ERRATA FOR RAYMOND D. GUMB AND KAREL LAMBERT'S *DEFINITIONS IN NONSTRICT POSITIVE FREE LOGIC*,

Modern Logic, vol. 7 (1997), pp. 25–55.

p. 25, line 13: delete this line
and, after . . . gov

p. 25, line 20: haskell ⇐ Haskell

p. 27, line 18: bound" ⇐ bound variable"

p. 27, line $\omega - 5$: Farmer ⇐ , Farmer

p. 28, line $\omega - 9$: Benccivenga ⇐ Bencivenga

p. 28, line $\omega - 2$: haskell ⇐ Haskell

p. 28, line $\omega - 1$: Thomason ⇐ Thompson

p. 29, line 9:
regardless of whether there is a j $(1 \leq j \leq n)$ such that x_j = err. Only non-

p. 29, line 12: haskell ⇐ Haskell

p. 30, line 8: nonlogical ⇐ logical

p. 30, line 16: , and are also ⇐ are also

p. 31, lines 5–7:

$$[t = t' \rightarrow (A \rightarrow A[\, t' \text{“}t])$$

$$[t = t' \rightarrow (A[\, t' \text{“}t] \rightarrow A)$$

$$\text{err} = t \leftrightarrow \neg\exists X\, (X = t)$$

p. 32, line 7–8:
nonempty set, $D_M = \{\mathbf{err}\}$, $\mathbf{err} \notin \mathfrak{D}_M$, and I_M is an interpretation function mapping symbols into appropriate objects. $\mathfrak{D}_M$ is the *inner domain* of M,

p. 32, line 15:
4. $I(f^n(t_1, \ldots, t_n)) = I(f^n)(I(t_1), \ldots, I(t_n)) \in \mathfrak{D} \cup D$,

p. 34, line 2: definitions ⇐ definitions

p. 35, line 11:

$$\forall X_1 \ldots \forall X_n \forall Y (f^n(X_1, \ldots, X_n)) = Y \leftrightarrow A(X_1, \ldots, X_n, Y))$$

p. 35, lines 15–16:
$A(X_1, \ldots, X_n, Y)$,
3. the only nonlogical symbols occurring in $A(X_1, \ldots, X_n, Y)$ are

p. 35, lines 19–20:

$$\forall X_1 \ldots \forall X_n \exists Y A(X_1, \ldots, X_n, Y)$$

$$\forall X_1 \ldots \forall X_n \forall Y' (A(X_1, \ldots, X_n, Y) \wedge (A(X_1, \ldots, X_n, Y') \rightarrow Y = Y')$$

p. 36, line 7:

$$\forall X_1 \ldots \forall X_n \forall Y (C(X_1, \ldots, X_n, Y) \rightarrow$$

$$(f^n(X_1, \ldots, X_n)) = Y \leftrightarrow (A(X_1, \ldots, X_n, Y)))$$

p. 36, lines 15-17:

$$\forall X_1 \ldots \forall X_n (C(X_1, \ldots, X_n, Y) \rightarrow \exists Y A(X_1, \ldots, X_n, Y))$$

$$\forall X_1 \ldots \forall X_n \forall Y \forall Y' C(X_1, \ldots, X_n, Y) \rightarrow$$

$$A(X_1, \ldots, X_n, Y) \wedge (A(X_1, \ldots, X_n, Y') \rightarrow Y = Y')$$

p. 36, lines 22–23:

$$\forall X_1 \ldots \forall X_n \forall Y\, (f^n\, (X_1, \ldots, X_n)) = Y \leftrightarrow$$

$$(C(X_1, \ldots, X_n\,) \rightarrow A(X_1, \ldots, X_n\,, Y)) \wedge$$

$$(\neg\, C(X_1, \ldots, X_n\,) \rightarrow Y = 0))$$

p. 37, ω – 11:

$$\exists Y\, A(a_1, \ \ldots, a_n, Y) \vee A(a_1, \ \ldots, a_n, \text{err})$$

p. 38, ω – 15 to ω – 14: inner and outer domains coincide $\Leftarrow$ outer but not the inner domain is empty.

p. 41, line 12:
then, for some term t, $\neg A(t)$, $\exists X\, (X = t) \in S$.

