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Commentary on Plumer

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In Response To: Gilbert Plumer *The paradoxical associated conditional of enthymemes*

1. Plumer's argument

Plumer's target is the view, common in the literature on enthymemes, that an enthymeme assumes the truth of its associated conditional, the conditional whose antecedent is the conjunction of the enthymeme's explicit premisses and whose consequent is the enthymeme's conclusion. Adherents of this view take what I shall call the *explicit associated conditional* to express the proposition that the explicit premisses imply the conclusion. But, according to the standard conception, an enthymeme is an incomplete argument, one which must be taken to have an implicit premiss because its explicit premisses do not by themselves imply the conclusion. It follows directly that the common view is mistaken. Not only is it untrue that every enthymeme assumes the truth of its explicit associated conditional. In fact, the very opposite is the case: no enthymeme assumes the truth of its explicit associated conditional.

The conditional associated with an enthymeme, Plumer claims, is the conditional whose antecedent is the conjunction of the enthymeme's explicit and implicit premisses and whose consequent is the conclusion. And *this* conditional, which I shall hereafter call the *full associated conditional*, should *not* be treated as an assumption of the enthymeme, in the sense of an implicit premiss which needs to be made explicit for purposes of argument evaluation, on pain of the infinite regress which Lewis Carroll pointed out so amusingly more than a century ago.

We can illustrate Plumer's point with reference to one of his own enthymemes:

(1) "Whether the kind of point the [water-resource–DH] argument makes is applicable to any other situation depends on how low in the situation the government's water or resource prices are compared to those of the nongovernmental sources, on how uniform the farms are across the particular region, etc. So it would be a misconstrual to attribute a more general assumption to the argument..."

I take it that this argument is an enthymeme in Plumer's sense because its premiss does not imply its conclusion in any of the senses of implication Plumer recognizes; the argument is neither formally nor materially valid, nor is it an instance of a non-deductively "valid" form of inference, such as induction by enumeration. Plumer would regard his argument as having an implicit premiss, e.g. that it is a misconstrual to attribute a more general assumption to an argument if the applicability of the kind of point it makes to other situations depends on factors not explicitly mentioned in the argument. Thus, on Plumer's account, (1) does not assume that it would be a misconstrual to attribute a more general assumption to the water-resources argument if the applicability

of the kind of point it makes to any other situation depends on how low in the situation the government's water or resource prices are compared to those of the nongovernmental sources, on how uniform the farms are across the particular region, etc.–at least if this supposed assumption is interpreted to express an implication relation between premiss and conclusion. The conditional associated with (1), the proposition which expresses its implication relation, is that it would be a misconstrual to attribute a more general assumption to the water-resources argument if the applicability of the kind of point it makes to any other situation depends on how low in the situation the government's water or resource prices are compared to those of the nongovernmental sources, on how uniform the farms are across the particular region, etc., *and* it is a misconstrual to attribute a more general assumption to an argument if the applicability of the kind of point it makes to other situations depends on factors not explicitly mentioned in the argument. This proposition, Plumer would insist, is not an assumption or implicit premiss of his argument; it is not something which needs to be made explicit for purposes of evaluation. If one claims that it is, one is committed to Lewis Carroll's infinite regress of premiss additions as a preliminary to evaluation of the argument.

Plumer considers, as possible counterexamples to his thesis, enthymemes whose implicit premiss is of the form "if the explicit premisses are true, then the conclusion is true". Such enthymemes would appear to assume the truth of the explicit associated conditional. They fall into two mutually exclusive and jointly exhaustive classes, according to whether the explicit argument is materially valid; by calling an argument materially valid, Plumer means that it is not formally valid but the meaning of its terms makes it impossible for its premisses to be true and its conclusion false.

