The second distinction made by Ausubel (1961, 1963b) and Ausubel et al. (1978) is between rote and meaningful learning. Rote learning is the same as verbatim memorization, and to Ausubel, that means the learner has made no real connection between what was already known and what was memorized. What was memorized stands as an arbitrary piece of information in isolation from the rest of cognitive structure. Children frequently memorize the Pledge of Allegiance, for example, and cannot tell you what the pledge means. By contrast, meaningful learning refers to the process of relating potentially meaningful information to what the learner already knows in a nonarbitrary and substantive way. This means that, in the previous example, the children would have some notion as to what the flag means as a symbol of the United States. With this prior knowledge, they can construct an understanding of what is entailed by pledging allegiance.

It is important to realize, said Ausubel, that either rote or meaningful learning can occur in reception and discovery learning situations. Students may attempt to memorize the results of a science experiment, for example, instead of understanding what the results suggest about the principle under study. Likewise, in reception learning, just because the learner is in a position of receiving information does not mean the learner must be passive. Quite the contrary, meaningful reception learning implies that the learner is cognitively active.

Three conditions are essential to meaningful learning. One is that the learner must employ a meaningful learning set to any learning task. If the learner intends to memorize, then meaningful learning will not result, no matter whether learning is by reception or by discovery. A second essential condition is that the material to be learned must be potentially meaningful. This suggests that learning tasks and materials should be organized, readable, and relevant, so that learners do not fail to learn because they can make no sense of the learning task. Finally, the third and most important condition for meaningful learning is what learners already know and how that knowledge relates to what they are asked to learn. According to Ausubel (1963b), "existing cognitive structure, that is, an individual's organization, stability, and clarity of knowledge is the principal factor influencing the learning and retention of meaningful new material" (p. 217). Given the importance Ausubel placed on prior knowledge in learning, how did he conceive of memory structure?

Cognitive Organization in the Learner

"The model of cognitive organization proposed for the learning and retention of meaningful materials assumes the existence of a cognitive structure that is hierarchically organized..." (Ausubel, 1963b, p. 217). As indicated earlier, Ausubel acknowledged the existence of neurophysiological events underlying learning, but he expressed his theory in terms of hypothetical constructs