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Commentary on Hoaglund

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Groarke, Leo, "Commentary on Hoaglund" (1999). *OSSA Conference Archive*. 88.
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In Response To: John Hoaglund's [Inference and argument in informal logic](#)
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1. *Against the Argument/Inference Distinction*

In "Reasoning and Giving Reasons," John Hoaglund tries to shed light on a common distinction made between "arguments" and "inferences." He does so by elaborating it in terms of a further distinction between linked and convergent arguments. In the process he tries to draw some interesting lessons about the appropriate scope of informal logic.

While I agree with Hoaglund's ultimate conclusion -- that informal logic does deal with inferences -- I must confess that I have never understood why some of informal logic's most preeminent practitioners make so much of the distinction between inference and argument. In this commentary I will try to explain why Hoaglund's paper has not assuaged my doubts.

So far as I can tell, Johnson and Blair distinguish arguments from inferences on the basis of the contentious character of the former, and the role they consequently play in social interaction (Johnson 1996, 76; Johnson & Blair 1996, 92-4). One might therefore say that the essential difference between inference and argument is the extent to which arguments are "embedded" or "situated" in social interaction and the extent to which they must, in view of this, be understood within the context of controversy and debate that it implies.

Hoaglund suggests something similar when he writes that "Inference is not necessarily dialectical in that it does not depend on exchanges between two persons. It is not necessarily controversial, and it can progress linearly; argument on the other hand is essentially controversial, so it can progress only against the background of diverse viewpoints." This amounts to the claim that arguments, unlike inferences, are *essentially* or *necessarily* dialectical and controversial. But this is somewhat confusing, for we have not been told how to judge the essential or necessary nature of a piece of reasoning.

Hoaglund, Johnson, and Blair try to shed light on the argument/inference distinction by suggesting that formal logic is the study of inference rather than argument. This is true insofar as formal logic concerns itself with abstract models of argument without regard to their social standing. The models of argument it develops do, therefore, encompass arguments which are trivial or redundant from the latter point of view. But this does not warrant the conclusion that there is a theoretically important distinction which should be made between inferences and arguments.

To begin with, one might debate the claim that there is no analogue of embedded argument in formal logic. Formal systems can model dialectical argument and there are many formal logics in which the status of a statement or an inference is in some important sense embedded in a context. In

paraconsistent logic, relevance logic, and possible world semantics, for example, the status of a proposition may be different when considered from different points of view. To take the simplest example, a proposition may be true in one possible world but not another. It is hard to say whether this kind of embeddedness could be understood as a formal analogue of the embeddedness which Johnson, Blair and Hoaglund associate with argument. But it can still be said that this possibility needs to be explored in much more depth before we conclude that there is no formal analogue.

That said, there is a sense in which this is a secondary matter. For it is a mistake to think that the distinction between arguments and inferences can turn on a discussion of formal logic and its account of argument. Indeed, it is a great mistake to think that this is so. It should instead be said that the crux of the distinction as it is standardly elaborated is not particularly tied to formal logic, for it implies that any inference which does not address a contentious matter and is not situated within a social context is not an argument, and this implies that many inferences typify kinds of argument which have little to do with classical logic. It is easy to create examples of inductive generalizations, appeals to authority, arguments from analogy, ad baculum arguments, etc., etc. which do not address matters of debate or are trivial, redundant, outrageous or impossible when we try to embed them in a social context. The standard account suggests that these are, as much as propositional arguments, mere inferences.

Consider the reasoning: "Mechanics believe that cars have wheels, they know about cars, so you should accept that cars have wheels." It has the form of an appeal to authority. Because it does not address an instance of disagreement or controversy it is not embedded in the way that arguments are, and must be judged an inference rather than an argument. One could easily multiply examples. In some cases, it is difficult to tell how we should classify a particular piece of reasoning. Consider the following inductive generalization: "All argumentation theorists must believe that formal logic cannot adequately deal with the arguments which are studied in argumentation theory, for all the ones that I have talked to believe that this is so." To count as argument rather than inference this must address a contentious issue and make sense as part of a social dialogue. Does it? I don't honestly know. If different theories are to be used for understanding and assessing inferences and arguments, then this leaves us in a situation where it is difficult to know how to proceed.

Further complications arise because what is contentious and debatable changes. During the fifth century BC it made sense to ask whether everything was made out of water, as Thales had suggested. After the development of science as we know it, such an argument is merely an inference, for it makes no sense within a contemporary context. If different theories are to be used to judge inferences and arguments, it follows that one theory was applicable during the fifth century and another one now. In a much more troubling way, it follows that the theory used to judge matters of public debate today may be inappropriate when we judge the same debate two years later, for these

matters may no longer be contentious and appropriate matters for dialogue and discussion.

