Rob A. van der Sandt: *Context and Presupposition.* London: Croom Helm, 1988. xvii + 249 pp.

Van der Sandt's *Context and Presupposition* represents a significant contribution to the study of presupposition. It presents a novel approach based on the idea that the presuppositions of a sentence determine the contexts in which its utterance is acceptable, and gives an interesting characterization of acceptability. The book also includes a comprehensive and detailed survey of problems involved in computing presuppositions and of previous approaches to solving them. It is, therefore, appropriate reading both for those seeking an introduction to presupposition and for those working in the area. Unfortunately, the organization of the book and its style of argumentation make it unnecessarily difficult.

In chapter 1, vdS briefly presents the early work of Frege, Russell, and Strawson, highlighting issues they raised regarding the truth-values of sentences with non-denoting terms, and the relationship between the presuppositions and the assertions made by a sentence. The chapter also includes examples of presuppositions induced by a variety of triggers.

Chapter 2 begins with a comparison of semantic and pragmatic approaches in general and an introduction to some of their various incarnations. According to the semantic view, presupposition is a semantic relation between sentences, independent of context. Typically, on this view, a sentence φ is said to presuppose sentence χ iff $\varphi \models \chi$ and $\neg\varphi \models \chi$. (The first of three rather serious typographical errors appears in this definition (p. 13): the second condition is written "$\varphi \models \neg\chi$" rather than "$\neg\varphi \models \chi$." The reader who is already familiar with presupposition will recognize the error, but it could easily confuse others.) VdS notes that, under a classical two-valued logic, this definition leads to the unreasonable conclusion that only (and all) tautologies are presuppositions. He discusses several deviations from classical logic that eliminate this consequence. Later, in section 4.1, they are criticized for technical problems to do with negation.

The pragmatic view is based on three ideas: that it is speakers that presuppose, not sentences; that presuppositions depend on context; and that utterances of sentences with failed presuppositions are infelicitous. VdS criticizes current pragmatic theories on several grounds. First, he raises the reasonable objection that they generally are based on undefined concepts such as felicity of utterances. He specifically rejects pragmatic definitions based on speaker and hearer beliefs, but his reasons are problematic. (For example, he makes the obvious point that not all things believed are presupposed; however, definitions based on speaker and hearer beliefs hardly need assume that they are.) Finally, vdS cautions that pragmatic definitions based on felicity alone over-generate, predicting, for example, that preparatory conditions on speech acts are presuppositions (*e.g.*, that the speaker has evidence for the truth of the sentence). Having argued against current pragmatic theories in general terms, vdS then discusses the particular theories of Karttunen, Stalnaker, and Soames, noting fundamental problems with each, particularly relating to the use of undefined notions. Chapter 4 presents specific theories in greater detail.

The second half of chapter 2 would make a nice chapter on its own. It first addresses the problem of determining **elementary presuppositions**, presuppositions of simple, unembedded sentences and their negations. VdS discusses presupposition tests involving embedding under negation, modality, and conditionals, showing that the negation test is flawed and that the modality and conditional tests only work for sentences considered in isolation. The well-known **projection problem** of determining presuppositions of complex sentences from those of their constituent sentences is then introduced. VdS points out that elementary presuppositions are not always preserved when the presupposition-inducing sentence is embedded in another, and that even those that are preserved can later be cancelled. He then goes on to discuss Karttunen's famous "holes, plugs, and filters" theory of projection (1973), criticizing it for ignoring the important influence of context on presuppositions.

Grice's theory of conveyed meaning and various attempts to explain presupposition in Gricean terms are discussed in chapter 3. The theory is presented in detail, followed by an argument that the vagueness of its central Cooperative Principle allows the theory to predict too much. Then vdS examines the distinction between entailments, conventional implicatures and and conversational implicatures. Grice claimed that the distinction can be made by checking detachability[1] and cancellability. VdS argues convincingly that both criteria fail. The key section of chapter 3 reviews attempts to reduce presupposition to conventional implicature, to conversational implicature, and to entailment, pointing out serious flaws in each. (Herein appears the second serious typographical error (p. 80). The sentence *the chief of Buru Buru is not bald* is analyzed, but unfortunately, it is written without the *not*. This word is central to the discussion and its omission makes the analysis rather confusing.) VdS concludes the chapter with an argument that *any* attempt to reduce presupposition to Gricean notions is "doomed to fail" (p. 83). Despite repeated readings, I have been unable to follow this argument.

