Review article*

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Noel Burton-Roberts: *The Limits to Debate. A Revised Theory of Presupposition.* Cambridge Studies in Linguistics 51. Cambridge: Cambridge University Press, 1989. x + 272 pp. £27.50/$42.50 (hardcover).

Noel Burton-Roberts (henceforth BR) presents in this book (which is a reworked version of his doctoral thesis) a novel view of presupposition. This view can be summarized as follows:

i. Presupposition is a semantic, not a pragmatic, phenomenon.

ii. A semantic account of presupposition requires a nonbivalent logic, involving a 'third logical status' (3), besides 'true' (1) and 'false' (2).

iii. 3 is not a truth value but a gap: the logic is classical but with gaps. To say of a sentence S that v(S) = 3 must be understood as 'S is not valued', and not as 'S has the value 3'.

iv. S_2 is a (weak) entailment of S_1 just in case whenever S_1 is true, so is S_2. (Weak) entailments are either strong or presuppositional. Nontruth of a strong entailment always leads to the value 2 (falsity). Nontruth of a presuppositional entailment leads either to the value 2 or to the value 3. There are no other entailments than strong entailments and presuppositions (pp. 127–128).

v. Nontruth of a presupposition, that is, presupposition failure (PF), of S leads to 3 only if S is not falsified by some strong entailment not being true. If it is, then strong entailment prevails, and v(S) = 2.

vi. If v(S) = 3, then v(~S) = 3, and vice versa. Thus, any sentence and its negation are unvalued under precisely the same conditions.

vii. The truth tables for negation, conjunction, and disjunction are as follows:

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(1)

		$\wedge$B	$\vee$B
~A	A	1 2 3	1 2 3
2	1	1 2 3	1 1 1
1	2	2 2 2	1 2 3
3	3	3 2 3	1 3 3

BR calls this view the 'revised logical definition of presupposition' (RLDP). It is different from the 'standard logical definition of presupposition' (SLDP) not so much in the truth tables as, rather, in that SLDP assigns 3 whenever there is PF, regardless of whether some strong entailment is found not true. I shall express the difference by means of the valuation table given in (2), where 'A_B' stands for 'A presupposing B', and B is one single presupposition of A (not the conjunction set of all of A's presuppositions). In BR's view (that is, RLDP), possible valuations (combinations of truth values) for any sentence A_B, its negation ~A, and its presupposition B are constrained as follows (U is the set of all possible [admissible] valuations):

(2)

U	v_1	v_2	v_3	v_4	v_5	v_6	v_7
A_B	1	2	2	2	3	3	3
~A	2	1	1	1	3	3	3
B	1	1	2	3	1	2	3

All other combinations of values (or their absence) are *inadmissible*. The difference with SLDP consists in the fact that v_3 and v_4 are inadmissible in SLDP but admissible in RLDP.

It is thus clear that the negation operator (~) cancels all (nontautological) entailments of its argument proposition, since the truth of ~A is compatible with v(B) = 1, 2, or 3, whereas truth of A is compatible only with v(B) = 1. The negation operator is thus in no way different from the classical negation in a classical bivalent system, which does precisely the same. Significantly, in RLDP, when A presupposes B, then ~A does not presuppose B. In BR's view, presupposition is NOT constant under negation, as it is in SLDP (see in particular pp. 142, 147 of the work under review).

The fact that presuppositions of positive sentences are generally preserved as default inferences is ascribed by BR (pp. 147–153) to a mechanism of conventional implicature which is said to be both noncancellable and of the default kind and thus defeasible: 'Rather, it is a DEFAULT implication of a kind already familiar to us from the study of pragmatic, conversational implication. But it is not conversational' (p. 151). Pragmatics is then called upon again to account for cases where the default inference is cancelled, such as (3):

(3) The king of France is NOT bald: there is no king of France.

These are analyzed (chapter 10) as cases of (corrective) metalinguistic use of *not*.[1]

BR maintains, moreover, that the only viable logical interpretation of SLDP involves a three-valued, not a gapped, logic, whereas his own RLDP necessarily involves a gapped logic.

