



Figure 2.4 Two Types of Nets

Semantic nets are sometimes referred to as *associative nets* because nodes are associated or related to other nodes. In fact, Quillian's original work modeled human memory as an associative net in which concepts were the nodes and links formed the connections between concepts. According to this model, as one concept node is stimulated by reading words in a sentence, its links to other nodes are activated in a spreading pattern. If another node receives sufficient activation, the concept would be forced into the conscious mind. For example, although you know thousands of words, you are only thinking of the specific words in this sentence as you read it.

Certain types of relationships have proved very useful in a wide variety of knowledge representations. Rather than defining new relationships for different problems, it is customary to use these standard types. The use of common types makes it easier for various people to understand an unfamiliar net.

Two types of commonly used links are **IS-A** and **A-KIND-OF**, which are sometimes written as **ISA** and **AKO** (Winston 84). Figure 2.5 is an example of a semantic net using these links. In this figure the IS-A means "is an instance of" and refers to a specific member of a class. A **class** is related to the mathematical