

Lakoff (1987) refines his introduction of Idealized Cognitive Models by providing a classification of different types of ICMs, according to the basic type of semantics embodied in the models. Next to the more usual propositional models (of the *bachelor* type, for instance), all the kinds of semantic phenomena that we discussed earlier may lie at the heart of an Idealized Cognitive Model. A metaphoric pattern of the type LOVE IS WAR, for instance, may be classified as a metaphoric Idealized Cognitive Model. Similarly, there are image-schematic models, and metonymic models. This subclassification of ICMs reveals that the notion of Idealized Cognitive Model is a fairly unrestrained one, which hardly imposes any constraints on semantic descriptions. In this sense, the notion of ICM is best seen as a cover-term for the various models of (encyclopedic) knowledge that cognitive semantics pays attention to, but not as a specific descriptive model.

### 5.3.2 *Frame semantics and FrameNet*

When 'frame' is not just used as a broad synonym of Idealized Cognitive Model, Fillmore's more technical usage of the term refers to a specific way of analysing the semantics of natural language, which grew out of his work on case grammar (1977a). As typical features of this type of analysis we should mention the following: frame theory is specifically interested in the way in which language may be used to perspectivize an underlying conceptualization of the world—it is not just that we see the world in terms of conceptual models, but those models may be verbalized in different ways. Each different way of bringing a conceptual model to expression, so to speak, adds another layer of meaning: the models themselves are meaningful ways of thinking about the world, but the way we express the models while talking adds perspective. In the context of Cognitive Linguistics in the larger sense, perspectivization is seen as a crucial aspect of meaning construal: see Verhagen (2007) for an overview.

This overall starting point of Fillmorean frame theory leads to a description on two levels. On the one hand, a description of the referential situation or event consists of an identification of the relevant elements and entities and the conceptual role they play in the situation or event. On the other hand, the more purely linguistic part of the analysis indicates how certain expressions and grammatical patterns highlight aspects of that situation or event. In an early stage of frame theory, the two levels of description were terminologically conveniently distinguished by the terms 'scene' and 'frame' respectively. The scene was the underlying conceptual structure, whereas the notion of frame referred to the grammatical patterns highlighting parts of the scene. In later developments of the theory however, the terminological distinction was abandoned, and only the term 'frame' remained in use.

	buyer	seller	goods	money
<i>buy</i>	subject	(to)	direct object	(for)
<i>sell</i>	(to)	subject	direct object	(for)
<i>charge</i>	(indirect object)	subject	(for)	direct object
<i>spend</i>	subject	–	for/on	direct object
<i>pay</i>	subject	(indirect object)	(for)	direct object
<i>pay</i>	subject	(to)	for	direct object
<i>cost</i>	(indirect object)	–	subject	direct object

FIGURE 5.8. The COMMERCIAL TRANSACTION frame according to Fillmore and Atkins

To illustrate, we will present two examples of frame analysis, the RISK frame and the COMMERCIAL TRANSACTION frame. The commercial transaction frame involves words like *buy* and *sell*. The commercial transaction frame can be characterized informally by a scenario in which one person gets control or possession of something from a second person, as a result of a mutual agreement through which the first person gives the second person a sum of money. Background knowledge involved in this scenario includes an understanding of ownership relations, a money economy, and commercial contracts. The basic categories needed for describing the lexical meanings of the verbs linked to the commercial transaction scene include Buyer, Seller, Goods, and Money. Verbs like *buy* and *sell* then each encode a certain perspective on the commercial transaction scene by highlighting specific elements of the scene. In the case of *buy*, for instance, the buyer appears as the subject of the sentence and the goods as the direct object; the seller and the money appear in prepositional phrases: *Paloma bought a book from Teresa for €30*. In the case of *sell*, on the other hand, it is the seller that appears as a subject: *Teresa sold a book to Paloma for €30*. A more extended set of verbs is charted in Figure 5.8. The cells indicate in what syntactic form the elements of the frame appear in the syntagmatic pattern of the verbs. (Elements between brackets are optional. Empty cells indicate that the element is not relevant for the verb in question. The table is slightly simplified in comparison with Fillmore and Atkins 1992.)

