

ISSA Proceedings 2010 - Logic In The Pragma-Dialectical Theory



1. Introduction - Logic in the Pragma-Dialectical Theory [i]

Over the past fourteen years the proponents of the Pragma-Dialectical [ii] approach to argumentation have devoted the lion's share of their efforts to working out in detail how the rhetorical properties of arguments and argumentation can be accommodated within their pragma-dialectical framework. By now, the dialectical and rhetorical properties of arguments have been theoretically integrated to their satisfaction (see van Eemeren and Houtlosser 2009, van Eemeren 2010). Thus, of the classical triad - logic, dialectic and rhetoric - two members have been accounted for in the theory. What, one might ask, of the third member: logic?

In the early development of the Pragma-Dialectical approach, its authors saw themselves as needing to differentiate their dialectics-oriented program from the then-dominant paradigms of logic and rhetoric (see van Eemeren & Grootendorst 1984 [*Speech Acts in Argumentative Discussions*], hereafter *SAAD*, pp. 12-13, 16). Even in the latest version of the theory, the authors are critical of the Perelmanian approach, representing a certain take on rhetoric, and the Toulminian approach, representing a certain take on logic (see van Eemeren & Grootendorst 2004 [*A Systematic Theory of Argumentation*], hereafter *STA*, pp. 44-50). They have, however, come to terms with at least some features of rhetoric, namely those that clearly can and do play a role within argumentative discussions aimed at resolving a difference of opinion in a reasonable way. The time has come, I contend, for the proponents of the Pragma-Dialectical approach to undertake the effort of sorting out with similar care their conception of logic and its role in their theory.

The thesis of this paper is that the Pragma-Dialectical handling of logic does need some sorting out. I will argue, in particular, for the following propositions, which together support this thesis:

(1) The Pragma-Dialectical theory's procedure for making unexpressed premises explicit is, due to the conception of logic employed, incompatible with the theory's use of argumentation schemes in the analysis and evaluation of arguments.

(2) The problems with argumentation schemes aside, the explicitization procedure proposed in the Pragma-Dialectical theory is limited in scope due to the kind of logic it relies on.

(3) Some Pragma-Dialectic statements about logic are puzzling; the working conception of logic is unclear; and any case it is too narrow.

(4) The Pragma-Dialectical theory requires a clear and consistent approach to logic.

To the support for these propositions I now turn.

2. *First proposition*

(1) The Pragma-Dialectical theory's procedure for making unexpressed premises explicit is, due to the conception of logic employed, incompatible with the theory's use of argumentation schemes in the analysis and evaluation of arguments.

According to the Pragma-Dialectical theory, in order to assess the reasoning used in texts of arguments that a proponent or opponent has put to work in defending or attacking a standpoint, it is necessary (when the parties are absent) first accurately to reconstruct the arguments so the reasoning is fully explicit. The method, in the case of arguments that are not deductively valid as they stand, but are reasonably taken as meant to be deductively valid, is to add the premise(s) that would render them deductively valid (the logical level) and at the same time are maximally informative and consistent with the arguer's expressed commitments (the dialectical level) (SAAD, pp. 141-149). (Below I will take issue with this method, but accept it for now.)

“(a) The explicitized premiss[**iii**] must be a statement which, if added to the speaker's argument as a premiss, would make the argument valid (and thereby prevent a violation of the maxim of relation.)” (SAAD, p. 141)

It is clear from the discussion preceding the above passage that the authors mean by *valid* here, *deductively valid*. For they have just finished a review of alternative methods of supplying unexpressed premises, and one of the lessons they take is that rendering the argument valid by the rules of propositional logic is not sufficient - but not that it is not necessary (see SAAD, pp. 123-129). This is evidence, then, that, at least in SAAD, by 'logic' the authors of the Pragma-Dialectical theory mean either deductive logic in general or formal deductive logic in particular.

The theory envisages not only arguments that their proponents expect to be deductively valid but also arguments that employ argumentation schemes. In their introduction to the topic of argumentation schemes as tools for the analysis and evaluation of arguments, in a paragraph that begins emphasizing the importance of avoiding contradictions (van Eemeren & Grootendorst 1992 [*Argumentation, Communication and Fallacies*], hereafter *ACF*, p. 95), the authors of *ACF* make the following comment:

“[a] In order to assess the quality of the individual arguments, it must be determined whether the underlying reasoning is logically valid and starts from premises that are acceptable. [b] There is no need, however, to immediately assume that somebody who puts forward an argument is indeed involved in demonstrating how the conclusion is logically derived from the premises. [c] Still, in some way or other, the step from the arguments to the standpoint must be such that the acceptability of the premises is transferred to the conclusion” (*ACF*, p. 96, my numbering is added in brackets.)

