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PRESUPPOSITION AND ENTAILMENT

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1 In a recent paper[1] Mitchell Ginsberg has argued that in light of certain facts about presupposition the traditional conception of entailment should be modified. It has traditionally been maintained that the following principle holds for entailment:

(I) *If A entails B, then if B is false then A is false.*

But, as Ginsberg points out, it seems pre-analytically clear that, for example, the statement:

(1) Vita, whose husband is a lawyer, is an artist,

entails the statement:

(2) Vita is an artist.

And if (2) is false, it may be the case that (1) is *not* false, since (1) may be truthvalueless due to the falsity of the presupposition that Vita's husband is a lawyer. In general,

> "if . . . a given A entails some B such that A has a presupposition P which B does not have, then it will be possible for A to be without truth value (be neither true nor false), for example when P is false, while B might be either true *or* false."[2]

Ginsberg suggests that (I) be replaced by the principle:

(II) *If A entails B, then if B is false then A is not true.*

If this is done, then we can say, for example, that (1) does entail (2), since if (2) is false, (1) will be either false or truthvalueless. As a bonus, Ginsberg argues, we would also be able to accept the principle:

(III) *If A presupposes B, then A entails B,*

a principle which conflicts with the generally accepted principle:

(IV) *If A presupposes B, then if B is false, then A is neither true nor false.*

For example, since (1) presupposes

(3) Vita's husband is a lawyer,

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it follows via (IV) that if (3) is false, then (1) is neither true nor false. But if (III) were accepted, then since (1) presupposes (3), it would follow that (1) entails (3). We would then find ourselves in conflict with (I), which would commit us to holding that if (3) is false, then (1) is *false* rather than truthvalueless. Ginsberg argues that in replacing (I) with (II), we would be committed instead to the acceptable consequence that if (3) is false, then (1) is either false or truthvalueless. As a result, (III) could be accepted.

I will try to show that the rejection of (I) has undesirable consequences. I will then go on to sketch an alternative solution which will allow us to hold both (I) and (III). Thus, we shall not only be able to retain the traditional conception of entailment, but also we shall be able to say that whenever A presupposes B, A entails B.

2 If we reject (I), then *Modus Tollens* for entailment:

$$A \textit{ entails } B, \textit{ not-}B, \therefore \textit{ not-}A$$

would also have to be rejected. For given that A entails B and that not-B, it may happen that A is truthvalueless, in which case we cannot conclude that not-A. Similarly, rejection of (I) will entail rejection of *Reductio ad Absurdum* for entailment:

$$A \textit{ entails } B, A \textit{ entails not-}B, \therefore \textit{ not-}A.$$

Given that A entails a contradiction, we could not infer that not-A, since A might be truthvalueless. It may, of course, be possible to justify introducing a qualified version of these argument forms in which the conclusion is appropriately weakened. Nevertheless, it would seem preferable to try to find a way to save the traditional principle, (I).

3 Instead of attempting to modify the traditional conception of entailment, then, let us focus on the conception of presupposition which Ginsberg employs. A fundamental aspect of this conception is embodied in (IV), according to which the falsity of a presupposition renders the presupposing statement truthvalueless. This view apparently arises from considerations such as the following. The truth of

(3) Vita's husband is a lawyer

is a necessary condition of the truth of

(1) Vita, whose husband is a lawyer, is an artist,

since if (3) is false then (1) is not true. But the truth of (3) is also a necessary condition of the truth of

(4) It is false that Vita, whose husband is a lawyer, is an artist,

since if (3) is false then (4) is not true. Consequently, it seems, the truth of (3) is a necessary condition of the truth and of the falsity of (1).

Obviously, this argument takes (4) to be what logicians would call a *contradictory* of (1), i.e., (1) is false if and only if (4) is true. Fully stated, the argument runs as follows. If (3) is false then (1) is not true. And if (3)

is false then (4) is not true. But since (4) is a contradictory of (1), if (4) is not true then (1) is not false. Hence if (3) is false then (1) is neither true nor false.