The RISK frame contains the following set of elements (Fillmore and Atkins 1994: 367–8):

Protagonist	the central person in the frame
Bad	the possible bad outcome or harm
Decision	the decision that could trigger this
Goal	the desired outcome
Setting	the situation within which the risk exists
Possession	something or someone valued by the protagonist and endangered in the situation
Source	something or someone which could cause the harm

In Fillmore and Atkins (1992, 1994), this set of frame elements is the starting point for an analysis of sample sentences taken from a corpus of American English (see also Fillmore 1992, Fillmore and Atkins 2000). The analysis proceeds in the same way as we saw in the case of the commercial transaction scene: semantic roles in the frame are linked to grammatical forms of expression. Thus, a sentence like *Why should he risk his life to try to save Brooks?* could be analysed and tagged as *Why should {he}<sub>Protagonist</sub> risk {his life}<sub>Possession</sub> {to try to save Brooks}<sub>Goal</sub>?* As before, one particular element of the frame may be expressed by different grammatical forms. For instance, the possible Bad outcome may be expressed by a gerund, as in *we risked being killed*, but also by a nominal phrase, as in *we risked death to help you*. In the same way, the Decision is expressed by a gerund in *he risked swimming in the river*, and by a nominal phrase in *he risked a swim* (or metonymically, *he risked the river*). A difference with the example of a commercial transaction scene is that the RISK frame allows us to see how elements from different word classes can be related to the same background: the RISK frame describes the behaviour of both the verb *to risk* and the noun *risk*. For instance, a combination of the Protagonist and the Possession can be expressed by the sentence *he risked his life*, but also by *he put his life at risk*. A combination of the Protagonist and a Bad outcome is present in both *he risked falling down* and *he ran the risk of falling down*.

The collaboration between Fillmore and Atkins from which we quoted earlier set off two extensions of frame semantics: first, the systematic use of corpus materials as the main source of empirical evidence for the frame-theoretical analyses, and second, the development of an electronic dictionary with frame-theoretical descriptions. In a nutshell, these two developments go together in the Berkeley FrameNet project, which attempts to do for frame semantics what WordNet did for structuralist lexical relations (Johnson, Fillmore, Wood, Ruppenhofer, Urban, Petruck, and Baker 2002; Ruppenhofer, Ellsworth, Petruck, Johnson, and Scheffczyk 2006). The on-line FrameNet lexical database currently consists of more than 10,000 lexical units (that is, words or expressions paired to meanings), associated with roughly 900

hierarchically ordered frames, and illustrated by more than 135,000 annotated sentences taken from corpora.

The information may be accessed by starting from the frames, or by starting from the lexical units. As an example, let us consider the frame REVENGE. Simplifying, the description of the frame consists of a definition, a list of the frame elements, and an enumeration of the lexical units associated with the frame. (Non-core frame elements are not included in the example below.)

#### *Definition*

This frame concerns the infliction of punishment in return for a wrong suffered. An Avenger performs a Punishment on a Offender as a consequence of an earlier action by the Offender, the Injury. The Avenger inflicting the Punishment need not be the same as the Injured\_Party who suffered the Injury, but the Avenger does have to share the judgment that the Offender's action was wrong. The judgment that the Offender had inflicted an Injury is made without regard to the law.

#### *Frame Elements*

**Avenger:** The Avenger exacts revenge from the Offender for the Injury.

**Injured\_Party:** This frame element identifies the constituent that encodes who or what suffered the Injury at the hands of the Offender. Sometimes, an abstract concept such as a person's honour or their blood is presented as the element that has suffered the Injury. These also constitute instances of Injured\_Party.

**Injury:** The Injury is the injurious action committed by the Offender against the Injured\_Party. This Frame Element need not always be realized, although it is conceptually necessary.

