Presupposition

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Chapter 2

Satisfaction Theory

2.1 File Change Semantics

Heim (1983) proposes a treatment of presupposition in the framework of File Change Semantics (Heim 1982). Heim (1982) develops File Change Semantics for definite descriptions and pronouns,[1] but we will put them aside here, focusing on presuppositions.

The denotations of (declarative) sentences in File Change Semantics are not truth-values but *Context Change Potentials (CCPs)*, which are functions from contexts to contexts. The idea is that the meaning of a sentence is instructions as to how to update the current context and obtain a new context. In order to make sense of CCPs, we need to make assumptions about what contexts are.

2.1.1 Stalnakerian View of Contexts

A context is assumed to represent the *Common Ground* among the participants of the conversational context, which is the information shared by all the discourse participants.

Following Stalnaker (1973, 1974, 1978), let us represent the Common Ground in c by the *Context Set*, which is the set of possible worlds that are compatible with the shared knowledge of the discourse participants (see Stalnaker 1998, 2002 for further refinements). (In order to deal with quantificational sentences, we will augment context sets with assignment functions later.)

(2.1) Suppose $a_1, \dots, a_n$ are the conversational participants in the context. The Context Set C is the strongest proposition (= the smallest set of possible worlds) such that:

a. Each a_i believes that C;

[1] Her view of definite descriptions was revised subsequently in Heim (1991) and Heim (2011). She also proposes an alternative analysis of pronouns in Heim (1990).

b. Each a_i believes that each a_j believes that C;
c. Each a_i believes that each a_j believes that each a_k believes that C;
...

One could see C as the grand conjunction of all the propositions that are mutually believed to be true by the discourse participants.

2.1.2 The CCPs of Atomic Sentences

An atomic sentence is used to update the current Context Set by sifting out those possible worlds that are not compatible with what is conveyed by the sentence. Formally, for any atomic sentence p:

(2.2) $c[p] = \{ w \in c \mid w \models p \}$

Here's a concrete example. To simplify, we will ignore tense and aspect.

(2.3) $c[\text{it is raining}] = \{ w \in c \mid \text{it is raining in } w \}$

This system captures the dynamics of information flow in a conversation. Suppose that before the utterance of *It is raining*, the Context Set contained possible worlds where it is raining and worlds where it is not raining, representing a state of ignorance with respect to this information. After the utterance, a Context Set emerges that only contains possible worlds where it is raining, which represents the state of the conversation where all the discourse participants commonly believe what had just been asserted.

Classical static truth-conditional semantics is subsumed by this framework, as truth-conditions can be defined in terms of CCPs:

(2.4) $\textit{It is raining} \text{ is } \begin{cases} \text{true in } w & \text{if } \{ w \} [\text{it is raining}] = \{ w \} \\ \text{false in } w & \text{if } \{ w \} [\text{it is raining}] = \varnothing \end{cases}$

According to Heim (1983), presuppositions are pre-conditions for the updates by CCPs to succeed (again, we ignore tense and aspect for the moment).

(2.5) a. $c[\text{It stopped raining}]$ is defined iff for all $w \in c$, it was raining in w
b. Whenever defined,
$c[\text{It stopped raining}] = \{ w \in c \mid \text{it is no longer raining in } w \}$

When $c[\phi]$ is defined, we say c *satisfies* the presupposition of ϕ.

Non-atomic/complex sentences update the context set with the CCPs denoted by their component sentences in a stepwise fashion.

2.1.3 Negation

(2.6) $c[\text{not } \phi] = c - (c[\phi])$

To compute $c[\text{not } \phi]$ you first update c with ϕ, and then subtract the resulting possible worlds from c. So, $c[\phi]$ needs to be defined, i.e. c needs to satisfy the presupposition of ϕ. As a result, $c[\text{not } \phi]$ has the same presupposition as $c[\phi]$. In other words, the presupposition projects out.

