Philosophy 220

- Truth-functional connectives: &, v, ~, ⊃, ≡
  - Mean the same things that they always have.
- Lower-case letters (a-z, with and without numerical subscripts) stand for Singular Terms
  - Individual Constants (letters a through v, with and w/o subscript)
  - Variables (letters w-z, with and w/o subscript)
- Upper-case letters (A-Z with and without numerical subscripts) stand for Predicates
  - A predicate by itself indicates how many places it has by the number of primes following it.
  - E. g. F’ is a one-place predicate while F’’’ is a three-place predicate

The Symbols used in PL:

Symbolization Key:

- A symbolization key contains three elements:
  - The Universe of Discourse (UD): the set of things being discussed
  - Predicates: with variables in place of Singular Terms
  - Singular Terms: Specified by individual constants
- For example:
  - UD: Integers greater than zero and less than six
  - Ex: x is even
  - Ox: x is odd
  - Gxy: x is greater than y
  - Lxy: x is less than y
  - a: 1
  - b: 2
  - c: 3
  - d: 4
  - e: 5

Quantity Terms:

- Words like ‘all’, ‘none’, ‘some’, ‘everyone’, ‘nobody’, and ‘someone’ (and many others) are known as ‘quantity words’ because they express something about a quantity. Consider the sentence ‘Every integer is either odd or even’.
- We can interpret this sentence using the symbolization key on the previous slide as:
- (Ea v Oa) & (Eb v Ob) & (Ec v Oc) & (Ed v Od) & (Ee v Oe)
- Note here that we are taking the scope of quantity terms to be only within the Universe of Discourse.

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b. Bct

d. Bds

f. (~Bak & ~Bbk) & [(~Bck & ~Bdk) & ~Bek]

h. ~Atp & ~Ath

j. Lbp ⊃ Ldp

l. (Tbc & Tca) & (~Tbe & ~Tce)

n. (Tba v Tca) v (Tda v Tea)

p. Tcb ⊃ Tca

Exercise 7.2, 2*

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