



**Figure 4. DNA Versus Chromatin**

The genome: Invariant DNA sequence (*green double helix*) of an individual. The epigenome: The overall chromatin composition, which indexes the entire genome in any given cell. It varies according to cell type, and response to internal and external signals it receives. (*Lower panel*) Epigenome diversification occurs during development in multicellular organisms as differentiation proceeds from a single stem cell (the fertilized embryo) to more committed cells. Reversal of differentiation or transdifferentiation (*blue lines*) requires the reprogramming of the cell's epigenome.