The exposé of RLDP proper is found in part III of the book (pp. 121–246), which contains the chapters 6–10. The argumentation leading up to it is found in part I (pp. 7–53; chapters 1 and 2), which discusses SLDP, and in part II (pp. 55–120; chapters 3–5), which deals with the distinction between a truth-value gap and a third truth value. Part III also contains a discussion of what FOLLOWS FROM RLDP, in particular, BR claims, the solution of the well-known projection problem of presupposition through the logical connectives and modalities.[2]

A separate chapter (chapter 9) is devoted to the problem that PF sometimes provokes, in BR's terms, a 'truth-gap intuition' (TGI), whereas in other cases one feels more inclined to assign simple falsity, as noted by Strawson (1964) and others. Sentence (4) is thus taken to provoke TGI, but (5) is more clearly false (when said by any of us now):

(4) The king of France is bald.
(5) The king of France invited me to dinner last night.

BR proposes a solution that depends directly on his RLDP. The tenability of this solution thus correlates with that of RLDP.

This summarizes the main features of BR's notion of presupposition. This notion is indeed new: no other author has so far proposed it, or anything resembling it.

BR's argumentation for RLDP is weak. This in itself need not, however, be fatal, since a proposal may well be defensible on account of its own intrinsic strength and explanatory power. In any case, whatever the merits of RLDP proper, the first 120 pages, which are meant to lead up to it, struck me as verbose and largely insubstantial. The issues discussed, however, are of central importance. One such issue is the metalogical question of gapped versus trivalent logics.

According to BR, PF gives rise to a TGI, which is rooted in the alleged fact that in uttering a sentence suffering from PF one 'fails to make a statement'. Thus we read (p. 55),

> ... the Revised theory ... is to be preferred at least on these grounds [that is, of inducing a gapped bivalent rather than a trivalent logic], for the speaker intuition we are attempting to reconstruct is that of the lack of truth value inherent in statement failure.

How strong this intuition is, however, is very much a matter of debate. There is disagreement on whether presupposition failure leads to falsity (of whatever kind) or to statement failure. Frege and Strawson were both unclear about this, and the uncertainty has, apparently, persisted until today, even though it has been generally accepted since the mid-1970s that negation over a sentence that suffers from PF yields truth. In some cases we clearly have falsity: if someone spins me a yarn about the king of Taiwan, and I ask what this man looks like, and my storyteller informs me that the king of Taiwan is bald, then, surely, what he says amounts to a false statement. Equally clearly, in cases where a sentence is uttered without all its places of reference attachment being given a contextually well defined value, as when I say to you now,

(6) The girl was right after all.

we have statement failure and thus a lack of truth value: now it makes no sense to ask whether this, or its negation, is true or false. For that to be decided one has to know who this sentence is about, what the issue is or was, and what the girl in question said or thought about it. It would seem that this offers a clear enough picture: reference-attachment failure leads to statement failure, while presupposition failure yields falsity of some kind. The former is repaired by adequate contextual embedding, whereas the latter is repaired by states of affairs in the world. Yet BR prefers to hold on to the notion of a truth-value gap intuition and thus requires of a presupposition theory that it provide a formal reconstruction of that notion.

This being so, there is, in BR's view, sufficient reason for ruling out a priori all multivalent (trivalent) analyses. Nothing much is said about such analyses, other than that, under varying conditions, a third truth value is, or should be regarded as being, 'peculiar' (pp. 61, 65, 67).

BR rightly insists that a clear distinction should be made between a gapped and a trivalent logic. He cites a number of publications (p. 58) where the two are not properly distinguished (oddly, and misleadingly, including Seuren 1984). He rejects, however, the notion that gaps are 'infectious' in truth tables. This notion is reasonable in view of the fact that truth functions are by definition functions from (pairs of) truth values to truth values, so that the absence of a truth value in the input automatically leads to a lack of output value. It would seem to follow that any logic where '3' together with a classical value ('1' or '2') yields a classical value in any truth table must be considered trivalent and not gapped. Yet one may, if necessary, regard this as a terminological question. BR, anyway, takes the trivalent tables as presented, for example, in Kleene (1938),[3] assigning them a gapped rather than a trivalent interpretation.

