Pre-supposing?

Jacques Jayez

ENS-LSH, Lyon & UMR 5191, CNRS

Introduction

- Different theories of presupposition (in particular binding vs satisfaction theories)

Introduction

- Different theories of presupposition (in particular binding vs satisfaction theories)
- They agree in general on the *pre*-supposed (Beaver 2001) character of pps:

(1) **Pre-supposition**
A pp ϕ is associated with a sentence S only if the interpretation or evaluation of S requires that ϕ be believed (or, at least, provisionally accepted) at the moment S is used.

☞ See (Stalnaker 1984, 2002) for acceptance

Introduction

- As noted by (inter al.) Stalnaker (1974), in some cases pps can be informative: a pp ϕ is informative when (the speaker believes that) ϕ is not believed by the addressee.
- Problem: does the novelty of informative pps conflict with their pre-supposed status?

Introduction

- Problem: does the novelty of informative pps conflict with their pre-supposed status?

- This talk:

  1. pps are not necessarily ‘taken for granted’ by the speaker.

  ☞ This is by far the most frequent situation, but $\not\Rightarrow$ this is a condition on the use of a pp.

  2. A pp is a proposition ϕ that the speaker presents as true for her *before* she uses the sentence that conveys ϕ.

Introduction

- Problem: does the novelty of informative pps conflict with their pre-supposed status?
- This talk:
  1. pps not necessarily ‘taken for granted’
  2. A pp is an ‘already true’ proposition.
  3. Time-sensitive modeling of pps

Informativity of a pp

- Notation :
  - $s \Vdash_{\Box} \phi =_{def} \forall w \in s(w \models \phi)$ (acceptance)
  - $s \Vdash_{\Diamond} \phi =_{def} \exists w \in s(w \models \phi)$ (admittance)
  - $s \Vdash_{\Diamond}^{w_1 \ldots w_\alpha} =_{def} \forall w \in s(w \models \phi$ iff $w \in \{w_1 \ldots w_\alpha\})$
  - $w \models Bel_x\phi =_{def} \forall w'(w\mathcal{R}_{Bel,x}w' \Rightarrow w' \models \phi)$
  - $w \models Adm_x\phi =_{def} \exists w'(w\mathcal{R}_{Bel,x}w'$ & $w' \models \phi)$
  - s_x (the belief state of x) $=_{def} \{w' : w\mathcal{R}_{Bel,x}w'\}$, w being the current world.

Informativity of a pp

- Informative pps

(2) ϕ is informative w.r.t. x iff $\neg Bel_x \phi$. a uses ϕ as an informative pp w.r.t. b iff $Bel_a(\neg Bel_b \phi)$, i.e.: $s_a \Vdash_{\Box} \neg Bel_b \phi$

☞ I am *not* assuming that a pp has to be accepted by the hearers to be informative.

Informativity and common ground

- If pps are assumed to be part of the common ground pps cannot be informative.

Informativity and common ground

- If pps are assumed to be part of the common ground pps cannot be informative.
- Immediate conclusion : pps are not necessarily part of the cg.

Informativity and common ground

- If pps are assumed to be part of the common ground pps cannot be informative.
- Tentative conclusion : pps are not necessarily part of the cg.
- Then, what distinguishes them from assertions (or other speech acts)?

Presuppositions as preconditions

- Assumption: pps are not necessarily part of the cg
- Then, what distinguishes them from assertions?
- Pps are, in some sense, semantic/pragmatic *preconditions* of assertions (or other speech acts).

Presuppositions and Heimian semantics

- They are, in some sense, *preconditions* of assertions (or other speech acts).
- Popular implementation: 'admittance' operators (Heim 1983, van Eijck 1994, 1996, Beaver 1995, 1997, 2001).
  Example: Beaver's ∂ operator.

Presuppositions and Heimian semantics

- PPs as preconditions
- Admittance operators, e.g. ∂
- Stalnaker–Heim–Veltman tradition: updates = eliminative operations on sets of sets of propositions ('worlds').

(3) $s \oplus \phi = \{w : w \in s \,\&\, w \models \phi\}$

Presuppositions and Heimian semantics

- PPs as preconditions
- Admittance operators, e.g. ∂
- Acceptance and admittance

(4) a. $s \Vdash_{\Box} \phi : s \oplus \phi = s$,

b. $s \Vdash_{\Diamond} \phi : s \oplus \phi \neq \emptyset$.

