Displacement Logic for Grammar

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Lecture 3pre

From Displacement Calculus to Displacement Logic: Polymorphism

Cross-serial dependencies

Swiss-German, and Dutch:

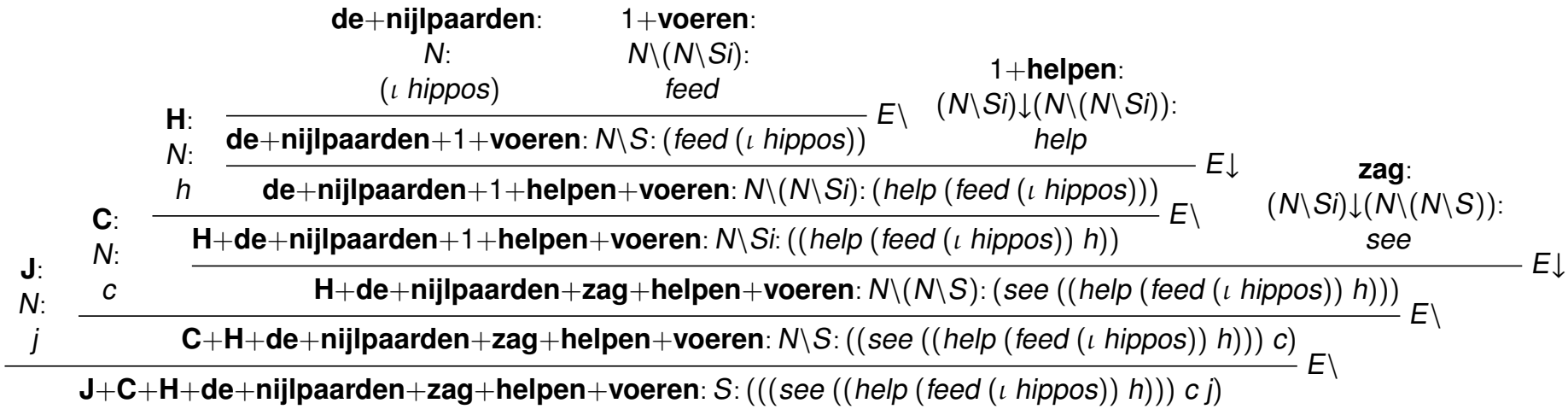
(1)

Jan	Cecilia	Henk	de	nijlpaarden	zag	helpen	voeren
J	C	H	the	hippos	saw	help	feed

'J saw C help H feed the hippos'

$sSi = 1$

(2) **Jan**: N: j
Cecilia: N: c
Henk: N: h
de: N/CN: ι
nijlpaarden: CN: *hippos*
zag: $(N\backslash Si)\downarrow(N\backslash(N\backslash S))$: *see*
$1+$**helpen**: $(N\backslash Si)\downarrow(N\backslash(N\backslash Si))$: *help*
$1+$**voeren**: $N\backslash(N\backslash Si)$: *feed*


de+nijlpaarden: N: (ι hippos)
1+voeren: N\(N\Si): feed
E\
1+helpen: (N\Si)↓(N\(N\Si)): help
E↓
zag: (N\Si)↓(N\(N\S)): see
E↓
E\
E\
E\
H: N: h
C: N: c
J: N: j
de+nijlpaarden+1+voeren: N\S: (feed (ι hippos))
de+nijlpaarden+1+helpen+voeren: N\(N\Si): (help (feed (ι hippos)))
H+de+nijlpaarden+1+helpen+voeren: N\Si: ((help (feed (ι hippos)) h))
H+de+nijlpaarden+zag+helpen+voeren: N\(N\S): (see ((help (feed (ι hippos)) h)))
C+H+de+nijlpaarden+zag+helpen+voeren: N\S: ((see ((help (feed (ι hippos)) h))) c)
J+C+H+de+nijlpaarden+zag+helpen+voeren: S: (((see ((help (feed (ι hippos)) h))) c j)