F23-Key

Ling 331 / 731
Spring 2016

Composition with abstraction is a four-step process:

1. **Abstraction** Add a λ-argument.
2. **Value copy** Copy the expression you already had (that's the binder's sister)
3. **Modify** the assignment
4. **Replace** the pronoun with the output of the modified assignment

Replace: $\lambda x \in D_e.\ run(x)$
Modify: $\lambda x \in D_e.\ run(g^{3 \to x}(3))$
Abstract + Copy: $\lambda x \in D_e.\ run(g(3))$

λ_3 $run(g(3)) : t$

1. Complete the following intransitive abstractions. Assume variable assignment g.

1. **PA :** $\langle e,t \rangle$
$\lambda x \in D_e.\ sleep(x)$
$\lambda x \in D_e.\ sleep(g^{2 \to x}(2))$
$\lambda x \in D_e.\ sleep(g(2))$
λ_2 **FA :** t
sleep(g(2))

2. **PA :** $\langle e,t \rangle$
$\lambda x \in D_e.\ yellow(x)$
$\lambda x \in D_e.\ yellow(g^{4 \to x}(4))$
$\lambda x \in D_e.\ yellow(g(4))$
λ_4 **FA :** t
yellow(g(4))

3. **PA :** $\langle e,t \rangle$
$\lambda x \in D_e.\ died(x)$
$\lambda x \in D_e.\ died(g^{1 \to x}(1))$
$\lambda x \in D_e.\ died(g(1))$
λ_1 **FA :** t
died(g(1))

4. **PA :** $\langle e,t \rangle$
$\lambda x \in D_e.\ dream(x)$
$\lambda x \in D_e.\ dream(g^{2 \to x}(2))$
$\lambda x \in D_e.\ dream(g(2))$
λ_2 **FA :** t
dream(g(2))

5. **PA :** $\langle e,t \rangle$
$\lambda x \in D_e.\ on(\iota z[\ table(z)\ ])(x)$
$\lambda x \in D_e.\ on(\iota z[\ table(z)\ ])(g^{4 \to x}(4))$
$\lambda x \in D_e.\ on(\iota z[\ table(z)\ ])(g(4))$
λ_4 **FA :** t
on(ιz[table(z)])(g(4))

6. **PA :** $\langle e,t \rangle$
$\lambda x \in D_e.\ orange(x) = 1\ \&\ house(x) = 1$
$\lambda x \in D_e.\ orange(g^{1 \to x}(1)) = 1\ \&\ house(g^{1 \to x}(1)) = 1$
$\lambda x \in D_e.\ orange(g(1)) = 1\ \&\ house(g(1)) = 1$
λ_1 **FA :** t
orange(g(1)) = 1 & house(g(1)) = 1

2. Complete the following transitive abstractions. Assume variable assignment g. **Be mindful of whether you're abstracting over the subject or the object.**

1. **PA :** $\langle e,t \rangle$

   $\lambda x \in D_e$. saw(g(1))(x)

   $\lambda x \in D_e$. saw(g(1))($g^{2 \to x}$(2))

   $\lambda x \in D_e$. saw(g(1))(g(2))

   - λ_2
   - **FA :** t — saw(g(1))(g(2))

2. **PA :** $\langle e,t \rangle$

   $\lambda x \in D_e$. watched(x)(Joni)

   $\lambda x \in D_e$. watched($g^{4 \to x}$(4))(Joni)

   $\lambda x \in D_e$. watched(g(4))(Joni)

   - λ_4
   - **FA :** t — watched(g(4))(Joni)

3. **PA :** $\langle e,t \rangle$

   $\lambda x \in D_e$. raced(me)(x)

   $\lambda x \in D_e$. raced(me)($g^{1 \to x}$(1))

   $\lambda x \in D_e$. raced(me)(g(1))

   - λ_1
   - **FA :** t — raced(me)(g(1))

4. **PA :** $\langle e,t \rangle$

   $\lambda x \in D_e$. ate(ιy[burger(y)])(x)

   $\lambda x \in D_e$. ate(ιy[burger(y)])($g^{2 \to x}$(2))

   $\lambda x \in D_e$. ate(ιy[burger(y)])(g(2))

   - λ_2
   - **FA :** t — ate(ιy[burger(y)])(g(2))

5. **PA :** $\langle e,t \rangle$

   $\lambda x \in D_e$. annoyed(ιy[R(x)(y) & brother(y)])(x)

   $\lambda x \in D_e$. annoyed(ιy[R($g^{4 \to x}$(4))(y) & brother(y)])($g^{4 \to x}$(4))

   $\lambda x \in D_e$. [get tired](g(4))

   - λ_4
   - **FA :** t — annoyed(ιy[R(g(4))(y) & brother(y)])(g(4))

6. **PA :** $\langle e,t \rangle$

   $\lambda x \in D_e$. lived(x)

   $\lambda x \in D_e$. lived($g^{1 \to x}$(1))

   $\lambda x \in D_e$. lived(g(1))

   - λ_1
   - **FA :** t — arrested(g(1))(g(2))

3. Draw the following compositions. Assume variable assignment g.

1. *who*$_1$ *t*$_1$ *is pregnant*

2. *which*$_1$ *he*$_2$ *liked t*$_1$

3. [$_{CP}$ *that the key is in t*$_1$]

4. Fill in the blank node