Counterfactuals and normative conditionals: key terms and state of the art

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Counterfactuals: Key terms

- a counterfactual conditional is (expressed via) a sentence of the following form: *If A had been the case, B would have occurred* (or *If A were the case, B would occur*)
- counterfactuals are, strictly speaking, subjunctive conditionals with antecedent that is assumed false (but note: SEP/Starr 2021 uses counterfactuals and subjunctive conditionals interchangeably, preserving the confusion in the literature)
- examples of a decreasing plausibility:
  - If Lukáš had been the president of SR, he would have been a head of a state.
  - If the Department hadn't applied for any project, Daniela wouldn't have been its member.
  - If Lukáš were the president of SR, he would be carefree.
  - If Marián had been the president of SR, he would have been identical to Zuzana Čaputová.

Counterfactuals: Key terms

- SEP reminds us that there are also alternative formulations of counterfactual contitionals, which do not fit into the *If A had been the case, B would have occurred* scheme:
  - If Maya had run, she might have been elected.
  - If Maya had run, she might have been elected and would have been an excellent Senator.
  - Mr. Taft never asked my advice in the matter, but if he had asked it, I should have emphatically advised him against thus stating publicly his religious belief.
  - If Maya had run, she probably would have won and she might have won big.

Counterfactuals: Key terms

- Q: Is there any way how to capture all these options?
- a tentative suggestion: A counterfactual conditional is a proposition of the form $A > B$ where A is false, and in order for the whole proposition to be true, there should be a certain dependence of B on A (this dependence can be specified in various ways, e.g., a truth of A at some past moment substantially increases the likelihood of B).

Counterfactuals: Key terms

- counterfactual conditionals exhibit non-monotonicity (Goodman 1947, Lewis 1973); example:
    - If Daniela hadn't organised a workshop this year, her project would have been lacking a promised output.
    - If Daniela hadn't organised a workshop this year, but Naomi had, the project would not have been lacking a promised output.
    - If Daniela hadn't organised a workshop this year, Naomi had, but the workshop had been cancelled in the end due to the health crisis, the project would have been lacking a promised output.

- Goodman's problem (as specified by SEP): "The truth-conditions of counterfactuals depend on background facts and laws. It is challenging to specify these facts and laws in general, but particularly difficult to specify them in non-counterfactual terms."

Counterfactuals: Key terms

- a counterpossible conditional is a counterfactual with an impossible antecedent
- examples of a decreasing plausibility:
  - If there were true contradictions, classical logic would not be the right logic.
  - If there were true contradictions, Priest would be happy.
  - If there were true contradictions, Tichý would be happy.
  - If there were true contradictions, classical logic would be the right logic.

Counterfactuals: State of the art

- initial motivation for the debate:
- truth-functional logic is not an adequate tool for capturing counterfactuals (SEP): It is inadequate because there is no truth-functional connective whatsoever that simultaneously combines two false sentences to make a true one (slide one, examples 1 and 2) and combines two false ones to make a false one (slide one, examples 3 or 4).
- in addition, possible-world semantics can be deemed insufficient for capturing counterpossible conditionals (we will return to this point at the end of this section)

Counterfactuals: State of the art

- possible-world semantics (Stalnaker 1968, Lewis, 1973; criticised by Tichý 1976 and in the debate on counterpossibles)
- they overcome the insufficiency of a truth-functional approach and can account for non-monotonicity, but many of them ignore background conditions (not a "complete" analysis of all truth-conditions)
- two main varieties:
  - strict conditional analysis (basic): $\Box(\phi \rightarrow \psi)$
  - similarity analysis (basic): all the ϕ-worlds most similar to $w_@$ are ψ-worlds.