**Offender:** The Offender has committed the earlier Injury for which the Avenger seeks revenge.

**Punishment:** The Avenger carries out a Punishment in order to exact revenge on the Offender.

#### *Lexical Units*

avenge.v, avenger.n, get\_back\_((at)).v, get\_even.v, payback.n, retaliate.v, retaliation.n, retribution.n, retributive.a, retributory.a, revenge.n, revenge.v, revengeful.a, revenger.n, sanction.n, vengeance.n, vengeful.a, vindictive.a

If we then turn to one of the lexical units, like *vengeance*, we again get a definition ('punishment inflicted in retaliation for an injury or offence'), together with a detailed description of the relevant grammatical patterns. These are, not surprisingly, characterized both in terms of the configurations

of frame elements that they exhibit and in terms of the syntactic valence patterns that instantiate those configurations. Annotated sentences from the corpora exemplifying the valence patterns may be retrieved separately. The sentences below illustrate some of the possibilities for *vengeance* as attested in the corpus.

My God, {she}<sub>Avenger</sub> would have *vengeance* {for this}<sub>Injury</sub>!

After all, {I}<sub>Avenger</sub> had taken *vengeance* {on her behalf as well as mine}<sub>Injured\_Party</sub>.

Some made hazardous, roundabout trips to join the Pretender via the Orkney Islands and Norway, but {the government's}<sub>Avenger</sub> *vengeance* {on those who could not get away}<sub>Offender</sub> was relatively restrained.

{He}<sub>Avenger</sub> had meted out *vengeance* {to his chief enemy, Grant}<sub>Offender</sub>, so any further attack upon mere pawns would be unnecessary.

There are many who believe {this disease}<sub>Punishment</sub> is {God's}<sub>Avenger</sub> *vengeance*.

The example may also make clear in what way the FrameNet lexical database differs from Mel'čuk's Explanatory Combinatorial Dictionary, with which there might seem to be a superficial resemblance. First, while the Explanatory Combinatorial Dictionary—and WordNet, for that matter—relate words among one another, the FrameNet lexical database relates words to frames. The relations between the words derive indirectly from this direct link to the frame. Second, the semantic functions in the FrameNet lexicon are defined relative to a frame too, in contrast with the lexical functions in the Explanatory Combinatorial Dictionary, which are general ones, holding for the lexicon as a whole.

The elaboration of a lexical database like FrameNet is an important development in the context of cognitive semantics, because it constitutes a link with computational lexical semantics. In general, the cognitive semantics movement is not as interested in an attempt to formalize semantic descriptions as are many of the neostructuralist models. Against the background of the questions that were activated by generativist semantics—the question of formalization and the question of cognitive adequacy—cognitive semantics clearly gives precedence to the latter. The FrameNet lexical database, however, is a major exception to this tendency.

## 5.4 Usage and change

Cognitive semantics has a natural affinity with historical-philological semantics: its emphasis on the flexibility of meaning, its broadly encyclopedic conception of meaning, and its cognitive orientation as such constitute an implicit

return to the interests of prestructuralist types of semantics. Not surprisingly, cognitive semantics has shown a specific interest in diachronic semantics. In this section, we briefly survey the relevant work, from two different perspectives: the overall usage-based model of change and the descriptive contributions of cognitive semantics.