Appended to sentence [c] is the following footnote:

“On this point, logic has not much to offer. In spite of important differences in the way logicians define the object, scope, and method of their work, they seem unanimous in thinking that their concern with validity is about formal rather than substantive relations between premises and conclusions, syntactico-semantic rather than pragmatic aspects, reasoning in isolation rather than in context, implications rather than inferences and - most important at this juncture - transmission of truth rather than acceptance.” (*ACF*, p. 96, Note 3.)

This footnote makes it abundantly clear that the authors here understand by logic formal deductive logic. It is unlikely that they had informal logic in mind. For not only do they make no reference to informal logic, but also by time *ACF* was being written, informal logicians had challenged every one of the assumptions attributed in this footnote to “logicians” *simpliciter*, and so while *informal* logic might well have had much to offer to account for the step from arguments (i.e., reasons or premises) to standpoints (i.e., conclusions) whereby the acceptability of the premises is transferred to the conclusions, it was not discussed. (For pertinent informal logicians, see, among others, Scriven 1976 and Fogelin 1978 both cited in *SAAD*’s references, and Govier 1987 cited in *ACF* ’s references, but see also Johnson & Blair 1978 and Govier 1985.)

Given these passages, the authors cannot be conceiving that grounds for a

justified transference of the propositional attitude of acceptance from premises to conclusion is a topic of formal logic. So, since the quoted passages occur in a section titled "Argumentation Schemes as Dialectical Tools," one is led to conclude that they hold that it is by means of argumentation schemes whereby the acceptability of the premises is transferred to the conclusion (in non-deductive arguments).

Argumentation schemes are not in every case to be instantiated by deductively valid arguments, because in many cases the arguments that exhibit them, even when they are completely cogent, will not be deductively valid - and for good reason. It is always in principle possible in such cases for there to be new information that is consistent with the acceptability of their premises yet which is incompatible with the acceptability of their standpoint. In this sense, such argumentation schemes are deductively invalid, or perhaps better, are non-deductive.

But arguments that are instances of such non-deductive argumentation schemes can be and often are incompletely expressed, no less than are arguments that are intended to be or may be taken to be deductively valid. In order to assess such arguments found in texts where the authors are not present, the unexpressed components need to be made explicit just as do those of incomplete arguments intended to be or fairly supposed to be deductively valid. How is that to be done? If the incomplete arguments that are instances of such argumentation schemes are reconstructed by the addition of premises that render them deductively valid, the result cannot be an instance of a non-deductive argumentation scheme. So if the method for reconstructing unexpressed premises is retained without change it cannot be applied to arguments exhibiting non-deductive argumentation schemes with unexpressed premises without distorting them by altering their character.

Here one might object, following Gerritsen (2001, p. 73), that, "argument schemes are defined in pragma-dialectics as specific sorts to deductively valid arguments." In that case, there would be no tension in the Pragma-Dialectical theory between the deductivism of formal logic and envisaging the use of argumentation schemes. However, Gerritsen's interpretation is surprising. Instances of the three basic argumentation schemes introduced in *ACF* (pp. 96-97) - symptomatic, analogical and causal argumentation - are typically defeasible. Certainly the examples the authors use to illustrate these three schemes are. "As Daniel is an American (and Americans are inclined to care a lot

