

Potential Things

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Torkel Franzen wrote:

Logic students do not very often
confuse $(\exists x)(P(x) \& Q(x))$ and $(x)(P(x) \rightarrow Q(x))$.
But they very often
indeed confuse
 $(\exists x)(P(x) \rightarrow Q(x))$ and $(\exists x)(P(x) \& Q(x))$
and
 $(x)(P(x) \& Q(x))$ and $(x)(P(x) \rightarrow Q(x))$

In the first case, indeed, a simple explanation for why the
corresponding confusion isn't encountered outside formal logic is that
there is no ordinary form of expression corresponding to
 $(\exists x)(P(x) \rightarrow Q(x))$.

Torkel's explanation doesn't hold up. People are perfectly capable of
imagining, encountering, calculating, and reasoning about existents of
which $\exists x(Px \rightarrow Qx)$ is non-vacuously true, and it's ludicrous to think
for no reason that they would be unable to come up with words to talk
about them.

For example: Six men decide to form a pool. They each ante up \$10;
they each draw a ticket numbered 1 through 6 from a hat; and they
decide who gets the pot by rolling a die.

Until the die is cast, it is true of each ticket that, if its number
corresponds to the number of pips on the die (P), it is the winning
ticket (Q); IOW, $\exists x(Px \rightarrow Qx)$ is true of it; and $\exists x(Px \rightarrow Qx)$ is still
true of all the losing tickets even after the die is cast. But not
vacuously true; it is not true anything else in the room that could
satisfy $\exists x(Px)$, such as any blank paper lying around.

One word used to designate such a state of affairs is 'potential': Each
ticket is a potential winner, while the pieces of blank paper are not
potential winners.

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