BR's reason for adopting the Kleene tables is in part their proven monotonicity, that is, the fact that they provide a calculus which is identical to classical strictly bivalent logic (all classical validities are preserved), even though the negation operator over a sentence A does not denote the full complement of A. Under the classical negation '¬' all valuations in the universe U in which A is not valued 1 (=true), as in Figure 1 ('/A/' stands for the valuation space of A, that is, the set of valuations in which A is valued 1), will be valued 1 for ¬A. But under the negation operator ~ only those valuations that belong to a subset U_A of U will be valued 1 for ~A. This latter negation thus denotes a partial ('inner') complement of A, that is, all nontrue valuations in U_A, as in Figure 2, where the valuations in $U-U_A$ have no value for A.

When the Kleene tables are interpreted as providing the framework for a formal reconstruction of the notion of *presupposition*, then, for any sentence A with the set of presuppositions P (A_P), $U_A = /P/$. In other words, then, the subuniverse for A is precisely the set of valuations where all the presuppositions of A are valued 1.

The truth tables for conjunction and disjunction are constructed under the constraint of monotonicity: with these truth tables the classical entailments are preserved for the operators ~, ∧, and ∨. These tables imply that there are subuniverses not only for individual atomic sentences but also for the complex sentences formed with the help of the three operators (~, ∧, ∨). This is necessary because the 'inner' complement denoted by ~ must be defined for disjunctions and conjunctions as well. In other

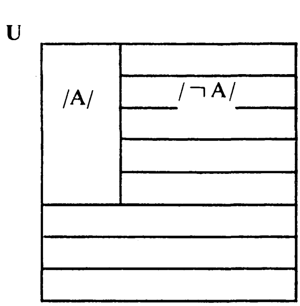

Figure 1. $/A/ \cup /\neg A/ = U$

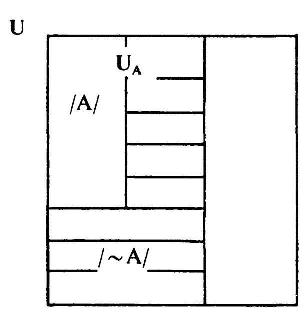

Figure 2. $/A/ \cup /{\sim}A/ = U_A$

words, given two sentences A_P and B_Q, the subuniverse for their conjunction, $U_{A\wedge B}$, and the subuniverse for their disjunction, $U_{A\vee B}$, must be defined. Now it follows from the Kleene tables that, for 'A_P and B_Q', $U_{A\wedge B}=(U_A\cap U_B)\cup/{\sim}A \vee {\sim}B/$, whereas, for '$A_P$ or B_Q', $U_{A\vee B}=(U_A\cap U_B)\cup/A \vee B/$. This is so because these subuniverses cover exactly those positions in the truth tables where a classical value, '1' or '2', appears. Defining these subuniverses is equivalent with saying that a sentence of the type 'A_P and B_Q' presupposes '(P and Q) or (not-A or not-B)', whereas 'A_P or B_Q' presupposes '(P and Q) or (A or B)'. Or, in terms of a concrete example, a sentence like (7a) should, in terms of the Kleene tables, presuppose (besides 'John exists') (7b), and (8a) should presuppose (8b), again given 'John exists':

(7) a. Both John's children and his pupils are fond of him.
    b. John has both children and pupils, or it is not the case that both his children and his pupils are fond of him.

(8) a. Either John's children or his pupils are fond of him.
    b. John has both children and pupils, or either his children or his pupils are fond of him.

A second reason for BR to accept the Kleene tables for the formal reconstruction of the presupposition notion is his belief that such a reconstruction is empirically adequate, a belief shared by other authors, such as, for example, Blau. But BR differs from the others (his RLDP) in that he holds that only if all strong entailments are true will PF result in a tv gap, whereas all other authors (whether or not they accept the Kleene tables) hold that PF alone suffices for the occurrence of a gap (or third value).

