

Figure 3b The CONTENT of *zyon ga kodomo ga neru* ‘John’s child sleeps.’

$$\begin{aligned}
 &= [6] \\
 &= \boxed{\text{ARG [2]} \\
 \text{REL } \{X \mid \{x_q \mid \text{John}'(x_q)\} \cap X \neq \emptyset\} \\
 \text{REL_INDEX } n \text{ or } x} \\
 \\
 &[2] \\
 &= \text{The CONTENT of [1]} \\
 \\
 &= \boxed{\text{ARG sleep}'(x_n) \\
 \text{REL } \{X \mid \{x_q \mid \text{child}'(x_q) \& R(x_q)(x_g)\} \cap X \neq \emptyset\} \\
 \text{REL_INDEX } n} \\
 \\
 &= \{x_n \mid \text{sleep}'(x_n)\} \in \{X \mid \{x_q \mid \text{child}'(x_q) \& R(x_q)(x_g)\} \cap X \neq \emptyset\} \\
 &= \{x_q \mid \text{child}'(x_q) \& R(x_q)(x_g)\} \cap \{x_n \mid \text{sleep}'(x_n)\} \neq \emptyset \\
 \\
 &= \{x_g \mid \{x_q \mid \text{child}'(x_q) \& R(x_q)(x_g)\} \cap \{x_n \mid \text{sleep}'(x_n)\} \neq \emptyset\} \in \{X \mid \{x_q \mid \text{John}'(x_q)\} \cap X \neq \emptyset\} \\
 &= \{x_q \mid \text{John}'(x_q)\} \cap \{x_g \mid \{x_q \mid \text{child}'(x_q) \& R(x_q)(x_g)\} \cap \{x_n \mid \text{sleep}'(x_n)\} \neq \emptyset\} \neq \emptyset \\
 &= \exists x[\text{John}'(x) \& \exists y[[\text{child}'(y) \& R(y)(x)] \& \text{sleep}'(y)]]
 \end{aligned}$$