We will refer to the context that a given CCP is used to update as its *local context*, and the context that the entire sentence takes as its *global context*. Here the global context and local context are identical. But this is not the case in certain cases, giving rise to presupposition filtering.

2.1.4 Conjunction

(2.7) $c[\phi \text{ and } \psi] = c[\phi][\psi]$

ϕ is processed *after* ψ, and its local context, namely $c[\phi]$, is distinct from the global context c.[2]

The presupposition of the second conjunct ψ needs to be satisfied in its local context $c[\phi]$, rather than in the global context c.

(2.8) a. $c[\phi \text{ and } \psi]$ is defined iff $c[\phi]$ is defined and $c[\phi][\psi]$ is defined;
b. Whenever defined, $c[\phi \text{ and } \psi] = c[\phi][\psi]$

Consequently, 'ϕ and ψ' does not always presuppose what ψ alone presupposes: even when the global context c does not satisfy the presupposition of ψ *per se*, 'ϕ and ψ' may be able to update c, if ψ's local context $c[\phi]$ satisfies the presupposition of ψ, e.g.

(2.9) a. It was raining in the morning, and it stopped raining in the afternoon.
b. Bill used to smoke but he quit smoking.

These conjunctive sentences as a whole presuppose nothing, i.e. they can update any context. The presupposition of the second conjunct is not satisfied in the global context but is satisfied in the local context.

Here, the presupposition of ψ is discharged by a prior update. In such cases, we sometimes say the presupposition gets *filtered* by the first conjunct.

[2] This is only the case if the update with ϕ is not trivial in c, i.e. $c[\phi] \neq c$.For natural language pragmatics, it is reasonable to require each utterance to be non-trivial. See Stalnaker (1973, 1974, 1978) for discussion.

Exercise: What's the predicted presupposition for the conjunctive sentence in (2.10)? Is this a problem?

(2.10) It is raining, and Mary's sister is reading *War and Peace* at home.

Here's an example illustrating the conditional presupposition:

(2.11) John bought an apartment and Mary did something idiotic too.
presupposition: buying an apartment is idiotic for John to do
(Heim's 2015 lecture notes)

2.1.5 Conditional

Heim (1983) offers the following analysis of *if*.[3]

(2.12) c[if ϕ, then $\psi] = c - (c[\phi] - c[\phi][\psi])$

The local context for ϕ is the global context c. The local context for ψ is $c[\phi]$, as in the case of conjunction. Thus, the predictions are: the presupposition of ϕ projects out, while the presupposition of ψ gets filtered by ϕ, as in the case of conjunction.

Let's verify these predictions with some examples:

(2.13) a. If Mary quits smoking today, then she will live long.
presupposition: Mary has been a smoker
b. If Mary has a laptop and a tablet, then she can lend you her tablet.
no presupposition

Exercise: What does the theory predict for (2.14)? Is it a problem?

(2.14) If John flies to London, then his sister will pick him up.

(2.15) If John bought an apartment, then Mary did something idiotic too.
presupposition: buying an apartment is idiotic for John to do

2.1.6 Disjunction

What are the projection behaviour of disjunction? There are some possibilities.

Possibility 1: Symmetric disjunction (Simons 2000, Geurts 1999)

[3] It seems she doesn't really think this is the right analysis; in part because the meaning of *if* should not be material implication.

(2.16) $c[\phi \text{ or } \psi] = c[\phi] \cup c[\psi]$

According to (2.16), you update c with ϕ and ψ separately, and take the union of the two resulting contexts.

This analysis looks fine for (2.17): the presupposition of both conjuncts seem to project out.

(2.17) a. Either John's sister came to the party, or Mary did.
b. Either Mary came to the party, or John's sister came to the party.

Both of these sentences seem to presuppose that John has a sister.

Exercise: Here's an example that is problematic for (2.17):

(2.18) Either John has no children or his children do not live with him.

Explain why (2.18) is problematic for (2.17).