Counterfactuals: State of the art

- **the premise theory**: in comparison with possible-world semantics approaches, the premise theory approaches counterfactuals from a perspective closer to Goodman (Veltman and Kratzer in several works); the approach is also close to similarity theory, but it aims for a greater precision w.r.t. intuitively clear examples (such as Tichý's 1976 example)

- Veltman's approach is based on the ideas that situations (subsets of worlds) not obeying the relevant laws are excluded from the consideration and that some facts determine other fact

Counterfactuals: State of the art

- the probability approach
- Adams' Prior Probability Analysis: The assertability of a conditional "If A had been the case, B would have occurred" is proportional to the agent's credence in B prior to learning that A was false.
- problem: the predictions about assertability are not always correct
- several different suggestions how to improve the idea proposed in the literature (e.g., by accounting for facts that agent learns after they learn that the antecedent is false)
- problem: as pointed out in the SEP entry, the theory does not provide truth-conditions for all counterfactuals, there is a divergence from actual human reasoning, and an issue with implementation (the latter is improved in Bayesian approaches)

Counterfactuals: State of the art

- Berto, Jago (2019): Vacuism is the view that all counterpossibles are trivially true, and this view seems wrong to many influential scholars (Brogaard, Salerno, Bernstein, Bjerring, Krakauer, Nolan, Priest...)

- this is so mainly because vacuism cannot account for the intuitive difference between examples of varying plausibility (cf. slide 5)

- often, impossible worlds are invoked to account for the fine-grainedness of counterpossibles (yet various hyperintensional frameworks, including TIL, might do)

Normative conditionals: Key terms

- normative conditionals include imperative conditionals and indicative conditionals

- imperative conditional is (expressed via) a sentence of the following form: *If A, do B!*

- examples of a decreasing plausibility:
    - If it rains heavily, close the window!
    - If it rains heavily, open the window!
    - If it rains heavily, prove that it rains and that it does not rain!

- note: if B would be inevitably true in case A were true, it would (in my view) not increase the plausibility - it would decrease it: If you're closing the window, close something!

Normative conditionals: Key terms

- normative conditionals that are best understood as indicative conditionals include the following: "B is obligatory if A is the case"; "If A, B is required"; "if A, B must be"; "If A, then B must not happen"; "If A, x shall be obliged to B"
- examples:
  - If an employee unwarrantedly enriches himself/herself to the detriment of the employer or an employer unwarrantedly enriches himself/herself o the detriment of an employee, such enrichment must be surrendered.
  - The working time of employees who perform work under agreements on work performed outside an employment relationship must not exceed 12 hours within any 24-hour period.

Normative conditionals: Key terms

- normative conditionals are thus not limited to:
    - exclamatory sentences: they can be expressed via at least seemingly declarative sentence (x shall be obliged to do B/ B must be the case)
    - normative conditionals requiring action (do B!/B must be the case): they can also require that something is not done (do not do B!/ B must not be the case / B cannot be the case)
    - conditional sentences: normative conditionals are often "buried" in a seemingly unconditional sentence (x who is... must do B -> If x is ...x must do B)

Normative conditionals: State of the art

- non-cognitivist approaches are a plausible choice for imperative conditionals due to their apparent non-truth-aptness
- such approaches face Jørgensen dilemma/trilemma
- more generally, a challenge is how to combine truth-functional connectives or intensional modals (which are semantically based on the truth-assignment in possible worlds) with imperatives that are not truth apt
- Dubislav's convention: An imperative F is called derivable from an imperative E if the descriptive sentence belonging to F is derivable with the usual methods from the descriptive sentence belonging to E, whereby identity of the commanding authority is assumed.

Normative conditionals: State of the art

- in search for an imperative logic, several suggestions have been considered in the literature (Hansen 2013):
  - logic of satisfaction: imperatives are not true, but they can be satisfied
  - logic of existence: imperatives exist and we can reason about what imperatives also exist if some do (the problem of explicit - implicit/ what grounds this existence)
  - logic of ideal existence: existence in a normative system that is closed under consequences
  - Hansen himself arrives at a pessimistic conclusion - there is no logic of imperatives

Normative conditionals: State of the art

- **cognitivist approaches** are a plausible choice for normative conditionals that are indicative conditionals due to their apparent truth-aptness
- the majority of the works in deontic logic have been published within this approach
- such approaches face the challenge of the is/ought gap (but usually ignore it)

Normative conditionals: State of the art

- in deontic logic, we often encounter attempts to deal with normative imperative conditionals and normative indicative conditionals in the same way (cognitivist or non-cognitivist)

- deontic action logic (based on Boolean algebra) can be perceived as a middle way between the two: deontic propositions have truth values, but actions don't (they have other values; e.g., in Kulicki and Trypuz 2015 onwards these are called deontic values); in TIL, a similar approach was taken by Kuchyňka (2012)

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THANK
YOU
for your
attention!