However, as regards the empirical merits of the Kleene tables for presupposition theory, this reviewer has serious doubts.[4] If this is what presuppositions are, we must accept that sentences of the form 'A_P or B_Q' presuppose 'A_P or B_Q, or P and Q', even though it would normally be considered preposterous to let any sentence presuppose itself as a member of a disjunction. Likewise we would have to accept that a conjunction presupposes the negation of itself as a member of a disjunction, even though that is clearly not normally the case. The risks involved in such a view are clearly demonstrated when one takes a case such as

(9) Either the water has stopped boiling or it hasn't started (yet).

where a presupposition of one disjunct is the negation of the corresponding presupposition of the other. This sentence is thus of the type 'A_C or ${\sim}B_{\sim C}$'. Under what BR calls the standard view of presupposition, where any sentence A and its negation ${\sim}A$ have the same presuppositions, we now get a very unwelcome result: since all valuations where the presuppositions of both A and B are fulfilled are now logically inadmissible, so that 'C and ~C' is necessarily not-true, the presupposition of (9) as a whole now boils down to (9) itself, which must thus be taken, in this calculus, to presuppose itself. This is disturbing because sentences are not suppposed to presuppose themselves: if they do, it is no longer possible for a sentence to be false while all its presuppositions are true. It also means that a sentence like (9) can never be valued 2, since its falsity leads automatically to the value 3 (whether gap or third value). But we would surely wish to say that (9) is false when the water is boiling now — an intuition explicitly shared by BR on his p. 170 (to which we shall return below).

Moreover, it is generally so that a presupposion of A followed by A itself (preferably conjoined by *and* or *but*) makes for a coherent and systematic bit of discourse. But when this is tried out on '(7b) and (7a)', or '(8b) and (8a)', the resulting text shows a distinct qualitative difference with regard to the more canonical texts built up by a presupposition followed by its carrier sentence. Yet, this is not the main criticism of BR's theory: the main criticisms find their origin in the specific claims made in his revised theory, which combines the Kleene tables with a truth-value assignment procedure where strong entailments prevail over presuppositional entailments.

Before we can discuss BR's RLDP more fully, something must be said about his handling of other authors' works. In this respect much remains to be desired. Keenan and Hull (1973), to begin with, is given a rough ride. This work is discussed on pp. 117–120. The main thesis (1973: 450) is rendered in the following terms, on p. 118 of the work under review:

'a. S2 is a LOGICAL CONSEQUENCE of S1 just in case S2 is true in every state of affairs in which S1 is true.
b. S2 is a LOGICAL PRESUPPOSITION of S1 just in case S2 is true in every state of affairs in which S1 is either true or false (so S1 is neither true nor false, but vacuous, whenever S2 is not true).
c. S2 is a LOGICAL ASSERTION of S1 just in case
 (a) S2 is a logical consequence of S1, but
 (b) is not a logical presupposition of S1.'

He subsequently (p. 119) 'unpacks' the definition of logical assertion as follows:

'S2 is a LOGICAL ASSERTION of S1 just in case
(a) S2 is true in every state of affairs in which S1 is true, and
(b) S1 is false in every state of affairs in which S2 is not true.'

thereby wishing to demonstrate that Keenan and Hull (1973) does in fact operate with BR's notion of strong entailment (see [iv] at the outset), and thus unwittingly follows BR's revised theory of presupposition (RLDP). Keenan and Hull is thus presented as being inconsistent, and RLDP comes out as somehow logically necessary or unavoidable. It is, however, easy to demonstrate that the 'unpacking' of (c) above does not lead to what BR says it does, but to

S2 is a LOGICAL ASSERTION of S1 just in case
(a) S2 is true in every state of affairs in which S1 is true, and
(b) in at least some state(s) of affairs S1 is false and S2 not true.

which is precisely what is intended in Keenan and Hull (1973) and consistent with it, and NOT equivalent with BR's notion of strong entailment.