#### 5.4.1 *Invited inference and pragmatics*

As a usage-based approach to meaning in general, cognitive semantics obviously takes a usage-based approach to meaning change in particular: new word senses emerge in the context of actual language use. Conceptually, this implies a distinction between decontextualized, coded meanings (stored in the language user's semantic memory) and contextualized readings that are realized in a specific discourse context. We have already discussed aspects of such a model in Chapter 4, and we are aware that from a historical point of view, this is not a novel idea: it is easily recognized as essentially the same model that lies behind Paul's distinction between an *usuelle Bedeutung* and an *okkasionelle Bedeutung* (see 1.2.2). That historical precedent is not often recognized by contemporary theorists, an example of the phenomenon we announced in the introduction to Chapter 1: the scholarship that emerged in the historical-philological era is not well known. The overall model comes in a number of terminological and theoretical guises, but the most articulate formulation is without doubt the Invited Inferencing Theory of Semantic Change initiated by Elizabeth Traugott (1982, 1985b, 1988, 1989) and described in great detail by Traugott and Dasher (2005). A crucial advance in comparison to earlier or more simple formulations of a usage-based model of change is the explicit reference to pragmatics in the Invited Inferencing Theory of Semantic Change. In fact, if new meanings arise at the level of discourse, the apparatus of linguistic pragmatics should be applicable to the relevant processes. Simplifying, this link with pragmatics takes two forms.

First, the contextualization of coded meanings takes shape through 'invited inferences', interpretations that are not expressed explicitly but are nevertheless intended or at least allowed by the speaker/writer. In a standard case of metonymy like *Don't forget to fill up the car*, the conclusion that it is not the entire car that needs to be filled with fuel is not an accident; it is intended by the speaker/writer. To explain how and when such inferences come about, Traugott and Dasher refer to the neo-Gricean pragmatic principles formulated by Horn (1984). These principles distinguish between a Q-heuristic (like the first Gricean maxim of Quantity: 'make your contribution sufficiently informative, and mean no more than that'), an R-heuristic (invoking the second Gricean maxim of Quantity, and the maxim of Relevance: 'say or write no more than you must, and mean more thereby'), and an M-heuristic

(specifying Manner: 'marked expressions signal a marked meaning'). It is the application of the R-heuristic that can result in semantic change of the invited inference kind: the speaker/writer uses an expression that is less explicit than it might be, but the full interpretation can be safely retrieved by the hearer/reader.

Second, drawing on a distinction introduced by Levinson (1995), Traugott and Dasher suggest the following path for the process by means of which such invited inferences become conventionalized. As a first step, following the mechanism that we just described, a conventional coded meaning gives rise to an utterance-token meaning, in a particular context. As a second step, the utterance-token meaning may crystallize into an utterance-type meaning, i.e. a generalized invited inference that is the default interpretation of an expression but that may still be cancelled. For instance, *after* in *After the trip to Minnesota she felt very tired* would normally be interpreted as implying a causal link, but that inference may be blocked in a sentence like *After the trip to Minnesota she felt very tired. It turned out that she had been sick for quite some time*. In the latter sentence, it is no longer implied that she felt tired because of the trip. Finally, the utterance-type meaning may further stabilize into a new coded meaning, existing alongside the original one and sometimes replacing it. Note that the situation in which the inferences are activated together with the original meaning function as a bridging context between the new and the old meaning. An example of the process of conventionalization of implicature was presented earlier: see the reference to König and Traugott (1988) in section 4.1.3. Here, it may be useful to briefly discuss a few theoretical points raised by the Invited Inferencing Theory of Semantic Change.

In the first place, although the examples given so far only involve metonymies, the model is a general one. Novel metaphors too, for instance, may be seen as emerging in the form of invited inferences: a lover who addresses his beloved as *squirrel* triggers the implication that he sees her as lively and dynamic. Nevertheless, in the actual applications of the Invited Inferencing Theory of Semantic Change, the emphasis is on metonymic relations, and there may be a tendency to see invited inferences as a particular type of metonymy only. To avoid terminological confusion, it may be useful to distinguish between two levels that play a role here. On the level of speech acts, an inference is by definition metonymic: the utterance *Squirrel, I love you* triggers the thought 'He cannot mean that I am a rodent, so he must mean that I am agile, industrious, and inquisitive'. That is a process that is easily recognized as an example of a cause/effect metonymy. On the level of the propositional meaning of the predicates, however, the relation between the 'rodent' reading and the figurative reading cannot be classified as metonymic.

In the second place, let us repeat a point made earlier: making room for the contextual determination of meaning does not automatically imply