Conditional Sentences as Conditional Speech Acts

Workshop Questioning Speech Acts
Universität Konstanz
September 14-16, 2017

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Leibniz Gemeinschaft

Leibniz-Zentrum Allgemeine Sprachwissenschaft

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Two analyses of conditionals

- Two examples of conditional sentences:

1) If Fred was at the party, the party was fun.
2) If 27419 is divisible by 7, I will propose to Mary.

- Analysis as conditional propositions (CP):
  conditional sentence has **truth conditions**, e.g. Stalnaker, Lewis, Kratzer:
  Stalnaker 1968: $[\varphi > \psi] = \lambda i[\psi(ms(i, \varphi))]$,
  $ms(i, \varphi)$ = the world maximally similar to i such that φ is true in that world
  Explains embedding of conditionals:

3) Wilma knows that if Fred was at the party, the party was fun.

- Conditional assertion / speech act (CS):
  suppositional theory, e.g. Edgington, Vanderveken, Starr:
  Under the condition that Fred was at the party it is asserted that it was fun.
  Explains different speech acts, e.g. questions, exclamatives:

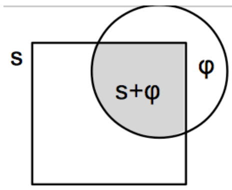
4) If Fred was at the party, was the party fun?
5) If Fred had been at the party, how fun it would have been!

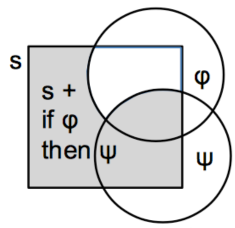
Some views on conditionals

- Linguistic semantics: overwhelmingly CP
  Philosophy of language: mixed CS / CP
- Quine 1950: CS
  "An affirmation of the form 'if p, then q' is commonly felt less as an affirmation of a conditional than as a conditional affirmation of the consequent."
- Stalnaker 2009: CP or CS?
  "While there are some complex constructions with indicative conditionals as constituents, the embedding possibilities seem, intuitively, to be highly constrained. (...) The proponent of a non-truth-conditional [CA] account needs to explain what embeddings there are, but the proponent of a truth-conditional [CP] account must explain why embedded conditionals don't seem to be interpretable in full generality."
- My goals: defend CS
  - Develop a formal framework for CS,
    this is done within Commitment Space Semantics (Cohen & Krifka 2014, Krifka 2015).
  - Explain (restrictions of) embeddings of conditional clauses
  - Propose a unifying account for indicative and counterfactual conditionals

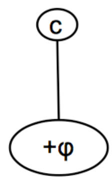
Modeling the Common Ground

- Common Ground: Information considered to be shared
- Modeling by context sets (propositions):
  - s: set of possible worlds (= proposition)
  - s + φ = s ∩ φ, update with proposition φ as intersection
  - s + [if φ then ψ] = s – [[s + φ] – [s + φ + ψ]],
    update with conditional (Heim 1983)
  - Update with tautologies meaningless,
    s + '27419 is divisible by 7' = s





- Modeling by sets of propositions
  - c: sets of propositions
  - c not inconsistent: no φ such that c ⊨ φ and c ⊨ ¬φ,
    where ⊨ may be a weaker notion of derivability
  - c + φ = c ∪ {φ}, update with proposition as adding proposition
  - update as a function:
    c + f(φ) = f(φ)(c) = λc'[c' ∪ {φ}](c) = c ∪ {φ}



Commitment States

- Propositions enter common ground by speech acts,
  e.g. assertion (Ch. S. Peirce, Brandom, McFarlane, Lauer):

6) A, to B: The party was fun.

   a. A commits to the truth of the proposition 'the party was fun'
   b. (a) carries a risk for A if the proposition turns out to be false.
   c. (a, b) constitute a reason for B to believe 'the party was fun'
   d. A knows that B knows (a-d), B knows that A knows (a-d)
   e. From (a-d): A communicates to B that the party was fun (Grice, nn-meaning).

- Update of common ground:
   a. $c + A\vdash\varphi = c'$ update with proposition 'A is committed to truth of φ'
   b. If accepted by B: $c' + \varphi = c''$
- This is a conversational implicature that can be cancelled:

7) Believe it or not, the party was fun.

- As c contains commitments, we call it a **commitment state**
- Commitment operator ⊢ possibly represented in syntax,
  e.g. verb second in German, declarative affixes in Korean
  Suggested analysis for German: $[_{ActP}$. $[_{CommitP}$ ⊢ $[_{TP}$ *the party was fun*]]]
- Other acts, e.g. exclamatives, require other operators.