In chapter 4, vdS returns to the evaluation of previous theories of presupposition. The chapter begins with a long section discussing the problems that negation and projection cause for semantic theories. VdS then claims that existing semantic theories *cannot* succeed because their compositional methods for computing the presuppositions of a sentence use only the presuppositions of its components, while the existence of a presupposition often depends on sentence-external factors. This sets the stage for discussion of the "only two serious formal pragmatic theories."

Karttunen and Peters' theory (1979) is presented along with a litany of bad predictions made by it. The author argues that no modification of their rules can adequately explain the phenomena because they do not consider the effect of context. In Gazdar's famous theory (1979a, 1979b), potential presuppositions (termed **pre-suppositions**)[2] are computed mechanically, based on the words and constructions of a sentence, and presuppositions are a subset of the pre-suppositions, determined on the basis of consistency with context. VdS summarizes Gazdar's theory, noting the common criticism that the order within its consistency check[3] plays an important role in explaining the data, yet is never explained. He then gives a long list of counterexamples, and concludes that the theory "needs drastic revision." I did not, however, find the counterexamples to be as devastating as those against Karttunen and Peters' theory.

Some of the counterexamples to Gazdar's theory ((198), and the contradiction problem cited on

p. 126) concern the appearance of a K (knowledge) or weaker B (belief) operator in the presuppositions and implicatures it generates. However, these complaints hinge on the particular semantics of the operators. Such things have been the subject of much research and it is possible to envision semantics according to which Gazdar's theory makes the correct predictions for these examples. Several other counterexamples ((111), and (117), *e.g.*) can be eliminated if adequate care is taken in attributing beliefs. VdS complains that, according to Gazdar's theory, (1) below (vdS's (111)) does not presuppose $K_{speaker}\neg$(Hilda's vacuum cleaner works)[4] because this potential presupposition is in contradiction to the implicature shown in (2).

(1) Hilda thinks her vacuum cleaner works, and does not know that it is broken.

(2) $P_{speaker}$(Hilda's vacuum cleaner works).

If the implicature is simply modified to show that it reflects *Hilda's* beliefs, as in (3), the contradiction disappears and the presupposition is predicted to hold.

(3) $B_{speaker}P_{Hilda}$(Hilda's vacuum cleaner works).

A more serious counterexample illustrates the inability of Gazdar's theory to see the difference in acceptability between pairs such as the following (vdS's (104) and (105)):

(4) Hilda used to beat her husband and has stopped doing so.

(5) ? Hilda has stopped beating her husband and used to beat her husband.

or to predict that the latter is ill-formed in some sense. Central to vdS's theory is a notion of contextual acceptability that makes appropriate predictions possible in such cases. VdS's most damaging criticism of Gazdar's theory is that it mishandles presuppositions that introduce new information. If $P(\neg\alpha)$ is assumed in the context, as is the case when α represents new information, a potential presupposition $K(\alpha)$ will always be cancelled by Gazdar's theory, due to its inconsistency with the context. This is certainly inappropriate. Once again, though, if we are careful about attributing beliefs, the problem disappears. Exactly whose assumption is $P(\neg\alpha)$? If it is the listener's, which is the case when the information is new to the listener, the assumption is correctly written $P_{listener}(\neg\alpha)$. The potential presupposition $K_{speaker}(\alpha)$ is not inconsistent with this assumption, and Gazdar's theory would correctly predict that it is a presupposition. On the other hand, if the assumption is of the speaker, *i.e.*, is $P_{speaker}(\neg\alpha)$, then the presupposition is correctly cancelled. I would argue that we should go one step further, viewing the presupposition as recognized by the listener, and thus adding $K_{listener}K_{speaker}(\alpha)$ to the context[5].

VdS concludes Chapter 4 with a survey and criticism of more recent theories.