about money), he is sure to be concerned about the costs" (*ACF*, p. 97) will be a good inference unless Daniel is not a typical American in this respect, or unless Daniel is travelling on his company's expense account, etc. "The method I propose worked last year (and this problem is similar to the one we had last year), so it will work again" (*ACF*, p. 97) will be a good inference unless there are new conditions surrounding the problem this year, or unless the method worked last year only because of unusual conditions then, etc. "Because Tom has been drinking an excessive amount of whiskey (and drinking too much whiskey leads to a terrible headache), Tom must have a terrible headache" (*ACF*, p. 97) will be a good inference unless Tom has already taken a painkiller, or unless Tom has an unusual tolerance for excessive amounts of whiskey, etc. In none of these examples do the premises deductively imply the conclusion. Moreover, the critical questions that the authors envisage associated with each argumentation scheme (see *ACF*, pp. 162 ff.) anticipate that arguments exhibiting any of the schemes can in principle be defeated. So I am skeptical of Gerritsen's interpretation. However, if she is right and the authors of the Pragma-Dialectical theory do hold that the schemes of symptomatic argumentation, analogical argumentation and causal argumentation represent "specific sorts of deductively valid arguments," then my claim of incompatibility between the theory's deductivism and its appeal to schemes in the interpretation of arguments does not hold. However, in that case, the theory has to face the criticism that the argumentation schemes it relies on are on the face of it non-deductive.

3. Second proposition

(2) The problems with argumentation schemes aside, the explicitization procedure proposed in the Pragma-Dialectical theory is limited in scope due to the kind of logic it relies on.

The procedure for explicitizing unexpressed premises can be applied only to arguments that are plausibly interpreted as offered by their proponents as supposedly deductively valid. However, setting aside argumentation scheme theory, there are many kinds of arguments that are not offered by their proponents as supposedly deductively valid, but that are offered as nevertheless cogent. That is, their premises are purported to have sufficient probative force that one who accepts them is thereby justified in accepting their conclusions. Such arguments can be and often are presented with elisions, on the assumption that the interlocutor or reader can readily supply the unexpressed components; yet (to repeat) even when fully reconstructed they are not, and are not supposed

to be, deductively valid. Examples include (but are not restricted to) various kinds of inductive arguments such as enumerative inductions, generalizations from samples to populations and inductive analogies; arguments to the best explanation; arguments from a priori analogy; evaluative arguments such as those applying normative criteria to cases or balance of considerations arguments. All of these kinds of arguments share the property that tokens of them can be fully explicit and cogent and yet not be deductively valid. That is because to be counted as deductively valid they would require the additional premise that the evidence given is the total evidence or that all other things are equal, when in practice that premise cannot be known to be true or cannot reasonably be committed to. As a result, to reconstruct incompletely expressed tokens of such patterns of argument so as to render them deductively valid - whatever form the selected unexpressed premise might be given - is to misrepresent the nature of the force of the grounds they supply in support of the standpoints in defence of which they are offered. To reconstruct them by adding a deductive validity-ensuring unexpressed premise to the effect that in the given case there is no further relevant evidence or that all things are equal requires attributing an unreasonable commitment to the proponent of the argument.

This conclusion will hold even if one insists, as the authors of Pragma-Dialectics do, that the missing premise supplied by the analyst should not be the “logical minimum” (namely the associated conditional of the argument consisting of the stated premises as the antecedent and the conclusion as the consequent). The authors require that the missing premise(s) be the “pragmatically optimal” proposition in the circumstances, namely, the one that renders the argument valid while also being a commitment of the speaker and the most informative of the validating premise candidates at hand in the context (see ACF, pp. 66-67). The problem is that if the argument aims at (i.e., the speaker is committed to) no more than a plausible, or a presumptive, or a probabilistic inference from premises to conclusion, then even the pragmatically optimal unexpressed premise will misrepresent the inference by turning it into a deductively valid one, one in which, given the premises, the conclusion *must* follow, not one in which it only plausibly, presumably or probably follows.

To be sure there are those, such as Groarke (1992, 1995, 1999, 2002), who defend the strategy of analyzing arguments with unexpressed premises as if their proponents were committed to their being deductively valid - an approach

Godden has termed “reconstructive deductivism” (Godden 2005, p. 168). In a carefully-argument examination of Groarke’s reconstructive deductivism, Godden rejects that position, and I find his case against it to be thoroughly convincing. This is not the place to enter that debate except to note that if the proponents of the Pragma-Dialectical approach to reconstructing unexpressed premises are committed to reconstructive deductivism, they need to answer Godden’s case against it.

If the anti-deductivist position is correct, then the Pragma-Dialectical method for supplying unexpressed premises for incompletely expressed arguments, because it is tied to deductive validity and hence to deductive logic, perhaps even to formal deductive logic, can be used for only one of many patterns of argument (or, alternatively, presupposes only one of many types of standards of inference assessment), and some other method or methods need to be devised that work for the others. Alternatively, a different method needs to be devised that can be used generally for all patterns of incompletely expressed arguments.