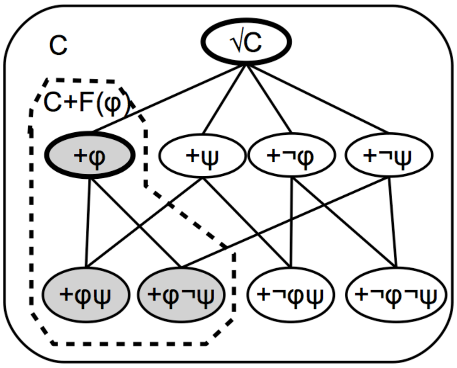
Commitment Spaces

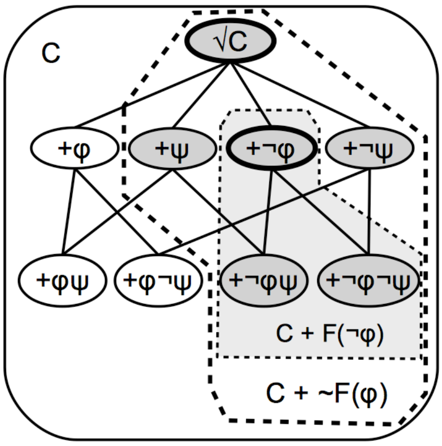
- Commitment Spaces (CS):
  commitment states with future development,
  cf. Cohen & Krifka 2014, Krifka 2014, 2015
- A CS is a set C of commitment states c
  with $\cap C \in C$ and $\cap C \neq \emptyset$;
  $\cap C$ is the **root** of C, written √C
- Update: $C + \varphi = \{c \in C \mid \varphi \in C\}$,
  as function: $F(\varphi) = \lambda C\, \{c \in C \mid \varphi \in C\}$
- Denegation of speech acts
  (cf. Searle 1969, Hare 1970, Dummett 1973)

8) I don't promise to come.

9) I don't claim that Fred spoiled the party.

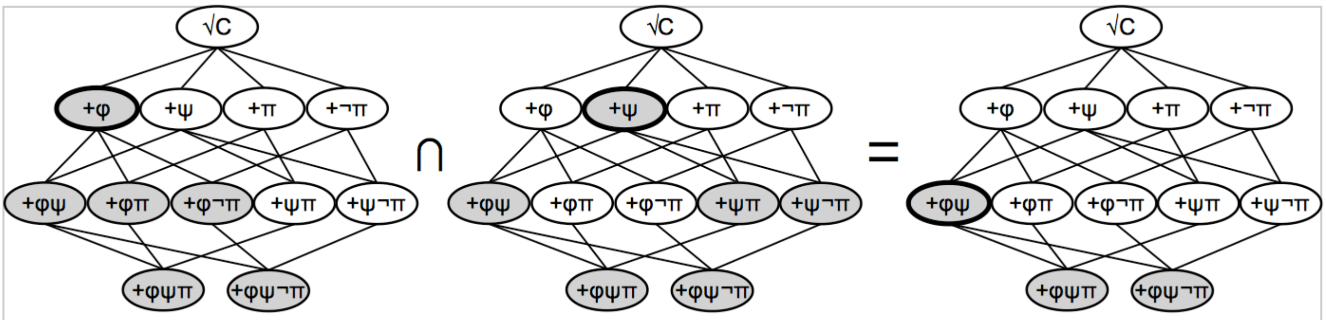
   Formal representation of denegation:
   $C + {\sim}A = C - [C + A]$
   this is dynamic negation in Heim 1983
- Speech acts that do not change the root:
  meta speech acts (cf. Cohen & Krifka 2014)





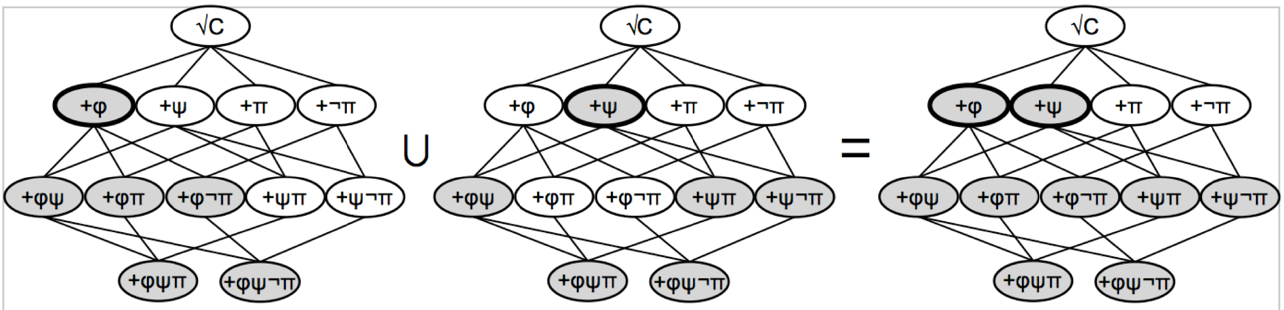
Boolean Operations on CSs

- Speech acts $\mathfrak{A}$ as functions from CS to CS: $\lambda C\,\{c \in C \mid ...\}$
- Denegation: $\sim\mathfrak{A} = \lambda C[C - [C + \mathfrak{A}]]$
- Dynamic conjunction: $[\mathfrak{A}; \mathfrak{B}] = \mathfrak{B}(\mathfrak{A}(C))$, function composition
- Boolean conjunction: $[\mathfrak{A} \,\&\, \mathfrak{B}] = \lambda C[\mathfrak{A}(C) \cap \mathfrak{B}(C)]$, set intersection
- Example: F(φ) & F(B),
  same result as F(φ) ; F(ψ)



Boolean operations: Disjunction

- Boolean Disjunction: $[\mathfrak{A} \vee \mathfrak{B}] = \lambda C[\mathfrak{A}(C) \cup \mathfrak{B}(C)]$
- Example: F(φ) V F(ψ)