Cases of contextual entailment:

(2.19) a. Either Geraldine is not a mormon or she has given up wearing her holy underwear. (Karttunen 1973)
b. Either Jack is not a catholic or his rosary was stolen. (Heim's 2015 lecture notes)

Exercise: Come up with an alternative analysis of disjunction that explains (2.18) and (2.19). What would it predict for (2.17b)?

2.2 Accommodation

Presupposition accommodation is one of the central issues in the current literature on presupposition (see **?** for an overview). There are two types of accommodation, for which Satisfaction Theory offers a uniform account.

2.2.1 Local Accommodation

Recall that in some cases the presupposition fail to project.

(2.20) The kind of France isn't bald — there is no king of France!!

Heim (1983) suggests that such cases, the local context is manipulated so that the presupposition will be satisfied. This operation is called *(local) accommodation*.

In Satisfaction Theory, local accommodation is achieved by adjusting the local context so that it satisfies the presupposition:

Suppose c does not satisfy the presupposition of *The king of France is bald* and there might or might not be a king of France. Then, *The king of France isn't bald* is undefined for c. Local accommodation is an extra operation of adjusting c so that it satisfies the presupposition in the following manner:

(2.21) c[not(the king of France is bald)]
$\rightsquigarrow c - (c\underline{[\text{France has a king}]}[\text{the king of France is bald}])$

The resulting context is compatible with the non-existence of a French king.

2.2.2 Global Accommodation

If local accommodation is allowed, the same mechanism should be applicable to the global context as well. One could argue that this is what's happening in cases like (2.22).

(2.22) I quit smoking a couple of years ago.

The hearer doesn't need to know that the speaker was a smoker before. They could just go with the speaker's assumptions and accept the presupposition. This is called *(global) accommodation*.

Some more examples from Geurts (1999:13):

(2.23) a. We regret that children cannot accompany their parents to commencement exercises.
b. John lives in the third brick house down the street from the post office.
c. It has been pointed out that there are counterexamples to my theory.

In Satisfaction Theory, we can understand this as the same operation as local accommodation. In order to make sense of (2.22), for example, you first update the context with the information that the speaker used to be a smoker, and then update the resulting context with the at-issue meaning of (2.22).

Something like this is assumed by many scholars, but whether it's the same operation as local accommodation or not is a controversial issue. We'll come back to the issue of accommodation later.

2.2.3 'Proviso Problem'

Before leaving this topic, one more debate about accommodation.

Recall the problem of conditional presuppositions.

(2.24) a. Mary flew to London and her sister picked her up.
b. If Mary flies to London, her sister will pick her up.

According to Satisfaction Theory, these sentences can be utter in contexts c such that for each $w \in C$ the following is the case: if Mary flies/flew to London, then she has a sister. This is because the presupposition needs to be satisfied only after the first clause is processed.

But you usually take (2.24) as presupposing that Mary has a sister. Some assume that this is because (global) accommodation allows you to accommodation something more than what the semantic presupposition of the sentence requires Beaver (2001), Kadmon (2001), von Fintel (2008).

Notice that this problem only arises with accommodation. If it is known that Mary has a sister, then it is also true that if she flew/flies to London, she has a sister, so the presupposition will be satisfied without a problem. The problem here is that what we seem to accommodate is stronger than the semantic presupposition that the theory predicts.

Roughly, the idea goes as follows: the semantic presupposition of these sentences is that if Mary flew/flies to London, then she has a sister. Minimally you only need to accommodate this conditional presupposition. However, it is weird to assume that Mary has a sister only if she goes to London, so you strengthen what is accommodated, and assume simply that she has a sister.

Again, whether this is the right analysis of what's going on here is a hotly debated issue. We'll come back to it, after discussing an alternative theory that derives the non-conditional presupposition for these sentences with this extra pragmatic step.

Exercise: Geurts (1999) points out that (2.25) is a problem for this analysis:

(2.25) John knows that if Mary flies to London, she has a sister.

