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Alice Medvedev* (amedvedev@ccny.cuny.edu). *Unions of chains of signatures.*

We meditate on a particularly naive notion of a limit of a sequence of theories: a union of conservative expansions. That is, we consider a sequence of nested signatures $L_1 \subset L_2 \subset \dots$, each one a subsignature of the next, and a sequence of L_i -theories T_i where each T_i is precisely the set of L_i -consequences of T_{i+1} (and hence is a subset of T_{i+1}). It turns out that many model-theoretic properties then pass from all T_i to their union T ; these include consistency, completeness, quantifier elimination, partial quantifier elimination such a model-completeness, elimination of imaginaries, stable embeddedness of some definable set, characterization of algebraic closure; stability, simplicity, rosiness, dependence. Our motivating example is the theory T of fields with an action by $(\mathbb{Q}, +)$, seen as a limit of (theories of) fields with $(\mathbb{Z}, +)$ -actions. (Received August 11, 2015)