

Figure 2b The CONTENT of *kodomo ga keeki o tukuru* ‘A child makes a cake.’

$$\begin{aligned}
 &= \boxed{\begin{array}{l} \text{ARG [8]} \\ \text{REL } \{X \mid \{x_q \mid \text{child}'(x_q)\} \cap X \neq \emptyset\} \\ \text{REL_INDEX n} \end{array}} \\
 &\quad [8] \\
 &\quad = \text{The CONTENT of [7]} \\
 &\quad = [6] \\
 &= \boxed{\begin{array}{l} \text{ARG [2]} \\ \text{REL } \{X \mid \{x_q \mid \text{cake}'(x_q)\} \cap X \neq \emptyset\} \\ \text{REL_INDEX a} \end{array}} \\
 &\quad [2] \\
 &\quad = \text{The CONTENT of [1]} \\
 &\quad = \text{make}'(x_a)(x_n) \\
 &= \boxed{\begin{array}{l} \text{ARG make}'(x_a)(x_n) \\ \text{REL } \{X \mid \{x_q \mid \text{cake}'(x_q)\} \cap X \neq \emptyset\} \\ \text{REL_INDEX a} \end{array}} \\
 &= \{x_a \mid \text{make}'(x_a)(x_n)\} \in \{X \mid \{x_q \mid \text{cake}'(x_q)\} \cap X \neq \emptyset\} \\
 &= \{x_q \mid \text{cake}'(x_q)\} \cap \{x_a \mid \text{make}'(x_a)(x_n)\} \neq \emptyset \\
 &= \boxed{\begin{array}{l} \text{ARG } \{x_q \mid \text{cake}'(x_q)\} \cap \{x_a \mid \text{make}'(x_a)(x_n)\} \neq \emptyset \\ \text{REL } \{X \mid \{x_q \mid \text{child}'(x_q)\} \cap X \neq \emptyset\} \\ \text{REL_INDEX n} \end{array}} \\
 &= \{x_n \mid \{x_q \mid \text{cake}'(x_q)\} \cap \{x_a \mid \text{make}'(x_a)(x_n)\} \neq \emptyset\} \in \{X \mid \{x_q \mid \text{child}'(x_q)\} \cap X \neq \emptyset\} \\
 &= \{x_q \mid \text{child}'(x_q)\} \cap \{x_n \mid \{x_q \mid \text{cake}'(x_q)\} \cap \{x_a \mid \text{make}'(x_a)(x_n)\} \neq \emptyset\} \neq \emptyset \\
 &= \exists x[\text{child}'(x) \ \& \ \exists y[\text{cake}'(y) \ \& \ \text{make}'(y)(x)]]
 \end{aligned}$$