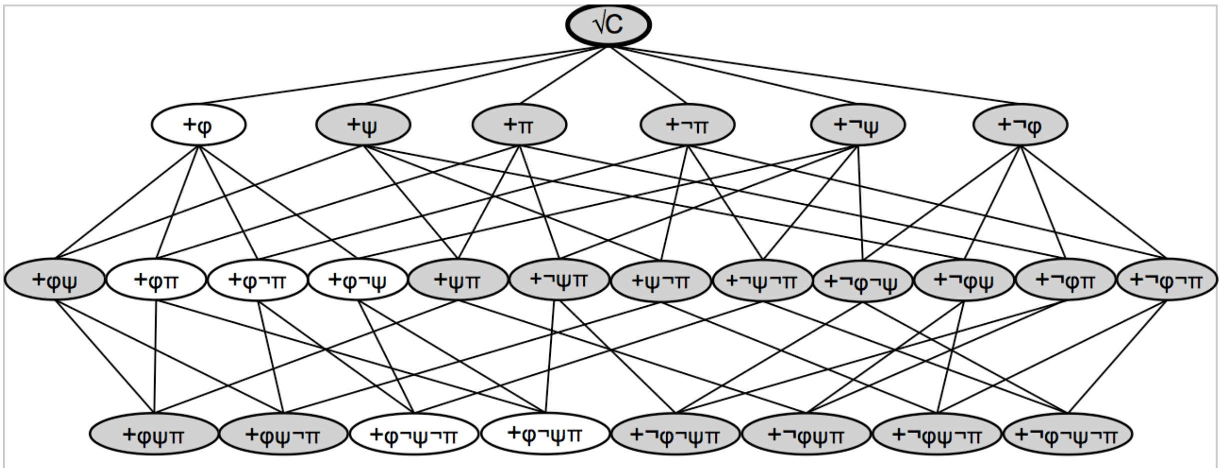


- Note: Disjunction does not necessarily lead to single-rooted CS
  Problem of speech-act disjunction,
  cf. Dummett 1973, Merin 1991, Krifka 2001, Gärtner & Michaelis 2010
- Solution: allow for multi-rooted commitment spaces;
  √C, the **set** of roots of C, $=_{def} \{c \in C \mid \neg\exists c' \in C[c' \subset c]\}$
- In this reconstruction, we have Boolean laws,
  e.g. double negation: $\sim\sim\mathfrak{A} = \mathfrak{A}$, de Morgan: $\sim[\mathfrak{A} \vee \mathfrak{B}] = [\sim\mathfrak{A} \,\&\, \sim\mathfrak{B}]$
- But there is pragmatic pressure to avoid multi-rooted CSs

10) It is raining, or it is snowing understood as: It is raining or snowing.

Conditional speech acts

- Conditionals express a **conditional update** of a commitment space that is effective in possible future developments of the root.
- if φ then ψ: If we are in a position to affirm φ, we can also affirm ψ.
  - hypothetical conditionals in Hare 1970
  - Krifka 2014 for biscuit conditionals
- Proposal for conditionals: $[\varphi \Rightarrow \psi] = \lambda C \{c \in C \mid \varphi \in c \rightarrow \psi \in c\}$
- Note that this is a meta-speech act: it does not change the root



Conditional speech acts

- Conditionals in terms of updates:
  - $[\mathfrak{A} \Rightarrow \mathfrak{B}] = \lambda C\{c \in C \mid c \in \mathfrak{A}(C) \rightarrow c \in \mathfrak{B}(\mathfrak{A}(C))\}$
  - $[\mathfrak{A} \Rightarrow \mathfrak{B}] = [[\mathfrak{A} ; \mathfrak{B}] \vee {\sim}\mathfrak{A}]$ (cf. Peirce / Ramsey condition)
  - $[\mathfrak{A} \Rightarrow \mathfrak{B}] = [{\sim}\mathfrak{A} \vee \mathfrak{B}]$ (if no anaphoric bindings between A and B)
- Antecedent not a speech act (cf. Hare 1970);
  if/wenn updates without commitment;
  verb final order in German, embedded clauses without illocutionary force:

11) Wenn Fred auf der Party <u>war</u>, [dann <u>war</u> die Party lustig].

  lack of speech act operators in antecedent

12) If Fred (*presumably) was at the party, then the party (presumably) was fun.

- Conditional speech act analysis of conditionals,
  acknowledging that antecedent is a proposition, not a speech act:
  $[\varphi \Rightarrow \mathfrak{B}] = [F(\varphi) \Rightarrow \mathfrak{B}] = [{\sim}F(\varphi) \vee \mathfrak{B}]$
- possible syntactic implementation for conditional assertion:
  $[\![[_{ActP}\ [_{CP}\ \mathit{if}\ \varphi]\ [\mathit{then}\ [_{ActP}\ .\ [_{CommitP} \vdash [_{TP}\ \psi]]]]]\!]^{S} = [F(\varphi) \Rightarrow S \vdash \psi]$, S: speaker

Conditional speech acts

- Pragmatic requirements for [$\varphi \Rightarrow \mathfrak{B}$]:
  Grice 1988, Warmbröd 1983, Veltman 1985:
  - Update of C with F(φ) must be pragmatically possible — i.e. informative and
  - Update of C + F(φ) + $\mathfrak{B}$ must be pragmatically possible — not excluded
- Theory allows for other speech acts, e.g. imperatives, exclamatives; questions:
  C + S1 to S_2: if φ then QUEST ψ = C + [[F(φ); ?($S_2 \vdash \psi$)] V ~F(φ)]
  see Krifka 2015, Cohen & Krifka (today) for modeling of questions
- Conversational theory of conditionals; analysis of if φ then ASSERT(ψ) as:
  - if φ becomes established in CG, then S is committed for truth of ψ;
  - not: if φ is true, then speaker vouches for truth of ψ

