Commentary on Reed & Walton

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There are two reasons why I may not be the best person to criticize this paper. First, because I have a very limited knowledge of the AI literature.

Second, because the basic approach to argument which is the core of this paper -- i.e. the suggestion that we should attempt to understand natural language argumentation in terms of argumentation schemes that define particular kinds of reasoning -- is an approach to reasoning to which I am myself committed. Indeed, it is an approach that I have, often in work with Chris Tindale, advocated for fifteen years (see Groarke and Tindale 1986; Groarke and Tindale 1989 and 1997; and Groarke 1999).

Given my own commitment to the general approach to reasoning defended in this paper, and my relative lack of knowledge of the literature on AI, I will have to focus my remarks in this commentary on the particular approach to argumentation schemes which Reed and Walton suggest. To this extent I shall try to further our discussion here by offering two brief criticisms of their approach, and by ending with a concluding remark.

Questions or Answers

The conception of argumentation scheme which Reed and Walton offer describes an argumentation scheme as a “pattern of reasoning,” a “form of argument,” or a “structure of inference.” So far so good. According to the account they develop, an argumentation scheme is paired with a set of “critical questions” which is used to assess any instance of a scheme. While I think it is possible to understand argumentation schemes in this way, I want to begin by noting that we do not need to place such a conceptual emphasis on the role of critical questions in understanding argumentation schemes.

Imagine an argumentation scheme, let’s call it A, which is accompanied by a set of critical questions, Q1...Qn. We have a good instance of argumentation scheme A if and only if we can in this instance answer questions Q1...Qn in an appropriate way. Let’s call the appropriate answers A1...An. Looked at from this point of view, we can describe an argumentation scheme as a pattern of reasoning which depends on a set of propositions A1...An. These propositions may be presented as explicit premises in the argument but they may – like many of the assumptions that argumentation depends on – be left implicit.

Looked at from this point of view, we can identify an argumentation scheme as a pattern of reasoning which fits a pattern of reasoning which is to be identified by identifying, not the critical questions which should be asked about it, but the kinds of premises it must implicitly or explicitly depend on. Of course, the critical questions that Reed and Walton associate with argumentation schemes arise in due course, for they arise as soon as we ask whether the premises the inference depends upon are true or probable or plausible. That said, there is no need to formalize argumentation schemes by the indirect route of identifying these questions when we can identify the premises they require directly. By identifying the premises directly we can place argumentation schemes into a well understood framework of arguments, premises and conclusions.
Deductive or Non-Deductive?

Once we understand argumentation schemes in the way I have proposed we can better understand some issues raised by the motivation that Reed and Walton give for their own conception of argumentation schemes. They propose argumentation schemes as a way to incorporate non-deductive and non-monotonic forms of reasoning. In the present context, I will leave the issue of monotonicity aside. Suffice it to say, ordinary reasoning is non-monotonic and any account of it must somehow account for this. This does show that something beyond classical logic will have to be used in attempts to formalize natural language reasoning. I believe that issues of tonicity highlight requirements that show that good inferences in natural language require, not only premises that imply the proposed conclusion, but also a set of premises which meets some standard of consistency and coherence. But this is a matter I leave for elsewhere.

In the present context, I will only address the question of deductivism. Here there are misconceptions buried in the present paper, which associates deductive reasoning with certainty. This is a common confusion but it is a confusion. The validity of a deductive inference does not ensure the certainty of the conclusion, but only that it is as certain as the premises. Thus the argument:

“This is an argumentation paper completed this month. All argumentation papers completed this month are outstanding papers. This is an outstanding paper.”

is a deductive argument which is valid. But we would doubt the conclusion, because we are likely to doubt the premises, and particularly the second.

It is in this context worth noting that it is a mistake to think that deductive reasoning is indelibly associated with the kind of reasoning that characterizes classical logic and mathematics. Such reasoning is equally as important in moral contexts (in the case of two wrongs reasoning, for example, which is discussed as a scheme in Groarke 1999), which are just the sorts of contexts in which argumentation theory needs to develop and exercise its ability to understand natural language reasoning.

It is easy to see how all argumentation schemes can be understood as deductive as soon as we move beyond the assumption that deductive inference is tied to certainty. For any argumentation scheme, which depends on propositions A1...An (which are answers to critical questions Q1...Qn), can be understood as the inference:

A1,... An

If A1 &....An, then C

Therefore C

where the C is the appropriate conclusion. It is wrong to think that this manner of understanding argumentation schemes undermines the subtleties of probative argument which Reed and Walton claim to capture by argumentation schemes. For these subtleties are automatically incorporated in the description of the scheme, for they are reflected in the nature of the premises (A1,...An) required for the conclusion.
A Concluding Comment

None of this is meant to deny the basic point made in this paper – that an approach to argument which focuses on argumentation schemes can be a powerful tool which will help us better understand and assess natural language reasoning both in pedagogical and AI contexts. To this extent argumentation theory should devote itself to the attempt to identify, define and formalize argumentation schemes and a theoretical framework in which they can be understood.

In my own opinion, it will be particularly important to develop two facets of a theory of argumentation schemes. The first is some clearer method of identifying argumentation schemes in natural language discourse -- especially as arguments are in these contexts often expressed in ways which are vague, ambiguous and capable of being understood in terms of different argumentation schemes.

The second is some taxonomy of argumentation schemes which allows us to better understand how different argumentation schemes are related to one another, and which do or should take precedence in particular argumentation contexts. There is a great deal of work to be done, but papers like the present one may push us in the right direction.

References

1986   Leo Groarke & Christopher Tindale, "Critical Thinking: How to Teach Good Reasoning," Teaching Philosophy, Vol. 9, No. 4, 301-318