Sharpening previous results of Baldwin and Shelah [2,11], the authors prove some equivalences to monadic NIP. In particular, they prove that the following are equivalent for a complete theory T with infinite models (see the paper for precise definitions):

(1) T is monadically NIP, i.e. every expansion by unary predicates in NIP;

(2) No monadic expansion of T admits coding of pairs of singletons by singletons;

(3) T does not admit coding of pairs of tuples by singletons;

(4) T has the *f.s. dichotomy*: if $\mathrm{tp}(b/Ma)$ is finitely satisfiable in $M \models T$, then for any singleton c, either $\mathrm{tp}(b/Mac)$ or $\mathrm{tp}(bc/Ma)$ is finitely satisfiable in M;

(5) If $M, N \models T$ then any *M-f.s. decomposition* of any subset of N, meaning a decomposition into a sequence of chunks A_i with $\mathrm{tp}(A_i/MA_{<i})$ finitely satisfiable in M, extends (in a certain sense) to such a decomposition of N;

(6) T is dp-minimal and has *indiscernable-triviality*, i.e. indiscernability over B is equivalent to indiscernability over each singleton $b \in B$.

They deduce that if T has quantifier elimination in a relational language with finitely many constants, then T is monadically NIP iff $\mathrm{Age}(T)$ is NIP, and they obtain a lower bound on the growth rate of $\mathrm{Age}(T)$ when T is not monadically NIP.