Advocates of the Pragma-Dialectical theory should be sympathetic to this suggestion, for already in their original formulation of the theory they anticipated the possibility that the choice of logic would have implications for the reconstruction of unexpressed premises. **[iv]** In *SAAD* they wrote, “The choice of one logic or another may have consequences for the supplementation of incomplete arguments” (p. 128). At that point they were writing about the differences among, for example “propositional logic, predicate logic and modal logic” (*ibid.*) – all varieties of deductive logic. So they were thinking of “logic” as “deductive logic”: “Where the argument is one which appears intuitively to be valid but whose validity cannot be demonstrated in any of the available logics, it may indeed be exceedingly difficult to decide what sort of addition needs to be made” (*ibid.*). However, there seems here nothing in principle preventing them from expanding the class of “available logics” to include also non-deductive norms of inference “validity.”

4. *Third proposition*

(3) Some Pragma-Dialectic statements about logic are puzzling; the working conception of logic is unclear; and any case it is too narrow.

The ideal model called a Critical Discussion (*SAAD*, p. 17) calls for arguers to behave as “rational discussants,” which entails engaging in argumentative discussions in accordance with a system of speech act rules that produce a

regulated interchange between conflicting parties designed to lead to a resolution of their dispute in a reasonable way (see *SAAD*, p. 18, pp. 152-153). Among these rules is one that implies that the parties are to produce arguments that are (inter alia) *valid* (Rule 10, *SAAD*, pp. 168-169).

As we have seen, by 'logic' the authors of the Pragma-Dialectical theory clearly mean 'formal deductive logic' (see the footnote from *ACF*, p. 96, quoted above, or *SAAD*, pp. 123-129) and their unexpressed premise explicitization procedure invokes deductive validity. In such contexts 'valid' would have the technical sense in which it is commonly used in formal deductive logic: not to accept the standpoint of such an argument having accepted its premises commits one to a contradiction.

When it comes to their discussion of fallacies, which is a principal component of *ACF*, the authors characterize fallacies as violations of the pragmatic rules that must be followed if an argumentative discussion is to resolve a difference of opinion in a reasonable way. They distinguish fallacies according to the rules that apply to each stage of such a discussion. The fallacies that occur in the argumentation stage (which is that component of the discussion where the interlocutors produce arguments and respond to one another's arguments) are divided into two groups: the ones that typically occur when using argumentation schemes (Chapter 15), and the ones that occur when using logical argument forms (Chapter 16). We might therefore hope to gain further insight into the authors' understanding of logic and its role in argumentation from these chapters.

Chapter 16, "Fallacies in Utilizing Logical Argument Forms," begins with the sentences:

"For a conclusive defense of a standpoint it is necessary for all the arguments used in the discourse to be logically valid. This validity requirement relates to the *form* of the arguments, which should be such that if the premises are true the conclusion of the argument cannot possibly be false." (*ACF*, p. 169.)

In other words, arguments must be formally deductively valid if their conclusions are to be conclusively defended. That is a reasonable position to take, given that formal deductive validity *guarantees* that truth (or acceptance) is transferred from premises to conclusion, and by such arguments the defense of the conclusion can be *conclusive* in the sense of being impossible to overturn, or reject (given that the premises are true, or accepted). By the term 'logic' in this

context we can thus again take the authors to mean deductive logic, and in fact, more particularly, formal deductive logic (since they say, and stress, that it is the *form* of the arguments that guarantees their validity).

One might thus expect a contrast between Chapter 15 of *AFC*, which deals with fallacies of argument schemes, and Chapter 16, dealing with fallacies of logical argument forms, along the lines of a contrast between the “logic” of a conclusive defense of a conclusion and the “logic” of a non-conclusive defense of a conclusion. At first, Chapter 15 seems to suggest such a contrast. The authors write,

“In order to adequately support the standpoint, in every single argumentation [i.e., each separate argument (see *ACF*, p. 73)] that is put forward in defense of a standpoint the right kind of argumentation scheme must be used and this scheme must be used properly.” (*ACF*, p. 158.)

