

Implicature, Conditional Strengthening, and Argumentation

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I

Arguments are *movements* of thought. From a logical point of view, such a movement is *justifiable* as it *tends* to preserve or transmit truth. To speak of such tendency is to abstract from particular movements of thought and to ascent to the *forms* of such movements. Thus logical theory is said to concern rules of validity or cogency that one may use to evaluate *forms* of arguments, forms as may be instantiated by particular sets of statements which we may use to represent particular movements of thought.

But *real* arguments pertain as much to *movements* of thoughts as *moves* in reasoned or critical or persuasion dialogues, where participants engage in various sorts of moves that involve, among other things, proving, question, opposing some thoughts, or inferring them from other thoughts as they are taken to be asserted or presupposed by other participants in a dialectical context. The rules that govern such moves are diverse and multifarious and have been a main focus of logical pragmatics and argumentation theories.

Though it has been a common thought that logical theory and logical pragmatics can be taught or studied quite independently from each other, the independence, in my view, can only be maintained to the extent that logical theory is treated primarily as a formal pursuit. The ability to think logically and to reason well

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goes far beyond a good grasp of formal rules of logic. As every teacher of logic courses knows, one of the commonest complaints students make about such courses is that the formal rules of inference, well codified as they are, cannot be readily applied to argumentative discourse in everyday reasoning. Logical theory must be informed by logical pragmatics if it is to be brought to bear on real argumentation. For by far most real arguments cannot be taken on their face value and evaluated as they stand, but need to go through reconstruction or interpretation of one kind or another that takes account of their context and dialectic-pragmatic backgrounds. So, it is to be expected that a treatise on logical theory that professes to be of genuine, practical use will pay due attention to the interpretation of arguments from a perspective that is sufficient sensitive to their contexts and dialectic circumstances. Sections in logic texts carrying headings like ‘Recognizing Arguments in Ordinary Language’ come to mind. But the need to analyze *real* arguments gives rise to more difficulties than these sections can handle, and the mere inclusion of such sections in an otherwise formal treatise barely addresses the core of the problem, which, in the simplest terms, lies in the *pragmatic dynamics* of real arguments.ⁱ

By ‘real arguments’ I mean not only arguments that have actually occurred, in contrasted with artificial instances of inference commonly found in textbooks of logic, but arguments as they occur in natural language in ‘the real marketplace of persuasion’ (to use Douglas Walton’s words). That such arguments are almost invariably embedded in a pragmatic web of dialectical or dialogical exchange means that their evaluation must involve careful attention to a host of notions that go beyond the traditional one of testing the logical correctness of clearly and explicitly stated inferences. A partial list of such notions includes: evidence behind a claim, deviation from norms governing various kinds of dialogical exchange, anticipation of objections, dialectical obligations (i.e., obligations implicitly or explicitly situated within an exchange between arguing parties), acceptability of a premise by the audience, legitimate or illegitimate shift in the burden of proof, retraction of commitments, kinds of dialogue rules (such as what Walton (1989: 10) calls ‘locution rules’, ‘commitment rules’ and ‘win-loss rules’), so on and so forth. Logical evaluation that

does justice to the dynamics of real argument is therefore not only a logical but also a pragmatic endeavor that goes beyond traditional analytical and logical skills.

In what follows I shall discuss a variety of pragmatic strengthening of conditional statements. The reason is twofold. First, this variety of conditional strengthening is in itself an interesting topic to think about. Second, I hope to provide, through discussing the examples below, a concrete illustration of how logical assessment of arguments and pragmatic scrutiny of them intertwine.

II

The following is an extract from a TV interview. [ROMANCE]: A presenter interviewing a promising new pop singer, S, asks her why she is not interested in having a romantic relationship. S replies, “If I have the time, I won’t mind having a romantic relationship. But my career looks like it’s going to take off the ground now. I think I’m going to be quite busy, so I’ll not be looking for a relationship, at least in the near future.”

The inference, if there is one, in S’s reply seems to be:

- (1) If (*a*) I have the time, then (*b*) I will look for (or won’t mind having) a romantic relationship;
- (2) ~*a*; therefore,
- (3) ~*b*.

