

Review of *Formal Pragmatics. Semantics, Pragmatics,  
Presupposition, and Focus*, N. Kadmon, Blackwell  
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*Formal Pragmatics* discusses various topics that are at the borderline of the semantics and pragmatics of natural language, in particular the treatment of indefinites and anaphora, presuppositions, and the analysis of focus. Enormous progress has been made in the last two decades in the analysis of these phenomena. It is time for this body of work to be summarized and described in a relatively easy accessible way such that students could become familiar with it. Kadmon's 430 page long book does exactly that. It covers a substantial body of formal work on linguistic phenomena, and – according to the back cover – serves both as a textbook, as well as a reference or research book. It presupposes only a very minimal knowledge of formal semantics, but still manages to lead students through recent formal developments in the subjects treated in the book. However, this book is not written as a neutral overview or textbook: on controversial issues Kadmon always makes clear which analyses she prefers, and sometimes (especially on the analysis of focus) the book reports on novel research by herself and others. I have not used this book in my classes on formal pragmatics. Thus, I will evaluate this book mostly as a reference and research monograph. Having firm views regarding most of the subjects covered in this book, I cannot help it that these opinions sometimes influence my following discussion.

The *first part* of the book deals with **dynamic semantics**. After a useful introductory discussion on conversational implicatures, presuppositions, and the interplay between context and content, the book consists of three parts: (i) dynamic semantics and its treatment

of indefinites and pronouns; (ii) the treatment of presupposition within dynamic semantics; (iii) the analysis of focus-dependent interpretation.

The first part is about dynamic semantics and contains three chapters. In chapter 2, Kamp's Discourse Representation Theory (DRT) and Heim's File Change Semantics (FCS) are introduced, and chapters 3 and 4 mainly report on Kadmon's own work on numerical determiners and anaphora she did for her PhD dissertation. Although the part of dynamic semantics is perhaps not complete—Groenendijk & Stokhof's Dynamic Predicate Logic (DPL), for instance, is not discussed at all—the phenomena discussed here (and in the rest of the book) are always covered in a way easily accessible to a wide audience. The main ideas are always first discussed in an informal way, followed later by the formal definitions.

Chapter 3 exemplifies one of the perhaps most important insights of dynamic semantics that is relevant for the analysis of pronouns and the pragmatic analysis of conversational implicatures: that we can assume that although *Leif has four chairs* and *Leif has at least four chairs* give rise to the same truth conditions, they still have a different *semantic* meaning. This is especially important for pragmatic theories of conversational implicatures, because here it has always been a problem how to account for the intuition that only the former type of example gives rise to an 'exactly'-implicature, if both sentences have the same semantic meaning.

In chapter 4 Kadmon argues in favor of the uniqueness assumption of (singular) anaphora. Though I agree to a large extent with her argumentation, I find it somewhat strange that first DRT/FCS is introduced as the theory to deal with indefinites and anaphora, and that later the perhaps most crucial assumption behind its analysis of the anaphoric dependency is argued against. As far as I can see, the perhaps most crucial claim of DRT/FCS is that Evans' E-type analysis of unbound pronouns gives rise to the wrong predictions and thus that contexts should be modeled by sets of possibilities that are *finer grained* than possible worlds (even when a token analysis is assumed). But by adopting a uniqueness assumption of anaphora, it is exactly this aspect of dynamic semantics that Kadmon proposes to give up. One wonders why we then should still use standard dynamic semantics.

The *second part* of the book, chapters 5 to 11, deals with **presuppositions**. Chapter 5 basically discusses the satisfaction theory of presuppositions due to Karttunen, Stalnaker, and Heim. The first two assume that to account for presuppositions of complex sentences, we should not look at the truth conditional content of a sentence (as was proposed in partial logic approaches to presuppositions) but rather at the way we process or interpret the

sentence, i.e., in terms of the way what is presupposed changes during the interpretation of a sentence. On the basis of this, plus the assumption that we interpret/process conjunctive sentences sequentially, it is predicted that such sentences behave asymmetrically with respect to presuppositions. Kadmon (pp. 123-125) finds the Karttunen/Stalnaker approach explanatory inadequate because it can't derive the presupposition of a conjunctive sentence in terms of the content of this sentence. Dynamic semantics (especially the versions of Heim and Groenendijk & Stokhof) can, because it equates meaning/content with context change. But I don't think that using dynamic semantics makes the analysis any more (or less) explanatory adequate: the explanatory force of both the Karttunen/Stalnaker account and the dynamic semantics account of presuppositions comes from the sequential way we (by assumption) interpret conjunctive sentences, and it is quite irrelevant as far as explanatory adequacy is concerned whether we identify this dynamic change of context with the content of the sentence (as proponents of dynamic semantics do) or not (Stalnaker never did). But, of course, Kadmon is right in claiming that these two-dimensional theories missed something that dynamic theories improved upon: they didn't discuss in enough detail the interaction between meaning and context change, which is especially crucial once we look below the level of the clause.

