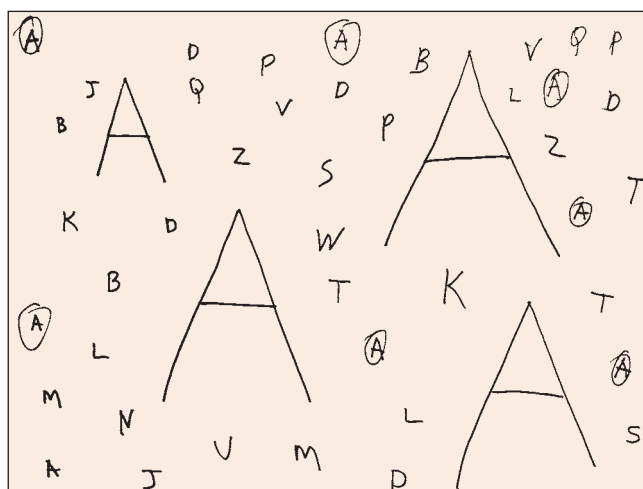


A



B

**FIGURE 36-3** **A.** A 47-year-old man with a large frontoparietal lesion in the right hemisphere was asked to circle all the A's. Only targets on the right are circled. This is a manifestation of left hemispatial neglect. **B.** A 70-year-old woman with a 2-year history of degenerative dementia was able to circle most of the small targets but ignored the larger ones. This is a manifestation of simultanagnosia.

#### **BÁLINT'S SYNDROME, SIMULTANAGNOSIA, DRESSING APRAXIA, CONSTRUCTION APRAXIA, AND ROUTE FINDING**

Bilateral involvement of the network for spatial attention, especially its parietal components, leads to a state of severe spatial disorientation known as *Bálint's syndrome*. Bálint's syndrome involves deficits in the orderly visuomotor scanning of the environment (*oculomotor apraxia*), accurate manual reaching toward visual targets (*optic ataxia*), and the ability to integrate visual information in the center of gaze with more peripheral information (*simultanagnosia*). A patient with simultanagnosia “misses the forest for the trees.” For example, a patient who is shown a table lamp and asked to name the object may look at its circular base and call it an ashtray. Some patients with simultanagnosia report that objects they look at may vanish suddenly, probably indicating an inability to look back at the original point of gaze after brief saccadic displacements. Movement and distracting stimuli greatly exacerbate the difficulties of visual perception. Simultanagnosia can occur without the other two components of Bálint's syndrome.

A modification of the letter cancellation task described above can be used for the bedside diagnosis of simultanagnosia. In this modification, some of the targets (e.g., A's) are made to be much larger than the others (7.5 to 10 cm vs 2.5 cm [3 to 4 in. vs 1 in.] in height), and all targets are embedded among foils. Patients with simultanagnosia display a counterintuitive but characteristic tendency to miss the larger targets (Fig. 36-3B). This occurs because the information needed for the identification of the larger targets cannot be confined to the immediate line of gaze and requires the integration of visual information across multiple fixation points. The greater difficulty in the detection of the larger targets also indicates that poor acuity is not responsible for the impairment of visual function and that the problem is central rather than peripheral. The test shown in Fig. 36-3B is not by itself sufficient to diagnose simultanagnosia because some patients with a frontal network syndrome may omit the large letters, perhaps because they lack the mental flexibility needed to realize that the two types of targets are symbolically identical despite being superficially different.