Chapter 5 is the heart of the book, motivating and presenting vdS's theory. The first section gives many examples to support the claim that presuppositional behaviour often depends on context and discusses various notions of context.

Section 5.2 begins with a discussion of theories of presupposition based on scope ambiguities, demonstrating that they are unable to solve the projection problem because they determine scope differences by syntactic analysis alone. This discussion interrupts the flow of the chapter and seems to belong in the earlier discussion of other approaches. The remainder of the section builds up to the formal presentation of vdS's theory. The key insights behind the theory are that (1) as part of understanding a sentence, hearers construct contexts in which it can be interpreted acceptably, and (2) elementary presuppositions are assumed to be part of these contexts unless their presence would make the utterance of the sentence unacceptable. This leads to a very simple and elegant definition of presupposition, which can be paraphrased as follows: A sentence presupposes a proposition P in a given context if (a) P is an elementary presupposition of the sentence, and (b) an utterance of the sentence would continue to be acceptable if P were added to the context[6]. (In exploring these notions, vdS offers one surprisingly invalid argument (p. 187) in which he concludes α from a rule of the form $\alpha \rightarrow \beta$ (II p. 186) and β.)

The interesting notion of acceptability is defined formally in section 5.3 along with the other elements of the theory. The definition is limited to assertions, and to utterances by one speaker only. The author gives four conditions that are necessary but not sufficient for the acceptability of a sentence in a given context, paraphrased below:

(a) the sentence must be informative, that is, the context must not entail the proposition expressed by the sentence in that context;

(b) the sentence must be consistent with the context;

(c) if the sentence is not a conjunction, disjunction, or conditional, all embedded sentences that are not themselves elementary presuppositions and that do not fall under verbs of propositional attitude[7] must also be acceptable in that context;

(d) if the sentence is a conjunction or conditional (expressing a proposition of the form $\chi \wedge \psi$ or $\chi \rightarrow \psi$) then χ must be acceptable in the context, and ψ must be acceptable in the context extended by χ; and

(e) if the sentence is a disjunction (expressing a proposition of the form $\chi \vee \psi$) then χ must be acceptable in the context extended by ψ, and ψ must be acceptable in the context extended by χ.

Clause (e) is my interpretation of vdS's rule for disjunctions. As it appears in the book, clause (e) requires that *the sentence itself* must be acceptable in the context extended χ. This is surely a typographical error, since it would lead to infinite regress. I tried to confirm my interpretation, but was unable to find either discussion or application of clause (e). That this important clause is never applied to an example is a serious oversight.

The final section of the chapter applies the theory to a series of examples, showing correct predictions about acceptability and about presuppositions. On applying the theory to sentence (6) (vdS's (147)), for instance, we get the correct prediction that (7) is not presupposed.

(6) If John has children, then his sons have red hair.

(7) John has children.

The analysis is as follows: By the definition of presupposition, (6) presupposes (7) in context *c* only if (6) is acceptable in the context extended by (7). Clause (d) of the definition of acceptability tells us that this is true only if the antecedent, *John has children*, is acceptable in the context extended by (7). This, in turn, is true only if the context extended by (7) does not entail *John has children*, according to clause (a). Because (7) itself states that John has children, *any* context extended by (7) entails *John has children.* Sentence (6), therefore, does not presuppose (7) in any context.

Although individual examples such as this one were convincing, I felt unsatisfied with the examples overall because they wander unsystematically. For example, disjunctions are never tested, as mentioned earlier. Furthermore, the predictive ability of the theory is never compared in detail to that of the other theories that were discussed and criticized in such detail earlier in the book.

Some of the examples raise a problem concerning the role of entailments. By vdS's definition, determining acceptability rests on the ability to predict entailments. Although the entailment involved in the analysis of (6) above was trivial to predict, in many cases non-trivial entailments are needed. Consider the following (vdS's (128)):

(8) ? Possibly the King of France is bald and France has a king.