Since “adequate” support need not be “conclusive” support, a contrast between argument schemes, which can supply “adequate” support, and deductively valid argument forms, which are needed for “conclusive” support, might seem in the offing. However, just a paragraph later, we find the authors saying the following:

“In case there are enough mutually acceptable starting points and argumentation schemes and it is perfectly clear what they are, it is, in principle, possible to answer the question whether an argumentation constitutes a *conclusive* defense for a standpoint. If both the identification procedure and the testing procedure produce a positive result, the standpoint has indeed been *conclusively* defended. (*ACF*, p. 159, my emphasis)

...

“A party may not regard a standpoint as *conclusively* defended if the defense does not take place by means of an appropriate argumentation scheme that is correctly applied.” (*Ibid.*, emphasis in the original.)

So satisfying the conditions of the proper use of argumentation schemes (i.e., appropriate scheme, correctly applied) is a necessary condition of “conclusive” support no less than is instantiating deductively valid argument forms. However, the force of these two uses of ‘conclusive’ is on the face of it different. For to accept the premises of a deductively valid argument but reject its conclusion is to commit oneself to a contradiction, whereas to accept the premises of an appropriate and correctly used argumentation scheme but reject its conclusion does not necessarily commit oneself to a contradiction, since one can at the same

time argue that an exception occurs in the case at hand. Some explanation of the use of the same term - 'conclusive' - for different judgements seems called for.

Notice that some of the claims here quoted from the two chapters in *ACF* are incompatible. It cannot be true both that, "For a conclusive defense of a standpoint it is necessary for all the arguments used in the discourse to be logically valid." and that, "A party may not regard a standpoint as conclusively defended if the defense does not take place by means of an appropriate argumentation scheme that is correctly applied" - unless the only kind of appropriate argumentation scheme is a one that is (deductively) logically valid, i.e., one in which the form of the argument is such that "if the premises are true the conclusion cannot possibly be false." But the authors clearly do not mean to restrict the class of appropriate argumentation schemes to logically valid argument forms, for they discuss "argument from authority," "argument from analogy" and "argument from consequence" (*ACF*, p. 160) as all potentially appropriate argumentation schemes, yet instances of none of them need be formally valid. This inconsistency is removed in *STA*, where these two criteria - validity and proper scheme used correctly - are clearly presented as a disjunctive set, not a conjunctive set as in *SAAD* and *ACF*.

The authors of the Pragma-Dialectical theory allow for fallacies that are mistakes of inductive inference (violations of the rules requiring that arguments have acceptable justificatory or refutatory force), such as *post hoc ergo propter hoc* and hasty generalization (*ACF*, pp. 164-165). If there are such fallacies, there must be instances of causal arguments and arguments making generalizations that are not fallacious, but cogent. But typically even the best of such arguments are open to the possibility that unexpected new evidence will undermine the inference, and thus they are not subject to deductive closure. Presumably such arguments have some sort of "logical" structure, albeit its instances will not be formally valid. Yet the authors do not discuss such a logic.

As already noted, in some places the Pragma-Dialectical account clearly means by 'logic' formal deductive logic, and its authors use the term 'logically valid' (e.g., *ACF*, p. 60), presumably meaning "deductively valid" or "formally deductively valid." At the same time, the authors reject "a dogmatic commitment to deductivism" (*ACF*, p. 60, Note 2). Although they do not define this term, on one reasonable interpretation it is the view that only arguments with a premise-to-conclusion implication that is deductively valid are acceptable. Thus it might be

reasonable to interpret the authors as open to other logical norms besides deductive validity (and *a fortiori*, formal deductive validity). But if so, then they cannot take logic to consist exclusively of formal deductive logic. In any event, they nowhere offer such norms or even mention their possibility.

The theory allows that argumentation schemes can constitute the warrants for the inferences from the acceptance of premises to the acceptance of standpoints. That is, they can account for the justificatory or refutatory force of a premise relative to a standpoint. On a broad conception of it, logic is, at least in part, the study of the norms that justify implication relationships - including (among others) those asserted to hold between the premises and conclusions of arguments. Accordingly, on the Pragma-Dialectical account of argument schemes, using this broad conception of logic, argumentation schemes can represent one type of logical norm. So the opportunity seems to present itself to adopt the broad conception of logic and thereby unify the theory, seeing logic as including the study of the norms of implication relationships in general. On that view, the implications asserted in some arguments satisfy the norm of deductive validity and those in others satisfying the norms of argumentation schemes. However, no such move is made.

