

## A Structuralist Theory of Logic: ERRATA

- Preface** p.xi, Elliott Mendelson (not “ Elliot”)
- p.5 line 6 from bottom: replace "binary, symmetric, and transitive" by "reflexive, symmetric and transitive”.
- p.10, line 17, should be “a conservative extension of it, and a closure condition (where I' is ...).”
- p.20. line 3 from bottom: “T implies A and T implies B” should be replaced by “C implies A and C implies B.”
- p.31 line 8 from top should be: since " $_*$ " is an extension of " $\phi_u$ ".
- p.39 Third paragraph, line 4. Replace "if and only if j is less than i+1" by "if and only if  $0 \leq j - i \leq 1$ ."
- p.45 Exercise 8.1. Let " $\#$ " be any reflexive ...
- p.46 line 1, replace “B and only if” by “B if and only if”, and  
 Definition 8.3, replace “weekly *closed*” by “weakly *closed*”.  
 Missing line at bottom has to be added: “bisection of a set provides an implication relation for it”.
- p.47 Missing line at bottom has to be added: “in the set S, no two of which are equivalent (under " $\Rightarrow$ "). That is,“
- p.55 Definition 9.1. Addition at end: “(4) follows from (1) - (3)”.
- p.67 line 5 from top: replace “ $A_1, \dots, A_n \Rightarrow^G B_1, \dots, B_m$ ” by “ $B_1, \dots, B_m \Rightarrow^G A_1, \dots, A_n$ ”.
- p.72 line 8 from bottom: delete second "R". i.e. just “R, (A \$\$ B)  $\Rightarrow$  B”.
- p.80 line 3 from bottom: it is worth noting (not "nothing").
- p.86 line 1,  $S^* = \{A, B, C\}$   
 Definition 11.4, replace “ $\varphi(A_1$ ” by “ $\varphi(A_1)$ ” (add missing right parenthesis).
- p.87 line 11 from bottom, "matching up".

- p.88 line 11 from bottom, “cannot be construed” (not "constructed").
- p.99 Exercise 12.5, last line should be “ $B \Rightarrow N \wedge N(B)$  fails.” (or put a stroke through the double arrow. That is replace both “C”s by “B”s.
- p.100 top line: the right hand double arrow ( $\Rightarrow$ ) should be replaced by its dual “ $\Rightarrow^{\wedge}$ ”.
- p.102 line 3 from bottom. Should be “Simple though this result is,..”. (not "theorem").
- p.103 first line of theorem 12.16: replace “ $I' = \langle S, \Rightarrow \rangle$ ” by “ $I' = \langle S, \Rightarrow' \rangle$ ”.
- Second line from bottom: should read “(2)  $N(A) \Rightarrow' N'(A)$  “.
- p.105 line 2: should read  $N'(A)$  for all  $A$  in  $S$ , (not "N(A) for all A in S").
- p.106 last paragraph line 3: “that this contrast ...” . (not: “that his constrast ...”).
- The letters should be realigned so that A,B,C, and D are the points on a square, and E is at its center.
- p.111 line 11 from the bottom: “that (1) and (4) are equivalent ...” (not (1) and (2)).
- p.112 line 1, no space between (1) and (4).
- line 9 from bottom: should read: “in the appropriate structure there are two other statements ... .
- p.113 Second diagram, no space between (1) and (4).
- p.121 line 12: should read “corresponding operators to study”. (delete extra “r” in “corresponding”))
- p.124 line 20: should read “favor  $E(P,Q)$  over  $D(P,Q)$ ” (not “favour  $E(Q,Q)$  over  $D(P,Q)$ ”)
- p.125 line 8: in the sentence “the structure). And that is impossible.”, delete the right parenthesis after “structure”, and insert a right parenthesis immediately after “impossible”.
- p.128 line 5 from bottom: should be “ $A, T \Rightarrow^{\Gamma} N(A)$ ”, (not “ $T \Rightarrow^{\Gamma} N(A)$ ”).
- p.129 line 4, should be "then if  $A \Rightarrow^{\Gamma} T$ ", (not "then if  $T \Rightarrow^{\Gamma} A$ ").

