PROBLEM	You get fired and need a job. You bounce a check and need to deposit funds. Your dog dies and you long for companionship.
SUCCESS	You ask for a raise and you get it. You fix a flat tire. You need a car so you steal one.
FAILURE	Your proposal of marriage is declined. You can't find your wallet. You can't get a bank loan.
RESOLUTION	Your broken radio starts working again. They catch the thief who has your wallet. You fix a flat tire after a blow out.
LOSS	Your big income tax refund is a mistake. The woman you love leaves you. The car you just bought is totaled.
PERSEVERANCE	You want to get married (again). You reapply to Yale after being rejected. You want to ski again after a bad skiing accident.
HIDDEN BLESSING	You get audited and they owe you. You sprain an ankle and win damages. Your mother dies and you inherit a million.
MIXED BLESSING	You buy a car and it turns out to be a lemon. You fall in love and become insanely jealous. Your book is reviewed but they hate it.

Figure 1.5 Examples of primitive plot units (adapted from Lehnert, 1981)

TAQ 12

Allocate the following events to one of the primitive plot units listed in Figure 1.5.

a) *Your car breaks down.*
b) *You pass an exam.*
c) *You buy a dog that costs a lot to feed.*
d) *You reapply to the Open University next year.*

One point you should notice about the use of goals and plans to understand stories is that they are based on people's motives and intentions in real-life situations. In fact, all the schemas we have discussed so far have been based on experiences of the world, including being told things. Clark's bridging inferences depend on general knowledge about rooms and chandeliers, about dislike of warm beer – at least in America; Bransford *et al.*'s experiments rely on people knowing that turtles, logs and fish can all exist in water, and about likely occurrences on peace marches and space-ship landings; Schank's scripts encapsulate what we know about eating in restaurants and going to the doctor.

According to this view, the schemas necessary for understanding language are identical with the schemas used for understanding the world about us and the motives behind people's actions. People use language to communicate about things which are important to them. Instead of reaching over to grab the salt, I am likely to say *Please pass the salt.* Instead of going ahead and digging up the whole garden, it is more cost-effective to have a discussion about where to plant the dahlias this year. Instead of constantly asking *What do you mean?* and *Who are you talking about?*. life is likely to be pleasanter if listeners try to make inferences based on general knowledge about what speakers are likely to be referring to and what meanings they are trying to convey.

It seems likely though, in addition to general knowledge about what happens in real-life situations, people also have schemas which represent their expectations about the form of linguistic inputs, especially stories and texts.

4.5 *Story schemas and story grammars*

The basic notion of *story schemas* is that we know something about how all stories are structured, over and above the content of any particular story. The only way we can know this is from experiences of hearing and reading many stories. all of which conform to a typical structure.

When you think of all the different kinds of stories you may have read – novels, collections of short stories, children's stories, newspaper stories – you may well wonder if there are any rules which can define a single typical structure for all stories. Several psychologists have proposed that, at least for fiction, all the different 'surface' forms of stories can be interpreted in terms of a 'deep' underlying structure which is universal to all stories. This deep structure can be defined by a set of rules known as a *story grammar*.

The rules in a story grammar are of a special type known as *rewrite rules*. This means that the structure of a story can be defined in terms of rules which can be used to 'rewrite' the story into its component parts. Figure 1.6 shows a set of grammar rules for simple stories proposed by Thorndyke (1977).

What these rules mean is that, according to Rule 1, a STORY can first be broken down into a SETTING followed by a THEME followed by a PLOT followed by a RESOLUTION. Rule 2 states that the SETTING can be rewritten as consisting of information about CHARACTERS, the LOCATION and TIME at which the

Rule number	Rule
1	STORY → SETTING + THEME + PLOT + RESOLUTION
2	SETTING → CHARACTERS + LOCATION + TIME
3	THEME → GOAL
4	PLOT → EPISODE(S)
5	EPISODE → SUBGOAL + ATTEMPT(S) + OUTCOME
6	ATTEMPT → EVENT(S)
7	RESOLUTION → EVENT and/or STATE
8	GOAL → DESIRED STATE

Figure 1.6 Grammar rules for simple stories (adapted from Thorndyke, 1977)

story takes place. According to Rule 3 the THEME can be rewritten as stating the GOAL of the main character. Rule 4 states that the PLOT consists of one or more EPISODES, which themselves include SUBGOALS, ATTEMPTS (involving EVENTS), and OUTCOMES (Rules 5–6). Finally, Rules 7 and 8 state that the RESOLUTION consists of an EVENT or a STATE which is a DESIRED STATE in terms of the original GOAL as stated in the THEME.