This instantiates the familiar invalid form of inference:

DENYING THE ANTECEDENT

$$\begin{array}{l} \text{If } p, q \\ \hline \sim p \\ \sim q \end{array}$$

But perhaps we can be more sympathetic in interpreting S’s inference. It is arguable that when interpreting an argument or inference we should take as our default position a certain principle of charity, which enjoins that unless there are reasons for doing

otherwise, we should interpret an argument in their strongest light possible as is allowed by the context. Accordingly, we may want to seek another, more sympathetic interpretation of S's reasoning in ROMANCE. Consider, for example, the following one: it is a matter of common sense that many people would choose to give precedence to their career over many things or other life projects, especially when it begins to fledge. Against this background knowledge, one may find it reasonable to interpret S's inference as an enthymemes with the following unstated or hidden premise:

(1*) If $\sim a$, $\sim b$.

Alternatively, taking into account the context in which it is used, one may find it reasonable to consider (1) *itself* as somehow interpretable as:

(4) If a, b and if $\sim a, \sim b$. (= a , if and only if b .)

In this second way, the sentence (1) is understood as not only expressing its literal meaning, but also suggesting or, to use the jargon of Geis and Zwicky (1971), *inviting the inference* to, the proposition that (1*). Geis and Zwicky's observation is that students in elementary logic courses often propose to formalize

If John leans out of that window any further, he'll fall.

with biconditionals rather than conditionals, which is surely wrong. But they also note that in a wide variety of circumstances, there is indeed a tendency to *perfect* a conditional to a biconditional. For example, a son would take his father who says (5) as not only meaning the literal meaning of the sentence:

(5) If you mow the lawn, I will give you five dollars.

but also *suggesting* that

(5*) If you don't mow the lawn, I won't give you five dollars.

As remarked by Laurence Horn, Geis and Zwicky's remarks on this kind of invited inference or *conditional perfection* (CP) 'released a hornet's nest of rebuttal and counter-rebuttal into the pragmatic atmosphere' (Horn 2000: 289). However, I will not try to comment on the sizable literature on this topic.ⁱⁱ For the purposes of this

essay as stated earlier, we will do well here to structure our discussion in relation the following problem. Just as the father's assertion of (5) only *suggests*, but not literally *means* (5*), (1) does not *literally* mean the proposition (1*). The inference in ROMANCE could not be turned into a valid one by reconstructing it along the line of Geis and Zwicky because such reconstruction would be misguided as far as logical evaluation is concerned. For although the assertion of (1) by S can be seen to be *associated*, perhaps most plausibly in a pragmatic kind of way, with the proposition (1*), this proposition is not part of what is encoded *semantically* by the premises. It would be a confusion between semantic content and pragmatic import to say that (1*) should form part of the premises of a proper reconstruction of the inference. Pragmatics cannot absolve the inference from the charge of fallacy.

Much of our discussion below is an attempt to elaborate and reflect on this problem. Perhaps the best way to approach the problem is to ask how conditional perfection is to be explained. Though there is no lack of supply of other views (for example, one that is based on the suggestion that in ordinary language 'if' is ambiguous and may mean 'if and only if'),ⁱⁱⁱ the approach that draws on Paul Grice's theory of implicatures^{iv} has dominated the discussions on conditional perfection and related issues ever since Geis and Zwicky stirred up the scene.

In a nutshell, Grice proposes that (formal) logical is not sufficient for explaining the way people understand one another's utterances. Understanding a sentence cannot be separated from what you may take to follow from the sentence, which depends not only on 'What does the sentence imply?' but also 'What could you conclude from the fact that I asserted the sentence, as an appropriately assertible sentence in such-and-such context?'. To answer a question of the latter kind, you need the assumption that I am cooperating with you. Grice thus proposes that in addition to logic, one's understanding of another's utterance requires what he calls the Cooperative Principle in communication:

Make your contribution such as it is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged.

Grice further groups dimensions of cooperation under four headings, as represented by the following Maxims:

- a. Quantity:
 - 1. Make your contribution as informative as is required (for the current purposes of the exchange).
 - 2. Do not make your contribution more informative than required.
- b. Quality: Try to make your contribution one that is true
 - 1. Do not say what you believe to be false.
 - 2. Do not say that for which you lack adequate evidence.
- c. Relevant: Be relevant.
- d. Manner: Be perspicuous
 - 1. Avoid obscurity of expression.
 - 2. Avoid ambiguity.
 - 3. Be brief.
 - 4. Be orderly

With these principles, Grice goes on to describe how a hearer can extract information that goes beyond what is implied logically by a sentence. Such information are said to be *implicated* by the sentence, or more accurately by the sentence together with the fact that it is asserted. The inferences through which such information is extracted are said to be *implicatures*, to be distinguish from semantic implications or entailments.

