Morgenbesser's Coin and Counterfactuals with True Components

Is A ∧ C sufficient for the truth of 'if A were the case, C would be the case'? Jonathan Bennett thinks not and produces a putative counterexample. But I argue that anyone who accepts the case of Morgenbesser's coin, as Bennett does, should reject Bennett's counterexample. Moreover, I show that the principle underlying Bennett's counterexample is unmotivated and indeed false. More generally, I argue that Morgenbesser's coin commits us to the sufficiency of A ∧ C for the truth of the corresponding counterfactual.

1. Introduction

Does the truth of A ∧ C suffice for the truth of the corresponding counterfactual 'if A were the case, then C would be the case' (A > C)? That is, does the schema

Conjunction Conditionalization: (A ∧ C) → (A > C)

hold? Conjunction Conditionalization is an axiom of Pollock's SS (1976, pp. 42-43) and hence a theorem of the stronger logics of Lewis (1986, p. 132) and Stalnaker (1968, p. 48) and is validated by a range of semantics including Lewis's. Despite this, Conjunction Conditionalization is controversial and many reject it. Indeed, Lewis (1986, p. 22) himself considers rejecting it.

If Conjunction Conditionalization is false, then these standard logics and a range of semantics have to go. Moreover, Conjunction Conditionalization has ramifications for other logical principles. For example, Conjunction Conditionalization cannot plausibly be maintained with either of

Simplification of Disjunctive Antecedents (SDA):
((A ∨ B) > C) → ((A > C) ∧ (B > C))

Universalization of Existential Antecedents (UEA):
(((∃*x*) *Fx*) > C) → ((∀*x*) (*Fx* > C))

contra Loewer (1976, p. 533) who states that the invalidity of Conjunction Conditionalization 'has nothing to do with the validity of (SDA)'.

Proof: A ∧ C entails (A ∨ B) ∧ C, giving (A ∨ B) > C by Conjunction Conditionalization. By (SDA), this gives B > C, for any B, erroneously making the truth of the consequent sufficient for the truth of a counterfactual. So (SDA) is false if Conjunction Conditionalization holds (cf. Butcher 1983, p. 75). Similarly, (UEA) fails assuming Conjunction Conditionalization, as (∀*x*) (*Fx* > C) is not, in general, required for the truth of (∃*x*) (*Fx*) ∧ C.

Although many now reject (SDA) and (UEA), both principles still have their adherents: Studtmann (2003, p. 56 n2) explicitly endorses (SDA), and (UEA) is, I think, implicit in McDermott's 2007.

Conjunction Conditionalization also plausibly validates

Counterfactual Modus Ponens (CMP):
(A ∧ (A > C)) → C

A counterexample to (CMP) must have the following form A ∧ (A > C) ∧ ¬C, so that application of (CMP) gives rise to a contradiction. But given Conjunction Conditionalization, we can conclude A > ¬C from A ∧ (A > C) ∧ ¬C and thus A ∧ (A > C) ∧ (A > ¬C). But this yields a contradiction given the following principle

Exclusion: ◊A → (¬((A > C) ∧ (A > ¬C)))

Exclusion is validated by a range of semantics for counterfactuals and is, in any case, overwhelmingly plausible. So if we can establish Conjunction Conditionalization, then we validate (CMP) contra Lycan (2001).

The status of Conjunction Conditionalization is also of independent philosophical interest. For example, both Sosa's (1999, p. 142) formulation of safety, 'if S were to believe P, then it would be the case that P', and Nozick's (1981) fourth condition on knowledge, 'if P were the case, then S would believe P', add nothing to the true belief condition on knowledge, if Conjunction Conditionalization is valid.[1]

In the next section, I consider Jonathan Bennett's putative counterexample to Conjunction Conditionalization, and show that we need not accept it. In §3 I argue that we should in fact reject Bennett's counterexample and that the principles which underwrite his counterexample are unmotivated and indeed false. Finally, in §4, I generalize the argument to the conclusion that Conjunction Conditionalization is true.