Presuppositions and Heimian semantics

- PPs as preconditions
- Admittance operators, e.g. ∂
- Acceptance and admittance
- ∂ defined: $\partial\phi$: "the pp that ϕ"

(5) a. ψ pp ϕ iff, for every s, if s admits ψ then s accepts ϕ.
b. $s \oplus \partial\phi = s$ if $s \Vdash_{\Box} \phi$ and is undefined otherwise.

Presuppositions and Heimian semantics

- ∂ defined: $\partial\phi$: "the pp that ϕ"

(5) a. ψ pp ϕ iff, for every s, if s admits ψ then s accepts ϕ.
b. $s \oplus \partial\phi = s$ if $s \Vdash_{\Box} \phi$ and is undefined otherwise.

- Intended interpretation: whenever ψ comes to be accepted ($s : s \Vdash_{\Diamond} \psi \longrightarrow s' : s' = s \oplus \psi \,\&\, s' \Vdash_{\Box} \psi$), ϕ was accepted in s ($s \oplus \partial\phi = s$).

Informative pps and ∂

- ∂
- Strictly speaking, ϕ is informative $\Rightarrow \phi$ cannot be presupposed by any proposition that the hearer admits (= thinks possible).

  If $s_{hr} \Vdash_{\Diamond} \psi$ and ψ pp ϕ, then $s_{hr} \Vdash_{\Box} \phi$, but $s_{hr} \nVdash_{\Box} \phi$ (since the pp is informative).

??

Informative pps and ∂

- Def. of ∂ $\Rightarrow$ No pp can be informative
- 'Obvious' patch: to go Stalnakerian, i.e. to relativize ∂ to agents (analogous to Stalnaker's speaker's pp, see Stalnaker 1973, 1974, 1998, 2002, Simons 2002a).

(6) a. a pp ϕ through S iff, for any agent x (not necessarily $\neq a$) if $Bel_x[Adm_a\psi]$ then $Bel_x[Bel_a\phi]$, where ψ is the content of S.

b. $s \oplus \partial\phi = s$ if s accepts ϕ and is undefined otherwise.

Informative pps and ∂

- Epistemic relativization
- What does (6a) mean?

(6) a. a pp ϕ through ψ iff, for any agent x (not necessarily $\neq a$) if $Bel_x[Adm_a\psi]$ then $Bel_x[Bel_a\phi]$.

Intuitive paraphrase: each time a can safely be taken as believing that ψ is (at least) possible, she can safely be considered as believing that ϕ.

‘Local’ pps and ∂

- admittance $\Rightarrow$ acceptance
- (7) *A discussion between detectives*

  A – For all I know, Mary may have used her car to return to the beach

  B – Ah, she has a car . . .

  A – I don’t know, I was just thinking aloud

(7) compatible with a modally ‘local’ interpretation:

Adm_{A}(Mary has a car & Mary used her car)

☞ In a binding theory, no problem to generate a local accommodation interpretation $\Diamond$ ($\exists x$ (x is a car & Mary owns x & Mary has used x)).

‘Local’ pps and ∂

- (7) *A discussion between detectives*

  A – For all I know, Mary may have used her car to return to the beach

  B – Ah, she has a car . . .

  A – I don’t know, I was just thinking aloud

- Beaver’s definition $\Rightarrow$ Detective A does not pp that Mary has a car because (s)he admits that Mary has used her car but does not accept that she has a car: admittance $\not\Rightarrow$ acceptance

‘Local’ pps and ∂

- Beaver’s approach $\Rightarrow$ no pp in (7)
- Is (7) just an example of ‘intermediate accommodation’: ‘If Mary has a car, she might have used it’? But . . .

‘Local’ pps and ∂

- Beaver’s approach $\Rightarrow$ no pp in (7)
- Intermediate accommodation?
- Why is there a difference between (8a) and (8b)?

