



Figure 8. Transitions in the Chromatin Template (*cis/trans*)

cis-effects: A covalent modification of a histone tail residue results in an altered structure or charge that manifests as a change in chromatin organization. *trans-effects:* The enzymatic modification of a histone tail residue (e.g., H3K9 methylation) results in an affinity for chromatin-associated protein (mod binder, e.g., HP1). The association of a mod binder (or associated protein complexes) causes downstream alterations in chromatin structure. *Histone replacement:* A covalent histone modification (or other stimulus) can signal the replacement of a core histone with a histone variant through a nucleosome-remodeling exchanger complex.