2. Bennett on counterfactuals with true components
Jonathan Bennett (2003, §92) rejects Conjunction Conditionalization in indeterministic contexts. In particular, he rejects

Coin: If I had tossed the coin at t, the coin would have landed heads

when in fact I did toss an indeterministic coin at t and it did land heads. To see why Bennett rejects Coin, we must examine two further counterfactuals. First, consider the case of Morgenbesser's coin (Slote 1978, p.27 n33): I toss an indeterministic coin, and whilst the coin is in mid-air, I offer you good odds that it will come up heads. You decline the bet and the coin lands heads. The following is then true

Morgenbesser: If you had bet heads, you would have won[2]

Now consider an example of Tichý's (1976). Suppose Fred invariably takes his hat when it rains but takes it only 50% of the time when it is fine. It is raining and so Fred has his hat. But

Tichý: If it had not been raining, Fred would have taken his hat

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[1] Sosa (1999) provides non-equivalent formulations of safety but needs the formulation in the text as he wants safety to be the contrapositive of sensitivity: 'if P were not the case, then S would not believe P' (1999, p. 148).
[2] Bennett only explicitly rejects the forward-looking analogue of Coin, 'If you were to toss the coin, it would fall heads' (2003, p. 240). However, as we shall see, his reasons for doing so also carry over to Coin, since tense plays no role. More generally, it seems tense plays no significant role for Bennett; he explicitly endorses both Morgenbesser (2003, pp. 234-235) and its forward looking analogue 'if you were to bet on heads, you would win' (2003, p. 240) and says of the latter 'It was based on a sheer guess, and was not a reasonable thing for me to say; but it was true' (2003, p. 240). Tense, then, is relevant to assertibility but not to truth.

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is false. Between them Morgenbesser and Tichý show that some, but not all post-antecedent facts should be held fixed when considering counterfactuals.

Bennett accounts for the difference between Morgenbesser and Tichý in his Lewis-style possible worlds semantics by appealing to

> Causal Independence: If ¬A and C obtain at the actual world and these two facts are causally unrelated to one another, then C also obtains at the closest A-worlds. From this it follows that A > C (2003, p. 237).

The coin landing heads is causally independent of whether you bet, so the closest worlds in which you bet are ones in which the coin lands heads. This is sufficient to make Morgenbesser true.

As it stands, however, Causal Independence is silent on cases where A and C are causally related and so does not explain our verdict on Tichý. What Bennett needs is

> Causal Independence*: If ¬A and C obtain at the actual world, then C obtains at the closest A-worlds iff these two facts are causally unrelated to one another. From this it follows that A > C.

Since Fred's taking his hat is causally related to the weather, this fact is not held fixed when assessing Tichý. In terms of Lewis's framework, Fred takes his hat in some closest not-rain-worlds, but in others he does not, and this is sufficient to make Tichý false.

The relevance of all this to Conjunction Conditionalization, is that Bennett sticks to this line of reasoning when the antecedent is true. That is, in addition to Causal Independence, Bennett subscribes to

> The Irrelevance Principle: 'When A and C are both true, and the causation of C is indeterministic, A > C is true just in case A is irrelevant to the causal chain that leads to C's obtaining' (2003, p. 240).

Given that in Coin the antecedent is relevant to the causal chain leading to the consequent, The Irrelevance Principle makes Coin, and hence Conjunction Conditionalization, false.

Note that as a biconditional, The Irrelevance Principle is the true antecedent analogue of Causal Independence* rather than Causal Independence. So without Causal Independence*, The Irrelevance Principle is unmotivated. And Bennett needs both directions of The Irrelevance Principle as it is the claim that A > C is true when A ∧ C _only if_ A is irrelevant to C that allows him to reject Coin.

The Irrelevance Principle and the falsity of Coin, however, are each inconsistent with Bennett's official way of accommodating the distinction between Morgenbesser and Tichý, which is not given by Causal Independence, but by

> Causal Chain: A post-antecedent fact contributes to the closeness of a world, w, to the actual world iff it obtains in w through same causal chain as it does in the actual world (2003, pp. 235, 299, 328).

But, if A indeterminisitically causes C, then, by Causal Chain, A-worlds where C obtains through this same causal chain are closer to actuality than other A-worlds

including (A ∧ ¬C)-worlds. So Conjunction Conditionalization and Coin are true by Causal Chain and The Irrelevance Principle false.

More importantly, Bennett's argument against Coin and Conjunction Conditionalization rested on what he took to be a generalization of the principle underlying our judgements about Morgenbesser and Tichý. However, Causal Chain also underwrites these judgements, but supports Coin and Conjunction Conditionalization.[3] Consideration of Morgenbesser and Tichý alone then, does not decide the truth of Coin. Given that The Irrelevance Principle is under motivated, Bennett has no argument against Coin and Conjunction Conditionalization, and so we are free to accept them both. Of course this is not to establish Conjunction Conditionalization.