13) If Goldbach's conjecture holds, then I will give you one million euros.
  - 'If it becomes established that G's conjecture holds, I will give you 1Mio €'
  - S can be forced to accept "objective" truth, decided by independent referees

14) Father, on deathbed to daughter: If you marry, you will be happy.
  - Future development of CS is generalized to times after participants even exist

Embedding of Conditionals

- What does this analysis of speech acts tell us
  about the complex issue of embedding of conditionals?
- Cases to be considered:
  - Conjunction of conditionals: ✓
  - Disjunction of conditionals: %
  - Negation of conditionals: %
  - Conditional consequents: ✓
  - Conditional antecedents: %
  - Conditionals in propositional attitudes: ✓

Embedding: Conjunctions ✓

- Dynamic conjunction = Boolean conjunction
  (without anaphoric bindings)
  $[[\mathfrak{A} \Rightarrow \mathfrak{B}] ; [\mathfrak{A}' \Rightarrow \mathfrak{B}']]$
  $= [\mathfrak{A} \Rightarrow \mathfrak{B}] \& [\mathfrak{A}' \Rightarrow \mathfrak{B}']$
  $= [\mathfrak{B} \vee \neg\mathfrak{A}] \& [\mathfrak{B}' \vee \neg\mathfrak{A}']$
- This gives us transitivity:
  $[C + [\mathfrak{A} \Rightarrow \mathfrak{B}] \& [\mathfrak{B} \Rightarrow \mathfrak{C}]] \subseteq C + [\mathfrak{A} \Rightarrow \mathfrak{C}]$
- For CP analysis, transitivity needs stipulation about ms relation:
  - $[\varphi > \psi] \wedge [\psi > \pi] = \lambda i[\psi(ms(i,\varphi)) \wedge \pi(ms(i,\psi))]$,
  - $[\varphi > \pi] = \lambda i[\pi(ms(i,\varphi))]$,
  - $[\varphi > \psi] \wedge [\psi > \pi] \subseteq [\varphi > \pi]$ **if $ms(i,\varphi) = ms(i,\psi)$**

Embeddings: Disjunctions %

- Disjunction of conditionals often considered problematic
  (cf. Barker 1995, Edgington 1995, Abbott 2004, Stalnaker 2009).

15) If you open the green box, you'll get 10 euros,
    or if you open the red box you'll have to pay 5 euros.

- We have the following equivalence (also for material implication)
  $[[\mathfrak{A} \Rightarrow \mathfrak{B}] \vee [\mathfrak{A}' \Rightarrow \mathfrak{B}']] = [[\sim\mathfrak{A} \vee \mathfrak{B}] \vee [\sim\mathfrak{A}' \vee \mathfrak{B}']]$
  $= [[\sim\mathfrak{A} \vee \mathfrak{B}'] \vee [\sim\mathfrak{A}' \vee \mathfrak{B}]] = [[\mathfrak{A} \Rightarrow \mathfrak{B}'] \vee [\mathfrak{A}' \Rightarrow \mathfrak{B}]]$
- This makes (15) equivalent to (16):

16) If you open the green box, you'll pay five euros,
    or if you open the red box, you'll get 10 euros

- Typically the two antecedents are mutually exclusive, resulting in a tautology:
  a. $[[\mathfrak{A} \Rightarrow \mathfrak{B}] \vee [\mathfrak{A}' \Rightarrow \mathfrak{B}']] = [[\mathfrak{A} \& \mathfrak{A}'] \Rightarrow [\mathfrak{B} \vee \mathfrak{B}']]$
  b. if $C + [\mathfrak{A} \& \mathfrak{A}'] = \emptyset$, this results in a tautology,
     antecedents of disjunctions are easily understood as mutually exclusive
  c. Following Gajewski (2002), systematic tautology results in ungrammaticality.

Embeddings: Disjunctions %

- For the CP theory, conditionals should not be difficult to disjoin;
  - $[\varphi > \psi] \vee [\varphi' > \psi']$ is not equivalent to $[\varphi > \psi'] \vee [\varphi' > \psi]$,
  - if $\varphi' = \neg\varphi$, this does not result in a tautology.
- Some disjoined conditionals are easy to understand, cf. Barker 1995:

17) Either the cheque will arrive today, if George has put it into the mail,
or it will come with him tomorrow, if he hasn't.

- Parenthetical analysis:

18) The cheque will arrive today (if George has put it into the mail)
or will come with him tomorrow (if he hasn't).

[ASSERT(ψ) V ASSERT(π)]; [F(φ) ⇒ ASSERT(ψ)]; [F(¬φ) ⇒ ASSERT(ω)]
Entails correctly that one of the consequents is true.

Embeddings: Negation %

- Regular syntactic negation does not scope over if-part:

19) If Fred was at the party, the party wasn't fun.

Predicted by CS theory, as conditional is a speech act, not a proposition.

- The closest equivalent to negation that could apply is denegation:
$\sim[\mathfrak{A} \Rightarrow \mathfrak{B}] = \sim[\sim\mathfrak{A} \vee \mathfrak{B}] = [\mathfrak{A} \,\&\, \sim\mathfrak{B}]$
But the following clauses are not equivalent

(i) I don't claim that if the glass dropped, it broke.
(ii) The glass dropped and/but I don't claim that it broke.

