Let $B$ be the set of rooted trees that contain an infinite binary subtree starting at the root. This set satisfies the metaproperty of containing a tree if and only if it contains at least two of its root child subtrees. Suppose we wish to know the probability that a Galton–Watson tree falls in $B$. The metaproperty forces this probability to satisfy a fixed-point equation, which can have multiple solutions. One of these is the probability we seek, but what is the meaning of the other solutions? In particular, are they probabilities of the Galton–Watson tree falling into some other set satisfying the same metaproperty? We create a framework that lets us answer all questions of this sort. Our proofs use spine decompositions of Galton–Watson trees and the analysis of Boolean functions. (Received July 30, 2018)