Why is this a problem? See Pérez-Carballo (2009) for a dissolution of this problem.

2.3 Quantification

2.3.1 Assignment Functions and Variables

In order to deal with quantified sentences, Heim (1982, 1983) proposes to enrich the context with assignment functions. We take assignment functions to be partial functions from indices to individuals.[4]

(2.26) A context c is a set of assignment-world pairs such that:
  a. $\{ w \mid \exists g[\langle g, w\rangle \in c] \}$ is the Stalnakerian Context Set;
  b. for any $\langle g, w\rangle, \langle g', w'\rangle \in c$, $\text{dom}(g) = \text{dom}(g')$

Assignment functions keep track of *discourse referents* and their possible extensions (Karttunen 1971, Heim 1982). They are useful in account for cross-sentential anaphora (see Brasoveanu 2007, 2008, 2010, Chierchia 1995, Groenendijk & Stokhof 1991, Dekker 2012, Nouwen 2003, 2007, among many others). As (2.26b) says, all assignments in a context have the same domain. We call that common domain the domain of c, $\text{dom}(c)$.

Sentences without variables are processed as before.

(2.27) $c[\text{it is raining}] = \{ \langle g, w\rangle \in c \mid \text{it is raining in } w \}$

In File Change Semantics, a variable (which a pronoun or trace denotes) plays two roles: When it is already in $\text{dom}(c)$, it gets referents via assignment functions. Pronouns and traces lexically require the index to be in $\text{dom}(c)$ as part of their presuppositions.

(2.28) a. $c[\text{she}_5 \text{ cried}]$ is defined iff $5 \in \text{dom}(c)$ and for each $\langle g, w\rangle \in c$, $g(5)$ is female in w
  b. Whenever defined, $c[\text{she}_5 \text{ cried}] = \{ \langle g, w\rangle \in c \mid g(5) \text{ cried in } w \}$

On the other hand, indefinites denote variables with new indices.[5] We assume that the syntax gives the following LF with variables:

(2.29) a. $c[\text{a}^2\ (x_2 \text{ boy})\ (x_2 \text{ cried})]$ is defined iff $2 \notin \text{dom}(c)$.
  b. Whenever defined, $c[\text{a}^2\ x_2 \text{ boy } x_2 \text{ cried}]$
  $= \{ \langle g[2 \mapsto e], w\rangle \mid \langle g, w\rangle \in c \text{ and } e \text{ is a boy in } w \text{ and } e \text{ cried in } w \}$

Here $g[2 \mapsto e]$ is just like g except that $g[2 \mapsto e](2) = e$.

We can actually define the CCP of *a* alone (or in other words, we can treat *a* as a 'sentence'):

(2.30) a. $c[\text{a}^i]$ is defined iff $i \notin \text{dom}(c)$.
  b. Whenever defined, $c[\text{a}^i] = \{ \langle g[i \mapsto e], w\rangle \mid \langle g, w\rangle \in c \text{ and } e \text{ is an individual} \}$

(2.31) Whenever defined, $c[\text{a}^i\ \phi\ \psi] = c[\text{a}^i][\phi][\psi]$

[4] Heim (1983) assumes that assignment functions are total. See Nouwen (2003, 2007), Dekker (2012) for arguments for making them partial.
[5] Heim revises her view of indefinites in Heim (1991, 2011).

2.3.2 Presupposition Projection Through Indefinites

Now let us see what happens when there's a presupposition trigger in the nuclear scope ψ, as in (2.32) from Heim (1983):

(2.32) A^1 x_1 fat man x_1 was pushing his$_1$ bike.

The restrictor and nuclear scope are interpreted as follows.

