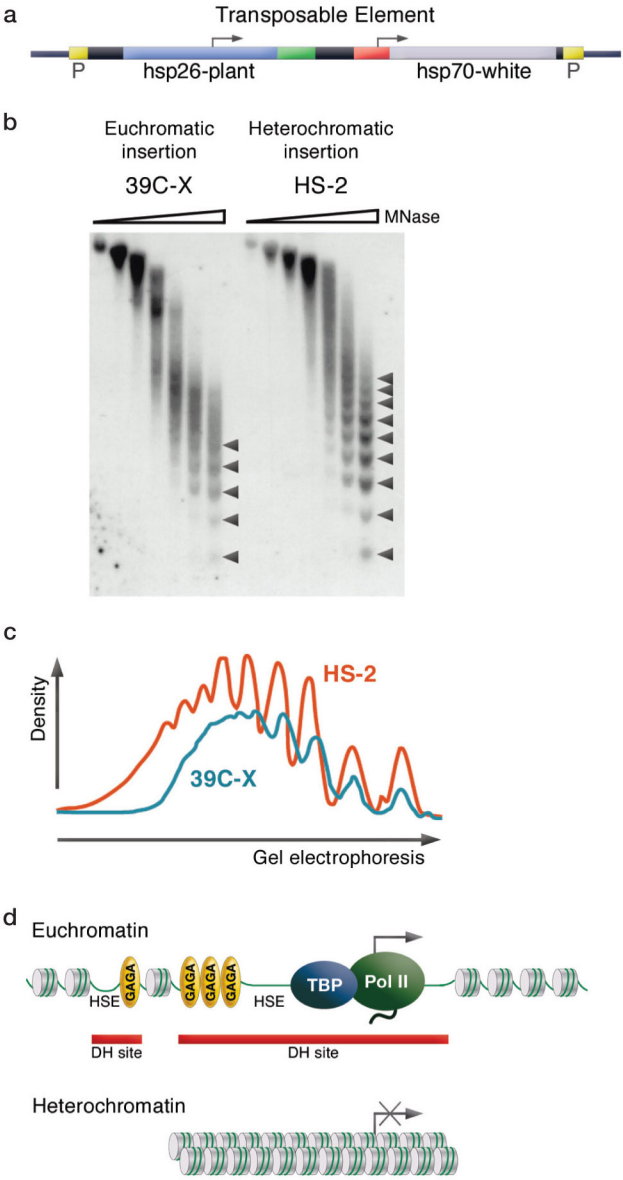

Figure 3. Heterochromatin Is Packaged into a Regular Nucleosome Array

A transposable element such as that shown (*a*), carrying a marked copy of a heat shock gene for study and an *hsp70*-driven copy of *white* as a visual marker, can be used to examine the same gene in different chromatin domains. Nuclei from *Drosophila* embryos from a line carrying this transgene in a euchromatic domain (39C-X; red eye) and a line carrying the same transgene in a heterochromatic domain (HS-2; variegating eye) were digested with increasing amounts of MNase, the DNA purified and run out on an agarose gel, and a Southern blot hybridized with a probe unique to the transgene (*b*). Linker sites cleaved by MNase are marked with arrows. (*c*) Densitometer scans from the last lane of each sample are compared (top to bottom is left to right). An array of 9–10 nucleosomes can be detected in heterochromatin (*red line*), compared to 5–6 in euchromatin (*blue line*), indicating more regular spacing in the former case. (*d*) A diagrammatic representation of the results. (*b*, *c*, Adapted, with permission, from Sun et al. 2001 [© American Society for Microbiology].)