

been replaced by A', because the student's understanding of the positive reinforcement principle is no longer the same as it was.

Examples of correlative subsumption can also be readily seen in the content being taught by Mr. Amaya in his social studies class. As the students learn about different aspects of government, they correlatively subsume these characteristics under the inclusive concept, government. (They may also derivatively subsume the labels, democracy and oligarchy, for example, under the label, government.) Then when discussion turns to expressions of patriotism, for example, such as displaying the American flag to commemorate the founding of America's democracy, students correlatively subsume this information under the anchoring idea of democracy (Figure 4.4).

Superordinate and Combinatorial Learning. Not all learning can be explained through the processes of derivative and correlative subsumption, because not all learning occurs in a subordinate fashion. In discovery learning, for instance, students may be working with examples to discover the more general concept or proposition. Thus, learning must be occurring in a superordinate, rather than subordinate, way. Similarly, what about instances in which students learn about similar concepts at the same level in the hierarchy as the anchoring idea? Learning in that case must be neither subordinate nor superordinate, but coordinate, or lateral. To account for learning that is not subordinate in nature, Ausubel, et al. (1978) proposed the processes of superordinate and combinatorial learning.

Superordinate learning occurs through a synthesis of established ideas. That is, a new, inclusive proposition or concept is learned under which already established ideas can be subsumed. If ideas x, y, and z are already established in the learner's cognitive structure and their association is discovered, then new idea A is learned under which they are all subsequently subsumed, as shown in Figure 4.5.

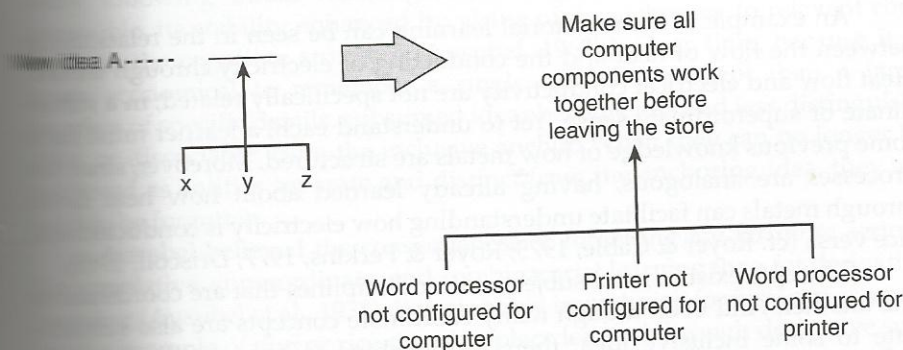


FIGURE 4.4 A Cognitive Structure about Democracy Learned through Subsumption

FIGURE 4.5 An Example of Superordinate Learning

flag, where the stripes indicate the original thirteen colonies and the stars indicate the states of today