Whether Pragma-Dialectics takes 'logic' to mean formal deductive logic or just deductive logic (thus allowing for material deductions), taking logic to be restricted to some form of deductive logic is too narrow. The argument for this proposition is implicit in what has already been said. It was noted above that there are many patterns of argument instances of which are taken to offer sufficient grounds for accepting their conclusions without their being deductively valid. Presumably such patterns of argument have their logics; that is, there are general norms for their adequacy. The implications alleged in the inferences they invite are subject to such norms. Presumably, also, the Pragma-Dialectical theory would want to accommodate such arguments, recognizing their justificatory or refutatory potential. It follows, then, that the Pragma-Dialectical theory needs to expand its conception of logic.

5. Fourth proposition

(4) The Pragma-Dialectical theory requires a clear and consistent approach to logic.

The Pragma-Dialectical theory defines 'argumentation' as:

"... a verbal, social and rational activity aimed at convincing a reasonable critic of

the acceptability of a standpoint by putting forward a constellation of propositions justifying or refuting the proposition expressed in the standpoint.” (STA, p. 1.)

From the perspective of considering the role of logic in the theory, the point that argumentation is supposed to be a *rational* activity, aimed at convincing a *reasonable* critic, is key. There are two ways the theory tries to satisfy the norms of rationality and reasonableness. One is by postulating an ideal model for argumentative discussions defined by rules expressly designed to optimize the possibility of resolving disagreements by means of arguing about them in a reasonable way. The procedure is thus (supposed to be) instrumentally rational, an effective means of reaching its goal. Within this procedure the participating parties are given the freedom, and responsibility, of agreeing to the methods they will use to resolve their disagreement, with the proviso that their methods must conform to the external constraint of being rational and reasonable. Their methods are thus (supposed to be) intrinsically rational, that is, will lead to agreement based on the merits of the arguments and will convince a reasonable critic.

In deciding together how they will proceed with their argumentation, the parties must agree on the discussion rules they will be bound by. These concern the starting points and the inference norms of the argumentation. As to the starting points, they must agree on how to identify the premises they may use or be committed to. Instrumental rationality requires that they do this in a systematic way, but there is no requirement of intrinsic rationality for the propositional contents of these commitments. The authors are convinced that such a requirement presupposes “justificationism,” the (to their mind false) thesis that there can be identified basic propositions that are reasonable or rational (see their discussion of the Münchhausen trilemma, e.g., STA, p. 131). As to the inference norms, however, the parties are not at liberty to choose any they like. They must conform to the requirements of logic insofar as they must be consistent and they must agree to some set of logical norms. The only choice they get is as to which logic to use. Logic is thus an “external” constraint that imposes intrinsic rationality on their argumentation.

The authors of the Pragma-Dialectical theory do not make much of this logical requirement, however it is arguably essential in order to block one charge of vicious relativism. The criticism has been levied by some (e.g., Biro & Siegel 2006a, 2006b; Siegel & Biro 2008; Lumer, 2009) that if the parties to an

argumentative discussion could adopt any inference norms they might agree to in addition to any premises they might agree to, there would be nothing to prevent their settling their disagreements in an irrational way, even if they were mutually satisfied with the outcome. Defenders of the theory have denied this criticism (see Garseen & van Laar 2010), although the critics are not convinced by their response (see Siegel & Biro 2010). Whatever the upshot of that particular controversy, were the proponents of Pragma-Dialectics to emphasize what I think is at least an implicit requirement of the theory, namely that the interlocutors of a well-regulated episode of argumentation are obliged mutually to commit to *some* logic, then at least one basis for an allegation of vicious relativism would be removed. The only problem then would be the lack of clarity about the nature of the logic envisaged and the role of logic in the theory.

I find it difficult to diagnose this problem in detail in any single way. The authors seem to work with a narrow sense of 'logic,' in terms of which it denotes just deductive logic, or even just formal deductive logic. At the same time, they (in my opinion, correctly) allow argumentation schemes a role in identifying acceptable inferences. Thus deductive logic and argumentation schemes seem to be two unrelated kinds of norms for the implications alleged to underlie the inferences invited and committed to in arguments (see Pinto 2001, pp. 36-37, for the thesis that an argument is an invitation to draw an inference).