By clause (d) of the definition, (8) is acceptable in a context only if *France has a king* is acceptable in that context augmented with the proposition expressed by *the King of France is bald.* Condition (a) predicts that this is false, vdS argues, since in any context *the King of France is bald* entails that France has a king. Thus (8) is unacceptable in any context. But how do we know that this entailment holds? VdS claims (p. 198) that, although presuppositions are usually entailed, it is *not* due to the fact that they are presuppositions. He does not, however, specify exactly when the entailments hold. Since predicting presuppositions depends upon predicting entailments, it is an important issue.

Among the examples is an interesting discussion of the common notion of meaning as a function from context to the communicative content of sentences in context. This notion is flawed, according to vdS, because it is insensitive to the fact that sentences with the same communicative content may not be acceptable in the same contexts. For example, sentences (9) and (10) (vdS's (131) and (132)) have the same communicative content — each conveying (a) that John loves Mary, (b) that someone loves Mary and (c) that John loves someone[8] — yet (11) and (12) demonstrate that they are not acceptable in the same contexts.

(9) It is John who is in love with Mary.

(10) It is Mary with whom John is in love.

(11) John is in love with someone. It is Mary with whom John is in love.

(12) ? John is in love with someone. It is John who is in love with Mary.

VdS suggests a variation on this definition of meaning according to which, for a given context, the communicative content of the sentence is returned only if the sentence is acceptable in that context. This definition is able to predict that (9) and (10) do not have the same meaning.

A final chapter very briefly examines projection under verbs of propositional attitude, which the theory, as stated above, does not address (see clause (c) of the acceptability definition). VdS argues that, with these verbs, belief in presuppositions should be ascribed to the subject of the verb, and in some cases, also to the speaker. He then discusses some of the shortcomings of various epistemic logics and argues that, although his theory could easily be modified to behave in this manner, it is pointless to formulate such modifications in the absence of an adequate semantics of belief.

At this point, and with no sort of conclusion, the book comes to an abrupt end.

Digesting vdS's book is often laborious work. I frequently found it necessary to reread sections because his arguments were difficult to reconstruct. The book also has some awkward problems with organization. For example, in chapter 2 (p. 32), Karttunen's theory is evaluated critically before the theory has been defined or described in any detail. Likewise, in chapter 4, the "VP-anaphora test" and its flaws are discussed (p. 89) before it is defined. On a larger scale, I found the discussion of other theories of presupposition to be spread around the book (chapters 2 and 4, and the first half of section 5.2) in a way that did not facilitate my understanding. It should be mentioned that this book is based on a dissertation that was written in Dutch; however, the presentation problems are at a high structural level and therefore do not appear to be due to a language problem.

In summary, vdS makes an important contribution to the study of presuppositions. He presents an original theory, that views the elementary presuppositions of a sentence as indicators of the contexts in which the is sentence acceptable. Further, by specifying necessary conditions on acceptability, he takes an important step toward formalizing this often-used but seldom-defined concept. I recommend the book, but warn the reader that it is marred by rhetorical and structural flaws that make it difficult going.

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Notes

[1]An inference of a sentence is detachable from semantics if it is possible to find another sentence expressing the same meaning but that lacks the inference.

[2]This term is typographically awkward, since the hyphen can be mistaken for an end-of-line break. VdS's book is not immune to the problem — the hyphen occurs at a line break several times.

[3]Potential clausal implicatures consistent with the context, including the assertion just made, are added to the context first; then consistent potential scalar implicatures, and finally consistent potential presuppositions are added.

[4]Gazdar uses unsubscripted K to mean *the speaker knows that*, and unsubscripted P to mean *it is compatible with all the speaker knows that*, with the semantics of these operators following Hintikka (1962). Subscripts are used here to allow for agents other than the speaker.

[5]My own work attempts to solve several problems with presupposition by taking the attribution of beliefs very seriously. See (Horton and Hirst 1988) and (Horton 1987).

[6]An additional condition requires that the proposition be consistent with all other elementary presuppositions of the sentence, in context. Thus, if a sentence has contradicting presuppositions, none of them survives.

[7]This restriction applies only to verbs of propositional attitude such as *hope*, that entail neither their complement nor its negation. Projection under such verbs is discussed in chapter 6.

[8]For (9), (a) is asserted, (b) is presupposed, and (c) is entailed; for (10), (a) is asserted, (c) is presupposed, and (b) is entailed.

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