(8) a. Maybe Mary has used the car ($\overset{pp}{\rightsquigarrow}$ there is a car)

b. If there is a car, maybe Mary has used the car ($\overset{pp}{\not\rightsquigarrow}$ there is a car)

‘Local’ pps and ∂

- Beaver’s approach $\Rightarrow$ no pp in (7)
- Intermediate accommodation?
- Why is there a difference between (9a) and (9b)?

(9) a. If Mary has a car$_i$, she may have used it, and its$_i$ number is in the FBI’s files
imposed reading: ‘If Mary has a car, then (she may . . . and its number . . .)

b. Maybe Mary has used her car$_i$, and its number is in the FBI’s files
reading 1: ‘Maybe (Mary has used her car and . . .)’
reading 2: $\overset{pp}{\leadsto}$ Mary has a car

‘Local’ pps and ∂

- Beaver’s approach $\Rightarrow$ no pp in (7)
- Intermediate accommodation?
- Conclusion: no evidence for obligatory intermediate accommodation $\Rightarrow$ one has to make room for local pps in some cases.

Consequences and options

- Forms of words usually associated with pps can convey novel information to the hearers (informative 'pps')
- Option 1a: Informative 'pps' are not pps

  Option 1b: Informative pps are pps because (i) they have the projection properties of pps and (ii) what counts is not reality but pretense, ($\approx$ Geurts 1999)

(10) The speaker x pp ϕ whenever (s)he acts *as if* (s)he took ϕ for granted.

Consequences and options

- Forms of words usually associated with pps can convey local ‘pps’ (Mary’s car example (7)).
- Option 2a : purely local ‘pps’ are not pps ((pretended) acceptance required)

  Option 2b : they are pps because they project (locally) like standard pps.

Consequences and options

- Local projection

  ((11) $\overset{pp}{\leadsto}$ 'It is possible that John (believes that he) has a car')

(11) *A discussion between detectives*

A – For all I know, John_i might have feared that Mary had used his_i car to return to the beach

B – Ah, he_i has a car . . .

A – I don't know, I was just thinking aloud

Pre-supposing

- ψ pp ϕ = at the time where ψ is (globally or locally) true, ϕ is *already* (globally or locally) true.

Pre-supposing

- ψ pp ϕ = at the time where ψ is (globally or locally) true, ϕ is *already* (globally or locally) true.

- Representation problem: total (vs. partial) models are not appropriate because . . .
  causal, abductive, logical inferences cannot be distinguished from local pps.

Pre-supposing

- . ψ = 'Mary is very strong' $\xrightarrow{\text{CAUSE}}$ ϕ = 'Mary can lift the rock'
  . ψ = 'Mary has moved the rock' $\xrightarrow{\text{ABD}}$ ϕ = 'Mary is very strong'
  . ψ = 'Mary is in the room' $\Rightarrow \phi$ = 'someone is in the room'

  If ψ holds at w at t, ϕ also holds, but, then, ψ and ϕ also hold at w at $t - 1$.

Pre-supposing

- If ψ holds at w at t, ϕ also holds, but, then, ψ and ϕ also hold at w at $t-1$.

- General problem: if worlds are *total* systems, if $w \models \psi \Rightarrow \phi$ and $w \models \psi$, $w \models \phi$.
  So every consequence of a proposition in a world at t is already present at $t-1$.
  The notion of world does not countenance internal change.

Pre-supposing

- General strategy:

  1. Making worlds partial,

  2. keeping ∂, i.e. focusing on belief updates (transitions between belief states).

Pre-supposing

- General strategy:
  1. Making worlds partial,
  2. focusing on belief updates (transitions between belief states).

- Allows one to consider 'local' pps (no admittance $\Rightarrow$acceptance rule)

Pre-supposing

- General strategy:
  1. Making worlds partial,
  2. focusing on belief updates (transitions between belief states).

- Allows one to tell apart pps and common sense/logical inferences

Partiality

- (12) **Partiality**
  $w \models \phi$ iff ϕ is true at w, $w \,\rightrightharpoons\!\!| \; \phi$ iff ϕ is false at w. $w \models_{?} \phi$ iff $w \not\models \phi$ and $w \not\Dashv \phi$.

- (13) $w \sqsubseteq w'$ iff for all ϕ, if $w \models$ (resp. $\Dashv$) ϕ, $w' \models$ (resp. $\Dashv$) ϕ.