In chapter 6 the satisfaction theory of presuppositions is mainly contrasted with the cancellation approach mainly due to Gazdar (1979). Whereas the satisfaction theory basically assumes that what is presupposed by a sentence should (in the ideal or normal case) already be common ground, according to the cancellation approach a presupposition is just an item of information one can (by default) infer from a sentence, very much like a conversational implicature.

Though Kadmon finds the satisfaction approach intuitively more appealing, it is also problematic in that we sometimes use a sentence that triggers a presupposition, although the content of this presupposition is not yet common ground. A popular way to get rid of some of such examples, and as extensively discussed in chapters 9 and 10 of Kadmon's book, is by making use of presupposition *accommodation*: we accommodate the context such that the presupposition is satisfied in the context after all. Presupposition accommodation should be thought of, I believe, as a form of Gricean exploitation. A sentence gives rise to a presupposition because it can be used appropriately only in a context in which this presupposition is met, or satisfied. But once it becomes common knowledge that a sentence can be used appropriately only in certain kinds of contexts, this common knowledge can be

exploited by a speaker: she can already use the sentence even if this contextual requirement is not met, because she can rely on the hearer's ability to recognize what kind of context is required and to produce one by standard abductive reasoning. I think it is very natural to assume such a mechanism, at least, if presupposition accommodation is the exception rather than the rule (in the latter case, the motivation for working in the satisfaction framework seems blurred), and if it is limited to what is known as 'global accommodation'. Based on some suggestions of Heim, and defended more fully by authors such as Roberts, van der Sandt, and Geurts, Kadmon proposes that many problematic examples for the satisfaction analysis noticed by Gazdar and others concerning, for instance, negation, *The king of France is not bold, because there is no king of France*, disjunction, *I will meet either the king or the president of Bessarabia*, and possibility statements, *It is possible that John used to smoke and it is possible that he stopped doing so* should be accounted for by non-global accommodation. I agree that once one allows for non-global accommodation, these examples cease to be a problem. However, with authors like Heim and Beaver I would be very reluctant to use a notion like local accommodation. If we would allow for non-global accommodation all too easily, we would give up the distinction between what is presupposed and what is asserted (and/or conversationally implicated) too easily. By doing so, we also threaten to give up the main idea behind the satisfaction analysis of presuppositions: that with the use of a presupposition trigger, we indicate something about the context's common ground with respect to which we make the utterance containing this trigger.

Consider an example similar to one she discusses herself. Suppose we observe a woman that we have never seen before behaving very strangely. We try to figure out why she behaves the way she does. I tell you: *Perhaps she stopped smoking*. For such cases Kadmon is obviously correct: I can say this without taking it to be common ground that this woman used to smoke. Moreover, I also don't want to claim that she smoked. Globally accommodating the context with the information that the woman used to smoke gives rise to the wrong prediction as well: although this information is not incompatible with what is presupposed, we don't infer from the sentence that the woman actually used to smoke. In these cases, Kadmon proposes, local accommodation is the natural alternative: the sentence just *means* that *Perhaps (the woman used to smoke and has stopped smoking)*. For reasons explained above, I don't think this is the way we should go. I would prefer an analysis where the sentence still gives rise to a *global* presupposition, but one that is weaker than just the factual information that the woman used to smoke. In fact, this weaker presupposition

is just *Perhaps the woman used to smoke*. Thus, here and elsewhere, we can avoid local accommodation by globally accommodating a weaker presupposition.

Chapter 10 deals with presuppositions of quantified sentences. It deals partly with the *binding problem* faced by Karttunen & Peters' well-known two-dimensional analysis of presuppositions. Heim (1983) was the first to see that once we account for presuppositions in dynamic semantics, we are not faced with the binding problem anymore, because we allow for the fact that the interpretation of presupposition and assertion can be (anaphorically) dependent on one another. Though I agree with Kadmon that the universal presupposition she predicted for existential sentences was too strong, I also think that Heim's universal presupposition for quantified sentences like *Every German loves his Mercedes* is much better than Kadmon suggests: It is well known that the interpretation of quantificational sentences depend on a contextually given domain of quantification. But this means that Heim only predicts a universal reading with respect to such a domain, which sometimes can be *globally* accommodated to the initial context of interpretation (perhaps as a topic, as suggested by David Beaver). In this way we predict the same readings for quantified sentences as favored by Kadmon – our example sentence is true if and only if every (male) German who has a Mercedes loves it, without saying anything about the poor Germans without a Mercedes – although the sentence does put a presuppositional constraint on the initial context in which the sentence could be used appropriately, just as the satisfaction account would have it.