3. An Argument from Morgenbesser to Coin

The following principles are theorems in the standard counterfactual logics and valid on a range of semantics

Limited Transitivity: $((A > B) \wedge ((A \wedge B) > C)) \rightarrow (A > C)$

Substitution: $((A > B) \wedge (B > A) \wedge (A > C)) \rightarrow (B > C)$

Gloss on Limited Transitivity: if the closest A-worlds are B-worlds, then the closest (A ∧ B)-worlds are the closest A-worlds, so C obtains at the former worlds iff it obtains at the latter worlds. Similarly for Substitution: if the closest A-worlds are B-worlds and the closest B-worlds are A-worlds, then the closest A-worlds are the closest B-worlds and so C obtains at the former worlds iff C obtains at the latter worlds.

Returning to Morgenbesser, consider the following argument where the antecedents and consequents have been abbreviated in the obvious ways

Argument 1

Morgenbesser: Bet > Win
(1) (Bet > Win) → (Bet > Heads)
(2) (Bet > Heads) → ((Bet ∧ Toss) > Heads)
(3) ((Bet ∧ Toss) > Heads) → (Toss > Heads)
Therefore
Coin: Toss > Heads

Argument 1 is valid, so if Bennett wishes to accept Morgenbesser and reject Coin, he must reject one of (1) to (3). (1) to (3) are all extremely plausible, but each can be supported by independent argument.

(1) is licensed by Limited Transitivity. The closest worlds at which you bet heads and win are worlds where the coin lands heads, so we have (Bet ∧ Win) > Heads. And this counterfactual is obviously true regardless of whether we employ a possible

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world semantics. Conjoined with (1)'s antecedent, this gives (1)'s consequent by Limited Transitivity.

(2) is supported by Substitution. Since I only offer you the bet once I've tossed the coin, we have Bet > (Bet ∧ Toss). Obviously the converse, (Bet ∧ Toss) > Bet, holds too. Combined with the antecedent of (2), these counterfactuals yield (2)'s consequent by Substitution.

So from applications of Substitution and Limited Transitivity we can move from Morgenbesser to the consequent of (2). Before considering (3), we should note that Bennett himself has been ambivalent about Substitution (2001, p. 201), although he does want to validate Limited Transitivity. (Similarly, Schaffer, who proposes an antecedent-independence account, seems happy to give up Substitution as he thinks this is required to deal with cases like Morgenbesser and Tichý (2005, p. 305 n14). As we have seen, however, Causal Chain also suffices.) Lewis, however, thinks Substitution is non-negotiable as it is validated by 'the weakest system that has any claim to be called a logic of conditionals' (1971, p. 80). Happily, however, the argument need not rely on Substitution, nor on Limited Transitivity for that matter.

(1) is also licensed by

Weakening the Consequent: $((A > B) \wedge \Box (B \rightarrow C)) \rightarrow (A > C)$

Gloss: if the closest A-worlds are B-worlds and all B-worlds are C-worlds, then the closest A-worlds are C-worlds. Trivially, from Bet > Win we have Bet > (Win ∧ Bet). Necessarily, if you win and bet heads, the coin lands heads, so by Weakening the Consequent we have Bet > Heads. That is, if we reject (1), it is not the case that if you had bet heads the coin would have landed heads. But in that case, how can it be that if you had bet heads you would have won, as Morgenbesser states?

(2) need not rely on Substitution, but only on very limited antecedent strengthening

VLAS: $((A > B) \wedge (A > C)) \rightarrow ((A \wedge B) > C)$

Gloss: if the closest A-worlds are B-worlds, then the closest (A ∧ B)-worlds are the closest A-worlds, so C is true at the former iff it is true at the latter. As noted above, Bet > (Bet ∧ Toss). This combined with the antecedent of (2), Bet > Heads, gives, by VLAS, (Bet ∧ Toss) > Heads.

Unlike Substitution Bennett is committed to VLAS: '[VLAS] is valid. There can be no doubt about that' (2003, p. 332). So we can reach the consequent of (2) via applications of Substitution or VLAS and Limited Transitivity or Weakening the Consequent.[4]

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[4] Limited Transitivity, Substitution and VLAS are theorems of Pollock's, Lewis's and Stalnaker's logics. Weakening the Consequent, is only a theorem when $B \rightarrow C$ is a logical truth and not just metaphysically necessary. Edgington (personal communication) prefers to think of these principles as rules of inference, but, construed as such, she accepts them. If, we define 'winning' as 'betting heads and the coin landing heads or betting tails and the coin landing tails', then we can replace '$\Box (B \rightarrow C)$' in Weakening the consequent with '$\vdash (B \rightarrow C)$'. Williamson notes (2007: 295-296) that such a revised principle, but not Weakening the Consequent, is plausibly false in languages that contain a rigidifying actuality operator. Such issues are orthogonal to our concerns, however.

