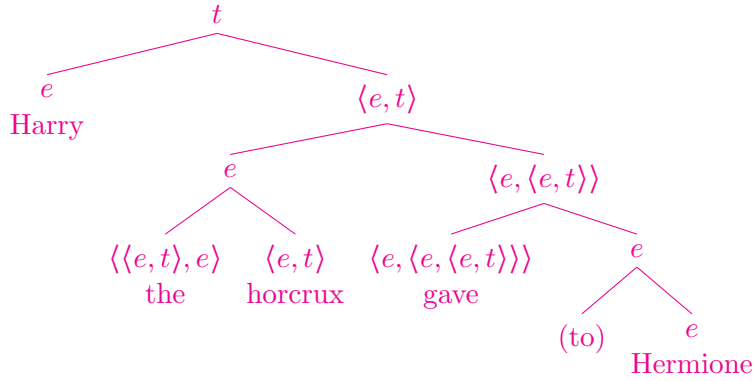


1 More practice

Give the full lambda computation of the sentence *Harry gave the horcrux to Hermione*, assuming the logical form in the tree below. Annotate the tree with types, show the lexical entries, and show the step-by-step computation.



$$\llbracket \text{Harry} \rrbracket = a$$

$$\llbracket \text{Hermione} \rrbracket = e$$

$$\llbracket \text{give} \rrbracket = \lambda x[\lambda y[\lambda z[\text{GIVE}(z, y, x)]]]$$

$$\llbracket \text{horcrux} \rrbracket = \lambda x[\text{HORCRUX}(x)]$$

$$\llbracket \text{the} \rrbracket = \lambda f_{\langle e, t \rangle}[\iota y[f(y)]]$$

$$\llbracket \text{Harry the horcrux gave (to) Hermione} \rrbracket$$

1. $\llbracket \text{the horcrux} \rrbracket$

- (a) $= \llbracket \text{the} \rrbracket(\llbracket \text{horcrux} \rrbracket)$
- (b) $= \lambda f_{\langle e, t \rangle}[\iota y[f(y)]](\llbracket \text{horcrux} \rrbracket)$
- (c) $= \iota y[\llbracket \text{horcrux} \rrbracket(y)]$
- (d) $= \iota y[\lambda x[\text{HORCRUX}(x)](y)]$
- (e) $= \iota y[\text{HORCRUX}(y)]$
- (f) $= o$

2. $\llbracket \text{gave (to) Hermione} \rrbracket$

- (a) $= \llbracket \text{give (to) Hermione} \rrbracket$
- (b) $= \llbracket \text{give} \rrbracket(\llbracket \text{Hermione} \rrbracket)$
- (c) $= \llbracket \text{give} \rrbracket(e)$
- (d) $= \lambda x[\lambda y[\lambda z[\text{GIVE}(z, y, x)]]](e)$
- (e) $= \lambda y[\lambda z[\text{GIVE}(z, y, e)]]$

3. $\llbracket \text{the horcrux gave (to) Hermione} \rrbracket$

- (a) = $\llbracket \text{the horcrux give (to) Hermione} \rrbracket$
- (b) = $\llbracket \text{give (to) Hermione} \rrbracket (\llbracket \text{the horcrux} \rrbracket)$
- (c) = $\llbracket \text{give (to) Hermione} \rrbracket (o)$
- (d) = $\lambda y [\lambda z [\text{GIVE}(z, y, e)]](o)$
- (e) = $\lambda z [\text{GIVE}(z, o, e)]$

4. $\llbracket \text{Harry the horcrux gave (to) Hermione} \rrbracket$

- (a) = $\llbracket \text{the horcrux gave (to) Hermione} \rrbracket (\llbracket \text{Harry} \rrbracket)$
- (b) = $\llbracket \text{the horcrux gave (to) Hermione} \rrbracket (a)$
- (c) = $\lambda y [\lambda z [\text{GIVE}(z, y, e)]](a)$
- (d) = $\lambda z [\text{GIVE}(z, o, e)](a)$
- (e) = $\text{T iff GIVE}(a, o, e)$