Van Fraassen's system of supervaluations is discussed in two sections (pp. 93–104). However, BR's discussion of this (difficult) system is, again, highly deficient and badly riddled with misinterpretations. So is his discussion of Seuren (1984, 1985), which are sometimes misquoted and sometimes quoted from misleadingly. On p. 87 the view is attributed to me (which I have never held) that there are three negations and four truth values in language. And my trivalent logical analysis is presented and discussed under terminological definitions that are explicitly distinct from those adopted in my own work, with the unsurprising result that this analysis is made to look as if it falls flat under BR'S critique.

Let us, however, pass on to the discussion of BR's part III, the exposé proper of his position. As we saw above, BR's innovation with respect to many older notions of presupposition consists in his allowing for the carrier sentence S1 to have the value 2 even when its presupposition S2 is not true, yet requiring that S1 and S2 are valued 3 under identical conditions. S1 is valued 2 under PF, and ~S1 is therefore valued 1, just in case S1 is falsified by the nontruth of at least one of its strong entailments. All contingent entailments of S1 are thus lost under the negation operator. Unfortunately, we must conclude that this innovation is untenable. It is so on two independent grounds, one of a formal and one of an empirical nature.

On formal grounds this analysis is not tenable because it lacks a viable model theory. This can be shown in the following way. In BR's RLDP, nontruth of a strong entailment of a sentence A leads to the truth of ~A. The question now is, how does A entail itself? If A strongly entails itself, then, given, as before, a total set of valuations U, the set of valuations /A/ in U in which A is valued 1, and the set of valuations

$/SE_A/$ in U, in which the conjunction set of all strong entailments of A is valued 1, $/A/=/SE_A/$. The general condition, so far, is thus: $/A/= /SE_A/ \subseteq U$.

We also have, however, presuppositional entailments, which are those entailments which are not strong entailments (p. 127 and elsewhere). Let $/P_A/$ be the set of valuations where the conjunction set of all presuppositions of A is valued 1. Given that A entails its presuppositions, and that it is possible for A to be false and all its presuppositions to be true. $/A/ \subset /P_A/$. Hence the more stringent general condition: $/A/= /SE_A/ \subset /P_A/ \subseteq U$.

Now consider the condition under which a sentence is valued 3 in BR's theory:

'(iii). S (and *not*-S) is NOT TRUE and S (and *not*-S) is NOT FALSE iff some WE [= weak or presuppositional entailment] of S is false but no SE [= strong entailment] of S is false' (p. 130).

A sentence A is thus valued 3 just in case it has a false presupposition but no false strong entailments. For A this requires a valuation v_n which is outside $/P_A/$ (that is, some presupposition of A is false), and at the same time inside $/SE_A/$ (that is, all strong entailments are true). But since $/A/=/SE_A/ \subset /P_A/$, v_n is impossible. In short, if A strongly entails itself, then for A to be valued 3, its own strong entailment A must be valued 1.

It follows that, in BR's revised theory, no sentence will ever be valued 3 if every sentence strongly entails itself. This makes, in effect, the notion of presupposition entirely vacuous in this theory, which can hardly have been the intention of its author.

It may be objected that a sentence A does not strongly entail itself, since its nontruth leads, trivially, to either the value 2 or a gap, that is, 3. But then A must PRESUPPOSE itself, and $/P_A/$ can be neither smaller nor larger than $/A/$, so that, in this case $/A/=/P_A/$. But then it is impossible for A to be false and all its presuppositions to be true, and, moreover, if all strong entailments of A are true, A will lack a truth value! It would seem, therefore, that there is something radically amiss with BR's RLDP.

As has been said, BR's revised notion of presupposition is hard to defend also on empirical grounds. This is because, in his revised theory, the falsity of a presupposition P of a sentence A is insufficient cause for A to have the third value, since there is the further requirement that all strong entailments of A must be true. Yet, as BR himself says on p. 237, we have acceptable sentences like

(10) The king of France isn't bald, because there is no king of France.

It would seem to follow, therefore, that, for speakers' intuitions at least, the falsity of a presupposition is a perfectly sufficient reason for assigning falsity to a sentence, regardless of any strong entailments. Now BR counters this argument by positing that this use of *because* is pragmatic rather than truth-conditional and is on a par with cases like

(11) a. John is going out because he has his hat on.
b. Because he has his hat on doesn't mean John is going out.

where *because* gives the speaker's reason for making or withholding his assertion (that John is going out), and not John's reason for going out or not going out.