Another way to support (2) is to note that ((Bet ∧ ¬Toss) > ¬Heads) and that this combined with either of the following

☐ ((Bet > Heads) → (((Bet ∧ Toss) > Heads) ∨ ((Bet ∧ ¬Toss) > Heads)))

☐ ((Bet > Heads) ↔ (((Bet ∧ Toss) ∨ (Bet ∧ ¬Toss)) > Heads))

gives (Bet ∧ Toss) > Heads. In the first case by Exclusion and disjunctive syllogism, and in the second case, by what I call 'Very Restricted Simplification of Disjunctive Antecedents'.

VRSDA: (((A ∨ B) > C) ∧ (A > ¬C)) → (B > C)[5]

These latter defences of (2), however, rely on the fact that Toss is a necessary condition of Heads and so cannot be employed when arguing for Conjunction Conditionalization more generally as I do in §4. However, they are important in the present context as they provide another route to establishing (2), which, as well as being a premise in the argument to Coin, is in itself significant as we shall see below.

(1), is, in fact, unnecessary given that Bennett (2003, p. 237) explicitly accepts Bet > Heads. This is because (1) is, like Morgenbesser, entailed by Causal Independence and by other independence accounts. More generally, Bet > Heads is a semi-factual whose antecedent is irrelevant to the truth of the consequent, and so is an instance of a type of counterfactual that we count as true (cf. Bennett 2003, §91, Pollock 1976, p. 26). Consequently, we need not rely on either Limited Transitivity or Weakening the Consequent. So Bet > Heads, (2) and (3) also constitute an argument to Coin.

In any case, given that Bennett is committed to Limited Transitivity and VLAS, he is committed to the consequent of (2). So the question now becomes, is (3) true? When discussing a version of Morgenbesser, Bennett writes

> At the closest worlds at which you bet on heads while I press the button, the fall of the coin arises from the very same chain of events: the button-press link in the chain is the very one that occurred [in the actual world], with merely a different vocal accompaniment. This seems to be why [we accept *Morgenbesser*] (2003, p. 235).

So here Bennett seems to be suggesting that preservation of the actual causal chain is what is important: the mere presence of a vocal accompaniment makes no difference to whether the coin lands heads. Given that Bennett accepts Morgenbesser on this basis, he should also accept (3). Moreover, to reject (3) would be to claim that whilst it is not the case that if I tossed the coin, the coin would fall heads, it is the case that if I tossed the coin and you placed a bet, the coin would land heads. But there is no link between your betting behaviour, causal or otherwise, and the result of the coin toss. To reject (3) would be to claim that your betting had some impact on the result of the coin toss, which is absurd. Moreover the whole rationale for Morgenbesser is that my betting is causally independent of the result of the coin toss, so to deny that now undercuts the motivation for Morgenbesser.

It is implausible to reject (3), but it is not inconsistent to accept a pair of the form (Bet ∧ Toss) > Heads and ¬(Toss > Heads). Indeed, we know from Stalnaker and Lewis that antecedent strengthening is an invalid argument form and similarly,

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[5] Both conditionals and VRSDA are validated by the semantics of Pollock, Lewis and Stalnaker.

antecedent weakening is also invalid. An example adapted from Lewis (1986, p. 10): If the USA and all their enemies threw their weapons into the sea tomorrow, there would be peace. But it's not the case that if the USA threw their weapons into the sea tomorrow, there would be peace. However, the cases of the failure of antecedent strengthening/weakening in the literature are ones where the extra material in the antecedent is causally relevant to the consequent. But in (3) this material is, as we have seen, causally and logically independent of the consequent. We might suppose, then, that antecedent weakening only fails when the subtraction from the antecedent is causally relevant to the consequent.

This is not quite right, however. Imagine the following set-up: (i) C can only be brought about by A or by B, each of which is sufficient for C; (ii) A and B are themselves causally unrelated, so that whether or not A happens has no impact on whether or not B happens and vice versa; and (iii) none of A, B or C obtain.[6] In this situation since A is unrelated to B, we have A > ¬B. Furthermore, we have A > C. These two conditionals yield (A ∧ C) > ¬B by VLAS.

