LEŚNIEWSKI'S ARGUMENT AGAINST UNIVERSALS (RECONSTRUCTION BY **E. LUSCHEI**)

"The characterization that (A) only any general object representing certain individual objects has only any property common to them all entails that (B) any property of any general object representing certain individual object is common to them all. For suppose that (1) *X* is general object representing objects (that are) *b*, (2) *X* is *c*, and (3) *Y* is *b*. Then characterization A and supposition 1 together entail that (4) for every *c*, *X* is *c* if and only if all *b* are *c*. It follows, by substitution and detachment on the basis of supposition 2, that (5) all *b* are *c*. And together with an appropriate (6-see below) of ontology, steps 5 and 3 entail that (7) *Y* is *c*. So, the deduction being completely general, it follows that (B) for every *X*, *Y*, *b*, and *c*, if *X* general object representing objects *b*, *X* is *c*, and *Y* is *b*, then *Y* is *c*. What Leśniewski demonstrated (as follows) was that the weaker characterization B, derivable (as above) from A, entails that (C') nothing is general object representing more than one indyvidual object. For suppose that (1, =B) if *X* is general object representing objects (that are) *b*, *X* is *c*, and *Y* is *b*, then *Y* is *c*; i.e., any general object representing objects *b* is *c* only if all *b* are *c*. Then it follows by substitution, for instance, that (2) if *X* is general object representing objects *b*, *X* is nonidentical with *Z*, and *Z* is *b*, then *Z* is nonidentical with *Z*; and (3) if *X* is general object representing objects *b*, *X* is identical with *Z*, and *Y* is *b*, then *Y* is identical with *Z*.

But, the consequent of step 2 being contradictory, it follows that (4) if *X* is general object representing objects *b*, and *Z* is *b*, then *Y* is identical with *Z*. So (5) if *X* is general object representing objects *b*, *Z* is *b*, and *Y* is *b*, then *X* is general object representing objects *b*, *X* is identical with *Z*, and *Y* is *b*. And steps 3 and 5 together entail that (6, =C) if *X* is general object representing objects *b*, *Z* is *b*, and *Y* is *b*, then *Y* is identical with *Z*. In other words, the deduction being completely general, it follows that (C') for every *b*, if there are at least two *b*, then there is no "general object" representing objects *b*.

I add that, since no general object can thus represent more than one *b*, and any that represents *b* is itself *b*, it follows that (D) any general object represents itself but nothing else. For suppose that (1) *X* is general object representing objects (that are) *b*. Then, according to characterization A, it follows that (2) for every *c*, *X* is *c* if and only if all *b* are *c*. Now it is a thesis of ontology that (3) for every *X* and *b*, all *b* are *b*, and if *X* is anything at all then *X* is identical with *X*. Thesis 3 and supposition 1 together entail that (4) all *b* are *b*, and *X* is identical with *X*. Appropriate substitution instances of step 2, together with step 4, entail that (5) *X* is *b*, and any *b* is identical with *X*; i.e., that there is at most one *b*, and at least one - namely, *X* itself. In other words, according to the appropriate thesis of ontology that (6) for every *X* and *b*, if *X* is *b*, and any *b* is identical with *X*, then *X* is the sole *b*, it follows that (7) *X* is the sole *b*. Consequently, this deduction too being completely general, it follows that (D) for every *b*, any general object representing *b* is itself the sole *b*. Any such "Platonic Ideal Bed" , for instace, is the sole bed in the universe; and therefore exists only if there is exactly one bed, namely itself, otherwise being nonexistent. (See Plato, *Republic*, bk. 10, 596- 597, and *Parmenides*, 132- 133; also Aristotle, *On Sophistical Refutations*, ch. 24, 179a, and *Metaphysics*, bk. 1, ch. 9, 990b.)

Leśniewski's technique of "natural deduction" by the suppositional method may be illustrated by recasting these sample deductions in the familiar symbolism, supplemented by counterparts of certain functors of ontology, that Lesniewski used in informal exposition. I presuppose truth-functional logic implicitly, and four theses of ontology explicitly.