Let us take a simple story as an example (each phrase in the story is identified by a number):

Once upon a time (1) a prince and princess (2) were walking in the forest (3). The prince wanted to marry the princess (4). He asked her to marry him (5). She said yes (6). They got married and lived happily ever after (7).

Figure 1.7 shows how story grammar rules can be used to generate a structure for this particular story. Structures of this kind are known as *tree structures* because they consist of *nodes* which branch out from a single node, the STORY. (You will notice that it is really an upside-down tree with the trunk at the top and the branches at the bottom.) One characteristic of rewrite rules is that you go on rewriting the nodes until you get down to the actual phrases in the story (known as *terminal nodes* because they are filled in at the bottom of the tree structure with actual story events).

Apart from being an exceedingly simple story, this analysis shows that goals and subgoals are often not explicitly stated in a story but have to be inferred from the actions of the characters. The claim is

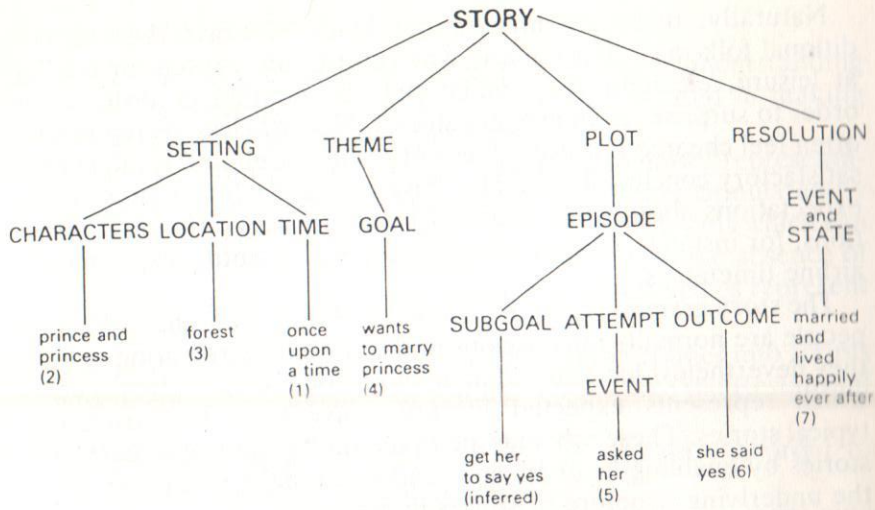

Figure 1.7 Tree structure for a simple story

that, while the rules may allow certain 'surface' elements to be omitted, we cannot understand the 'deep' structure of a story unless we infer the missing goals and subgoals.

It has been shown (Thorndyke, 1977) that leaving out crucial elements like the THEME or altering the order of story components makes stories harder to understand and remember. In general, the more a story conforms to the 'ideal' structure set out by the grammar, the easier it is to understand. Stories with an ideal structure are said to reflect a *canonical* story format. On the other hand, stories with such predictable structures tend to be rather boring – at least for adult readers.

Mandler and Johnson (1977) make the point that story grammars are particularly suitable for folk-tales which are passed on orally from generation to generation before being written down. The reason why traditional story-tellers are able to recite long complex stories from memory is that the stories conform to an underlying structure in which a single protagonist carries out a series of actions to achieve a stated goal. Regardless of how many events occur in the story, a teller can keep track of the overall framework of the story. It has often been noted that story-tellers produce slightly different versions of a basic story on each occasion, showing that they have memorized, not a word-perfect surface version, but rather the underlying deep structure which enables them to generate the events in the story.