Reason: Pragmatics requires that $\mathfrak{A}$ is informative,
hence (i) implicates that it is not established that the glass broke,
in contrast to (ii).
Another reason: (ii) establishes the proposition the glass dropped
without any assertive commitment, just by antecedent.

Embeddings: Negation %

- Forcing wide scope negation: Barker 1995, metalinguistic negation:

20) It's not the case that if God is dead, then everything is permitted.
 'Assumption that God is dead does not license the assertion that everything is permitted.'

- Punčochář 2015, cf. also Hare 1970:
 negation of *if φ then ψ* amounts to: Possibly: φ but not ψ
- Implementation in Commitment Space Semantics:
 $C + \Diamond\mathfrak{A} =_{def} C$ iff $C + \mathfrak{A}$ is defined,
 i.e. leads to a set of consistent commitment states.
- Speech act negation $\Diamond{\sim}\mathfrak{A}$
- Use of *no* to express this kind of negation:

21) S_1: This number is prime.
 S_2: No. It might have very high prime factors.

- Applied to conditionals:
 $C + \Diamond{\sim}[\mathfrak{A} \Rightarrow \mathfrak{B}] = C$ iff $C + {\sim}[\mathfrak{A} \Rightarrow \mathfrak{B}] \neq \emptyset$
 iff $C + [\mathfrak{A}\ \&\ {\sim}\mathfrak{B}] \neq \emptyset$
 i.e. in C, $\mathfrak{A}$ can be assumed without assuming $\mathfrak{B}$

Embeddings: Negation %

- Égré & Politzer 2013 assume three different negations:
  - neg [φ → ψ] ⇔ φ ∧ ¬ψ, if speaker is informed about truth of φ
  - neg [φ > ψ] ⇔ φ > ¬ψ, if sufficient evidence that φ is a reason for ¬ψ
  - neg [φ > ψ] ⇔ ¬ [φ > ψ] ⇔ [φ > ¬□ψ], basic form
- Reason: Different elaborations of the negation of conditionals,

22) S_1: If it is a square chip, it will be black.
 S_2: No (negates this proposition)
 (i) there is a square chip that is not black.
 (ii) (all) square chips are not black.
 (iii) square chips may be black.

- However, we do not have to assume different negations;
 (i), (ii) and (iii) give different types of contradicting evidence.
- This explanation can be transferred to the analysis of negation here:

23) S_1: $C + [F(\varphi) \Rightarrow F(\psi)]$.
 S_2: No (rejects this move)
 (i) $C + [F(\varphi)\ \&\ F(\neg\psi)]$
 (ii) $C + [F(\varphi) \Rightarrow F(\neg\psi)]$
 (iii) $C + \Diamond{\sim}[F(\varphi) \Rightarrow F(\psi)]$

Embeddings: Conditional consequents ✓

- Easy to implement, as consequents are speech acts:
  $[\mathfrak{A} \Rightarrow [\mathfrak{B} \Rightarrow \mathfrak{C}]] = [\sim\mathfrak{A} \vee [\sim\mathfrak{B} \vee \mathfrak{C}]]$
  $= [[\sim\mathfrak{A} \vee \sim\mathfrak{B}] \vee \mathfrak{C}]$
  $= [[\mathfrak{A} \,\&\, \mathfrak{B}] \vee \mathfrak{C}] = [[\mathfrak{A} \,\&\, \mathfrak{B}] \Rightarrow \mathfrak{C}]$

24) If all Greeks are wise, then if Fred is Greek, he is wise.
entails: If all Greeks are wise and Fred is a Greek, then he is wise.

- CP analysis achieves this result under stipulation:
  - $[\varphi > [\psi > \pi]] = \lambda i[[\psi > \pi](ms(i, \varphi))]$
    $= \lambda i[\lambda i'[\pi(ms(i', \psi)](ms(i, \varphi))]$
    $= \lambda i[\pi(ms(ms(i, \varphi), \psi))]$
  - $[[\varphi \wedge \psi] > \pi] = \lambda i[\pi(ms(i, [\varphi \wedge \psi]))]$

  Necessary assumption:
  $ms(ms(i, \varphi), \psi)$
  $= ms(i, [\varphi \wedge \psi])$

- Possible counterexample (Barker 1995):

25) If Fred is a millionaire, then even if if he does fail the entry requirement, we should (still) let him join the club.

Problem: scope of *even* cannot extend over conditional after conjunction of antecedents

Embeddings: Conditional antecedents %

- Conditional antecedents are difficult to interpret (cf. Edgington, 1995, Gibbard, 1981)

26) If Kripke was there if Strawson was there, then Anscombe was there.

- Explanation:
  Antecedent must be a proposition, but conditional is a speech act!
- Sometimes conditional antecedents appear fine (Gibbard):

27) If the glass broke if it was dropped, it was fragile.
  - Read with stress on *broke*, whereas if it was dropped is deaccented
  - This is evidence for if it was dropped to be topic of the whole sentence.
  - Facilitates reading If the glass was dropped, then if it broke, it was fragile; this is a conditional consequent, which is fine.

- Notice that for CP theorists, conditional antecedents should be fine
  $[[\varphi > \psi] > \pi] = \lambda i[\pi(ms(i, \lambda i'[\psi(ms(i', \varphi))]$.

Embeddings: Propositional attitudes

28) Bill thinks / regrets / hopes / doubts that if Mary applies, she will get the job.
29) Bill thinks / regrets / hopes / doubts that Mary will get the job if she applies.
30) A: If Mary applies, she will get the job. B: I believe that, too. / I doubt that.

