## Chapter 8, Problem 7: Japanese Causatives

- A. Nominative.
- B. Dative.

C. 
$$\begin{bmatrix} word \\ SYN \end{bmatrix} \begin{bmatrix} Word \\ FORM & fin \\ VAL \end{bmatrix} \begin{bmatrix} SPR & \langle \text{$\square$} \rangle \\ COMPS & \langle \text{$2$}, \text{$3$} \rangle \end{bmatrix} \\ ARG-ST & \langle \text{$\square$NP[CASE nom]}_k, \text{$2$NP[CASE dat]}_i, \text{$3$NP[CASE acc]}_j \rangle \\ WODE & \text{prop} \end{bmatrix} \\ SEM & \begin{bmatrix} RESTR & RELN & cause \\ RELN & sit & s \\ SIT & t \\ SIT & t \\ CAUSER & k \\ CAUSEE & i \\ CAUSED-EVENT & s \end{bmatrix} \\ \end{bmatrix}$$

D. 
$$\begin{bmatrix} d\text{-rule} \\ INPUT \\ & \\ \end{bmatrix} \begin{bmatrix} SYN & [HEAD \ verb] \\ ARG\text{-ST} & \langle NP_i \rangle \oplus \blacksquare \\ SEM & [INDEX \ s_1] \\ RESTR & \\ \end{bmatrix} \end{bmatrix}$$
OUTPUT 
$$\left\langle F_{sase}(\blacksquare) , \begin{bmatrix} ARG\text{-ST} & \langle NP[CASE \ nom]_k \ , NP[CASE \ dat]_i \rangle \oplus \blacksquare \\ INDEX \ s_2 \\ RESTR & \\ \end{bmatrix} \right\rangle \begin{bmatrix} pred \\ RELN \\ SIT \\ CAUSER \\ k \\ CAUSEE \\ i \\ CAUSED\text{-EVENT} \ s_1 \end{bmatrix} \right)$$