The problem is the suggestion that the contentious or non-contentious nature of an inference should play so prominent a role in determining how we should understand and assess inferences. For even when an inference is trivial or redundant or impossible to take seriously in a real life context, it is hard to see why this should change our way of understanding it or our standards of assessment. And if these don't change, then it is hard to see why the distinction between inference and argument is of great significance when we want to formulate a general theory of argument. For this suggests that we can illustrate the dynamics of appeals to authority, inductive generalizations, ad ignorantiam arguments, and so on with inferences as well as arguments. Why then all the fuss about the distinction between arguments and inferences?

2. A Counterexample

An example may give more substance to this skepticism. I want to use a peculiar one just because it can illustrate the narrowness of the examples which are ordinarily used to illustrate the inferences as opposed to arguments. The example I want to take is a famous incident from the traditional *Life of Aesop* (Daly 1961). According to the biography of the famous fabulist, he was born an ugly mute slave and received the gift of speech and argument (*logos*) in return for a pious favour to a messenger of Isis. The incident which I want to consider occurs before this transpires, when Aesop is still unable to speak. He is nonetheless able to demonstrate his cleverness when his fellow slaves try to take advantage of him by stealing the master's figs and blaming it on Aesop. Though he cannot speak, he manages to outwit them by swallowing warm water, putting his finger down his throat and forcing himself to regurgitate, the results proving that he has not eaten the figs. When he points to the other slaves and they are forced to do the same, the evidence literally falls from their mouths and they are punished for their actions.

Even though this is an incident in which Aesop does not forward a verbal argument, it is a case in which he manages to prove his innocence by providing evidence for this conclusion. We might summarize his implicit argument as:

Premise: If I was guilty of eating the figs, they would be in my vomit.

Premise: They are not in my vomit.

Conclusion: I am not guilty of eating the figs.

In this case we have reasoning which is a straightforward instance of *modus tollens* (denying the consequent). Accordingly, it can be represented as :

$$\begin{array}{l} g > v \\ \underline{-v} \end{array}$$

where g = I am guilty of eating the figs; v = They are in my vomit.

As this is a paradigm example of a propositional logic argument, it is tempting to call it an inference. But it must also be accepted that it is an example of an argument in the sense in which arguments are supposed to be distinct from inferences. Indeed, it is a paradigm example of an argument for it takes place in a social context where it is indelibly tied to a dispute, i.e. whether Aesop stole the figs. It is dialectical in the sense that it is Aesop's answer to charges that have been made against him and exemplifies the four characteristics of dialectical argument which Hoaglund outlines (it is a product of a social process, presupposes a role of questioner and answerer, is initiated by a question or doubt, and is "purposive").

But it matters little whether we call this reasoning a piece of reasoning or an argument. The important point is that it can be analysed as a deductive inference and judged accordingly (according to the principles of validity and soundness). This suggests that such analyses have a role to play in informal logic, and that the great divide between inferences and arguments -- which is supposed to keep inferences out of informal logic -- is a mirage. Because, as has already been suggested, the principles of inference remain applicable when inferences become, because of social context, clear instances of argument in the sense of controversy.

3. Hoaglund's Discussion

To some extent these remarks support Hoaglund's conclusion that informal logic does -- at least implicitly -- deal with "inference." But they support this conclusion by throwing the usefulness of the argument/inference distinction into doubt, not by trying to provide another way to elaborate it. There is no time here to provide a detailed response to Hoaglund's attempt at elaboration, but I will pose a series of questions which seem to me to raise serious questions about these elaborations.

1. Convergent arguments are made up of independent chains of reasoning. Isn't it possible to have independent chains of reasoning which are all deductive but lead to the same conclusion -- one by *modus ponens*, one by hypothetical syllogism, another by conditional proof, and so on? Doesn't it follow that a convergent argument could be made up of inferences of precisely the sort that are the concern of formal logic? And how then can it be said that convergent arguments are examples of argument rather than inference?
2. Can't convergent arguments -- i.e. arguments in the argument vs. inference sense -- result in discovery? And can't linked arguments -- i.e. inferences -- be used "to supplant doubt with acceptance?" Isn't Aesop's inference designed to do? And can't the deductively valid inference "God can forgive everything, so he can forgive me my sins" be used as a method or reassurance even if one

thinks the premise is beyond doubt?

3. Does it make sense to say that linked arguments are more self-contained than convergent arguments? For surely it depends on the nature of their premises. If the premises are controversial they are not self-contained, but depend on the extent to which these premises are supported or can be supported. How then can we make the linked/convergent distinction one which is founded on some notion of self-containment?

4. Does it make sense to distinguish linked and convergent arguments in terms of argument strength? Obviously, convergent arguments can be bad arguments. It may be that only one of the lines of support they offer for a conclusion has much to recommend it. If this is so, there may well be only one line of reasoning that provides significant support for the conclusion. And then there may be one premise "the loss of which greatly diminishes the strength of the argument."

I conclude that the usefulness of the inference/argument distinction remains in doubt, at least as long as it is elaborated in the sort of way that Johnson, Blair and Hoaglund suggest. Our best strategy is to place much less emphasis on the distinction in the first place. Trying to clarify a murky distinction by relating it to other murky distinctions is not the way to go.

References

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