To see how the Gricean approach works, consider the following objection to Geis and Zwicky's example. Some early critiques of Geis and Zwicky's examples points out that there clearly are cases where the use of a conditional does not invite the inference to the relevant biconditional, for example

- (6) If I quit, I will be replaced. (Boër & Lycan's 1973);
- (7) If the axioms aren't consistent with each other, then every WFF in the system is a theorem. (Lijie 1972)

Contexts can also be conceived in which (5) does not give rise to (5*):

whether a particular speaker in a particular situation will infer [(5*)] from [(5)] will depend on the circumstances. A person to whom [(5)] is addressed could well ask whether there might not be some other way he could earn five dollars, by cleaning up the garage or whatever. That is, if he does want the five dollars, and does not want to mow the lawn, he need not simply conclude that he's out of luck. Nor need the person who utters [(5)] intend to suggest that. [(5)] could well be the first item on a list of responses to the question, "How can I earn five dollars?" (Liljie 1972, 540)

From the Gricean perspective, there is nothing particularly troublesome in these observations. In a context in which there are ways other than mowing my lawn that you can earn five dollars, or equivalently, in a context where mowing my lawn is not the only *sufficient condition* for getting from me five dollars, I will violate the Quantity Maxim if I utter (5) without indicating I am mentioning but one of the sufficient conditions. But if it is clear that I was cooperative, or if you are granted the assumption that I was cooperative and as informative as needed, you may infer from the fact that (5) is asserted that there are no other ways you can earn five dollars (since otherwise I would have mentioned them). In such a context, (5) tends to get 'perfected' because (5*) is conversationally implicated by (5). But in a context in which it is *clear* that (5) is only the first items on a list of responses to the questions, 'How can I earn five dollars?', perfection will be out of place. For in that case I cannot be taken to have violated the Quantity Maxim by saying (5).

To use the now standard conversational-implicature-inducing quantitative scales, the Gricean analysis can be reconstructed as involving a type of scale structured as the following:

...
 if p, q , and if r, q and if s, q
 if p, q and if r, q
 ↑ if p, q

A proposition on a given line entails any proposition on the lower lines, while an assertion of a lower line proposition implicates that the speaker is *not* in position to assert the higher propositions. Applied to the mowing-the-lawn example, saying of (5)

implicates that apart from mowing the lawn there is no other sufficient condition for earning five dollars.^v

In what follows I shall venture to suggest that there is another important type of implicature in relation to conditional that is worth discussing, perhaps more so than conditional perfection.

III

Consider the following situation (which as a matter of fact is a real life one, arising from a discussion this author has with someone on the very topic of this paper).

[A&B]

A and B were in the former's office having an engaging discussion about certain problems in pragmatics when A announced, "If I am free tonight, we may continue with this discussion. But I need to teach Pragmatics 101 (tonight)." Upon hearing A's announcement, B rose from his seat and said goodbye.

B's response was most natural and proper. Supposedly he reasoned as follows (or one may say that he attributed the following inference to A, in which case, 'Mr. A' should read 'I'):

- (8) If (*c*) Mr. A is free tonight, (*d*) we may continue to discuss.
- (9) $\sim c$ [from 'Mr. A needs to teach tonight'].
- (10) Therefore, $\sim d$.

This inference instantiates the fallacious form of DENYING THE ANTECEDENT. Yet if the principle of charity is operative, we may want to look for an interpretation that will render B's inference at least as reasonable as his leaving the room seem to us natural and proper.

One may want to invoke CP for this purpose, but it seems there is another kind of inference that A's announcement may invite.