Such uses of *because* are indeed frequent and normal. Consider, for example, cases where *because* gives the speaker's reason for asking a question, as in

(12) Are you going out? Because you have your hat on.

However, a little variation on the *because* theme shows that this analysis, though possible, is not the only one to apply to cases like (10). Thus, the complex conjunction *simply because* can clearly not be used as a speech-act motivator:

(13) ! Are you going out? Simply because you have your hat on.

Likewise, a *do so* pickup of the main clause combined with *because* is also restricted to truth-conditional *because* and impossible with the status of speech-act motivator. A sentence like

(14) John is going out, and he is doing so because he has his hat on.

is interpretable only as giving John's reason for going out and not as giving the speaker's reason for feeling able to assert that John is going out. If we now go back to sentence (10) we see that both tests are positive for the truth-conditional use (while allowing also for the speech-act-motivator use), since both (15a) and (15b) are acceptable:[5]

(15) a. The king of France isn't bald, simply because there is no king of France.
b. The king of France isn't bald, and he isn't because there is no king of France.

This, it would seem, effectively blocks BR's pragmatic explanation.

BR claims, furthermore, that his revised theory makes the right predictions with regard to the projection phenomena of presuppositions through truth-functional and modal operators. In his view, RLDP automatically gets all the phenomena right. Clearly, if RLDP were logically sound, and if BR's further claims with respect to projection phenomena were correct, BR's claim would be justified. However, as we have seen, the logic adopted for RLDP does not appear sound. And the further claims do not seem justified either. They risk failing on at least two counts.

First, BR discusses (pp. 164–169) a counterexample brought to his attention by Rob van der Sandt:

(16) If Max has a wife, she'll come to the party, and if she comes to the party, he won't be able to flirt.

Our intuitions are quite clear: sentence (16) bears no trace of the presupposition 'Max has a wife', although the second conjunct still carries that presupposition at least as a default. According to BR's theory (and other theories as well), if one conjunct carries a presupposition (or default), then the whole conjunction does. BR thus has a problem.

His answer (p. 167) consists in not analyzing (16) as having the logical structure $(A \rightarrow B_A) \wedge (B_A \rightarrow C)$, that is, a conjunction both whose conjuncts are an implication, but as having the structure $(A \rightarrow (B_A \wedge (B_A \rightarrow C)))$, in which case the presupposition B is indeed filtered out. This solution, however, lacks generality: a little further probing reveals that this different scope assignment fails in similar cases that present the same problem for BR's theory. The problem must be deemed to remain. Consider, for example, sentences like

(17) a. Maybe if Max has a wife she'll come to the party, and necessarily/obviously, if she comes to the party he won't be able to flirt.
b. Jim expects that if Max has a wife she'll come to the party, and he knows that if she comes to the party Max won't be able to flirt.

Clearly, there is no way in which these sentences can be analyzed other than as conjunctions. In particular, the meanings of these sentences do not allow for a scope assignment whereby the operators *necessarily / obviously* or *he knows that* can fall under the scope of, respectively, *maybe* or *Jim expects that*. Yet, since the operators of the second conjuncts are all fully transparent with respect to presuppositions of their embedded clauses, the problem raised by (16) remains.

Then, on pp. 169–171, BR discusses the problem of conflicting presuppositions, as in (9) above, repeated here:

(9) Either the water has stopped boiling or it hasn't started (yet).

Here the first disjunct presupposes that the water has boiled before, whereas the second disjunct presupposes that the water has not boiled before. The intuitions, again, are quite clear: both presuppositions are lost without even the trace of a (default) suggestion. And again, BR claims that his RLDP gives the right result without any extra provision. His argument runs as follows. Assume, he says, that both (a) *The water has stopped boiling* and (b) *The water has not started boiling* logically assert, or strongly entail, (c) *The water is not boiling now.* If (c) is false, both disjuncts of (9) are false and (9) is valued 2. If (c) is true, then the water either was or was not boiling before. If the former, the first disjunct is valued 1 and the second 3, hence (9) is valued 1. And if the latter, then the first disjunct is valued 3 but the second 1, with the same result. Hence (9) is valued either 1 or 2 and will never be valued 3. This means that (9) will never have the chance of suffering from presupposition failure, which again means that (9) has no presuppositions.

