

(P) A Matter of Horn Clauses (1/1)

P1. Rules:

$V(\text{help}).$
 $V(\text{let}).$
 $N(\text{John}).$
 $N(\text{Kim}).$
 $S(xy) :- V(x), N(y).$
 $S(xy) :- S(x), S(y).$

Sample derivation:

$S(\text{let Kim}) :- V(\text{let}), N(\text{Kim}).$
 $S(\text{let John}) :- V(\text{let}), N(\text{John}).$
 $S(\text{let Kim let John}) :- S(\text{let Kim}), S(\text{let John}).$
 $S(\text{help John}) :- V(\text{help}), N(\text{John}).$
 $S(\text{help John let Kim let John}) :- S(\text{help John}), S(\text{let Kim let John}).$

P2. Rules:

$N(\text{Jan}).$
 $N(\text{Hans}).$
 $Ddat(em).$
 $Dacc(de).$
 $Vdat(\text{hälfte}).$
 $Vacc(laa).$
 $V P(xy, z) :- Ddat(x), N(y), Vdat(z).$
 $V P(xy, z) :- Dacc(x), N(y), Vacc(z).$
 $V P(wy, xz) :- V P(w, x); V P(y, z).$
 $S(xy) :- V P(x, y).$

Sample derivation:

$V P(em \text{ Jan, hälfte}) :- Ddat(em), N(\text{Jan}), Vdat(\text{hälfte}).$
 $V P(em \text{ Hans, hälfte}) :- Ddat(em), N(\text{Hans}), Vdat(\text{hälfte}).$
 $V P(em \text{ Jan em Hans, hälfte hälfte}) :- V P(em \text{ Jan, hälfte}), V P(em \text{ Hans, hälfte}).$
 $V P(de \text{ Hans, laa}) :- Dacc(de), N(\text{Hans}), Vacc(laa)..$
 $V P(de \text{ Hans em Jan em Hans, laa hälfte hälfte}) :- V P(de \text{ Hans, laa}), V P(em \text{ Jan em Hans, hälfte hälfte}).$
 $S(de \text{ Hans em Jan em Hans laa hälfte hälfte}) :- V P(de \text{ Hans em Jan em Hans, laa hälfte hälfte}).$

