

# STRUCTURES FOR SEMANTICS: ERRATA Sep 2000

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►: change into

Note: these errata ignore spelling mistakes, except the following, which should be changed everywhere:

discreet	► discrete
well founded	► well-founded
bivalid	► bivalent

## CHAPTER 1

8/3:  $(\varphi \rightarrow (\psi \rightarrow \chi)) \rightarrow$  ►  $(\varphi \rightarrow (\psi \rightarrow \chi)) \rightarrow$

9/9:  $(p \rightarrow (q \rightarrow p))$  ►  $(p \rightarrow (q \rightarrow p))$

29/1-3: We can---range ►

We can find a formula  $\varphi[X,Y]$  which expresses that there is a relation between individuals which has X as its domain and Y as its range; we can express that this relation is a function;

37/-6:  $>$  ►  $>$

38/16:  $=\langle x,y \rangle + x$  ►  $=\langle x,y \rangle + x$

51/16:  $f$  ►  $f$  and  $\text{dom}(f)=A$ .

63/7:  $g(y) >>$  ►  $g(y) >$

/20:  $A \models [g]$  ►  $A \models \varphi [g]$

62/26:  $\frac{g(x)}{f^{-1}(b)}$  ►  $\frac{g^*(x)}{b}$

64/12: ►

/13:  $g^*$  ►  $g$

## CHAPTER 2

73/12: algebra ► structure

/18: ) ► >

/-3: if **A** is ► if A is

74/9:  $* \uparrow A$  ►  $*_A \uparrow B$

/14,15: even numbers ► even natural numbers

odd numbers ► odd natural numbers

/16/17: **A** ► **A** (twice)

/-6: **B** ► **B**

77/3:  $\mathbf{B} \uparrow h(\mathbf{A})$  ►  $\mathbf{B} \uparrow h(A)$

79/picture (1): The topnode of A is labelled: f

81/-2:	$(d) = h(d)$	▶ $(x) = h(d)$
82/15:	because g	▶ because h
83/9:		▶ $\forall g: \text{if } B \models \varphi [h(g)] \text{ then } A \models \varphi [g]$
84/-4:	Second symbol	▶ $\sqsubseteq$
91/-11	$P \sqsubseteq Q$	▶ $P \sqsubseteq P \sqcup Q$
98/-9:	$\lambda s \lambda . \llbracket$	▶ $\lambda s \lambda w . \llbracket \llbracket$
103/-5:	$\leq'$	▶ $\leq$
104/1:	even numbers	▶ even natural numbers
/9:	and $a \leq b$	▶ and $a \leq b'$
111/18:	$\mathbf{Z}'$	▶ $\mathbf{Z}$
116/-16:	for any chain $C_0 \in C$	▶ for any chain $C_0 \subseteq C$
/-14:	$c \in X$	▶ $c \subseteq X$
120/6:	$\langle a, \leq \rangle$	▶ $\langle A, \leq \rangle$
120/-3:	cannot	▶ can

### CHAPTER 3

122/14:	$\llbracket$	▶ $\llbracket \llbracket$
124:		The picture is upside down.
125/-2:	F	▶ $F\varphi$
126/2:	$H\emptyset$	▶ $H\varphi$
130/7:	$\lambda n.$	▶ $\lambda n \lambda p.$
132/5:	sentential	▶ sentential
133/5:	$(p \wedge q)[0]$	▶ $(p \wedge q)^+[0]$
/10:	$2]]$	▶ $2]]]$
140/-9:		Add: However, the core idea of the analysis developed here is Larson's.
148/-17,-13:	$\emptyset$	▶ $\varphi$
151/-18:	is	▶ if
162/6:	the	▶ to
168/4:	where $\varphi$ is true	▶ where $\varphi$ is false

### CHAPTER 4

172/7:	$\cap x$	▶ $\cap X$
174/7:	conclusion	▶ inclusion
175/2,3:	chain---element	▶ period contains at least one minimal period
181/9:	by q	▶ by p
/10:	by p	▶ by q
190/10:	$p'$	▶ p
191:	Exercise 2	▶ Exercise 4
194/-9:	)	▶ }