Now if ¬A ∧ C were the case, then B would be the case, since C can only be brought about by A or by B, and ¬A. So here we have a situation where we can move from (A ∧ C) > ¬B to (¬A ∧ C) > B, even though A is unrelated to B. Of course it is easy to see why this is: B has to 'step-in' to replace A as a cause of C, if C is still to be the case. Moreover, it is not the case that C > ¬B, since, we may suppose, C is as likely to be brought about by B as by A. But, as stipulated, A is irrelevant to ¬B, so here we have a case of the failure of antecedent weakening, ((A ∧ C) > ¬B) ∧ ¬(C > ¬B), even though the subtraction from the antecedent is irrelevant to the consequent. But such cases are structurally very different from (3) in that the subtraction from the antecedent is causally relevant to whether the remainder of the antecedent obtains. But given that your betting is causally irrelevant both to whether the coin lands heads and to whether the coin is tossed, we cannot appeal to the failure of antecedent weakening to reject (3).

So here we have an argument to show that if Morgenbesser is true then so is Coin and so Coin cannot represent a counterexample to Conjunction Conditionalization for those, like Bennett, who accept Morgenbesser. And given that Coin is true, The Irrelevance Principle must be false.

Perhaps, however, the defender of Causal Independence* and The Irrelevance Principle can bite the bullet and reject (3), since together with Morgenbesser, (1) and (2), it violates The Irrelevance Principle by yielding Coin. But we should note that not only is The Irrelevance Principle under motivated, it is, in fact, completely unmotivated. This is because Causal Independence* is false. The consequent of (2), (Bet ∧ Toss) > Heads, a true semi-factual entailed by Morgenbesser and our principles of counterfactual logic, has an antecedent which is causally relevant to its consequent and so falsifies Causal Independence*. Indeed,

(2) (Bet > Heads) → ((Bet ∧ Toss) > Heads)

alone is sufficient to show that Causal Independence* is false. The antecedent of (2), Bet > Heads, is an irrelevant semi-factual entailed by Causal Independence*, so given (2), we can detach its consequent, (Bet ∧ Toss) > Heads, which renders

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[6] Cases with the structure described here warrant further investigation as they are prone to lead us into error. For reasons of space, I cannot defend fully what I claim about such cases here, but I hope to in future work.

Causal Independence* false. But without Causal Independence*, The Irrelevance Principle is unmotivated, as we saw above.

Moreover, similar reasoning shows that The Irrelevance Principle is false. Consider a situation in which you are offered and accept the bet (the defence of (2) presented above does not turn on your rejection of the bet). In such a situation the antecedent of (2), Bet > Heads, is a counterfactual with true components, whose antecedent is irrelevant to the obtaining of the consequent and so is entailed by The Irrelevance Principle. Given (2), this yields (Bet ∧ Toss) > Heads, a counterfactual with true components but with an antecedent relevant to the consequent. Such a conditional falsifies The Irrelevance Principle.

So given VLAS, Substitution, VRSDA or Exclusion, all of which give (2), The Irrelevance Principle is false and so cannot be invoked to reject (3). The truth of (2) also shows that the antecedent-independence accounts of Edgington (2004), Kvart (1994), Noordhof (2004) and Schaffer (2004) are false and so cannot be used to undermine Coin.[7] The same considerations falsify Causal Independence*, leaving Causal Chain as our only explanation of Morgenbesser and Tichý. So here we have the kernel of an abductive argument to Causal Chain which entails Conjunction Conditionalization. However, the deductive argument to Coin above can be generalized to the conclusion that Conjunction Conditionalization is true.

4. Generalizing the argument
The argument above may seem to address only one type of counterexample to Conjunction Conditionalization, namely those where A indeterminisitically causes C. Of course, there is nothing special about coin tosses, so the above argument tells equally against Nozick's claim that

> If it is truly a random matter which slit a photon goes through, then its going through (say) the right slit does not establish the subjunctive: 'if a photon were fired at that time from that source it would go through the right-hand slit' (1981, pp. 680-681).

Simply run Argument 1 replacing 'Toss' with 'Photon firing' and 'Heads' with 'Right slit'. (Similarly we can reject Gundersen's (2004, pp. 1-2) case of the Zen master.)