It may be observed that in many circumstances a hearer of an assertion of 'if p, q' tends to take the speaker to be inviting the inference to the negation of:

if $\sim p$, q

While this way of understanding ‘if p , q ’ falls short of perfection, it still makes it stronger. Let’s name this kind of *strengthening NNC* — $\sim(\text{if } \sim p, q)$ involves two negations and the original consequent. An assertion of ‘if p , q ’ gives rise to NNC in a context where the assumption of communicative cooperation allows the hearer to hear that ‘if $\sim p$, q ’ does not hold, or more accurately, that it is to be excluded from the information conveyed by the speaker. A closer look seems to suggest that NNC is quite ubiquitous in non-CP situations. Let’s think about what such a situation would be like if it does not give rise to NNC. Suppose the story of A&B is set in a context such that A is in a position to assert (8), yet without thereby committing himself to the *negation of*

(11) If I’m not free to night, we may (still) continue with this discussion. [= if $\sim c$, d]

It is as if A uttered (the first person version of) (8) and then remarked, “Yet even if I’m not free, we may still continue with this discussion.” How is B to make of A’s announcement? In that case, A can be taken to be saying something like “*whether* I am free tonight *or not*, we may continue with this discussion”, and thus running the risk of violating the Maxim of Quantity. For if A were prepared to continue with the discussion whether or not he has got a class to teach later that day, his assertion of (8) and (9) would hardly serve any real purpose in terms of informing B in relation to the conditions under which their discussion would or would not continue. In that case, he could simply go on with the discussion without any announcement about his teaching schedule. So, from B’s perspective, if he does not take A’s assertion of (8) as implicating

(8*) It is not the case that if $\sim c$, then d .

— that is, the negation of (11) — he will be treating A’s assertion as informatively trivial or uncooperative. In normal circumstances, where cooperation prevails or is taken for granted, there is no basis for him to do so. Therefore, assuming that A is cooperative, B can strengthen A’s conditional statement in the NNC way.

A few more words as to what kind of strengthening is provided by the an NNQ-implicature. If I tell you:

- (12) If you use this key (pointing to a particular one in a set of quite different looking keys), you can unlock the door,

can you extract from the fact that I assert (12) that only the key I recommended can unlock the door, that is, that any other key will not work? One may tend to think so, as we all know that usually keys that look different do not unlock the same lock. So, CP is to be expected to take place in such a situation. But suppose we are talking about forcing a particular door open and I recommend thus: [HAMMER]

- (12) If (*e*) you use a hammer, (*f*) it will work.

Suppose you have no reasons to think that I also believe that *only* a hammer will do the job. You may still tend to think that I don't believe that *any* object will work just as fine, given the fact that I bothered to make a *particular* recommendation at all. You thus can infer that it is not the case that *anything* that is *not* a hammer will (also) work. It is in this sense — in terms of a *universal quantification* over the *situations* in which the antecedent of the original conditional, 'if *p*, *q*', is false — that the relevant implicature, $\sim(\text{if } \sim p, q)$, is to be understood. So, if (12) gives rise to an NNC implicature:

- (12*) It is not the case that if ($\sim e$) you use a *non*-hammer, (*f*) it will work,

my audience can take me to be denying that *every* non-*e*-situation (situations in which *e* is false) constitutes a *f*-situation.

In general, relevant to NNC is the requirement that one assert 'if *p*, *q*' only when one does not believe that *p* is the *only* sufficient condition for *q*; that is, the requirement that one assert 'if *p*, *q*' only when at least one world in which both $\sim p$ and $\sim q$ hold is epistemic possible.^{vi} When the Cooperative Principle makes the requirement appropriate in a context, an assertion of 'if *p*, *q*' can be strengthened to 'mean' also that it is not the case that $\sim p$ is *also* sufficient, or equivalently, that *some* $\sim p$ -condition is not a *q*-situation. In contrast, the relevant requirement for CP is that one asserts 'if *p*, *q*' only when one also believes that *p* is the *only* sufficient, and thus also a necessary, condition. In terms of HAMMER, the contrasting implicatures are:

(13) No non-hammers will work. (CP)

(14) Some non-hammers will not work. (NNC)