4 We should note, however, that the truth of (3) is a necessary condition of the truth not only of (1) and of (4), but apparently of *every logical compound statement containing* (1) *as a component.* For example, it appears that the truth of (3) is a necessary condition of the truth of each of the following logical compounds:

(5) If Vita, whose husband is a lawyer, is an artist, then Vita is an architect.
(6) If Vita is an architect, then Vita, whose husband is a lawyer, is an artist.
(7) If Vita, whose husband is a lawyer, is not an artist, then Vita is an architect.
(8) Vita, whose husband is a lawyer, is an artist only if she is an architect.
(9) Either Vita, whose husband is a lawyer, is an artist, or she is an architect.
(10) Unless Vita, whose husband is a lawyer, is an artist, she is an architect.
(11) It is possible that Vita, whose husband is a lawyer, is an artist.

Thus, there seems to be nothing special about the fact that the truth of (3) is a necessary condition of the truth of (4), since (4) is merely one of the many logical compounds which can be formed from (1), and each of these compounds requires the truth of (3) as a precondition of its truth.

Evidently a presupposed proposition is simply one which is not affected by the logical compounding operations of natural languages by which complex statements are constructed out of more elemental parts. For example, (5) states that Vita's being an architect is implied by Vita's being an artist, and does not claim that her husband's being a lawyer is somehow involved in this implication. The proposition that Vita's husband is a lawyer is something which, so to speak, stands outside the operation by which the hypothetical statement is constructed. Analogous considerations apply to the other statements in the above list. Many statements, we can say, are composed of several propositions having differing statuses—certain propositions involved in a given statement are *focused on*, while others are *presupposed*. Logical compounding operations of natural languages affect only the *focus* propositions, leaving the *presuppositions* untouched. The resultant compounds continue to require the truth of the presuppositions of the components as a precondition of the truth of the compounds. This will explain why it happens that when the relevant negating operation is applied to (1) to form

(4) It is false that Vita, whose husband is a lawyer, is an artist,

only the focus proposition of (1), i.e., that Vita is an artist, is affected. This fact is even clearer in the statement

(12) Vita, whose husband is a lawyer, is not an artist,

which is equivalent to (4).

5 We should, then, avoid confusing the truth conditions of a given statement with the truth conditions of certain compounds of the statement formed in natural languages. With this in mind, let us hypothesize that not only is the truth of (3) a necessary condition of the truth of (1), but also the falsity of (3) is a *sufficient condition* of the *falsity* of (1). Since the truth of (3) is a necessary condition of the truth of (4), we cannot now hold that the truth of (4) is a necessary condition of the falsity of (1). (1) may be false because (3) is false, even though the falsity of (3) also makes (4) false. Obviously, we cannot go on to claim that (4) is a "logician's contradictory" of (1), for it is not the case that (1) is false if and only if (4) is true. This is not to say that a "logician's contradictory" of (1) cannot be formed in natural languages. Such a contradictory, however, will not be a natural language *logical compound* of (1). For example, both of the statements:

(13) It is false that Vita is an artist and her husband is a lawyer,
(14) Either Vita is not an artist or her husband is not a lawyer,

are true if and only if (1) is false. Nevertheless, normally a speaker who objected to (1) would believe himself to be in a position to make one of the following statements:

(15) Vita is not an artist,
(16) Vita's husband is not a lawyer.

Hence, such a speaker would not be inclined to state either (13) or (14). Indeed, doing so would normally be misleading, since it would normally indicate that the speaker did not believe he was in a position to state either (15) or (16).

6 We can go on to hypothesize that from a logical point of view a *statement* can be identified as the conjunction of the proposition focused on and the proposition(s) presupposed.[3] "Two" statements are the *same statement* if and only if they consist of the same proposition focused on and the same presupposition(s). Thus, for example, the "two" statements:

(1) Vita, whose husband is a lawyer, is an artist,
(17) Vita, who is married to a lawyer, is an artist,

are the same statement, while the two statements:

(18) Vita is an artist and her husband is a lawyer,
(19) Vita, who is an artist, is married to a lawyer,

are statements distinct both from each other and from (1) and (17), despite the fact that all four statements have the same truth conditions. A logical compound statement will also be a conjunction of the focus proposition and presupposition(s), but in this case the presupposition(s) of the various components, instead of entering into the focus proposition, become presupposition(s) of the compound. For example, the statement

(5) If Vita, whose husband is a lawyer, is an artist, then Vita is an architect,

is the same statement as

(20) If Vita is an artist, then Vita, whose husband is a lawyer, is an architect,

since each consists of a conjunction of the focus proposition, i.e., that if Vita is an artist then she is an architect, and the presupposition, i.e., that Vita's husband is a lawyer. In contrast, the statements

(21) If Vita is an artist and her husband is a lawyer, then Vita is an architect,
(22) If Vita, who is an artist, is married to a lawyer, then Vita is an architect,

are distinct both from each other and from (5) and (15). In this case the truth conditions of the statements also differ. While (5) and (20) are not true unless Vita's husband is a lawyer, the truth of (21) and of (22) is not ruled out by her husband's not being a lawyer. On the other hand, (22), unlike the other statements, cannot be true unless Vita is an artist.

