

How to Believe a Conditional

Hugh Mellor and Matthew Simpson

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1 The dispositional theory

$B(P,Q)$ is $D(P,Q)$: $D(P,Q)$ and $B(P)$ causes $B(Q)$

Modus Tollens: $D(P,Q)$ and $B(\text{not-}Q)$ causes $B(\text{not-}P)$.

2 Contraposition

'If P then Q ': closest P -world is a Q -world.

'If not- Q then not- P ': closest not- Q world is a not- P world.

3 General beliefs – universal

– 'All F are G ' – $B(\forall x(Fx \rightarrow Gx))$ – $B(\forall x(Fx \rightarrow Gx))$ is the disposition $D(Fa, Ga)$: to believe Ga if you believe Fa , and to have this disposition *for all a* (cf. Ramsey 'General Propositions and Causality', Armstrong *Belief, Truth and Knowledge* ch.6).

– Objections:

– Complexity; Failure; Sufficiency

4 General beliefs – existential

– 'Something is F ' – $B(\exists x Fx)$

– $B(\exists x Fx)$ is the disposition $D(Fx, P)$: to believe any P *wherever* you believe ' $\forall x(Fx \rightarrow P)$ ': $B(\exists x Fx)$ and $B(\forall x(Fx \rightarrow P))$ causes $B(P)$.

– E.g. $B(\text{Someone murdered Dr Black})$ and $B(\forall x(x \text{ murdered Dr Black} \rightarrow \text{the safe is empty}))$ causes $B(\text{The safe is empty})$

5 Truth-conditions

Universal:

- If all F are G , then any true belief in ' a is F ' can only lead to a true belief in ' a is G '.
- If not all F are G , then there will be some belief in ' a is F ' which can be true but leads to a false belief in ' a is G '

Existential:

- If something is F , then ' $\forall x(Fx \rightarrow P)$ ' entails P (via ' $Fa \rightarrow P$ ' for whichever a is F). So any true belief in ' $\forall x(Fx \rightarrow P)$ ' can only lead to a true belief in P .
- If nothing is F , then ' $\forall x(Fx \rightarrow P)$ ' does not entail P , so you can truly believe ' $\forall x(Fx \rightarrow P)$ ' but falsely believe P . (e.g. ' $\forall x(x \text{ is the culprit} \rightarrow \text{the safe is empty})$ ' can be true, and the safe can be full because nobody was the culprit).

References

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