- $[_{CP}$ that $[_{TenseP}$ …]] suggests an TP (propositional) analysis of conditionals
- Krifka 2014: Coercion of assertion to proposition, $\mathfrak{A} \rightsquigarrow$ '$\mathfrak{A}$ is assertable'

  (28) $\rightsquigarrow$ Bill thinks / regrets / hopes / doubts
  - that it is assertable that if Mary applies, she will get the job,
  - that whenever established that Mary applies, it is assertable that she will get the job
- Assertability of A at a commitment space C:
  - A speaker S is justified in initiating C + $\mathfrak{A}$,
  - a speaker S that initiates C + $\mathfrak{A}$ has a winning strategy, i.e. can ultimately defend this update.
- Possibly similar with:

31) It is (not) the case that if Mary applies, she will get the job;
'it is (not) assertable that if Mary applies, she will get the job'

- Evidence for this coercion: discourse / speech act operators in *that* clauses

32) they thought that, frankly, they made more complex choices every day in Safeway than when they went into the ballot box

- As in other cases of coercion, required by selection of lexical operator, e.g. *think, doubt* …,

Counterfactual conditionals

- Indicative conditionals considered so far:
  The antecedent can be informatively added to the commitment space,
  e.g. C + if φ then ASSERT ψ pragmatically implicates that C + F(φ) ≠ Ø
- This is systematically violated with counterfactual conditionals:

33) If Mary had applied, she would have gotten the job.
34) If 27413 had been divisible by 7, Fred would have proposed to Mary.

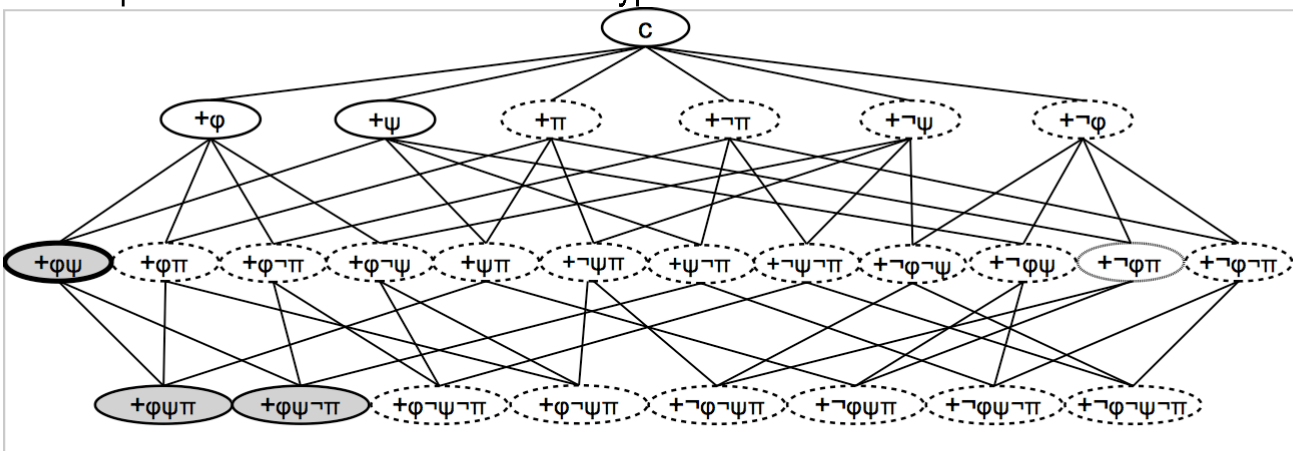
- Proposal:
  - The counterfactual conditional requires **thinning out** the commitment states so that the antecedent F(φ) can be assed.
  - This requires "going back" to a hypothetical larger commitment space in which the actual commitment space is embedded.
- This leads to the notion of a **commitment space with background**, that captures the (possibly hypothetical) commitment space (**background**) "before" the **actual** commitment space

Commitment Space with Background

- A commitment space with background is a pair of commitment spaces $\langle C_b, C_a\rangle$, where
  - $C_a \subseteq C_b$
  - $\forall c\in C_b\,[c < C_a \rightarrow c\in C_a]$, where $c < C_a$ iff $\exists c'\in C_a[c \subseteq c']$, i.e. C_a is a “bottom” part of C_b
- Example: $\langle C,\ C+F(\varphi)+F(\psi)\rangle$