However, this argument, again, fails to go through. The central flaw is that, in BR's system, the negative sentence (b) does not logically assert, or strongly entail, anything contingent entailed by its argument clause *The water has started boiling.* All contingent entailments of the argument clause are, as we have seen, canceled by the negation operator. Intuitively, of course, the second conjunct of (9) does indeed forcefully imply (c), that the water is not boiling now, and an adequate logical analysis of language should capture this fact. But BR's logic does not capture it.

To be precise, if (c) is false, that is, the water is boiling now, then the truth value of the first disjunct of (9) is 2, in BR's system, because a strong entailment is false, but the value of the second disjunct now depends crucially on the truth value of its presupposition. This is so because, this disjunct being of the form $\sim$A, A being *the water has started boiling*, the strong entailment of A, that the water is boiling now, is true, and therefore (assuming that no other strong entailment fails to be true), it is now up to its presuppositions to decide the value of this disjunct. Now suppose the water is not only boiling now but has also boiled before. Then the value of (9), it being of the form $A_C \vee \sim B_{\sim C}$, is 3, since the second disjunct suffers from PF. According to BR's table for $\vee$, the whole disjunction, (9), is therefore valued 3. Which means that, if the water has boiled before and is boiling now, (9) suffers from PF and can be made true only if the presupposition in question, which turns out to be that the water has not boiled before, is made true. (9) is thus seen to presuppose, in BR's system, that the water has not boiled before. This is clearly in conflict with speaker's intuitions.

On the whole, this is a very disappointing book. Its main thesis is badly argued for, and, it seems, not tenable. Many points are inadequately, or even wrongly, discussed, and at least some authors' views are not adequately represented. Much time and reading effort could have been saved, and no doubt errors could have been avoided, if the author had been more liberal with diagrams and formalisms, and less liberal with prose text where a simple formula would have done the job much better. Although the issues raised are almost all essential and central to presupposition theory, so that the careful reader will feel provoked and will go on, or start, thinking about them, there is, on balance, hardly anything that one feels one would like to keep as a fruitful or stimulating thought.

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Notes

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1. BR presents his views on presupposition and negation, in particular metalinguistic negation, in a recent article (Burton-Roberts 1989), which, however, seems to be based on SLDP rather than on RLDP. I have written a critical reply to this article (Seuren i.p.). Anyone with a more than passing interest in the matter at hand would do well to read these two publications in conjunction with the book and this review.
2. BR also claims (p. 78) that a gapped logic with classical ('complementation') negation eliminates the liar paradox ('This sentence is not true'). However, in such a system the paradox returns for the third logical status: 'This sentence has the value 3'.
3. BR mentions Van Fraassen (various works) as one of the authors sporting the truth tables in question. This does not accord with the reconstruction of Van Fraassen's supervaluation system as presented in McCawley (1981: 244–245) or Seuren (1984: 347, 1985: 224), where Van Fraassen's tables are seen to be trivalent but not truth-functional, since <3,3> gives either 2 or 3 for $\wedge$ and either 1 or 3 for $\vee$. BR could, however, have mentioned Blau (1978), whose tables are also those used by BR.
4. See Seuren (1988) for an exposé of an alternative calculus where $U_{A \wedge B} = U_A \cap U_B$, and $U_{A \vee B} = U_A \cup U_B$, and for a detailed argument showing the presuppositional untenability of the Kleene tables.
5. Similar tests apply in other languages. Thus in Dutch the subordinating conjunction *omdat*, corresponding to English *because*, can only be used truth-conditionally, whereas the coordinating conjunction *want* (English *for*) can only be used as a speech-act motivator. Yet the literal translation of (10) into Dutch, that is, with subordinating *omdat*, is perfectly acceptable.

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