A Formal Syntax Account of the English Auxiliary System

Noam Chomsky, *Syntactic Structures*, 1957

I. Phrase Structure Rules:

S → NP AuxP VP
AuxP → T (M) (have+en) (be+ing)
VP → V (NP)
NP → (D) N
T → {pres, past}
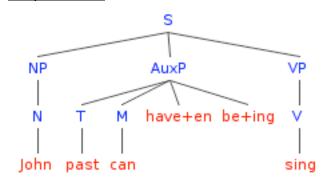M → {can, may, will, shall, must}

II. Transformational Rules:

Affix Hopping
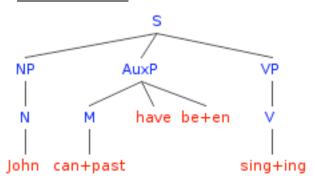AF X => X+AF, where AF = {pres, past, en, ing}

III. Sample Derivation:

Deep Structure   Surface Structure

Phonetic Form:

John could have been singing