



FIG 3-1 Directional trends in growth.

Second, the **proximodistal**, or **near-to-far**, trend applies to the midline-to-peripheral concept. A conspicuous illustration is the early embryonic development of limb buds, which is followed by rudimentary fingers and toes. In infants, shoulder control precedes mastery of the hands, the whole hand is used as a unit before the fingers can be manipulated, and the central nervous system develops more rapidly than the peripheral nervous system.

These trends or patterns are bilateral and appear symmetric—each side develops in the same direction and at the same rate as the other. For some of the neurologic functions, this symmetry is only external because of unilateral differentiation of function at an early stage of postnatal development. For example, by the age of approximately 5 years, children have demonstrated a decided preference for the use of one hand over the other, although previously either one had been used.

The third trend, **differentiation**, describes development from simple operations to more complex activities and functions, from broad, global patterns of behavior to more specific, refined patterns. All areas of development (physical, cognitive, social, and emotional) proceed in this direction. Through the process of development and differentiation, early embryonal cells with vague,