As already hinted, one coherent way of picturing things is to think of the inference commitments of arguments as being subject to assessment according to a variety of norms. Take 'logic' to be the name for the general study of, among other things, the norms that govern the implication relations that may be found, in among other places, the inferences used in arguments. Thus the inferences of arguments may be assessed according to a variety of norms of logic. It is based on these norms that judgements are made about whether the acceptability of a premise may be transferred to the standpoint, whether the conclusion follows from the premises, whether one may infer (one is justified in inferring) the conclusion from the premises - the judgements can be characterized in various ways. One set of these norms consists of different theories of deductive logic. The inferences of arguments can be judged, accordingly, by whether the arguments are deductively valid according to the selected (or appropriate) deductive logic. Another set of these norms consists of the warrants embodied in (non-deductive) argumentation schemes. So understood, argumentation scheme warrants

constitute another kind of logic. (How argumentation scheme warrants function in the assessment of argument inferences is a separate question.)

On this way of understanding logic in general, and deductive logic and argumentation scheme theory in particular, the question may be asked, what logical norms are *appropriately* applied to arguments in argumentation? The Pragma-Dialectical theory clearly envisages both deductive logic and argument scheme theory as providing legitimate norms for arguments, although it offers no rationale for that judgement. Moreover, it is silent on whether norms for inductive inferences (such as generalizations from samples to populations, or inductive analogies), or abductive inferences (the inferences of arguments to the best explanation), or conductive inferences (the inferences assimilating both positive and negative considerations)[v], or others, are also appropriate norms for the arguments of argumentation. If the Critical Discussion rules prohibit any norms not explicitly prescribed, all of these would be ruled out, and that would require a justification, given the ubiquity of these other kinds of inference. So the Pragma-Dialectical theory needs to develop an account of how deductive logic, argument scheme theory, and other kinds of logical norms, fit together (or don't). And it would need to motivate or justify that account.

An alternative conceptualization is to understand all patterns of argument – deductive, inductive, abductive, conductive, etc. – as argumentation schemes. Thus *modus ponens* would be an argumentation scheme no less than generalization from sample to population, appeal to expert opinion or argument from *a priori* analogy. Thinking of argument schemes as warrants or inference licenses, it would then be the case that some of them authorize inferences with deductive closure while others authorize inferences to numerical probability judgements, yet others inferences to *pro tanto* (“all things considered”) judgements, and so on.

In addition to sorting out its theory of the normative role of argument schemes, or as part of doing so, the Pragma-Dialectical theory needs to loosen its commitment to deductive logic. Its commitment to deductive logic forces on it a method for explicitizing unexpressed premises that cannot be sustained if the theory is to tolerate, as its authors seem to want it to, arguments employing non-deductive argument schemes that may presuppose unexpressed components. What is needed is a revision of the unexpressed premise explicitization procedure that does not (entirely) rely on even reconstructive deductivism.

If these tasks are carried out, along with an account of how argument schemes function to warrant inferences, then we will have a more coherent and complete account of the nature of logic and role it plays in Pragma-Dialectics. There is work to be done before that result can be declared accomplished.

Notes

[i] My thanks, for comments on an earlier draft that have removed errors and suggested constructive changes, to Hans Hansen, Rongdong Jin, Christopher Tindale, Douglas Walton, and especially Ralph Johnson. Thanks also to two anonymous reviewers for their corrections and constructive recommendations, which have resulted in several modifications and additions to the paper originally delivered at ISSA 2010.

[ii] I capitalize the first letters of 'Pragma-Dialectics' and 'Critical Discussion' in this paper where these are terms of art, the proper names of that theory and that theoretical construct propounded by F.H. van Eemeren, R. Grootendorst and their colleagues of the Amsterdam school.

[iii] In *Speech Acts in Argumentative Discussions* and *Argumentation, Communication and Fallacies*, the spelling "premiss" is used. In *A Systematic Theory of Argumentation*, the spelling "premise" is used. I will spell the word "premise" except when quoting a passage from either of the first two books in which the word appears.

[iv] Thanks to one of the referees for calling this fact to my attention.

[v] I here refer to what Carl Wellman (who introduced the term 'conductive argument') referred to as conductive arguments of the third pattern (see Wellman 1971, 52 and 57).

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