Standard formal logic does not sanction the inference from (13) to (14), nor the inference from (14) to the negation of (13). One might therefore comment that any suggestion that CP is a stronger implicature or not will be misguided. But it would be interesting to remind such a commenter of the fact that the implication relation, or more accurately the implicature relation as is normally taken to have in natural language, between all and some, is precisely a matter that calls for logico-pragmatic explanation. As a matter of fact, some interesting Gricean approaches to this issue have been suggested.^{vii} So, to the extent that we do not take for grant the standard interpretation in formal logic of ‘all’ and ‘some’, it would be an interesting suggestion to make that since (13) talks about ‘all’ but (14) only about ‘some’ and ‘some’ is normally, or conversationally, taken to ‘imply’ *not all*, CP is a stronger implicature in the sense that it commits the speaker to hold a stronger claim — that *all* non-hammer will not work, compared with, as (13) claims, that some *but not all* non-hammer will not work — concerning what will not work. On the basis of this observation I venture the empirical suggestion that not only NNC is the more common kind of implicature between the two but it is also a widespread phenomenon. It is so not just because it involves a weaker commitment but also because the commitment can normally taken to be a *minimal* one that the speaker must make if he or she is to be cooperative. To be quantity-cooperative, my assertion ‘if p, q’ must at least allow the audience to infer, from the fact that ‘if p, q’ was asserted, that I am committed to believing that *there is a difference between p and ~p* in regard to whether ‘q’ is true or not. If such a minimal commitment can be taken to be absent in a context, what is the point, in terms of informativeness, of uttering ‘if p, q’ in that context? And such a minimal commitment is precisely what is involved in NNC.

IV

Earlier we mentioned a doubt about the significance of conditional perfection for argument evaluation. The same doubt also applies to conditional strengthening as a type of implicature. Recall that the grounds for the doubt is that the additional

proposition, whether it is 'if $\sim p$, $\sim q$ ' (CP) or ' $\sim(\text{if } \sim p, q)$ ' (NNC), is only *implicated* by 'if p , q ' and so, strictly speaking, is not part of what it means literally. To the extent that we keep distinct what is implied or entailed and what is implicated, it is impertinent to give CP or NNC a role in the reconstruction of an argument for the purpose of logical evaluation, which is essentially a matter about the semantic relationship between the premises and the conclusion.

My response to this problem is as follows. Unless one's interest is primarily in formal correctness, one would agree that a logically correct inference can fail to be rational persuasive. Take the familiar fallacy of *Begging the Question*: the premise of an argument that begs the question only restates, though not directly, the conclusion, which the arguer is supposed to have an obligation to prove or to abstain from holding as acceptable. Here the fallacy is not a formal matter but has to do with deviation from dialectical rules for rational discourse. *Complex Question* provides another example. These are familiar cases already recognized by traditional logicians. There are more complex cases if one pays attention to how real arguments work in the 'real marketplace of persuasion'. From this one may argue that when one brings logic to bear on real argumentation one must be careful not to equate (argumentatively) reasonable inferences with logically adequate ones. The evaluation of the reasonableness or rational persuasiveness of an inference can make good use of formal rules of logic but it must appeal to dialogical and pragmatic considerations too. How such an appeal should be constrained so that the evaluation will not collapse into discourse analysis is a very complex matter, of which I cannot pretend to command a clear view. But regarding the doubt mentioned above, I think the following can be said. Even without a fully worked out notion of *reasonable inference* in argumentative discourse, the observations we have made show at least that implicatures (and for that matter certain other pragmatically considerations) can have direct bearing on the logical evaluation of arguments through their bearing on argument reconstruction. Logicians and argumentation theorists of all stripes agree that *hidden* or *unstated* premises, which include typically some of the background knowledge or beliefs shared by participants in the discourse, count as much as premises explicitly stated and so must be revealed and added to the set of premises

during argument reconstruction. Take the example A&B again. It is arguable that the burden is on those who object that (8*) cannot, or should not, be considered as something like an *unstated* premise. If our earlier analysis of the example is on the right track, it is hard to see how B can make sense of A's announcement, as a conversationally cooperative one, without reading (8*) into the inference to (10). So, provided that the context is suitable for NNC-implicature, it is legitimate for B to attribute to A the belief that (8*), or put differently, to take (8*) as part of the background knowledge relevant to the inference in question. I find it difficult to see to how a notion of an unstated premise can be countenanced that excludes such an implicature as (8*) in A&B.

Emerged from the above discussion is a conception of real-argument analysis that intertwines logical appraisal and pragmatic reconstruction of arguments. On this conception, what appeared initially to be a questionable argument is subject to reconstruction on account of the principle of charity. The reconstruction will take into account the dynamics of the dialectical exchange in which the argument is situated. In contrast with this is a naive conception according to which the pre-logical analysis of an argument consists mainly in supplying unstated or hidden premises. The naive view is certainly right in holding that an argument need not and should not be taken on its face value. Its naivety lies not so much in focusing on 'unstated premises' as in a naive understanding of the scope of possible 'unstated' premises and the pragmatic complexity in their identification. The more sophisticated view holds that *stating* the unstated premises and indeed *noticing* that there is a need to look for one at all is a pragmatic endeavor. To the extent that such an endeavor is complex and multifarious, the scope of 'unstated premises' should be comparably wide.