Characterization A. $[X,b] \therefore X \varepsilon \mathrm{repr}(b) . \equiv : X \varepsilon X : [c] : X \varepsilon c . \equiv . b \subset c$
Consecquence B. $[X,Y,b,c] : X \varepsilon \mathrm{repr}(b) . X \varepsilon c . Y \varepsilon b . \supset . Y \varepsilon c$
Derivation:
$[X,Y,b,c] \therefore$

(1)	$X \varepsilon \mathrm{repr}(b)$.	
(2)	$X \varepsilon c$.	
(3)	$Y \varepsilon b . \supset :$	
(4)	$[c] : X \varepsilon c . \equiv . b \subset c :$	(consequence of A and 1)
(5)	$b \subset c$.	(4, 2)
(6)	$[Y,b,c] : b \subset c . Y \varepsilon b . \supset . Y \varepsilon c$.	(thesis of ontology)
(7)	$Y \varepsilon c$	(6, 5, 3)

C.

$[X,Y,Z,b] : X \,\varepsilon\, \mathrm{repr}(b) \,.\, Z \,\varepsilon\, b \,.\, Y \,\varepsilon\, b \,.\supset.\, Y \,\varepsilon\, \mathrm{Id}(Z)$

$[X,Y,Z,b] \therefore$

(1')	$X \,\varepsilon\, \mathrm{repr}(b)$.	
(2')	$Z \,\varepsilon\, b$.	
(3')	$Y \,\varepsilon\, b \,.\supset:$	
(4')	$X \,\varepsilon \sim[\mathrm{Id}(Z)] \,.\supset.\, Z \,\varepsilon \sim[\mathrm{Id}(Z)] :$	(B, 1', 2')
(5')	$[X,Z,a,c] : X \,\varepsilon\, a \,.\, \{X \,\varepsilon \sim[\mathrm{Id}(c)] \,.\supset.\, Z \,\varepsilon \sim[\mathrm{Id}(Z)]\} \,.\supset.\, X \,\varepsilon\, c :$	(thesis of ontology)
(6')	$X \,\varepsilon\, \mathrm{Id}(Z)$.	(5', 1', 4')
(7')	$Y \,\varepsilon\, \mathrm{Id}(Z)$	(B, 1', 6', 3')

C'. $[Y,Z,b] : Y \,\varepsilon\, b \,.\, Z \,\varepsilon\, b \,.\sim[Y \,\varepsilon\, \mathrm{Id}(Z)] \,.\supset.\, [X] \,.\sim[X \,\varepsilon\, \mathrm{repr}(b)]$

$[Y,Z,b] \therefore$

(1)	$Y \,\varepsilon\, b$.	
(2)	$Z \,\varepsilon\, b$.	
(3)	$\sim[Y \,\varepsilon\, \mathrm{Id}(Z)] \,.\supset:$ $[X] :$	
(4)	$X \,\varepsilon\, \mathrm{repr}(b) \,.\supset.\, Y \,\varepsilon\, \mathrm{Id}(Z) :$	(C, 1, 2)
(5)	$\sim[X \,\varepsilon\, \mathrm{repr}(b)]$	(4, 3)

D. $[X,b] : X \,\varepsilon\, \mathrm{repr}(b) \,.\supset.\, X \,\varepsilon\, \mathrm{Id}(b)$ i. e.: $[b] \,.\, \mathrm{repr}(b) \subset \mathrm{Id}(b)$

$[X,b] \therefore$

(1)	$X \,\varepsilon\, \mathrm{repr}(b) \,.\supset:$	
(2)	$[c] : X \,\varepsilon\, c \,.\equiv.\, b \subset c :$	(A, 1)
(3)	$[X,a,b] : b \subset b : X \,\varepsilon\, a \,.\supset.\, X \,\varepsilon\, \mathrm{Id}(X) :$	(thesis of ontology)
(4)	$b \subset b \,.\, X \,\varepsilon\, \mathrm{Id}(X)$.	(3, 1)
(5)	$X \,\varepsilon\, b \,.\, b \subset \mathrm{Id}(X) :$	(2, 4)
(6)	$[X,b] : X \,\varepsilon\, b \,.\, b \subset \mathrm{Id}(X) \,.\supset.\, X \,\varepsilon\, \mathrm{Id}(b) :$	(thesis of ontology)
(7)	$X \,\varepsilon\, \mathrm{Id}(b)$	(6, 5)"

ON THE BASIS OF E. LUSCHEI'S, THE LOGICAL SYSTEMS OF LEŚNIEWSKI, NORTH-HOLLAND, AMSTERDAM 1962, PP. 308-310.

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