Partiality

- (14) **World updates**

$$w \oplus \phi = \begin{cases} w \text{ if } w \models \phi, \\ \bot \text{ if } w \Dashv \phi, \\ \bot \text{ if } w = \bot, \\ \text{the } \sqsubseteq\!-\text{smallest } w' \text{ s.t. } w \sqsubseteq w' \text{ and } w' \models \phi \text{ otherwise.} \end{cases}$$

See Jaspars 1994

Partiality

- (15) **State updates**

  1. $s \oplus_{w_1 \ldots w_\alpha} \phi = \{w \in s : w \notin \{w_1 \ldots w_\alpha\} \cup \{w \oplus \phi : w \in \{w_1 \ldots w_\alpha\}\}$
  2. $s \oplus \phi = \{w' : w \in s \,\&\, w' = w \oplus \phi\}$

☞ So $s \oplus \phi = s \oplus_{w \in s} \phi$

☞ $\{\bot \ldots \bot\}$ is the absurd state. I assume that no sequence of states contains absurd states.

Partiality

- (15) **State updates**

  1. $s \oplus_{w_1 \ldots w_\alpha} \phi = \{w \in s : w \notin \{w_1 \ldots w_\alpha\} \cup \{w \oplus \phi : w \in \{w_1 \ldots w_\alpha\}\}$
  2. $s \oplus \phi = \{w' : w \in s \;\&\; w' = w \oplus \phi\}$

  (13) $w \sqsubseteq w'$ iff for all ϕ, if $w \models$ (resp. $\dashv$) ϕ, $w' \models$ (resp. $\dashv$) ϕ.

- (16) $s \sqsubseteq s'$ iff there is a bijection f between s and s' such that $w \sqsubseteq f(w)$.

  Ex.: $s = s'$, $s' = s \oplus \phi$, $s = \{w_1 \ldots w_\alpha\}$ and $s' = \{w_1 \oplus \phi_1 \ldots w_\beta \oplus \phi_\beta, w_{\beta+1} \ldots w_\alpha\}$.

Pre-supposing

- The idea: the speaker x pp ϕ through the use of a sentence S iff the (local or global) satisfaction of ϕ (the pp) 'necessarily' precedes updating with the content of S.

  'Necessarily' = whichever agent and epistemic sequence is considered, provided the agent uses S.

Pre-supposing

- The idea: the speaker x pp ϕ by using a sentence S iff updating locally or globally with ϕ (the pp) 'necessarily' precedes the use of S.

  'Necessarily' = whichever agent and whichever sequence of belief states we consider.

- Requiring that the precedence relation hold over all possible sequences for all possible agents excludes accidental precedence (as in a sequence of disconnected assertive updates).

Pre-supposing: the definition

- (17) A state sequence for an agent x is a temporally ordered linear discrete sequence of states such that:
  For every $s_{x,t}, s_{x,t+1}$, $s_{x,t} \sqsubset s_{x,t+1}$.

☞ No absurd state, by assumption

Pre-supposing: the definition

- State sequences
- (18) x pp ϕ by using S at t iff for every agent y and every state sequence $\langle \ldots s_{y,t} \rangle$, if y uses S and ψ is the 'content' of S, then either

  a. $s_{y,t} \Vdash_{\Box} \psi$ and $s_{y,t-1} \Vdash_{\Box} \phi$, or

  b. $s_{y,t} \Vdash_{\Diamond}^{w_1 \ldots w_\alpha} \psi$ and $s_{y,t-1} \Vdash_{\Diamond}^{w_1 \ldots w_\alpha} \phi$.

☞ The possibility of local (world-per-world) updates is guaranteed by partial logic.

Pre-supposing: the definition

- Df of pre-supposing
- The definition of the 'content' of S depends on the solution one proposes for the 'binding problem' of Karttunen and Peters. I ignore the pb here.