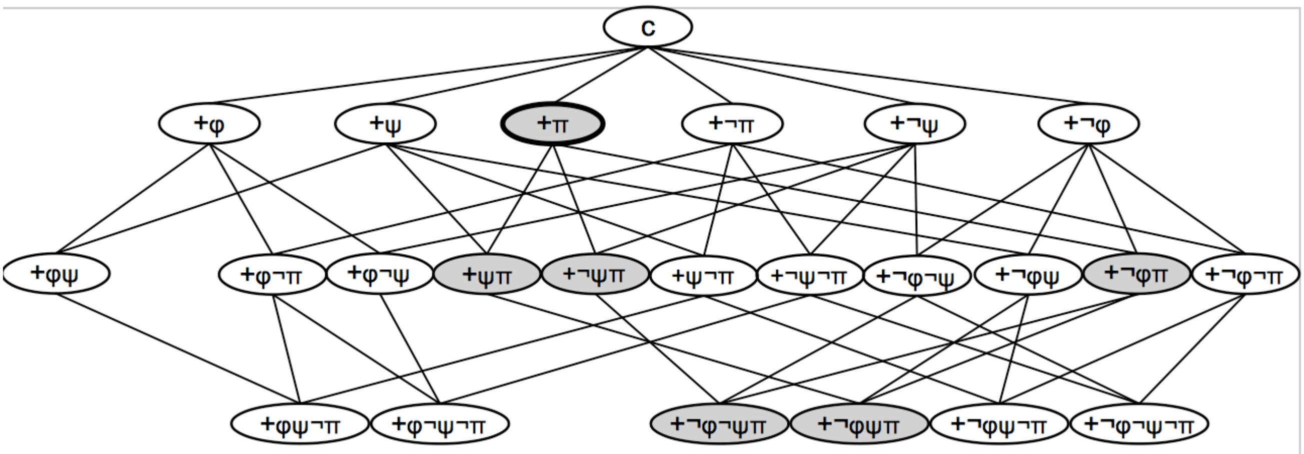
  root: fat border, actual commitment space: gray

  past commitment states: solid hypothetical commitment states: dotted



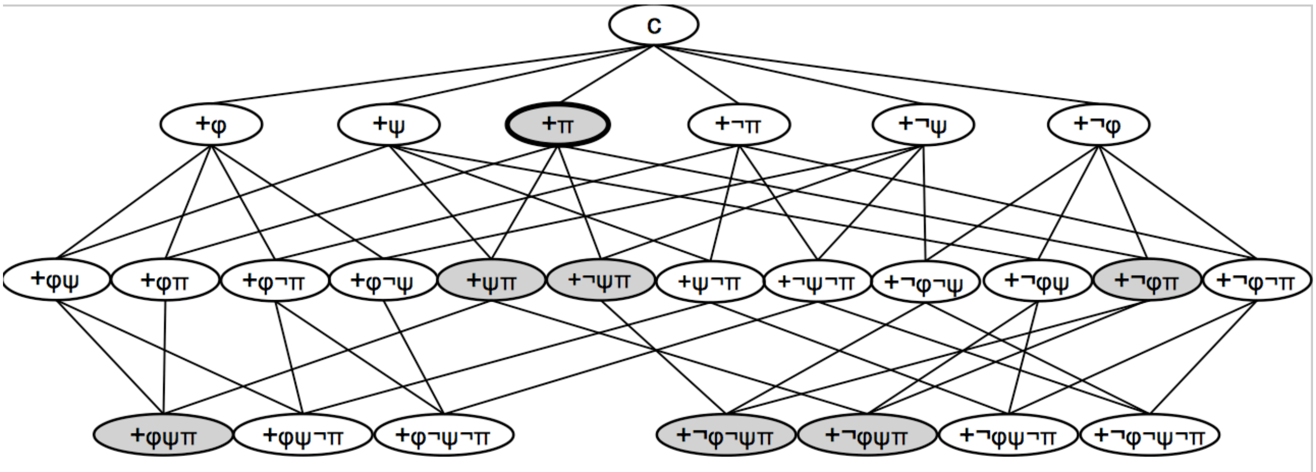
Update of CS with background

- Regular update of a commitment space with background:
  $\langle C_b, C_a\rangle + \mathfrak{A} = \langle\{c\in C_b \mid \neg\,[C_a + \mathfrak{A}] < c\}, [C_a + \mathfrak{A}]\rangle$,
  where $C < c$: $\exists c'\in c[c' \subset c]$
  - Regular update of commitment space C_a
  - Eliminating commitment states “under” C_a in background
- Update with denegation “prunes” background CS, here: $\langle C, C+F(\pi)\rangle + {\sim}F(\varphi)$



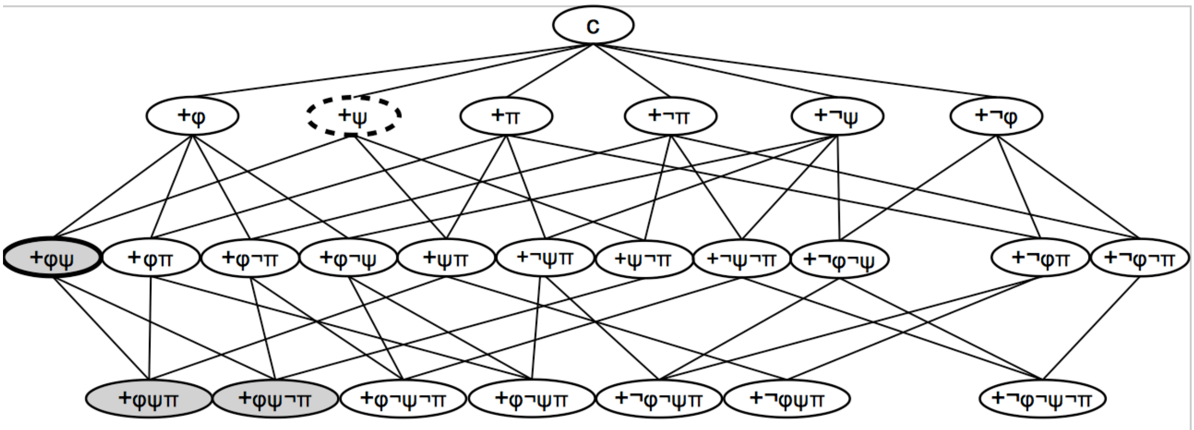
Update of CS w background by conditional

