Computing with 'Logically Possible Partly-Fregean Interpretations'

Let h *be the meaning assignment determined by the logically possible partly-Fregean interpretation in (53) of the handout "Fregean Interpretations."*

(i) $h((\lambda P_4\ \exists x_3\ ((\textbf{man'}\ x_3)\ \&\ (P_4\ x_3))))$ = (by definition of Politics+λ)

(ii) $h(\ F_\lambda(\ P_4\ , F_\exists(\ x_3\ , F_{And}(\ F_{Concat}(\textbf{man}, x_3), F_{Concat}(P_4, x_3)\ldots)$ = (by homomorph. of h)

(iii) $G_\lambda(\ h(P_4)\ , G_\exists(\ h(x_3)\ , G_{And}(\ G_{Concat}(\ h(\textbf{man}), h(x_3)), G_{Concat}(\ h(P_4),\ h(x_3))\ldots)$
= (by def. of h)

(iv) $G_\lambda(\ f(P_4)\ , G_\exists(\ f(x_3)\ , G_{And}(\ G_{Concat}(\ f(\textbf{man}), f(x_3)), G_{Concat}(\ f(P_4),\ f(x_3))\ldots)$
= (by def. of f)

(v) $G_\lambda(\ f(P_4)\ , G_\exists(\ f(x_3)\ , G_{And}(\ G_{Concat}(\ \mathit{mn}\ , f(x_3)), G_{Concat}(\ f(P_4),\ f(x_3))\ldots)$
= (by def. of G_λ)

(vi) The function *L* such that if $g \in J$, $L(g)$ =
The function *p* with domain $D_{<e,t>,E}$ such that for any $x \in D_{<e,t>,E}$,
$p(x) =\ G_\exists(\ f(x_3)\ , G_{And}(\ G_{Concat}(\ \mathit{mn}\ , f(x_3)), G_{Concat}(\ f(P_4),\ f(x_3))\ldots)(g(P_4/x))$
= (by def. of $G_\exists$)

(vii) The function *L* such that if $g \in J$, $L(g)$ =
The function *p* with domain $D_{<e,t>,E}$ such that for any $x \in D_{<e,t>,E}$,
$p(x)$ = [The function *E* such that if $g' \in J$, $E(g') = 1$ iff there is a $y \in D_{e,E}$ such that
$G_{And}(\ G_{Concat}(\ \mathit{mn}\ , f(x_3)), G_{Concat}(\ f(P_4),\ f(x_3))\ldots)(g'(x_3/y)) = 1](g(P_4/x))$
= (by meta-logic)

(viii) The function *L* such that if $g \in J$, $L(g)$ =
The function *p* with domain $D_{<e,t>,E}$ such that for any $x \in D_{<e,t>,E}$,
$p(x) = 1$ *iff* there is an $y \in D_{e,E}$ such that
$G_{And}(\ G_{Concat}(\ \mathit{mn}\ , f(x_3)), G_{Concat}(\ f(P_4),\ f(x_3))\ldots)(g(P_4/x)(x_3/y)) = 1$
= (by def. of G_{And})

(ix) The function *L* such that if $g \in J$, $L(g)$ =
The function *p* with domain $D_{<e,t>,E}$ such that for any $x \in D_{<e,t>,E}$,
$p(x) = 1$ *iff* there is an $y \in D_{e,E}$ such that
[The function *Conj* such that if $g' \in J$, then $\mathit{Conj}(g') = 1$ iff
$G_{Concat}(\ \mathit{mn}\ , f(x_3))(g') = 1$ and $G_{Concat}(\ f(P_4),\ f(x_3))(g') = 1](g(P_4/x)(x_3/y)) = 1$
= (by meta-logic)

(x) The function L such that if $g \in J$, $L(g)$ =

The function p with domain $D_{<e,t>,E}$ such that for any $x \in D_{<e,t>,E}$,

$p(x) = 1$ *iff* there is an $y \in D_{e,E}$ such that
$G_{Concat}(\ mn\ , f(x_3))\ )(g(P_4/x)(x_3/y)) = 1$ and $G_{Concat}(\ f(P_4),\ f(x_3))(g(P_4/x)(x_3/y)) = 1$

= (by def. of G_{Concat})

(xi) The function L such that if $g \in J$, $L(g)$ =

The function p with domain $D_{<e,t>,E}$ such that for any $x \in D_{<e,t>,E}$,

$p(x) = 1$ *iff* there is an $y \in D_{e,E}$ such that
$mn((g(P_4/x)(x_3/y))(f(x_3)(g(P_4/x)(x_3/y))) = 1$ and
$f(P_4)((g(P_4/x)(x_3/y))(f(x_3)(g(P_4/x)(x_3/y))) = 1$ = (by (53))

(xii) The function L such that if $g \in J$, $L(g)$ =

The function p with domain $D_{<e,t>,E}$ such that for any $x \in D_{<e,t>,E}$,

$p(x) = 1$ *iff* there is an $y \in D_{e,E}$ such that
$i(g(P_4/x)(x_3/y))(x_3)) = 1$ and $g(P_4/x)(x_3/y))(P_4)(g(P_4/x)(x_3/y))(x_3)) = 1$

= (by def. of 'Logically Possible Partly-Fregean Interpretation)

(xiii) The function L such that if $g \in J$, $L(g)$ =

The function p with domain $D_{<e,t>,E}$ such that for any $x \in D_{<e,t>,E}$,

$p(x) = 1$ *iff* there is an $y \in D_{e,E}$ such that $i(y) = 1$ and $x(y) = 1$

Thus, h((λP_4 ∃x_3 ((**man'** x_3) & (P_4 x_3)))) is computed to be a constant function on variable assignments.

- **It maps every variable assignment to the function *p*, which is the characteristic function of the set of <e,t> functions *f* which map some man to 1.**
- **Thus, it maps every variable assignment to the 'set of properties that some man has'**

<u>Note the parallel to our model theoretic semantics from the handout "Preliminaries":</u>
Let $\mathcal{M}$ be the model defined in (13) of "Preliminaries". Let g be any variable assignment based on $\mathcal{M}$.

[[(λP_4 ∃x_3 ((**man'** x_3) & (P_4 x_3)))]]^{M,g} =

The function p with domain $D_{<et>,E}$, range $D_{t,E}$ and for all $x \in D_{<et>,E}$,

$p(x) = 1$ *iff* there is a $y \in D_{e,E}$ such that $i(y) = 1$ and $x(y) = 1$