Pre-suppositions vs. inferences

- In line with the motivation for ∂ and with (Geurts 1999), causal, abductive and logical consequences are *not* pps (for an opposite view, see Simons 2002b)

Pre-suppositions vs. inferences

- Inferences $\neq$ pps
- (19) a. 'Mary is very strong' $\xrightarrow{\text{CAUSE}}$ ϕ = 'Mary can lift the rock'
  'Mary can lift the rock' not necessarily accepted/admitted before 'Mary is very strong'
  b. ψ = 'Mary has moved the rock' $\xrightarrow{\text{ABD}}$ ϕ = 'Mary is very strong'
  'Mary is very strong' not necessarily accepted/admitted before 'Mary has moved the rock'
  ☞ although it is a causal precondition
- Similarly for logical consequences (e.g. $P(a) \Rightarrow \exists x P(x)$).

Communicated pps

- What is communicated when a pp trigger is used?

Communicated pps

- What is communicated when a pp trigger is used?
- If a pp is a pre-supposition, its pre-supposed status should be communicated.

Communicated pps

- What is communicated when a pp trigger is used?
- If a pp is a pre-supposition, its pre-supposed status should be communicated.
- What is communicated is independent of the subsequent treatment of the pre-supposed proposition (update, rejection).

Communicated pps

- What is communicated when a pp trigger is used?
- Basically, an *image* of the speaker's belief state
- More precisely, a constraint on this image

Communicated pps

- What is communicated when a pp trigger is used is a constraint on the image of the speaker's belief state
- (20) x communicates at t that (s)he pp ϕ through the use of S iff the use of S at t by x lets the other agents believe that (s)he already believed ϕ at $t-1$.

Communicated pps

- (20) x communicates at t that (s)he pp ϕ through the use of ψ iff the use of ψ at t by x lets the other agents believe that (s)he believed ϕ at t_1.

- Consequence: the other agents *update* their beliefs about x's beliefs to incorporate ϕ.

Assertions, pps and Conventional Implicatures

- Differences w.r.t. refutation between assertions and CIs (Jayez & Rossari 2004)

(21) A1 – John, who was late, missed his train
A2 – John was late and missed his train
B – No, it's false

Preferred interpretation for B's answer:
(21a) : 'John did not missed his train'
(21b) : 'John was not late' or 'John did not miss his train' or 'John was not late and did not miss his train'

Assertions, pps and CIs

- Refutation again

(22) A – Unfortunately, John was not elected
B1 – No, he won!
B – ?? No, it's perfect!

See (Jayez & Rossari 2004) for an extended discussion

Assertions, pps and CIs

- The linking test

  Ducrot's (1972) observation (*loi d'enchaînement*): pps tend to escape discourse linking when expressed by discourse markers

(23) a. John started smoking because he was nervous

b. ?? John started smoking because he feared for his health

Assertions, pps and CIs

- The *loi d'enchaînement* applies to CIs

(24) a. John, who has much experience, doubts that the software can be distributed

a'. because it has too many security holes

a". ?? because he has been working for Xerox for 8 years

b. Unfortunately, the software could not be distributed, because it had too many security holes

c. Unfortunately, the software could not be distributed, ?? for it is a nice software

Assertions, pps and CIs

- Potts (2003) and J&R agree on the idea that CIs should have some form of truth-conditional representation (the detailed proposals differ).
- Jayez (2004): pps are CIs of a special kind

Assertions, pps and CIs

- Detachability: certain (alleged) CIs are not detachable and certain (alleged) pps are:

(25)
a. Marie, paraît-il, a été élue, mais je demande à voir
'Mary, was elected, I hear, but I wait to see ... '
b. Marie a été élue, ?? mais je demande à voir [si c'est vrai]
'Mary was elected, ?? but I wait to see [whether it's true]"

Assertions, pps and CIs

- Detachable information does not ‘protect’ the asserted content in case of a blatant contradiction.

(26) David Beckham married a spicegirl, he is, therefore, brave, but, actually, he ??(did not marry a spicegirl / is not brave)

Assertions, pps and CIs

- Pps are sometimes ‘detachable’

(27) a. Mary too was elected ($\overset{pp}{\leadsto}$ someone else was elected)
b. Mary too was elected, because she was very convincing

☞ I ignore the presuppositional hierarchy of *too* (van der Sandt & Geurts 2001)

Assertions, pps and CIs

- Projection: no systematic behavior for CIs

(28) a. John believes that, unfortunately, Mary will be elected [no 'projection']

b. John believes that Mary, who is very convincing, will be elected ['projection']

Assertions, pps and CIs

- Suspendability: CIs can be suspended

(29) If your daughter Louise is less than 18 years old, John, who loves Louise, who is underage, will need some derogation to marry her

Assertions, pps and CIs

- Conclusion: standard tests for distinguishing CIs and pps are not reliable. The semantic contribution of the different items is essential.

