semantic information and plays an important role in listening comprehension. Learners’ understanding of intonation differs, according to their mother tongue. For example, as Ogata (1993) mentions, in the case of learners whose mother tongue, such as Japanese, tends to be constructed of monotonous intonation, it is not easy for them to get used to several kinds of rising intonation, such as in non-monotonous intonation patterns. Ogata gives examples on this point as indicated below:

1. Is that a dog?
2. Is that a cat?

In comparing these examples, 1 is more difficult for the Japanese to listen to than 2.

Prior knowledge

In comprehending speech, listeners compare and collate the speakers’ linguistic information with their own structured knowledge, or prior knowledge. The linguistic information that can be collated with prior knowledge is integrated into the listeners’ comprehension structures. In other words, those who cannot adapt their prior knowledge easily cannot understand speech properly. For example, when listening to difficult lectures involving complicated language, those listeners who know something about the content of the lecture beforehand and have prior knowledge of the subject find listening comprehension easier. They have existing schemata which help them to organise the information they are hearing and assimilate it to their prior knowledge.

Attention and memory

In order to process phonetic language information that fades away instantly, much more attention is required than in reading comprehension. If listeners do not pay close attention to the speaker’s utterance, they grasp only a slight amount of linguistic information, and have to infer the contents of the message just from this. As O’Malley et al. mention, ‘effective listeners seemed to be aware when they stopped attending and made an effort to redirect their attention to the task’ (1989: 428); thus attention is one of the important factors necessary in order to listen to linguistic information.

There are short-term memory and long-term memory factors in listening comprehension. The former is the memory in which listeners catch and distinguish the speaker’s utterance as linguistic information for only a few minutes, as a hypothesis about what is being said. On the other hand, the latter is memory organisation that memorises the content as a final conclusion for a long period of time. There is a rehearsal buffer between the short-term memory and the long-term memory, which utilises all the preconceived knowledge in long-term memory, ruminates on the meaning of the entire input product and transfers this information from the short-term memory to the long-term memory.

The relationship between listening comprehension and memory is complicated. There are some reports that consider the differences in the influence of short-term memory in listening comprehension by native speakers and non-native speakers. Conrad (1989) found, in work with non-native English speakers of high and medium skill levels listening to recorded sentences at different speaking rates, that non-native speakers tended to ignore information in the middle of sentences and tried to duplicate beginnings or ends of sentences. However, Dunkel et al. (1993), working with both native speakers and non-native speakers, presumably at high or advanced level, found that subjects with good short-term memory correctly recognised significant information and detailed information better than subjects with poor short-term memory.

It can be argued that differences of linguistic information processing cause the differences of memory capacity. As Richards (1987) suggests, ‘spoken language is generally delivered one clause at a time’. His statement can be juxtaposed with Japanese characteristics in linguistic information processing – i.e. processing incoming discourse word by word; and ‘back-to-front reading’ (harrigumi in Japanese means an explication of an English sentence according to Japanese word order) – i.e. generally, from later sections to earlier sections. It is clear that these characteristics limit the quantity of linguistic information which can be processed at one time, which makes short-term memory