Ordered trees and Spoiled Child trees
Lou Shapiro; Howard University

Ordered trees are counted by the Catalan numbers. If we allow vertices of outdegree 1 to be either red or green we get more possibilities and we call these spoiled child trees with the idea that a single child can be either spoiled or not spoiled. This gives a close cousin of the Catalan numbers and we calculate statistics such as the average number of spoiled children.

Keywords: Ordered trees, enumeration, expected value, Catalan number