourse topic are categories that have very noticeable repercussions for the linguistic structure of the assertion. Unless special circumstances apply (Beyssade et al. 2003), relevance of an assertion to a discourse topic is rarely signalled overtly. This is arguably due to Grice’s Cooperative Principle, which requires interlocutors to do their utmost to make sense of each other’s assertions. The maxim of relevance dictates that each contribution be relevant to the communicative exchange; hence, if the relevance of an assertion is not immediately obvious to the Addressee, he will try hard to establish relevance a posteriori. As a result, relevance obtains between virtually any given assertion and the Addressee’s context set, precisely because the assertion is made. This insight is echoed in Relevance Theory (Sperber and Wilson 1986), where it is argued that the ability of an Addressee to construe relevance entails the existence of relevance. Nevertheless, the construability of relevance is facilitated by an assertion’s expectedness: the more expected an assertion is in the context of an Addressee’s context set, the easier the construal of relevance. Expectedness is promoted by a number of semantic and pragmatic relations, as will be discussed in more detail in section 3.4.2.1.

I will continue to use M to designate a language user’s model of the world. However, its interpretation will henceforth be restricted to the language user’s context set of presuppositions relevant to the discourse topic. All lexico-grammatically evoked presuppositions will be considered relevant, unless their relevance is challenged by the Addressee. The presuppositions in the context set are understood to be more readily available to the language user than other, more peripheral knowledge.
2.4.3 Informational presuppositions

Lambrecht (2001a: 474ff) proposes a distinction between three types of informational presuppositions.\(^6\) **K-presuppositions** (knowledge) relate to the Addressee’s assumed state of ignorance. They distinguish the portion of the propositional content that the Speaker estimates the Addressee has yet to evaluate from the portion that he assumedly already takes for granted. By contrast, the **T-presupposition** (topicality) concern the Addressee’s assumed state of knowledge, or at least a specific part thereof. It identifies what the Speaker considers to be the Addressee’s **current center of interest**. **C-presuppositions** (consciousness) involve the **activation status** (Chafe 1976; Prince 1981) of the mental extensions evoked in the propositional content. C-presuppositions distinguish between referents and relations for the ideation of which little effort is required, as opposed to those that have to be retrieved from long-term storage or the ideation of which must be built up from scratch.\(^7\)

Due to the Cooperative Principle, the informational presuppositions that are packaged in the assertion exert a strong influence on the Addressee’s MW: interlocutors mutually assume that the other is not pulling their informational leg, so to speak. Therefore, if a Speaker miscalculates his Addressee’s state of knowledge and – for instance – wrongfully presupposes a certain mental extension to be at his current center of interest (that is, the Speaker entertains a wrong T-presupposition), the Addressee will readily adapt to this assumption as it becomes apparent from the way the Speaker’s assertion is encoded. This mechanism is described in Lewis’s **Rule of accommodation for presupposition**:

> If at time t something is asserted which requires presupposition p to be acceptable, and if p is not presupposed prior to t, then – ceteris paribus and within certain limits – presupposition p comes into existence at t.  
> (Lewis 1979: 172)

2.4.4 A three-way division of information structuring

The informational presuppositions are rather different in terms of the aspects of the interlocutor’s knowledge they affect. C-presuppositions target the activation status of the language user’s mental images of facts: in terms of the notions introduced

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\(^6\) Lambrecht’s proposal echoes work by Strawson, who argues that language users rely on three presumptions when they engage in communication. His **presumption of knowledge** dictates the existence of a minimal level of (ideational) common ground; the **presumption of ignorance** captures the idea that the Speaker assumes the gist of his message to be unfamiliar to his audience. Finally, his **presumption of relevance** is an assumption by the Addressee that Speakers “give or add information about what is a matter of standing concern” (Strawson 1971: 97).

\(^7\) Different authors propose different activation statuses. The six-way **givenness hierarchy** proposed in Gundel et al. (1993) is arguably the most authoritative. Lambrecht (1994: 109ff) argues that the givenness hierarchy is a conflation of activation status and focality, and proposes a seven-way hierarchy of identifiability and activation as an alternative.
previously in this chapter, they concern the relation between mental extensions and the semantic entities that are used to designate them. K-presuppositions and T-presuppositions, on the other hand, convey the Speaker’s beliefs about the relations in $M^A_W$ between these mental extensions and the semantic presuppositions in which they figure, as well as the changes he wants made to this arrangement. An altogether separate but related issue is the establishment of semantic coherence between propositional contents in a communicative exchange. Figure 2.2 is an attempt to graphically represent the domain of information structuring. As the figure illustrates, interlocutors face a threefold task to ensure that information is transferred successfully: referent management, coherence management and information packaging. The first is concerned with the relation between semantic entities and their mental extensions; the second with the relation between semantic presuppositions in which these extensions figure; and the third is concerned with the relation between mental extensions and semantic presuppositions.

![Figure 2.2](image-url)  
**Figure 2.2**  
The three faces of information structuring

In this triplet, coherence (Kehler 2002) is an ideational rather than an interpersonal notion, in that it targets the relations between (mental representations of) events rather than between interlocutors’ beliefs about the role of these events in the communicative exchange. Its concern is to maintain a plausible concatenation of propositions. Nevertheless, coherence has important ties to informational presuppositions, in particular T-presuppositions. That is, it seems that the existence of coherence between events in a discourse greatly facilitates the construability of relevance, which – as has been argued earlier – is a key notion in ensuring the evaluability of propositions in the current context set. In an experimental study, Bornkessel et al. (2003) show that assertions made in coherent discourse are evaluated quicker than those made in non-coherent discourse. Theoretically, many accounts of the marking of typical informational roles like Topic and Focus invoke not just categories from the domain of information packaging, but also factors that relate to activation and/or coherence (for a partial overview, cf. Prince 1981).
ubiquitous in which the contribution of each separate factor to the grammatical structure cannot be easily identified (cf. among many others Jasinskaja et al. 2004; Kruijff-Korbayova and Steedman 2003).

This dissertation, however, is concerned with information packaging only, and more in particular with the encoding of its constituent categories in the grammars of the languages of the world. The dependencies between it and the activation status of mental extensions or interpropositional coherence relations are not at issue. The influence of referent and coherence management on the structure of the expression will therefore be left out of consideration as much as possible.

2.5 Conclusion

This chapter has introduced a number of foundational concepts relating to knowledge, communication and information structuring. It has been emphasized throughout this chapter that communication and therefore information structuring are a matter of continuous negotiation between Speaker and Addressee, whereby both assume the other to be faithful in his attempts to communicate. A view on discourse knowledge management has been introduced that makes extensive use of recursive modelling, which enables a representation of the flow of knowledge in discourse as a process that takes place within in a single language user.

In the next chapter, we will zoom in on the way in which knowledge used in communication can be structured, and how this structure can be exploited to achieve changes to extant structuring of discourse knowledge in one’s interlocutor. After that, chapter 5 presents an account of how the instructions needed to manipulate the knowledge of the Addressee can be represented in Grammar.