(2.33) a. $c[x_1$ fat man$]$ is defined iff $1 \in \text{dom}(c)$
b. Whenever defined $c[x_1$ fat man$] = \{\langle g, w\rangle \in c \mid g(1)$ is a fat man in $w\}$

(2.34) a. $c[x_1$ was pushing his$_1$ bike$]$ is defined iff for each $\langle g, w\rangle \in c$, $1 \in \text{dom}(g)$ and $g(1)$ had a bike in w and $g(1)$ was male in w
b. Whenever defined $c[x_1$ was pushing his$_1$ bike$]$
$= \{\langle g, w\rangle \in c \mid g(1)$ was pushing his bike in $w\}$

Then:

(2.35) a. $c[\text{a}^1]$ is defined iff $1 \notin \text{dom}(c)$
b. $c[\text{a}^1][x_1$ fat man$]$ is defined iff $1 \notin \text{dom}(c)$
c. $c[\text{a}^1][x_1$ fat man$][x_1$ was pushing his$_1$ bike$]$ is defined iff $1 \notin \text{dom}(c)$ and for each $\langle g, w\rangle \in c$, for each $\langle g[1 \mapsto e], w\rangle$ such that e is a fat man in w, e has a bike in w

The local context for the nuclear scope consists of those pairs $\langle g, w\rangle$ such that $g(1)$ is a fat man in w. This means that the Context Set of c must be made up of those worlds where each fat man has a bike!

This is arguably too strong. So Heim (1983) suggests that you perform local accommodation before computing the nuclear scope, which turns the presupposition of the nuclear scope into an at-issue meaning. Effectively, what is predicted is the same as:

(2.36) A fat man owned a bike and was pushing it.

A similar problem arises with a presupposition triggered in the restrictor.

(2.37) A^1 (x_1 man who was pushing his$_1$ bike) (x_1 was tired).

(2.38) a. $c[x_1$ man who was pushing his$_1$ bike$]$ is defined iff for each $\langle g, w\rangle \in c$, $1 \in \text{dom}(g)$ and $g(1)$ had a bike in w
b. Whenever defined $c[x_1$ man who was pushing his$_1$ bike$]]$
$= \{\langle g, w\rangle \in c \mid g(1)$ was pushing his bike in $w\}$

(2.39) a. $c[x_1$ was tired$]$ is defined iff $1 \in \text{dom}(c)$
b. Whenever defined $c[x_1$ was tired$] = \{ \langle g, w \rangle \in c \mid g(1)$ was tired in $w \}$

Then:

(2.40) a. $c[\text{a}^1]$ is defined iff $1 \notin \text{dom}(c)$
b. $c[\text{a}^1][x_1$ man who was pushing his$_1$ bike$]$ is defined iff for each $\langle g, w \rangle \in c$, $1 \notin \text{dom}(g)$ and each individual e had a bike in w.

Again, this is too strong. Notice in particular the set of individuals include not just people but also chairs and desks, which are also required to own bikes here.

Heim's (1983) suggestion is that here too, you perform local accommodation, so before the update with the restrictor, you insert an additional update so that the presupposition will be satisfied:

(2.41) $c[\text{a}^1][x_1$ owns a bike$][x_1$ man who was pushing his$_1$ bike$]$

However, I think this solution is not satisfactory. Consider, for example, (2.42):

(2.42) a. Mary doubts that a fat man is pushing his bike.
b. Was a fat man pushing his bike?

Heim (1983) predicts no presuppositions for (2.42). We will discuss presupposition projection through quantificational expressions more tomorrow.

2.3.3 Universal Quantifiers

Generalised quantifiers in dynamic semantics are a bit more convoluted (see Chierchia 1995, Van den Berg 1996, Nouwen 2003, 2007, Brasoveanu 2007, 2008, 2010). For example, we could analyse *every* as follows:[6]

(2.43) a. $c[\text{every}^i\ \phi\ \psi]$ is defined only if $i \notin \text{dom}(c)$
b. Whenever defined, $c[\text{every}^i\ \phi\ \psi]$

$$= \left\{ \langle g, w \rangle \in c \;\middle|\; \begin{array}{l} \{ g'(i) \mid \langle g', w \rangle \in c[\text{a}^i][\phi] \wedge g \leqslant g' \} \\ \subseteq \{ g''(i) \mid \langle g'', w \rangle \in c[\text{a}^i][\phi][\psi] \wedge g \leqslant g'' \} \end{array} \right\}$$

(2.44) $g \leqslant g'$ iff for each $i \in \text{dom}(g)$, $g(i) = g'(i)$.