## CHAPTER 5

203/-7:	$F\psi$	▶ $F\phi$	(in the conclusion of IF)
206/4:	fails the	▶ fails to	
218/-1:	$=_1$	▶ $= 1$	
228/15:	if $A_2(e')(\phi)$	▶ if $A_2(e)(\phi)$	
229/11:	of	▶ or	
231/-19:	comp-	▶ incomp-	

## CHAPTER 6

234/11:	$LB(x)$	▶ $LB(X)$	
241/-8:	to 0)	▶ to 0. The other way round doesn't hold, by the way.)	
242/-7:	$\langle a, \leq \rangle$	▶ $\langle A, \leq \rangle$	
244/12:		Add:	
	For the borderline case of $\langle \{0\}, \leq \rangle$ we stipulate that 0 is an atom* and that $\langle \{0\}, \leq \rangle$ is atomic*.		
248/11:		▶ $a \vee b = 1$ iff $\neg a \leq b$ ; $a \wedge b = 0$ iff $b \leq \neg a$	
249/8:	of A generates A	▶ of X generates A	
250/-3:	N	▶ N	
254/16:	subalgebras	▶ sublattices	
255/23:	atoms.)	▶ atoms.) Again, we stipulate that $\langle \{0\}, \leq \rangle$ is atomistic*.	
255/11:	set.	▶ set, except $\langle \{0\}, \leq \rangle$ .	
258/-10:	any lattice L	▶ any lattice $L \in K$	
259/11:	$F_K(X)'$	▶ $F_K(X)'$	
260/9,11,13,20,33:	equivalence	▶ equational	
261/-8,-3 262/1,4:	free	▶ completely free	
265/3:	on	▶ in	
272/7:	(e)	▶ (c)	
279/16:	disjunction	▶ intersection	
283/-5:	$\{\phi_1, \dots, \phi_n\}$	▶ $\{\phi_1, \dots, \phi_n, \dots\}$	
/-3:	$\phi_1 \wedge \dots \wedge \phi_n$	▶ $\phi_1 \wedge \dots \wedge \phi_n \wedge \dots$	

## CHAPTER 7

285/3:	$A^B$	▶ $B^A$
287/-15:	isomorphic	▶ identical
292/7:	$\langle U, t \rangle$	▶ $\langle U, t \rangle$
301/-11:	and	▶ or
310/-10:	$\uparrow\downarrow$	▶ $\downarrow\uparrow$
315/4:		▶ 1. If A has a minimum 0 then $A = \{0\}$ .
318/-10:	CPRED	▶ MPRED
320/20:	$V(\llbracket P \rrbracket_g)$	▶ $V(\llbracket \uparrow P \rrbracket_g)$

## ANSWERS

325/11:	is not true	▶ is not false
	is not false	▶ is not true
329/3:	$g(f(a)) = a$	▶ $g(f(a)) = c$
	/in exercise 4:	
	(A)	▶ (I)
	(B)	▶ (II)
330/8,9:	$c \vee d \dashv\vdash k$ .	▶ $b \vee c = d$ , but $f(b \vee c) = j$ and $f(b) \vee f(c) = i$ .
332/17 ev	In this exercise everywhere where $\leq$ occurs between capital letters:	
	$\leq$	▶ $\leq'$ (nine times)
334/-11,-10:		I. moves to the beginning of the exercise.
337/Picture in d:		The connecting line between $\{c\}$ and $\emptyset$ is missing.
	/Line under (e):	
	<b>No woman moves</b>	▶ (f) <b>No woman moves</b>
338/-4:	$\leq$	▶ $<$
340/5:	p or q	▶ q or r
342/14:	$e, e'' \in q$	▶ $e, e'' \in r$
344/Exercise 1:		(b) moves to line -3
	/-1: $x \leq y\}$	▶ $x \leq y\}\}$
349/8 e.v.:		▶

Hence  $b \wedge \neg a$  is the complement of a, so  $b \wedge \neg a = \neg a$ , hence  $\neg a \leq b$ .

Assume  $\neg a \leq b$ , i.e.  $\neg a \vee b = b$ . Then  $a \vee (\neg a \vee b) =$

$a \vee b$ , i.e.  $(a \vee \neg a) \vee b = a \vee b$ , so  $1 \vee b = a \vee b$  and

$a \vee b = 1$ .

The other one goes in a similar way.