

1. **Part 1 (Lexicon)** Translate each of the following into the hyper-lambda-calculus.

	<b>Morpheme</b>	<b>Type</b>	<b>Translation</b>
(1)	every		
(2)	some		
(3)	no		
(4)	any		
(5)	a		
(6)	one		
(7)	two		
(8)	three		
(9)	at least		
(10)	exactly		
(11)	and		
(12)	if		
(13)	does-not		
(14)	woman		
(15)	man		
(16)	donkey		
(17)	enemy		
(18)	respects		
(19)	owns		
(20)	knows		
(21)	sells		
(22)	mother(def)		
(23)	father(def)		
(24)	to		
(25)	of [genitive]		
(26)	's [genitive]		
(27)	who		
(28)	helshelit		
(29)	[ $\alpha$ ]		
(30)	( $\alpha$ )		

## 2. Part 2 (Semantic Trees)

For each of the following, provide a semantic-tree.

- (1) Write down the most natural tree-structure.
- (2) Assign to each node its translation into the hyper-lambda-calculus, using your lexicon above for the morphemes.
- (3) Include *every* morpheme (appropriately spelled) below/above its node.
- (4) Make sure each composition is consistent with (greatly expanded) categorial-logic.
- (5) If a tree doesn't fit nicely and neatly on the page, reformat it so that it does!  
For complicated ones, I recommend multiple-pages, with appropriate notation connecting them.
- (6) Don't worry about noun forms, verb forms, and pronoun forms; treat them as mere spelling variations.

1. No man who owns a donkey sells it to any enemy of his.
2. If a man respects a woman, and she does not respect him, then she knows his mother and father.
3. Every man respects at least one woman who does not respect any woman whom he respects.
4. Exactly one man respects exactly one woman who does not respect him.

### 3. WORD MACRO and SYMBOL-SHORT-CUTS

#### 1. Security Settings

In order to run macros, Word security settings must be set appropriately; follow the following menu selections (Word 2003; may differ in other versions).

**Tools > Macros > Security > Set to 'Medium' or 'Low'**

**Close file and re-open;** when you open this file, if you chose "medium", you will be asked whether to allow macros; say 'yes'.

#### 2. Font

The special characters in this file come from an *embedded font* named '!SymbolGMH', which should work automatically, although the font itself may not otherwise be available. If you want to install the font officially, then go the Support Page on my website to download and install this font the usual way.

#### 3. Commands<sup>1</sup> (using functions keys; see next page)

**Bold** (toggle) makes current selection **bold**, unless it is empty, in which case it makes character to the left bold. Most importantly, after acting it shuts bold off. Type letter, then hit bold key.

**Small Caps** (toggle) does the same thing except using SMALL CAPS; can be combined with Bold. Most importantly, after acting it shuts small-caps off. Type letter, then hit small-caps key.

**Insert/Delete Row/Column** – may produce problems when cells are merged; **use caution**.

**NEW Table** places a new 12 row x 20 column table at the *end* of the document (*otherwise*, it can produce mischief).

- Table cells produced by this command are set up to expand and contract with content.
- Table rows are set up to hang together vertically, so they will move *en masse* to the next page if they don't fit together on the page.
- Table grid lines are set to be invisible; all the cell borders you see will print.
- Word Trick – delete-key does not delete rows or columns, but only empties them; use *cut* (Ctrl-X) instead (or use macro provided).

**MERGE CELLS** – select cells to merge, horizontal or vertical, then merge

**BLUE-BORDER-TOP** – merge first, then apply blue-border; this *toggles* border (will also remove blue border)

**RESET Table** resets the cell widths, which is sometimes necessary after Word unilaterally decides to change them itself.

#### 4. Numeric-Subscripts and Minus-Subscript (Automatic)

If you type a numeric-key or the minus-sign (not the keypad though), then if you are in a table, the numeral will be automatically subscripted, unless you are in the top row, where you don't need subscripts.

#### 5. Other Shortcuts

CTRL-ALT-P = show/hide paragraph marks [paragraph marks are annoying when editing table cells]  
 CTRL-ALT-G = show/hide table grid-lines [borders print; grid-lines do not]  
 CTRL-ALT-W = toggle width of page-view (in print-layout view); sometimes, hitting twice is useful.  
 Back-Slash = toggle sub-script [useful when editing existing text]  
 Numeric-Star = copy cell to cell below [useful in copy-paste lambda-conversion].

<sup>1</sup> Alas, Microsoft has elected to remove VBA (visual basic for applications) support on Office 2008 for Mac, so no third-party macros will work on Office 2008 for Mac. The symbol-keys should still work. VBA is still available on Office 2004 for Mac, as well as Windows Word 2002 and later. Also, Open Office does not support VBA; they have their own form of Basic.

### 4. Function Key Assignments

Print this page and place the following chart over your function keys [in the appropriate sense of ‘over’].

**NOTE:** C = control-key  
 SC = shift+control key

**THIS HAS CHANGED BECAUSE MANY LAP-TOPS USE CONTROL-ALT KEYS AS HOT-KEYS.**

	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	
SC	insert ROW			DELETE ROW	insert COLUMN			DELETE COLUMN	RESET table			NEW TABLE	
C	∧	∨	⊗	∏	¬	↔	=	≠	∏	Σ	⊗	⊙	C
	∇	∃	ı	λ	~	→	×	∨	MERGE CELLS	BLUE TOP-BORDER	SMALL CAPS	BOLD	



works for horizontal and vertical merge; <b>does not</b> supply blue border	this is a TOGGLE command	these act on the character to the left, unless text is selected, in which case they act on the selected text

(press **Shift-Control-F12** to start new table-tree)