- CIs and pps are *conventional* (they have stable linguistic triggers and are not open to contextual cancellation, $\neq$ Generalized Conversational Implicatures). In this respect, they are all Conventional Implicatures.

- Pps $\subset$ CIs because pps have the extra requirement of pre-supposition.

Communicated pps

- Consequence: the other agents update their beliefs about x's beliefs to incorporate ϕ.

- (30) Notation: $s_{\langle <x_1,t_1>\ldots<x_n,tn>\rangle}$ denotes what x_1 believes at t_1 that x_2 believes at t_2 that . . . that x_n believes at t_n.

- A simple example:
  . at t, b's beliefs = $s_{\langle <b,t>\rangle}$, b's beliefs about a's beliefs = $s_{\langle <b,t>,<a,t>\rangle}$
  . at $t+1$, a asserts ψ and pp ϕ
  . Intended effect on b: $s_{\langle <b,t>\rangle} \oplus \psi = s_{\langle <b,t+1>\rangle}$, $s_{\langle <b,t>,<a,t>\rangle} \oplus \phi = s_{\langle <b,t+1>,<a,t>\rangle}$.

Communicated pps

- Basic ontology: temporal partial possibilities

  Possibilities ← Gerbrandy 1998

  Partial possibilities ← Jayez & Rossari 2004

  Temporal possibilities ← this talk

Communicated pps

- Temporal epistemic possibilities

(31) Let $\mathcal{P}$ be a set of propositions, $\mathcal{A}$ a finite set of agents (a, b, etc.) and T a set of time-points. A *temporal possibility* based on $\mathcal{P}$, $\mathcal{A}$, and T is a function π which assigns to each member of $\mathcal{P} \times T$ one of the values 0, 1, or ? and to each $<x, t> \in \mathcal{A} \times T$ a set of possibilities, called an *information state*. $\pi \restriction (\mathcal{P} \times T)$ is the *root* of π. ZOOM

Communicated pps

- A possibility = a directed rooted graph
- (32) a. If π is a possibility, $\langle r \rangle$, where r is the root of π is a subbranch

  b. If $\langle u_1, \ldots, \pi_i \rangle$ is a subbranch, $\langle u_1, \ldots, \pi_i, <x_j, t_j>, \pi_k \rangle$, where $<x_j, t_j> \in \mathcal{A} \times T$ and $\pi_k \in \pi_i(<x_j, t_j>)$ is a subbranch.

A subbranch of a possibility π has a form $\langle r, <x_1, t_1>, \pi_1, <x_2, t_2>, \pi_2, \ldots \rangle$ with r = the root, and $<x_i, t_i> \in \mathcal{A} \times T$.

☞ A ‘world’ is the value of a given possibility for $\mathcal{P} \times T$.
Worlds that are identical w.r.t. their content count as different w.r.t. their position in the graph.

Communicated pps

- Temporal updates

(33) **Temporal updates on possibilities**

$$\pi \oplus <\phi, t> = \begin{cases} \pi \text{ if } \pi(<\phi, t>>) = 1 \\ \bot \text{ if } \pi(<\phi, t>) = O, \\ \bot \text{ if } \pi = \bot, \\ \text{the } \sqsubseteq\text{–smallest } \pi' \text{ s.t. } \pi \sqsubseteq \pi' \text{ and } \pi'(<\phi, t>) = 1 \text{ otherwise.} \end{cases}$$

Communicated pps

- Updates for pps

(34) When an agent x sincerely communicates at t that (s)he pp ϕ the presuppositional update consists in replacing each possibility π_n that is the endpoint of a subbranch of the form
$\langle r, <x_1, t>, \pi_1, <x_2, t>, \pi_2, \ldots, <x, t-1>, \pi_n \rangle$
by $\pi_n \oplus <\phi, t-1>$.