Chapter 11 deals with the standardly neglected issue whether what is presupposed by a simple clause is conventionally coded in the semantic meanings of the lexical items contained, or whether it also depends on features of the context. Kadmon argues convincingly that at least sometimes a presupposition is triggered conversationally, and that these presuppositions give rise to projection behavior quite similar to the standard ones (triggered by a lexical item like *stop*, for instance). Adopting the satisfaction theory of presuppositions, she rightly argues against Levinson's (1983) suggestion that presupposition and conversational implicature are basically the same thing: while presuppositions help us (in the ideal case) to remember what was already *commonly* known when the sentence was uttered, a scalar implicature, for instance, tells us only something about what the *speaker* knew at this prior state.

The *third part* of the book – almost 200 pages long – deals with the prosodic manifestation, and the model-theoretic meaning and function of **focus**. Prosodic manifestation is dealt with in chapter 12 and section 13.4. The latter section addresses the relationship

between (lack of) prosodic prominence and (lack of) new information.

The standard analyses (especially Rooth, 1984) of ‘only’ as discussed in chapter 14 propose that (1a) should be interpreted as (1b) (ignoring now the distinction between pre-supposition and assertion, and where  $[A]$  stands for the denotation of  $A$  and  $Alt(A)$  for the set of alternatives of  $A$ .)

- (1) a. John only painted [apples] $_F$ .  
 b.  $[only \phi] = \{w \in [\phi] | \forall p \in Alt(\phi) : p \text{ is true in } w \rightarrow [\phi] = p\}$

As discussed in chapter 15, the following examples are well-known to be problematic for the above interpretation rule: (1b) would falsely rule out (the possibility) that John painted apples for all three examples.

- (2) a. John only painted [apples and pears] $_F$ .  
 b. John only painted [apples or pears] $_F$ .  
 c. John only painted [a still-life] $_F$ .

Kadmon suggests that replacing the identity relation ‘=’ in (1b) by entailment, or better (to account for (2c)) by Kratzer’s notion of *lumping* helps to solve these problems. Though I agree that lumping helps, I believe that making use of it obscures rather than clarifies what is going on with the analysis of *only*. The following somewhat different analysis gives rise to the same predictions as Rooth’s (1b) when it is proper names that are focussed, but also solves the above problems concerning (2a) and (2b):

- (3)  $[only \phi] = \{w \in [\phi] | \neg \exists v \in [\phi] : \{\psi \in Alt(\phi) | v \in [\psi]\} \subset \{\psi \in Alt(\phi) | w \in [\psi]\}\}$

In fact, as explained in van Rooij & Schulz (submitted), this rule is basically the same as Groenendijk & Stokhof’s (1984) rule of exhaustive interpretation. To account for (2c) we don’t need Kratzer’s world-dependent entailment relation she called ‘lumping’, but just limit the worlds under consideration to those that satisfy the *meaning postulate* saying that for every individual  $x$  if  $x$  paints something,  $x$  also paints all of its parts. For suppose that the painted still-life in  $w$  is a complex  $a + b$  containing  $a$  (apples) as one of its parts. Then, obviously, there is no world alternative to  $w$  in a (modal) model that satisfies the meaning postulate where John painted still-life  $a + b$  but where he didn’t paint  $a$ . It follows that from (2c) we cannot conclude anymore that John didn’t paint apples.

According to Rooth's alternative semantics, the focus-semantic value of an expression has (at least) two roles to play: (i) it helps to determine the *domain* over which a *focus-sensitive* operator like *only* quantifies, and (ii) it helps to determine whether an assertion is a *congruent* answer to a question. Rooth (1992) argued that in the ideal case, no lexical item should ever have to refer directly to the notion of focus, meaning that the *semantic* use of focus, i.e. (i), should follow from its *pragmatic* use, (ii). This is not exactly what Rooth (1992) in the end defends, but more recent work of especially Roberts (1996) and Schwarzschild (1997) have tried to work out this appealing view and Kadmon adopts these analyses in chapter 17 of her book.