Since on our hypothesis a statement is a conjunction of the proposition focused on and the presupposition(s), the truth of the principle:

(III) *If A presupposes B, then A entails B*

is immediate. For example, since (1) consists of a conjunction of the proposition focused on, i.e., that Vita is an artist, and the proposition presupposed, i.e., that Vita's husband is a lawyer, it is clear that (1) entails its presupposition, (3). Nevertheless, since the falsity of a presupposition renders the presupposing statement false, it follows that we need not reject the principle:

(I) *If A entails B, then if B is false then A is false.*

Instead, we reject the claim:

(IV) *If A presupposes B, then if B is false then A is neither true nor false,*

a claim whose plausibility can be accounted for by the principle:

(V) *If A presupposes B, then if B is false, then A is not true and every logical compound of A is not true.*

We can go on to accept the traditional principle of bivalence:

(VI) *A is true or A is false,*

in accordance with which (V) yields the following principle:

(VII) *If A presupposes B, then if B is false then A is false and every logical compound of A is false.*

It should be noted that in holding that both of the statements:

(1) Vita, whose husband is a lawyer, is an artist,
(12) Vita, whose husband is a lawyer, is not an artist,

are false if Vita's husband is not a lawyer, we are in effect committed to the rejection of the traditional principle of excluded middle:

(VIII) *A or not-A*,

where 'not-*A*' represents the result of applying a natural language negation operation to '*A*'. Nevertheless, as we noted above, we are not committed to holding that there is no way to form in natural languages a "logician's contradictory" of a statement having a presupposition. For example, we have seen that the statement:

(13) It is false that Vita is an artist and her husband is a lawyer,

is true if and only if (1) is false. Representing such a contradictory as 'NOT-*A*', we can accept the following modified form of the principle of excluded middle:

(IX) *A or* NOT-*A*.[4]

Thus, we are not committed to holding that there are any built-in limitations on what can be expressed in natural languages.

7 I have tried to show that there are undesirable features associated with Ginsberg's proposal that we modify the traditional conception of entailment in order to be able to hold that a statement having a presupposition can entail a statement not having the presupposition. I have gone on to sketch a proposal for replacing the conception of presupposition underlying Ginsberg's view with a conception which at once seems to save the appearances concerning presupposition and to eliminate the conflicts with the traditional conception of entailment. The extent to which this new conception of presupposition can handle the full range of presuppositional phenomena remains as a subject for further investigation.[5]

NOTES

1. Mitchell Ginsberg, "The entailment-presupposition relationship," *Notre Dame Journal of Formal Logic*, vol. XIII (1972), pp. 511-515.

2. *Ibid.*, p. 512.

3. For discussion of a similar view of statements, see my "Pragmatics and definite descriptions," *Tulane Studies in Philosophy*, vol. XXI (1972), pp. 63-84, Section **6.**

4. Some qualification to this principle may have to be made if there are genuine statements in which the truth of the presupposition is a necessary condition not only of the truth of the *statement*, but also of the truth of the *focus proposition* involved. For a discussion of such cases, see *ibid.*, p. 79ff.

5. For an excellent discussion of a number of these phenomena, see Lauri Karttunen, "Presuppositions of compound sentences," *Linguistic Inquiry*, vol. IV (1973), pp. 169-193. Among the many types of statements discussed by Karttunen, there is one which may appear to be especially damaging to my thesis. The statement

   (23) If Vita is married, then Vita's husband is a lawyer

may be true even if

(24) Vita is married

is false. And yet (23) seems to be a natural language logical compound composed (in part) of

(3) Vita's husband is a lawyer,

and hence should presuppose (24) just as (3) does. On this point see Section **8** of my "Hypotheticals: Conditionals and theticals," forthcoming in *Philosophical Quarterly*, in which I argue that such statements as (23) are not genuine logical compounds.

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