I do not want to hold, nor do I think it right to hold, that *any* proposition implicated by a premise should be regarded as an *unstated* premise. But for those who take seriously the dynamics of real arguments and are sympathetic with the conception just described, the suggestion should not strike them as implausible that a proposition conversationally *implicated* by a premise should *not* be excluded from consideration in reconstructing the argument in question. As to what the systematic principles are that determine when an implicature should be accorded the status of an

unstated premise or be considered relevant to the appraisal of an argument in some other ways, I must confess that the question goes not only beyond the scope of this paper but also that of my command of the complex issues involved.

V

Return to our example of A&B. As far the question of why B's inference sounds justifiable despite its having the form of DENY THE ANTECEDENT, our discussion has not quite 'closed the deal'. If the situation is analyzable in terms of CP, then, of course, B's inference is valid and thus a justifiable one.^{viii} But if it is so in terms of NNC, the inference from (8) to (10), even with the premises augmented by (8*), will remain invalid. Maybe this is how the case should be viewed. However, since I have suggested taking NNC to be a prevalent kind of implicature, it would be interesting to ask whether there is a way to explain the 'force' of B's inference within an NNC interpretation. I propose such a way in the following remarks that conclude this paper. Notice that this proposal aims not so much at giving a 'correct' reconstruction of the inference as giving another illustration, or reminder, of how multifarious the ways are in which real arguments can be reconstructed.

Briefly, the idea is that the inference can be viewed as not a deductive but an inductive one. Recall that, on the NNC reading, 'if p, q' amounts to the conjunction of 'all p-situations are q-situations' and 'some ~p-situations are ~q-situations'. Accordingly (12), as we have seen, may convey the information that (as is recognized as such by me, the speaker):

- (15) Some situations in which you use a non-hammer are situations that it won't work.

So, upon hearing (12), you may infer that if you choose a non-hammer it will *probably* not work. The reasoning here is similar to the case in which one concludes that '*a* so probably *b*' on the basis of an incomplete generalization of the form 'some cases of P are cases of Q'. In other words, the inductive inference involved here has the form:

Some cases of *f* are cases of *h*.

fa

So probably, *ha*.

How cogent an argument of this form is, of course, depends, as is generally the case with inductive arguments, on a host of factors. Suppose (12) is made as a recommendation on my part for the hammer as one among several items at hand that may be employed, then, other things being equal, the force of your inductive reasoning from (12), as augmented by (15), to the conclusion that

(16) If I use any of these other (non-hammer) items, it won't work.

will decrease as the number of the items increase. Of course, the scope of the items that can be considered relevant depends on the context and background information (which is highly relevant considering the Total Evidence Requirement for inductive reasoning). Similarly, in the case in which a doctor is responding to a patient's enquiry about the effectiveness of three kinds of different medications, the assertion 'if you take A, you'll be fine by tomorrow' may be taken as providing some inductive support for 'if you take B, you won't be fine tomorrow', if no further information is given. Of course, in most cases like this, the doctor will have the obligation to tell the inquirer what he knows about the other two kinds of medications and so will not opine only about A.

Similarly, A's announcement in A&B conveys to B that

(17) Some $\sim c$ -situations are $\sim d$ -situations and now we are in a $\sim c$ -situation.

From (17) B may draw the conclusion that *probably* the $\sim c$ -situation they are in now is also a $\sim d$ -situation. The reasoning here is similar to the one mentioned above. Admittedly, it may look a trifle too contrived to try to force B's inference into an inductive pattern. But it seems to me that versions of A&B may be described which make it plausible to reconstruct the argument along an inductive line. After all, and most importantly, the *identification* of an argument as deductive or inductive is, after all, fundamentally a pragmatic decision, though the distinction between the deductive *standard* and the inductive *standard for assessment* of arguments is a logical one. For whether an argument or inference should be considered deductive or inductive

depends on whether or not the premises are *meant* to provide conclusive support for the conclusion, which is a question regarding what the premises are *intended* or *claimed* to do; as is shown by such typical characterizations as follows (my underlines)