Communicated pps

- pp update
- Many possible variations, e.g.:
  - the agent x is not sincere : the subbranches of the form $\langle r, <x, t>, \pi_1, <x, t>, \pi_2, \ldots, <x, t-1>, \pi_n \rangle$ are not modified,
  - some agents doubt that x is sincere: for any such agent y the subbranches of the form $\langle r, <y, t>, \pi_1, <y, t>, \pi_2, \ldots, <x, t-1>, \pi_n \rangle$ are not modified.

Communicated pps

- pp update
- Many possible variations
- Updates of subbranches of the form

  $\langle r, <y, t>, \pi_1, <y, t>, \pi_2, \ldots, <y, t>, \pi_n \rangle$

  with $\pi_n \oplus <\phi, t>$ are *not* required.

  Updating one's belief state with a pp is a side-effect, not the default intended effect.

Communicated assertions

- Assertive updates

(35) When an agent x sincerely communicates at t that he believes ψ through an assertion of ψ the assertive update consists in replacing each possibility π_n that is the endpoint of a subbranch of the form
$\langle r, <x_1, t>, \pi_1, <x_2, t>, \pi_2, \ldots, <x_n, t>, \pi_n \rangle$
by $\pi_n \oplus <\psi, t>$.

☞ It becomes common knowledge at t that ψ.

Communicated conventional implicatures (CIs)

- CI updates

(36) When an agent x sincerely communicates at t that (s)he conventionally implicates ϕ the CI update consists in replacing each possibility π_n that is the endpoint of a subbranch of the form
$\langle r, <x_1, t>, \pi_1, <x_2, t>, \pi_2, \ldots, <x, t>, \pi_n \rangle$
by $\pi_n \oplus <\phi, t>$.

Summary

- Assertion that ϕ by x: agents have common knowledge that ϕ
- Pp that ϕ by x at t: agents have common knowledge that x believes ϕ at $t-1$
- CI that ϕ by x at t: agents have common knowledge that x believes that ϕ at t

Conclusion

- Pps $\neq$ inferences
- Role of pp triggers: help to separate assumptions and propositions to be 'discussed' (accepted, rejected, questioned, etc.)
- CG: pps tend to live in CG because pieces of information *explicitly characterized* as not new (i.e. speaker's pps) lead to costly back-tracking if they are attacked (one must defend the pp and suspend the assertion, then go back to the assertion, etc.).

References

Beaver, David I. 1995. *Presupposition and Assertion in Dynamic Semantics*. Ph.D. thesis, University of Edinburgh.

Beaver, David I. 1997. Presupposition. Dans J. Van Benthem et A. ter Meulen (ds.), *Handbook of Logic and Linguistics*, Amsterdam: Elsevier et Cambridge: MIT Press, 939–1008.

Beaver, David I. 2001. *Presupposition and Assertion in Dynamic Semantics*. Stanford : CSLI

Ducrot, Oswald. 1972. *Dire et ne pas Dire*. Paris: Hermann.

van Eijck, Jan. 1994. Presupposition failure - A comedy of errors. *Formal Aspects of Computing*, volume 6A, 766–787 .

van Eijck, Jan. 1996. Presupposition and information updating. In M. Kanazawa, C. Pinon & H. de Swart (eds.), *Quantifiers, Deduction and Context*, Stanford: CSLI, 87–110.

Gerbrandy, Jelle. 1998. *Bisimulations on Planet Kripke*. ILLC dissertation, University of Amsterdam.

Geurts, Bart. 1999. *Presuppositions and Pronouns*. Amsterdam: Elsevier.

Heim, Irene. 1983. On the projection problem for presuppositions. *WCCFL* 2, 114–125.

Jayez, Jacques. 2004. Presuppositions and pedigrees for discourse markers. To appear in the Proceedings of CSSP'03.

Jayez, Jacques & Rossari, Corinne. 2004. Parentheticals as conventional implicatures. To appear in F. Corblin & H. de Swart (eds.), *Handbook of French Semantics*, Stanford: CSLI.

Jaspars, Jan. 1994. *Calculi for Constructive Communication. A study of the dynamics of partial states*. ILLC, dissertation, University of Amsterdam.

Potts, Christopher. 2003. *The Logic of Conventional Implicatures*. Ph.D., University of California Santa Cruz.

van der Sandt, Rob & Geurts, Bart. 2001. 'Too'. In Proc. of the 13th Amsterdam Colloquium.