- line 5, should be: " $B \Rightarrow^{\Gamma} T$ , then...", (not " $T \Rightarrow^{\Gamma} B$ , then...").
- p.132 line 16 from bottom, Theorem 15.6 (not 15.7).
- p.135 line 2 after diagram, "weakest member  $T$  of  $S$ " (not "or  $S$ ").
- p.144 line 9 from top: Theorem 16.9 (not Theorem 17.1).
- p.148 line 11-10 from bottom: should be " $A \vee N^{\wedge}(A)$  is a thesis in all structures (not " $A \vee N^{\wedge} N^{\wedge}(A)$ ").
- p.149 line 13 from bottom: "theorem (15.7)" (not 15.8).
- p.155 line 10 from top: should read "That the hypothetical is not more basic than the conjunction...", (not "That conjunction is not more basic than the hypothetical ..."). That is "conjunction" was used instead of "hypothetical" and the other way around.
- p.159 line 3 from bottom: should read "if  $A$  is in  $K$ , then  $N_T(A)$  is in  $L$ " (not "if  $A$  is in  $L$ , so too is  $N_T(A)$ .")
- p.160 Exercise 19.1, second line should be: " $f \Rightarrow t$ " (not " $t \Rightarrow f$ ").
- p.161 line 4 from bottom: should read "distributional patterns of 19.1 (1) – (4)" (not "distributional Definition 19.1". That is, delete "Definition".
- line 8 from bottom: should read "strong bisection  $T$  of  $I$ " (not "or").
- p.162 line 9 from bottom: should be "then  $N_{\Rightarrow}(A)$  is in  $L$  (for all  $A$  in  $S$ )" (not "then  $N_{\Rightarrow}(A)$  (for all  $A$  in  $S$ )").
- p.163 line 13 from bottom: should read "connectives " $\rightarrow$ ", " $\neg$ ", and " $\vee$ " " (not "connectives "&", " $\neg$ ", and " $\vee$ ").
- p.174 third paragraph, line 5: should read "a strong bisection of  $I$ " (not "a strong bisection of  $T$ ".)
- Theorem 19.12., first line: "Let  $I$  be any implication structure" (not "relation").
- p.176 line 11 from top: should read " $K$  would be closed under  $\Rightarrow^{\wedge}$ ", (not " $K$  would be closed under  $\Rightarrow$ ").
- p.177 line 4 from top: should read "of  $I$  such that  $N...$ ", (not "or  $I...$ ").
- p.185 line 10 from top: should read " $U$  of  $E^*$ ", (not " $U$  of  $E$ ").

