

## Boris Kment – Counterfactuals and Explanation

Presupposed: Stalnaker-Lewis framework for counterfactuals:

'If it had been the case that A, then it would have been the case that C' is true just in case C is true in all the possible A-worlds closest to the actual world.

'If it had been the case that A, then it might have been the case that C' is true just in case C is true in some of the possible A-worlds closest to the actual world.

**§1** Explananda for an account of closeness:

(2) Counterfactual dependence is temporally asymmetrical.

(3) Conformity to the laws of the actual world contributes to the closeness of an antecedent-world.

*Well-behaved antecedent-worlds* are exactly like our world until shortly before the antecedent-time, and then smoothly diverge just enough to make the antecedent true, and afterwards evolve in accordance with the actual laws.

Lewis's idea (for nomologically possible antecedents concerning matters of particular local fact):

(4) The well-behaved antecedent-worlds are closer than any other antecedent-worlds.

**§2** Lewis' theory of closeness:

(i) It is of the first importance to avoid big, widespread, diverse violations of law.

(ii) It is of the second importance to maximize the spatiotemporal region throughout which perfect match of particular fact prevails.

(iii) It is of the third importance to avoid even small, localized, simple violations of law.

(iv) It is of little or no importance to secure approximate similarity of particular fact, even in matters that concern us greatly.

This theory explains the asymmetry of counterfactual dependence, because big miracles are required to bring a world back into perfect match post-antecedent, while only small miracles are required to satisfy the antecedent in a world with perfect match pre-antecedent.

**§3** A problem: post-antecedent match is relevant to closeness in some, but not in all, cases:

(5) If Bugsy had used device B, the coin would still have landed heads.

(6) If you had accepted the bet, you would have won.

(7) If the random process in A had turned out differently and the signal had travelled from A to C rather than to B, ticket number 17 would still have won.

(8) If you had bought the ticket, you would have won.

Proposed explanation of this phenomenon:

(c) If a matter of particular fact obtains in two worlds, then this contributes to the closeness between the two worlds if and only if the relevant matter of fact has the same causal history in the two worlds.

**§4** (L) Where L is a law of nature and E is a course of events that instantiates L, the fact that L is a law is one of the factors that jointly explain E.

A problem for Lewis' theory of closeness is that the following counterfactual is not true:

(9) If (Law of Gravitation) had not been a law, then events would still have at least approximately conformed to it.

This problem suggests the following generalization of (c):

(C) If some fact *f* obtains in both of two worlds, then this similarity contributes to the closeness between the two worlds if and only if *f* has the same explanation in the two worlds.

**§5** In a deterministic world, we have the following dilemma:

(11) If I had not scratched my nose a minute ago, the history of the world might have been different throughout the period before the scratching.

(12) If I had not scratched my nose a minute ago, the laws of nature might have been different.

Kment recommends that in response we give up the principle that laws must be exceptionless.

**§6** Since the lawhood of laws is what explains why events conform to them, (18) follows from L:

(18) For any nomically possible antecedent, the closest antecedent worlds are nomically possible worlds, that is, metaphysically possible worlds with the same laws as ours.

**§7** If we think laws can have exceptions, the following theory of closeness is available to us:

1. It is of the first importance to ensure sameness of laws.
2. It is of the second importance to avoid big alien violations of the laws of *w*, provided the conformity to the relevant laws has the same explanation as in *w*.
3. It is of the third importance to maximize match in matters of particular fact with the same explanations as in *w*.
4. It is of the fourth importance to avoid small alien violations of the laws of *w*, provided the conformity to the relevant laws has the same explanation as in *w*.

To get this theory to work out right, the following principles about 'the world' are required:

(23) Causes precede their effects.

(24) The divergence of a world from ours is possible by a small miracle or without any miracle.

Kment takes counterexamples to (23) to also be counterexamples to the asymmetry of counterfactual dependence, so is content to ignore them. He thinks there are some counterexamples to (24), but that they are rare and so can also be safely ignored.

A problem for the view (due to Pollock):

If the coat had been stolen last night, it would have been stolen at midnight.

**§8** Another problem for the view (due to Dorr and Setiya):

(25) If Susie had used B rather than A for the aforementioned phone call ten years ago, the outcome of the lottery draw would have been just the same.

A dilemma for the view: either the explanations involved must be complete explanations, or merely productive explanations. If they are productive explanations, then Nixon's indeterministic missile-launching system supports the counterfactual 'if Nixon had pressed the button, the signal would have fizzled out', since many post-antecedent matters of fact would have had the same productive explanation in the fizzling world. If they are complete explanations, then we do not have that the king's coin toss would have yielded the same outcome whether the assassin was poisoned by *x* or *y*.

**§8** A problem with the view which is also a problem for other accounts of counterfactuals based on the Lewis-Stalnaker framework: counterfactuals with metaphysically impossible antecedents.

Kment prefers the solution which admits impossible worlds, and conjectures that C can explain why possible worlds are always closer to actuality than impossible worlds are.