$$
\begin{aligned}
[\![p_1 \cup p_2]\!]{\downarrow}(N) &:= [\![p_1]\!]{\downarrow}(N) \cup [\![p_2]\!]{\downarrow}(N)\\
[\![p/axis\text{::}test[q]]\!]{\downarrow}(N) &:= F_{axis}([\![p]\!]{\downarrow}(N)) \cap T(test) \cap [\![q]\!]?\\
[\![/axis\text{::}test[q]]\!]{\downarrow}(N) &:= F_{axis}(\{n_0\}) \cap T(test) \cap [\![q]\!]?\\
[\![axis\text{::}test[q]]\!]{\downarrow}(N) &:= F_{axis}(N) \cap T(test) \cap [\![q]\!]?\\
\\
[\![q_1 \wedge q_2]\!]? &:= [\![q_1]\!]? \cap [\![q_2]\!]?\\
[\![q_1 \vee q_2]\!]? &:= [\![q_1]\!]? \cup [\![q_2]\!]?\\
[\![\neg q]\!]? &:= \mathsf{Node} \setminus [\![q]\!]?\\
[\![\mathrm{true}]\!]? &:= \mathsf{Node}\\
[\![p]\!]? &:= [\![p]\!]{\uparrow}\\
\\
[\![/p]\!]{\uparrow} &:= \begin{cases} \mathsf{Node} & \text{if } n_0 \in [\![p]\!]{\uparrow} \\ \emptyset & \text{otherwise} \end{cases}\\
[\![axis\text{::}test[q]/p]\!]{\uparrow} &:= F_{axis^{-1}}([\![p]\!]{\uparrow} \cap T(test) \cap [\![q]\!]?)\\
[\![axis\text{::}test[q]]\!]{\uparrow} &:= F_{axis^{-1}}(T(test) \cap [\![q]\!]?)
\end{aligned}
$$

Figure 1: Alternative semantics for CoreXPath.

$$
\begin{aligned}
[\![p]\!]{\downarrow}(N) &= \bigcup_{n \in N} [\![p]\!]_{NodeSet}(n)\\
[\![q]\!]? &= \{n \in \mathsf{Node} \mid [\![q]\!]_{Boolean}(n)\}\\
[\![p]\!]{\uparrow} &= \{n \in \mathsf{Node} \mid [\![p]\!]_{NodeSet}(n) \neq \emptyset\}
\end{aligned}
$$

Figure 2: Relation between the two semantics.