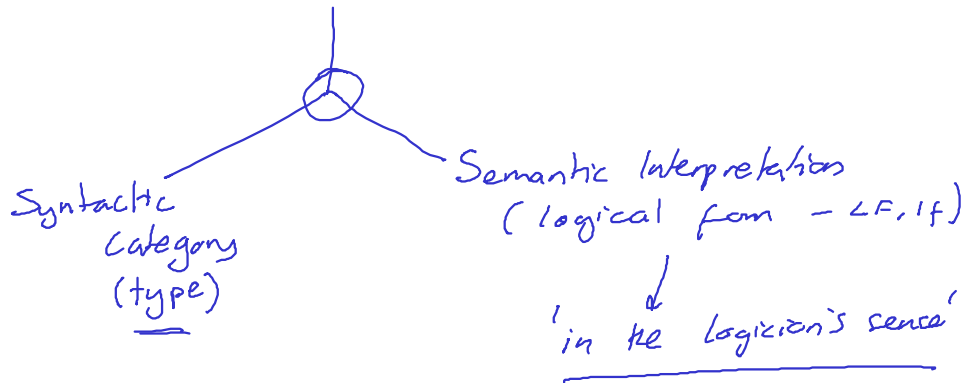# Syntax-driven semantic composition:
Signs

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COGS 543: Computational Semantics
METU, Informatics

Sign

phonetic form (phon)

Syntactic
Category
(type)

Semantic Interpretation
(logical form — LF, lf)

'in the logician's sense'

Fragment

$C_0 = \{a, b, c, J, k \cdots\}$ $C_1 = \{sleeps', walks' \ldots\}$

$V = \{x, y, z \ldots\}$

John := NP ; J'

/ε∧η/

Mary := NP : m'

sleeps := NP → S : sleeps'

$$\frac{John}{NP} \quad \frac{sleeps.}{NP \to S}$$
$$S : (sleeps' \; J')$$

S → NP VP

NP → John

VP → V_I

V_I → sleep'

S
/ \
NP VP
| |
John V_I
|
sleeps.

f(x)=x+2

g(y) = z²

$\lambda x . x + 2$

$\|S_J\| = 1$, if $\|J\| \in \|S\|$