

- (3) a. A woman snores $\exists x (Wx \wedge Sx)$
 b. Sam knows Pam Lsp (or $((L)s)p$)
 c. Every woman knows Pam $\forall x (Wx \rightarrow Kxp)$
 d. Every woman knows a woman $\forall x (Wx \rightarrow \exists y (Wy \wedge Kxy))$

$S:t$	$\rightarrow NP:\langle et, t \rangle VP:et$	$\llbracket S \rrbracket = (\llbracket NP \rrbracket) \llbracket VP \rrbracket$
$NP:\langle et, t \rangle$	$\rightarrow PN:e$	$\llbracket NP \rrbracket = (\lambda u. \lambda P. (P)u) \llbracket PN \rrbracket$
$NP:\langle et, t \rangle$	$\rightarrow Det:\langle et, \langle et, t \rangle \rangle N:et$	$\llbracket NP \rrbracket = (\llbracket Det \rrbracket) \llbracket N \rrbracket$
$VP:et$	$\rightarrow iV:et$	$\llbracket VP \rrbracket = \llbracket iV \rrbracket$
$VP:et$	$\rightarrow tV:\langle \langle et, t \rangle, et \rangle NP:\langle et, t \rangle$	$\llbracket VP \rrbracket = (\llbracket tV \rrbracket) \llbracket NP \rrbracket$

Lexicon

$PN:e$	\rightarrow Sam	$\llbracket PN \rrbracket = s$
$PN:e$	\rightarrow Pam	$\llbracket PN \rrbracket = p$
$iV:et$	\rightarrow snores	$\llbracket iV \rrbracket = \lambda u. Su$
$tV:\langle \langle et, t \rangle, et \rangle$	\rightarrow knows	$\llbracket tV \rrbracket = \lambda P \lambda x. (P) \lambda y. Kxy$
$N:et$	\rightarrow woman	$\llbracket N \rrbracket = \lambda u. Wu$
$Det:\langle et, \langle et, t \rangle \rangle$	\rightarrow a	$\llbracket Det \rrbracket = \lambda P \lambda Q. \exists x (Px \wedge Qx)$
$Det:\langle et, \langle et, t \rangle \rangle$	\rightarrow every	$\llbracket Det \rrbracket = \lambda P \lambda Q. \forall x (Px \rightarrow Qx)$

Alternative

$VP:et$	$\rightarrow tV:\langle e, et \rangle NP:\langle et, t \rangle$	$\llbracket VP \rrbracket = ((\lambda V \lambda P \lambda x. (P) \lambda y. ((V)x)y) \llbracket tV \rrbracket) \llbracket NP \rrbracket$
$tV:\langle e, et \rangle$	\rightarrow knows	$\llbracket tV \rrbracket = \lambda u \lambda v. Kuv$

- (4) a. Sam is mortal Ms
 b. Sam knows a tall person $\exists x ((Px \wedge Tx) \wedge Ksx)$
 c. Sam doesn't snore $\neg Ss$