p. 42, lines 7-8:
cation for Padoa's method. Let p^n be an n–ary predicate that does not occur in the sentence $A(a_1, \ \ldots, a_n)$ and

p. 42, line 10:
The predicate p is called *fully and explicitly definable* in

p. 42, line 15:
T. The predicate q^n is *implicitly definable* in T if

p. 42, line 18: and & $\Leftarrow$ &

p. 42, line ω :
(ID) $(T \cup T_q \vdash \forall^* a\, (p(a) \leftrightarrow q(a))$

p. 43, line 8:
1. $(\{\exists X\, (X = a)\} \cup T \cup \{\neg p(a)\}) \cup (\{\exists X\, (X = a)\} \cup T_q \cup \{q(a)\})$

p. 43, line 10:
2. $(T \cup \{\neg p(\text{err})\}) \cup T_q \cup \{q(\text{err})\})$

p. 44, line 17: (($\Leftarrow$ (

p. 44, line 18: (($\Leftarrow$ (

p. 44, line 20:

$$\forall^* a\ (\text{zero}\}(a) = 0) \equiv \forall X\ (\text{zero}(X) = 0) \wedge \text{zero}(\text{err}) = 0 \rightarrow$$

p. 44, line 22:

$$\forall X \forall Y\ (\text{zero}(X) = Y \leftrightarrow Y = 0) \wedge \forall X\ (\text{zero}(X) = \text{err} \leftrightarrow \text{err} = 0) \wedge$$

p. 45, line 9:

$$\forall^* a_1 \ldots \forall^* a_n\ \forall^* b\ (f^n\ (a_1, \ldots, a_n) = b \leftrightarrow A(a_1, \ldots, a_n, b)) \Rightarrow$$

p. 45, line 11:

$$\exists Y\ A(a_1, \ldots, a_n, Y) \rightarrow b = Y\ ) \wedge (\neg \exists Y\ A(a_1, \ldots, a_n, Y) \rightarrow b = \text{err})$$

p. 45, line $\omega - 4$:

$$\forall^* a_1 \ldots \forall^* a_n\ (\neg\ (\text{E}!(a_1) \wedge \ldots \wedge \text{E}!(a_n)) \rightarrow f^n\ (a_1, \ldots, a_n) = \text{err})$$

p. 45, line $\omega - 2$:

$$\forall^* a_1 \ldots \forall^* a_n\ (\neg\ (\text{E}!(a_1) \wedge \ldots \wedge \text{E}!(a_n)) \rightarrow \neg\, p^n\ (a_1, \ldots, a_n))$$

p. 46, lines 4–6:

$$\forall X_1 \ldots \forall X_n\ (p^n\ (X_1, \ldots, X_n) \leftrightarrow A(X_1, \ldots, X_n)) \Rightarrow$$

$$\forall^* a_1 \ldots \forall^* a_n\, p^n\ (a_1, \ldots, a_n) \leftrightarrow \text{E}!(a_1) \wedge \ldots \wedge \text{E}!(a_n) \wedge A(a_1, \ldots, a_n))$$

p. 46, lines 10–13:

$$\forall X_1 \ldots \forall X_n \forall Y (f^n (X_1, \ldots, X_n) = Y \leftrightarrow A(X_1, \ldots, X_n, Y)) \Rightarrow$$

$$\forall^* a_1 \ldots \forall^* a_n \forall^* b (f^n (a_1 \ldots a_n) = b \leftrightarrow$$

$$(\mathrm{E!}\,(a_1) \wedge \ldots \wedge \mathrm{E!}\,(a_n) \rightarrow A(a_1, \ldots, a_n, b)) \wedge$$

$$(\neg (\mathrm{E!}\,(a_1) \wedge \ldots \wedge \mathrm{E!}\,(a_n)) \rightarrow b = \mathrm{err}))$$

p. 47, line 3:

$$(\mathrm{E!}\,(a) \wedge \mathrm{E!}\,(b) \wedge \mathrm{E!}\,(c) \wedge b \quad 0 \rightarrow a = b \times \ c) \wedge$$

p. 47, line 12:

$$\forall^* a_1 \ \ldots \forall^* a_n (p^n (a_1, \ldots, a_n) \leftrightarrow A(a_1, \ \ldots, a_n))$$

p. 47, line $\omega - 5$: $(\Leftarrow [$

p. 48, line 12: , and $\Leftarrow$,

p. 48, line $\omega - 16$:

$$\forall X_1 \ldots \forall X_n \forall Y (f^n (X_1, \ldots, X_n) = Y \leftrightarrow A(a_1, \ \ldots, a_n, Y)) \Rightarrow$$

p. 48, line $\omega - 2$:
$\vdash_T \forall X \forall Y \forall Y' (A(X, Y) \wedge A(X, Y') \rightarrow Y = Y')$. However, the second, third,

p. 49, line 3:

$$\vdash_T \forall X (A(X, \mathrm{err}) \rightarrow (\exists Y A(X, Y) \rightarrow \forall Y A(X, Y))) \wedge$$

p. 49, line $\omega - 11$:

$$\forall X \forall Y (\zeta (X) = Y \leftrightarrow Y = 0)$$

p. 51, line 18: 1979 ⇐ 1997

p. 51, line $\omega - 12$: I am ⇐ We are

p. 51, line $\omega - 5$:
this, consider in standard first-order logic that $\{\forall X\, A(X)\} \cup \{\forall Y \neg A(Y)\}$ is

p. 53, $\omega - 4$ to $\omega - 3$: *Festschrift . . .* forthcoming ⇐ *Das weite Spektrum der analytischen Philosphie*, (Berlin, de Gruyter), 135–149.