Only a deductive argument involves the claim that its premisses provide *conclusive* grounds for its conclusion. In an inductive argument, the premisses are not claimed to give conclusive grounds for the conclusion but only to provide *some* support for that conclusion. (Copi 1994: 25)

A *deductive argument* is an argument in which it is thought that the premisses provide a *guarantee* of the truth of the conclusion. In a deductive argument, the premisses are intended to provide support for the conclusion that is..... In an inductive argument, the premisses are intended only to be so strong that, if they are true, then it is *unlikely* that the conclusion is false. ('Deductive and Inductive Arguments', IEP)

Needless to say, determining whether it is *claimed*, *thought*, or *intended* that the premisses of a particular argument provide conclusive grounds for the conclusion is essentially a pragmatic issue. The lack of a clear view of this point has been the source of such perennial questions as “Are all inductive inferences, no matter how forceful, can be faulted as deductively invalid?” or “Is there any difference between deductive validity and the strongest possible sort of inductive cogency. ”

As remarked, reconstruction of arguments is a pragmatic endeavor. I hope the above digression into the identification of arguments as deductive or inductive can help underscore this point and also that analysis of real arguments requires doing justice to the dialectic and pragmatic complexity that marks these arguments.

Notes

ⁱ But since the advent of informal logic and argumentation in the later part of the last century, we have seen a new species of texts on logic and critical thinking that accord central importance to, or place more emphasis on, logical pragmatics or argumentation-theoretic considerations; see, e.g., Fisher 1988, Hintikka and Bachman 1991, Levi 2000, Pinto 2001, Thomas 1997, Tindale 2004, Salmon 2006 and Walton 1998 and 1989.

ⁱⁱ van der Auwera's (1997) survey covers most of the relevant literature up mid-1990.

ⁱⁱⁱ See Horn's survey in Horn (2000). It may be noted that Mackie's and Fearnside and Holther's discussions of the ambiguity of 'if' in the context of fallacious inference predated Geis and Zwicky's discussion. See Fearnside and Holther 1959 and Mackie 1967.

^{iv} As propounded in Grice's 1967 William James lecture in Harvard entitled 'Logic and Conversation'. See Part I of Grice 1989.

^v The originality of the Gricean solution of CP is a quite and interesting complex picture. The solution made its maiden appearance, according to van der Auwera 1997, in Horn 1972 and later rediscovered several times over by, among others, Noordam 1979, Cornulier 1983, and van der Auwera 1990. See van der Auwera 1997. It should be noted that my proposal in section III below (NNC) is similar in important aspects to a proposal in von Fintel's 2001, though they differ significantly in formulation, as I came to notice in writing an ancestor (in Chinese) of this paper (Wong 2008). But von Fintel did not make, nor has anyone as far as I know, the sort of comparison attempted here between NNC and CP, which is made possible by superimposing another layer of implicature on the reading of 'all' and 'some', which figure in the quantificational characterization of the two kinds of implicatures.

^{vi} Since we are in the business of *Quantity*-implicature, the notion of an *epistemic* possible world may be used here to give an alternative presentation. We may borrow from the kind of analysis Stalnaker employs in his (1975) and take a context as defining a set of epistemic possible worlds — worlds each of which for all one knows might be the actual world. (12*) may then be understood thus:

It is not the case that *all* epistemic possible worlds in which you use a non-hammer are worlds in which it works (= It is not the case that *all* epistemic possible worlds in which $\sim e$ is true are worlds in which f is true).

In other words, NNC is associated with the conversational requirement that, in terms of HAMMER, I assert (12) only when at least a world in which you use a non-hammer and find yourself *unable* to force the door open is epistemically possible.

^{vii} See e.g., McCawley 1993: 307.

^{viii} Here 'justifiability' may simply be the familiar notion of *validity*, or it may be some notion of *inferential reasonableness* to be spelt out in terms of dialectic and dialogical rules as well as formal rules of logic. Which notion one favors depends on how one is to bring implicature to bear on the assessment of arguments: whether through a broader understanding of an unstated premise or through an elaboration of a more general, logico-pragmatic notion of rational persuasiveness of which formal validity that satisfies some dialectic constraints is a main type. I favor the second approach. But here I argued as though I was approaching the issue in the first way because the second approach would take us too far afield.

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