Kadmon follows Roberts and Schwarzschild in claiming that *only* doesn't have to associate with focus (partly based on Partee's examples involving so-called 'second occurrence expressions'), but in case that it does the standard interpretation results because of the pragmatic congruence constraint on contexts induced by the focus semantic value of the whole sentence including *only*. Both claims are controversial, however. First, Krifka (1995) and others have argued that *only* cannot associate with so-called 'weak pronouns', and Beaver & Clark (2003) argue that experimental results suggest that also in Partee's second occurrence examples there is prosodic prominence on the term *only* 'associates' with. Although – not being a phonologist – I cannot reliably judge the strength of these arguments, they might put some doubt on Kadmon's claim that *only* doesn't have to associate with focus. Equally worrying, it seems to me, is that it is completely unclear how Schwarzschild, Roberts, and Kadmon would like to account for sentences involving a word like *even*. Would they like to propose – in analogy with the case of *only* – that the focus semantic value of the *whole* sentence including *even* has to be congruent with the context? If so, I want to see how this should be worked out. If not, it suggests that we have an operator that associates with focus after all, and their completely pragmatic analysis of focus should be given up at least for this particle. Although I agree (just like Rooth) that in the ideal case no operator 'associates' semantically with focus – who wants to say, for instance, that negation associates with focus? –, once we assume that *even* does, it doesn't seem to be so terrible anymore to assume the same for *only*. Let me stress again that I would like the radical project proposed in chapters 16 and 17 of Kadmon's book to be successful, but I am just not sure how to work things out, nor that all empirical phenomena speak in its favor.

Chapters 18 and 19 contain a useful discussion on whether we need a recursive analysis of focus semantic values and on whether focus is always 'scoped' out of the clause in which

it occurs. In both cases Kadmon's answer is 'No'.

Chapter 20 discusses the interpretation of *topical* accent. Based on the analyses of topic by Roberts and Büring, Kadmon proposes that (4a) presupposes (among others) (4b).

(4) a. [Larry]<sub>T</sub> kissed [Nina]<sub>F</sub>.

b. For each individual, who did that individual kiss?

I think Kadmon's analysis of topical accent is appealing: it accounts for the intuition that the only difference between focussed and topicalized constituents is that whereas the former is 'the last element to be filled in', the latter is the 'penultimate element to be filled in', or 'the last element to be filled in *in the last QUD*'.

Still, her analysis of topical accent is limited in the same way as the standard analyses of focus interpretation are: it works well in case it is proper names that are accentuated, but once more complex noun phrases are taken into account the analysis is at best incomplete. For instance, I don't think that [*One boy*]<sub>T</sub> kissed [*Nina*]<sub>F</sub> presupposes a question of the form *Who did one boy kiss?* with a quantificational (at least) interpretation of the noun phrase. On that interpretation, things even go surely wrong if we assume that the phrases in focus are (by default) interpreted exhaustively (as proposed in Groenendijk & Stokhof, 1984), or for a sentence like [*One boy*]<sub>T</sub> kissed *only* [*Nina*]<sub>F</sub>, where exhaustivity is explicitly demanded: it falsely predicts that no boy kissed anyone else than Nina. But in fact, dynamic semantics comes to the rescue here: we can interpret *only* not w.r.t. the quantifier *one boy*, but w.r.t. the particular individual introduced by 'one boy'. Thus, I believe that by integrating the first and third part of the book more closely, more could have been said about phrases with topical accent than proposed in the analyses discussed in Kadmon's book.

In the final chapter of the book, chapter 21, Kadmon discusses an important issue that so far hasn't had the attention it deserved in pragmatics: how do focal and normal presuppositions interact? Kadmon first argues convincingly that, although it would solve some problems in neat ways, we better not assume that focus gives rise to an existential presupposition, but rather that a question is under discussion. Then she takes up an old discussion triggered by Strawson, and claims that a definite NP does not have to give rise to an existential presupposition in case it is part of the focus. The last section of the book, section 21.3, contains a very interesting discussion on 'altered' presuppositions: standard presuppositions are weakened in case the presupposition trigger itself is in focus.



In this critical review I have stressed some points where I cannot follow Kadmon's treatment: I don't see why we should adopt standard dynamic semantics once we assume uniqueness for anaphoric pronouns; I don't think local accommodation fits in nicely with the satisfaction theory of presupposition; and I believe that Kadmon should have chosen another analysis of 'only'. But these critical remarks should not give the impression that I don't like the book. Although I believe that the book could have been more compact, and somewhat less 'Amherst-oriented', it does indeed accomplish what the back cover promises: it presents the way the semantics-pragmatics interface has come to be viewed today from the point of view of many model-theoretic semanticists. In fact, I think that Kadmon's book manages very well to make the recent formal developments on the analysis of indefinites and anaphora, presuppositions, and the analysis of focus accessible to a wide audience. Moreover, if one compares this book with the, perhaps, still standard textbook in pragmatics, i.e. Levinson's (1983) *Pragmatics*, it becomes very clear how much progress has been made on certain topics in the field. Pragmatists better not ignore the theories reviewed and expanded upon in Kadmon's book, if they want to discuss any of the above mentioned topics.

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