LOCAL AND GLOBAL OPERATORS AND
MANY-VALUED MODAL LOGICS

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1 *Motivation*   In formal contexts, we may distinguish between two types
of conditional operators.* The truth value of a *local* conditional is defined
in terms of the truth values of its antecedent and consequent. The truth
value of a *global* conditional is defined in terms of the possible truth-values
of its antecedent and consequent. Global conditionals are usually formed by
applying a modal operator to a local conditional. For example, strict
implication is defined by applying the necessity operator to material
implication. That is, "$p \dashv q$" is defined as "$L(p\ C0\ q)$", where $C0$ is the
standard two-valued material implication and the properties of the neces-
sity operator "L" are determined by the particular modal logic being
employed.

There has been some move to formally treat ordinary language
counterfactual conditionals as global conditionals of a certain sort. (See for
example [1] and [3]). Viewed from this perspective, the local conditional
involved is not the standard two-valued material implication, but is rather
a three-valued operator.

We may use T, F, and I for "true", "false", and "indeterminate",
respectively. We may then define the conditional $C1$ as follows (contrasting
it with material implication $C0$):

$C0$	T	F
T	T	F
F	T	T

$C1$	T	I	F
T	T	I	F
I	I	I	I
F	I	I	I

Some possible examples of conditional statements which may perhaps be
appropriately translated by $C1$ are: "If you trespass, you will be

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