most part to the posterior column, are found also in the substantia gelatinosa of Rolando; their axons are short and entirely confined to the gray substance, in which

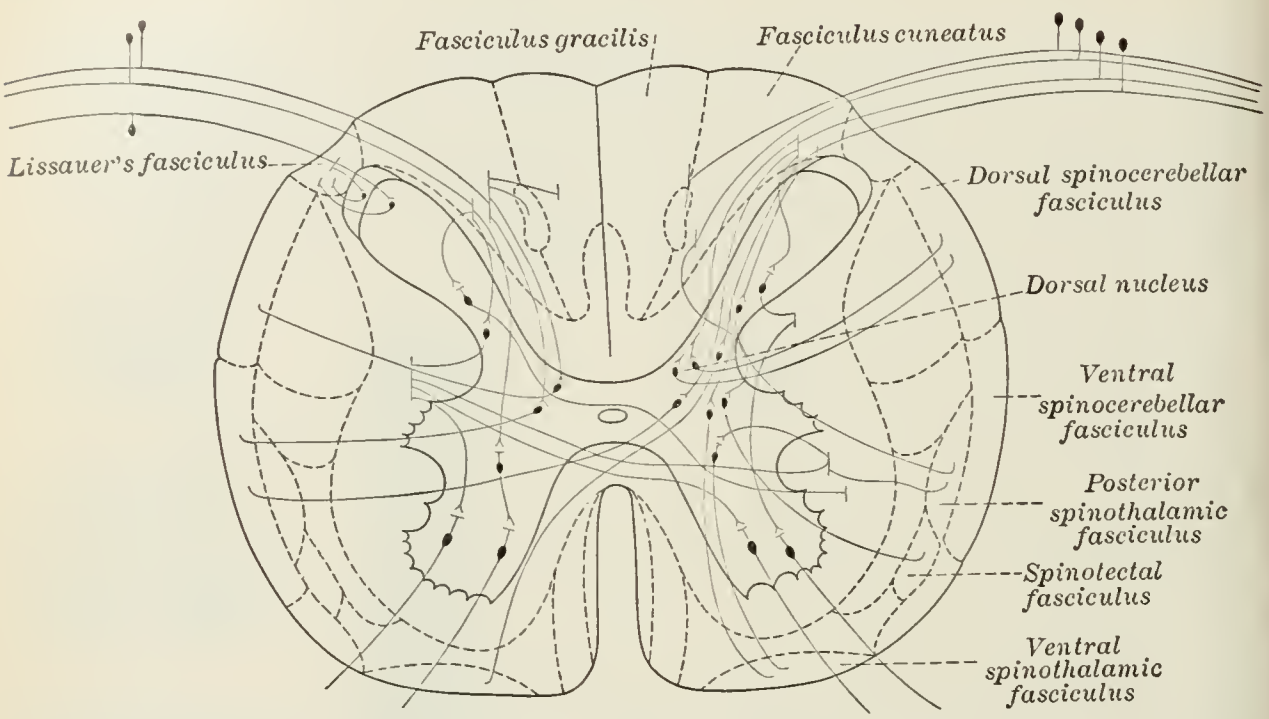

FIG. 669.—Diagram showing a few of the connections of afferent (sensory) fibers of the posterior root with the efferent fibers from the ventral column and with the various long ascending fasciculi.

they break up into numerous fine filaments. Most of the nerve cells are arranged in longitudinal columns, and appear as groups on transverse section (Figs. 669, 670, 671).

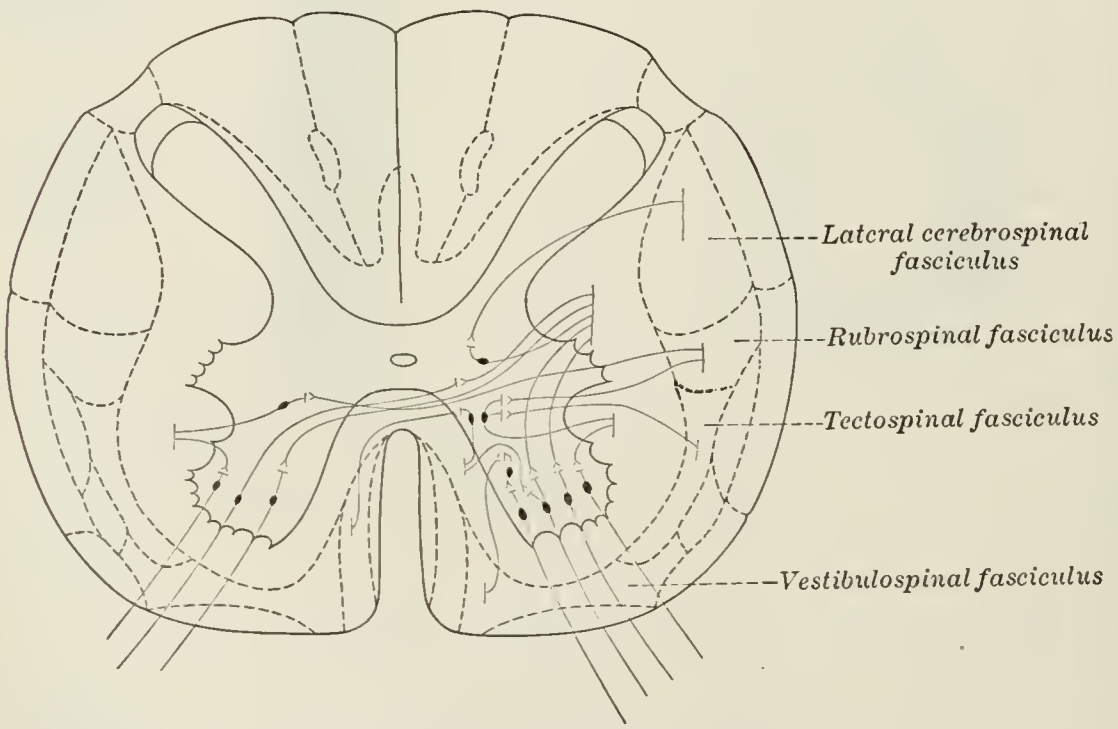

FIG. 670.—Diagram showing possible connection of long descending fibers from higher centers with the motor cells of the ventral column through association fibers.

Nerve Cells in the Anterior Column.—The nerve cells in the anterior column are arranged in columns of varying length. The longest occupies the medial part of the anterior column, and is named the **antero-medial column:** it is well marked in C4, C5, again from C8 to L4, it disappears in L5 and S1 but is well marked in