- p.189 line 6 from top: should read " $U_i(P)$ ". That is "p" should be in Caps.
- p.190 lines 4-5 in the proof of Theorem 20.12: should read " $P_1(s^*), \dots, P_n(s^*) \Rightarrow Q(s^*)$  for all  $s^*$  in  $E^*$ " (not " $P_1(s), \dots, P_n(s) \Rightarrow Q(s)$  for all  $s$  in  $E^*$ ").
- p.192 line 11 from top: should read " $U_i(P) \vee U_i(Q)$ ", (not " $U_i(P \vee U_i(Q))$ " with a missing right parenthesis after "P").
- line 11 from the bottom: should read " $(e_1) D(P(e_1), Q(e_1))$ ", (not " $(e_1) D^*(P(e_1), Q(e_1))$ ").
- p.196 line 11 from top: should read " $E_i E_i(P) \Leftrightarrow^* E_i(P)$ ", (not " $E_i E_i(P) \Leftrightarrow^* P$ ").
- p.203 line 3 from the top: there are three occurrences of "s". Replace the second occurrence by "s".
- p.205 line 2 from bottom: the equivalence sign should be " $\Leftrightarrow$ ", (not " $\Leftrightarrow^*$ ").
- p.206 lines 1 – 2 from the top: there are two occurrences of the equivalence " $\Leftrightarrow^*$ ", one on line 1 and the other on line 2. Each should be replaced by " $\Leftrightarrow$ ".
- p.207 line 16 from the bottom: this should now read this way: " $Q(s)$  is  $A_1$  if  $s_i$  is  $e$  and  $A_2$  if  $s_i$  is  $e'$ ".
- line 10 from bottom: should read " $I(e, e')(s), Q(e')(s) \Rightarrow Q(e)(s)$  (supplying the missing comma).
- p.212 line 5 in proof of Theorem 22.1, replace "second condition" by "first condition".
- line 9 in proof of Theorem 22.1, replace "second condition" by "first condition".
- p.232 line 13, replace the equivalence (" $\Leftrightarrow^{ISC}$ ") by " $\Rightarrow^{ISC}$ " (implication).
- p.233 line 12 from bottom: should read " $I^*_f(X) \Leftrightarrow^* X$ " (not " $I^*_f(x) \Leftrightarrow^* X$ ").
- p.245 line 11 from bottom, replace "which" by "while".
- p.246 bottom line: should read "simpler formulations." (not "simpler formulations:"). That is, replace full colon by a period.
- p.248 line 2 from top: "in the next chapter" should be replaced by "in the next section"
- p.249 top line: encase each of "T", "K<sub>4</sub>", "S<sub>4</sub>", "S<sub>5</sub>", "B", "D", and "G-L" by parentheses (they are modal systems).

- p.253 last line: should read " $\sigma(A \& B) \Rightarrow \sigma(A) \& \sigma(B)$ ", not " $\sigma(A \& B) \Rightarrow (A) \& \sigma(B)$ ".
- p.256 last line: should read " $\Rightarrow$ ", (not " $\Rightarrow^{\wedge}$ ").
- p.257 line 2 from top: should read " $\Rightarrow^{\wedge}$ ", (not " $\Rightarrow$ ").
- p.259 line 18 from top: should read " $\varphi(A_1) \Rightarrow^{\wedge} \varphi(B)$ ", (no bar through the implication sign).
- p.260 line 7, subscript "1" in " $A_1$ " throughout this paragraph should be italicized.
- p.262 line 21 from top: Should read "There are four cases...", (not "two").
- p.269 top line: replace "*S is dominated by  $\varphi$* " by "*S dominates  $\varphi$* "
- p.273 line 8 from top: " $R\varphi$ " should be replaced by " $R^{\varphi}$ " (super script).
- p.280 line 8 from bottom: replace "set-strengthening" by "self-strengthening".
- p.287 line 5 from bottom: in (2), replace " $N^{\wedge}\varphi N(A)$ " by " $N^{\wedge}\sigma N(A)$ ".
- p.305 In Theorem 30.4., the second line of the proof should read:  
" $\neg\neg(A \vee B) \Rightarrow \neg\neg(A) \vee \neg\neg(B)$ ".
- p.307 In Theorem 30.6., the fifth condition should be "(e)" (not "(d)").
- p.331 In the formulation of bivalence (PB), replace " $T(A \vee \neg A)$ " in the text, by " $T(A) \vee T(\neg A)$ ".
- p.348 line 15 from top should read: "Then  $UR^{\varphi}V$  holds if and only if  $UR^{\sigma}V$ ".  
line 23 from top should read: "then  $\sigma(A)$ ", (not "the  $\sigma(A)$ ")
- p.369 In the diagram,  $\varphi(B)$  should be placed high in the diagram, alongside  $A$ ;  $\varphi(A)$  should be moved over to exactly where  $\varphi(B)$  is presently in the diagram, and  $\varphi(D)$  and  $\varphi(C)$  should remain exactly as they are in the present diagram.

#### ERRATA IN THE FOOTNOTES:

- p.396 last line in Exercise 2. Replace "but not  $AR_1C$ " by "but not  $BR_1C$ ".

**ERRATA IN THE INDEX:**

Entry: **component-style operators** not in alphabetical order.