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COMPLETENESS OF COPI'S METHOD OF DEDUCTION

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Massey has pointed out in [2] that it is an open question as to whether Copi's method of deduction for propositional logic (**CMD**), as described in Chapter Three of [1], is complete in the sense of being able to validate every argument which can be proved valid by the use of truth-tables. It is here shown that **CMD** is complete in this sense, for its completeness follows from Theorem I below and the deductive completeness of the logistic system **R.S.** of Chapter Seven of [1].

The following lemma is required for the proof of Theorem I:

There is a formal proof by **CMD** *of the validity of* $q \vee (p \cdot \sim p) \cdot r \therefore q$.

Proof of the lemma:[1]

1.	$q \vee (p \cdot \sim p) \cdot r$	$/ \therefore q$
2.	$(q \vee (p \cdot \sim p)) \cdot (q \vee r)$	1, Dist.
3.	$q \vee (p \cdot \sim p)$	2, Simp.
4.	$(q \vee p) \cdot (q \vee \sim p)$	3, Dist.
5.	$q \vee p$	4, Simp.
6.	$\sim\sim q \vee p$	5, D.N.
7.	$\sim q \supset p$	6, Impl.
8.	$(q \vee \sim p) \cdot (q \vee p)$	4, Comm.
9.	$q \vee \sim p$	8, Simp.
10.	$\sim\sim q \vee \sim p$	9, D.N.

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1. The elementary valid argument forms of **CMD** used in constructing this formal proof are referred to by their abbreviations given by Copi on pages 42-43 of [1]. Note that because of Comm. for both disjunction and conjunction, formal proofs of the validity of $((p \cdot \sim p) \cdot r) \vee q \therefore q$, $(r \cdot (p \cdot \sim p)) \vee q \therefore q$, and $q \vee (r \cdot (p \cdot \sim p)) \therefore q$ can also be given. Thus any reference to the formal proof given for this lemma should be taken as referring to any one of these four formal proofs.

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