- As conditional update involves denegation, we also observe pruning
- Example:
  $\langle C_b, C_a{+}F(\pi)\rangle + [\varphi \Rightarrow F(\psi)]$
  $= \langle C_b, C_a{+}F(\pi)\rangle + [\sim F(\varphi) \vee F(\psi)]$



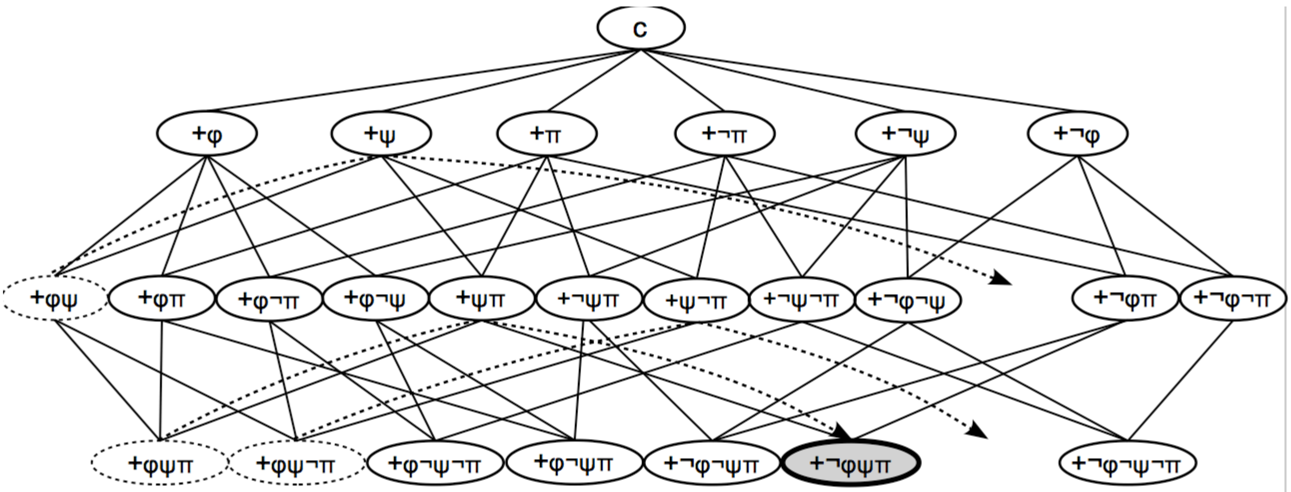
Counterfactual conditionals

- Update with counterfactual conditional:
  - Let C_a be $C_b + F(\varphi) + F(\psi)$
  - $\langle C_b, C_a\rangle + [F(\neg\varphi) \Rightarrow F(\pi)] = \ldots C_a + \sim F(\neg\varphi) \ldots = \ldots C_a - C_a + F(\neg\varphi) \ldots,$
  - but $C_a + F(\neg\varphi)$ not felicitous, as $\forall c \in C_a$: $\neg\varphi \notin c$
- Revisionary update: go back to c.state where update is be defined:
  - $C +_R F(\varphi) = \{ms(c, \varphi) + f(\varphi) \mid c \in C\}$,
    $ms(c, \varphi)$ = the c.state maximally similar to c that can be updated with φ
- Going back to dotted c.state; update with $[\neg\varphi \Rightarrow F(\pi)]$; effect on background



Counterfactual conditionals

- Counterfactual conditional informs about hypothetical commitment states, which may have an effect under revisionary update,
- Example:
  C_b + F(φ) + F(ψ) + (counterfactual) [¬φ ⇒ F(π)] + (revisionary) F(¬φ)
- Notice that the effect of the counterfactual conditional remains, it is guaranteed that π is in the resulting commitment space



Counterfactuals and “fake past”

- Explaining of “fake past tense” in counterfactual conditionals
  Dudman 1984, Iatridou 2000, Ritter & Wiltschko 2014, Karawani 2014, Romero 2014
  - Past tense shifts commitment space from actual to a “past” commitment space; this does not have to be a state that the actual conversation passed through, but might be a hypothetical commitment space.
  - As conversation happens in time, leading to increasing commitments, this is a natural transfer from the temporal to the conversational dimension.
- Ippolito 2008 treats “fake tense” as real tense, going back in real time where the counterfactual assumption was still possible. Problem with time-independent clauses:

35) If 27413 had been divisible by 7, I would have proposed to Mary.
36) If 27419 was divisible by three, I would propose to Mary.

- Going from c to a commitment state c' ⊂ c with fewer assumptions to make a counterfactual assertion may involve going to different worlds for which a commitment state c' is possible. (cf. See Krifka 2014 for a model with branching worlds)

Wrapping up

- Modeling conditionals as conditional speech acts is possible!
- There are advantages over modeling as conditional propositions:
  - Flexibility as to speech act type of consequent
  - Restrictions for embedding of conditionals
  - Logical properties of conditionals without stipulations about accessibility relation.
- The price to pay:
  - Certain embeddings require a coercion from speech acts to propositions, e.g. from assertions to assertability
  - Conditionals are not statements about the world, but about commitment spaces in conversation; this requires idealizing assumptions about rationality of participants, extending commitment spaces beyond current conversation.
- A theory of counterfactuals
  - Counterfactuals not about non-real worlds but about thinned-out commitment states
  - Allows for counterfactual conditionals with logically false antecedents
  - Suggests a way to deal with fake past