Simons, Mandy. 2002a. Presupposition and accommodation: Understanding the Stalnakerian picture. *Philosophical Studies* 112, 251–278.

Simons, Mandy. 2002b. Presupposition and relevance. To appear in Zoltan Szabo (ed.), *Semantics vs. Pragmatics*, Oxford U.P.

Stalnaker, Robert. 1973. Presuppositions. *The Journal of Philosophical Logic* 2, 447–457

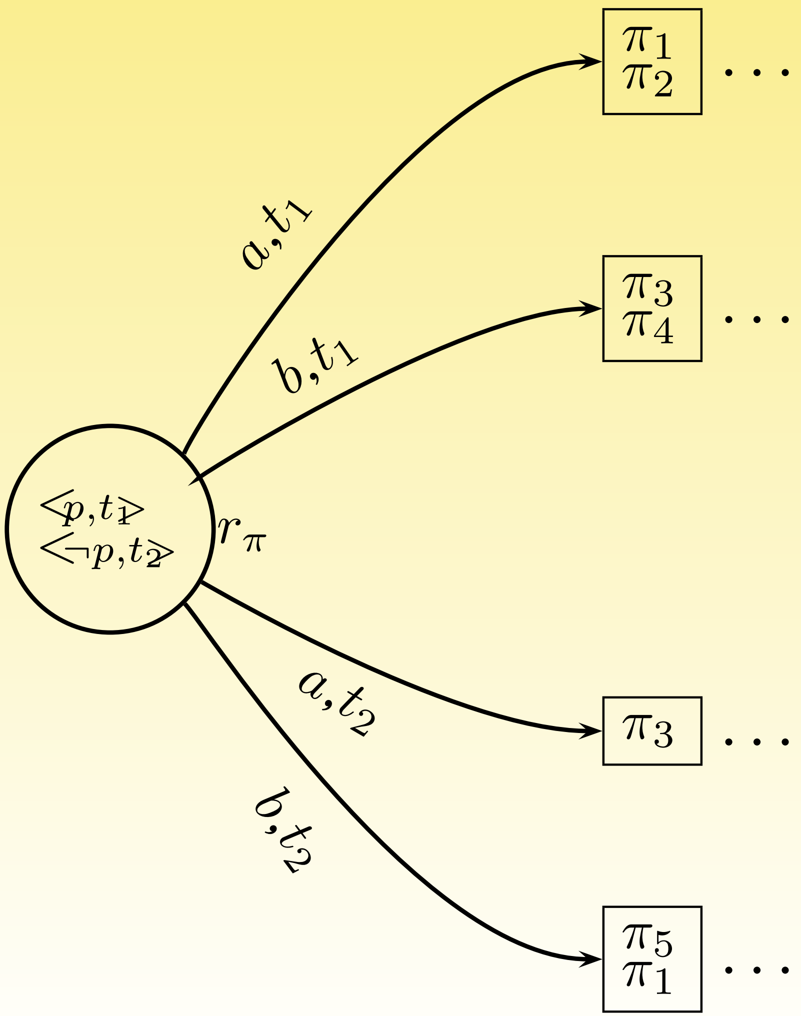
Stalnaker, Robert. 1974. Pragmatic presuppositions. In M. Munitz & P. Unger (eds), *Semantics and Philosophy*, New York: New York University Press, 197–214.

Stalnaker, Robert. 1984. *Inquiry*. Cambridge (MA): MIT Press.

Stalnaker, Robert. 1998. On the representation of context. *Journal of Logic Language and Information* 7, 3–19.

Stalnaker, Robert. 2002. Common ground. *Linguistics and Philosophy* 25, 701–721.

A possibility with two agents, two time points and one proposition



$$
\begin{aligned}
r_{\pi_1} &= \{<p, t_1>, <p, t_2>\} \\
r_{\pi_2} &= \{<p, t_1>, <\neg p, t_2>\} \\
r_{\pi_3} &= \{<\neg p, t_1>, <\neg p, t_2>\} \\
r_{\pi_4} &= \{<p, t_1>, <\neg p, t_2>\} \\
r_{\pi_5} &= \{<\neg p, t_1>, <p, t_2>\}
\end{aligned}
$$