

Hansson's Hamburger puzzle

The factual counterfactual checker

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Let p , q and r stand for the facts that we saw the man with the hamburger, snackbar A is open and snackbar B is open, respectively.

0. The neutral cognitive state:

	p	q	r
$ w_0\rangle$	0	0	0
$ w_1\rangle$	0	0	1
$ w_2\rangle$	0	1	0
$ w_3\rangle$	0	1	1
$ w_4\rangle$	1	0	0
$ w_5\rangle$	1	0	1
$ w_6\rangle$	1	1	0
$ w_7\rangle$	1	1	1

1. We update with the fact r :

	p	q	r
w_0	0	0	0
$ w_1\rangle$	0	0	1
w_2	0	1	0
$ w_3\rangle$	0	1	1
w_4	1	0	0
$ w_5\rangle$	1	0	1
w_6	1	1	0
$ w_7\rangle$	1	1	1

2. We update with the law that hamburgers must have been bought somewhere: $r \rightarrow (p \vee q)$:

	p	q	r
w_0	0	0	0
w_1	0	0	1
w_2	0	1	0
$ w_3$	0	1	1
w_4	1	0	0
$ w_5$	1	0	1
w_6	1	1	0
$ w_7$	1	1	1