(2.45) Whenever defined, $c[\text{Every}^3\ x_3$ girl x_3 cried$]$
$= \{ \langle g, w \rangle \in c \mid$ the set of girls in w is a subset of girls who cried in $w \}$

What if the restrictor ϕ and/or nuclear scope ψ have presuppositions?

[6] (2.43) works because we don't allow rebinding (random assignment by *a* is only defined for new variables). In other words, we don't lose information in the assignment function (Nouwen 2003, 2007).

As you can see, you need to compute $c[\mathsf{a}^i][\phi]$ and $c[\mathsf{a}^i][\phi][\psi]$. Thus, the predictions are the same as in the case of indefinites: the presupposition of ϕ needs to be satisfied in c with respect to all individuals; the presupposition of ψ needs to be satisfied with respect to all individuals that made ϕ true. For instance, (2.46) is predicted to presuppose that every student has a paper and will have their paper accepted by LI.

(2.46) Every student is aware that their paper will be accepted by LI.

This prediction looks reasonable. On the other hand, the prediction for restrictors is wrong. E.g. (2.47) is predicted to presuppose that every individual, student or not, has a paper that will be accepted by LI.

(2.47) Every student who is aware that their paper will be accepted by LI is happy.

2.3.4 Other Generalised Quantifiers

In general, you can describe the meaning of a generalised quantifier as follows.

(2.48) a. $c[\mathsf{Q}^i\ \phi\ \psi]$ is defined only if $i \notin \mathrm{dom}(c)$

b. Whenever defined, $c[\mathsf{Q}^i\ \phi\ \psi]$

$$= \left\{ \langle g, w\rangle \in c \;\middle|\; \begin{array}{l} \mathbb{Q}(\{\, g'(i) \mid \langle g', w\rangle \in c[\mathsf{a}^i][\phi] \wedge g \leqslant g' \,\}) \\ (\{\, g''(i) \mid \langle g'', w\rangle \in c[\mathsf{a}^i][\phi][\psi] \wedge g \leqslant g'' \,\}) \end{array} \right\}$$

Q here is a dynamic quantifier, and $\mathbb{Q}$ is its static counterpart, which is a relation between two sets. The semantics of *every* above is an instance of this. *Most* looks (roughly) like (2.49).

(2.49) a. $c[\mathsf{most}^i\ \phi\ \psi]$ is defined only if $i \notin \mathrm{dom}(c)$

b. Whenever defined, $c[\mathsf{most}^i\ \phi\ \psi]$

$$= \left\{ \langle g, w\rangle \in c \;\middle|\; \frac{|\{\, g'(i) \mid \langle g', w\rangle \in c[\mathsf{a}^i][\phi] \wedge g \leqslant g' \,\}|}{|\{\, g''(i) \mid \langle g'', w\rangle \in c[\mathsf{a}^i][\phi][\psi] \wedge g \leqslant g'' \,\}|} \gg \frac{1}{2} \right\}$$

According to analysis, the predictions about presupposition projection are the same for all dynamic generalised quantifiers, because in order to compute $c[\mathsf{Q}^i\ \phi\ \psi]$, you need to compute $c[\mathsf{a}^i][\phi]$ and $c[\mathsf{a}^i][\phi][\psi]$. Arguably, these predictions are not correct in the general case, especially for restrictors.