Putative counterexamples to Conjunction Conditionalization are, however, often unlike Coin in this regard. Standardly, putative counterexamples are of four other types:

I.   There is no connection between the antecedent and consequent

For example (Fine 1975, p. 359)

> (4) If I were to raise my little finger, there would be rainfall this Winter

II.   A raises the chances of C, but C does not (solely) obtain in virtue of A

> (5) If he had worked hard, he would have passed

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[7] Noordhof and Schaffer need not count Coin as false as they could accept Lewis's (1986) Strong Centring assumption.

is allegedly false if the student worked hard but passed only because he cheated (Fine 1975, p. 359).

III. A lowers the chances of C, and C does not obtain in virtue of A.

(6) If Caspar had come, the party would have been a good one.

You erroneously believe both that Caspar did not attend the party and that the party was a bad one. When Caspar ruins most parties he attends, and in fact nearly ruined this one, then Bennett (1974) claims (6) is false.

IV. A obtains in virtue of C

(7) If my lawn were wet, it would be raining

Butcher (1983) thinks (7) is false if it is raining and my lawn is wet.

Does my argument cover such cases? Well that A caused C was not relied upon in Argument 1. To see this, consider the following generalization of Argument 1. Take any fact C that obtains from time t. I offer you a bet at $t^*<t$ on whether C will obtain or not, which you decline. After t I can say truthfully 'If you had bet on C, you would have won'. Now consider the following argument for any fact A that obtains before t^*

Argument 2

(8) Bet > Win
(9) (Bet > Win) $\rightarrow$ (Bet > C)
(10) (Bet > C) $\rightarrow$ ((Bet $\wedge$ A) > C)
(11) ((Bet $\wedge$ A) > C) $\rightarrow$ (A > C)
Therefore
(12) A > C

Argument 2 is simply a generalization of Argument 1. (8) is my truthful utterance after you declined the bet and C came about. (9) is licensed by Limited Transitivity or Weakening the Consequent. (10) is licensed by Substitution / VLAS: '(Bet $\wedge$ A) > Bet' is trivially true and 'Bet > (Bet $\wedge$ A)' is true assuming the past is counterfactually independent of our wager, so that regardless of whether I offer and you accept the bet, A obtains. (11) follows from the fact that whether C obtains is independent of my betting.

In fact A need not be a fact that obtains before I offer the bet, although this is a particularly vivid example. As long as A obtains independently of the wager, we should assent to Bet > (Bet $\wedge$ A), and this is what we need to establish (10). This is important if Argument 2 is to cover (7). So no matter how infelicitous I to IV are, we are committed to endorsing them, if we accept Morgenbesser.

One might object that there is something funny about betting that changes the context (cf. Vessell (2003 pp. 117-118)) and so what the argument above really shows is not that Conjunction Conditionalization is true, but rather that there is a shift in context.[8] But the argument can be reformulated without reference to gambling. As I noted in §3, we can move directly from the semi-factual 'Bet > Heads' and (2) and (3)

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[8] Note that adopting the contextually-sensitive strict conditional semantics of would-counterfactuals endorsed by von Fintel (2001) and Gillies (2007) does not avoid argument 2.

to Coin. But there is nothing special about 'Bet > Heads'; any semi-factual with an irrelevant antecedent will do. So instead of 'Bet' we can instead employ any B such that whether B obtains is irrelevant to whether A and C obtain.

Argument 3

> (13) $(B > C)$
> (14) $(B > C) \rightarrow ((B \wedge A) > C)$
> (15) $((B \wedge A) > C) \rightarrow (A > C)$

Therefore

> (12) $A > C$

(13) is our irrelevant semi-factual, and (14) is licensed by $B > (B \wedge A)$ and either of Substitution or VLAS, and (15) by the fact that whether C obtains is independent of B.

In certain circumstances, however, there will be no such B. For instance, let C be a proposition that only holds at the world of assessment so that $\neg B > \neg C$. Because of this, Argument 3 falls short of establishing Conjunction Conditionalization in its full generality. To reject Conjunction Conditionalization on this basis, however, would be extremely ill-motivated.

Conjunction Conditionalization is, then, non-negotiable for those who accept the truth of semi-factuals with irrelevant antecedents or counterfactuals that turn on them, such as Morgenbesser. Given that these conditionals are central to our counterfactual reasoning, the rejection of Conjunction Conditionalization would mean divorcing the truth conditions of counterfactuals from our inferential practices in a radical way.[9]

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