Bibliography

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

Beaver, David & Henk Zeevat. 2007. Accommodation. In Gillian Ramchand & Charles Reiss (eds.), *The Oxford Handbook of Linguistic Interfaces*, 503–538. Oxford University Press.

van den Berg, Martin. 1996. *Some Aspects of the Internal Structure of Discourse: The Dynamics of Nominal Anaphora*: Universiteit van Amsterdam Ph.D. dissertation.

Brasoveanu, Adrian. 2007. *Structured Nominal and Modal Reference*: Rutgers University Ph.D. dissertation.

Brasoveanu, Adrian. 2008. Donkey pluralities: plural information states versus non-atomic individuals. *Linguistics and Philosophy* 31(2). 129–209. doi:10.1007/s10988-008-9035-0.

Brasoveanu, Adrian. 2010. Structured anaphora to quantifier domains. *Information and Computation* 208(12). 450–473. doi:10.1016/j.ic.2008.10.007.

Chierchia, Gennaro. 1995. *Dynamics of Meaning: Anaphora, Presupposition, and the Theory of Grammar*. Chicago: University of Chicago Press.

Dekker, Paul. 2012. *Dynamic Semantics*. New York: Springer.

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

Groenendijk, Jeroen & Martin Stokhof. 1991. Dynamic Predicate Logic. *Linguistics and Philosophy* 14(1). 39–100. doi:10.1007/BF00628304.

Heim, Irene. 1982. *The Semantics of Definite and Indefinite Noun Phrases*: University of Massachusetts, Amherst Ph.D. dissertation.

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

Heim, Irene. 1990. E-type pronouns and donkey anaphora. *Linguistics and Philosophy* 13(2). 137–177.

Heim, Irene. 1991. Artikel und Definitheit. In Arnim von Stechow & Dieter Wunderlich (eds.), *Semantik: Ein internationales Handbuch der zeitgenössischen Forschung/Semantics: An International Handbook of Contemporary Research*, 487–535. Berlin: de Gruyter.

Heim, Irene. 2011. Definiteness and indefiniteness. In Klaus von Heusinger, Claudia Maienborn & Paul Portner (eds.), *Semantics: An International Handbook of Natural Language Meaning*, vol. 2, 996–1025. Berlin: de Gruyter.

Kadmon, Nirit. 2001. *Formal Pragmatics*. Oxford: Blackwell.

Karttunen, Lauri. 1971. Definite descriptions with crossing coreference. *Foundations of Language* 7. 157–182.

Karttunen, Lauri. 1973. Presuppositions of compound sentences. *Linguistic Inquiry* 4(2). 169–193.

Nouwen, Rick. 2003. *Plural Pronominal Anaphora in Context: Dynamic Apsects of Quantification*: Utrecht Institute of Linguistics OTS Ph.D. dissertation.

Nouwen, Rick. 2007. On dependent pronouns and dynamic semantics. *Journal of Philosophical Logic* 36(2). 123–154. doi:10.1007/s10992-006-9029-8.

Pérez-Carballo, Alejandro. 2009. Toward a dissolution of the Proviso Problem. In Paul Égré & Giorgio Magri (eds.), *Presuppositions and Implicatures: Proceedings of the MIT-Paris Workshop*, Cambridge, MA: MITWPL.

Simons, Mandy. 2000. *Issues in the Semantics and Pragmatics of Disjunction*. New York: Routledge.

Stalnaker, Robert. 1973. Presuppositions. *Journal of Philosophical Logic* 2(4). 447–457.

Stalnaker, Robert. 1974. Pragmatic presuppositions. In Milton Munitz & Peter Unger (eds.), *Semantics and Philosophy*, 197–213. New York: New York University Press.

Stalnaker, Robert. 1978. Assertion. In Peter Cole (ed.), *Syntax and Semantics 9: Pragmatics*, 315–332. New York: Academic 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(5-6). 701–721.

von Fintel, Kai. 2008. What is presupposition accomodation, again? *Philosophical Perspectives* 22(1). 137–170.