In a materially valid argument like:

(2) *My coat is green, so it is coloured*

the explicit associated conditional is indeed true: that my coat is green does imply that it is coloured. But either the argument should be taken to be complete as it stands, with no implicit premiss, or the implicit premiss is the universal generalization of the explicit associated conditional: If anything is green, it is coloured. That must be so, Plumer argues, because the original stated premiss is materially valid; the proposed generalization is a necessary and analytic truth, so that the argument does not (merely) assume that there is something special about my coat such that its being green makes it coloured. Of course this universal generalization, which on some accounts should be treated as an implicit premiss, implies the explicit associated conditional, by universal instantiation. But any such implication of one or more elements of an argument is not an assumption, i.e. implicit premiss, of the argument, since it is already part of its content. If we were supposed to add it too as an implicit premiss, then by parity of reasoning we would apparently have to add every other instance of the universal generalization, thus making the argument infinitely long.

As an example of an enthymeme which is not materially valid but whose implicit premiss looks like the explicit associated conditional, Plumer proposes the water-resource argument alluded to above:

(3) *The government provides water at low prices to many farmers in a certain region. But other farmers in the region are farming profitably even though all the water they use is bought from nongovernmental sources. Hence, any farmer in the region could make a profit if the government ceased to provide the cheap water.*

The implicit premiss of this argument, Plumer claims, must be an ungeneralized conditional, because the argument's conclusion would apply to other regions and/or other resources only if various unstated conditions were satisfied. The case is not arbitrarily selected, so the argument does not assume an empirical universal generalization; still less does it assume a necessary, analytic generalization. But, although the implicit premiss looks like the explicit associated conditional, by hypothesis it is not. For the explicit associated conditional is, and must be, false: the explicit premisses do not imply the conclusion. But the ungeneralized conditional proposed as an implicit premiss is, or might be, true. If the proposed implicit premiss is construed as qualified by some implicit modal operator like "probably" (a construal which implies a similar implicit qualification of the conclusion), then it could be taken to express a probabilistic implication of the same sort as is attributed to the argument. But in that case the argument is best interpreted as an induction by enumeration with no implicit premiss; in particular, the probabilistic conditional, though true, would not make the argument stronger than otherwise if it were added as a premiss. Even though we sometimes state explicitly the major premiss in a probabilistic modus ponens argument like:

(4) *If he drove the car in the state he is in, then he probably crashed. And unfortunately, he did take the car. So he probably crashed.*

there would be no grounds for regarding it as an implicit premiss if it were left out, assuming that the same degree of probability is signified in both cases.

The upshot of these two types of cases is that, where an enthymeme's explicit associated conditional is true, it is not an implicit premiss, and where an enthymeme's implicit premiss is verbally identical to its explicit associated conditional, the identity is merely verbal and the explicit associated conditional is false. An enthymeme's explicit associated conditional is in some cases true and in some cases an implicit premiss, but in no cases both. That is apparently why Plumer calls it paradoxical.

Despite these arguments, Plumer concedes that in a sense the author of an enthymeme is committed to its explicit associated conditional. For the full associated conditional is true, and by commutation and exportation is equivalent to the iterated conditional that, if the implicit premiss is true, then the explicit associated conditional is true. So, since there is commitment to the

implicit premiss, there is commitment to the explicit associated conditional. But, he claims, this is only a qualified commitment, a commitment to the explicit associated conditional because of the commitment to the implicit premiss.

2. Strengthening of Plumer's argument

If we make explicit Plumer's commitments, we can dispel his misgiving about probabilistic modus ponens arguments and eliminate the need for his concession, thus strengthening his case. He assumes that an argument has an acceptable link between its premisses and its conclusion if and only if its premisses imply its conclusion. There are various sorts of implication. Strict implication is either formal or material; that is, either the argument's form or the meaning of its terms makes it impossible for the argument to have true premisses and a false conclusion. Probabilistic implication is a relation in which it is improbable that the premisses are true and the conclusion false; in at least some cases, this probabilification is a function of the argument's form, as in induction by enumeration. An enthymeme is an argument whose explicit premisses do not by themselves imply its conclusion (in any of the possible senses of implication), but do so when an implicit premiss is added. The implicit premiss is actually part of the author's argument, even though it is unstated; the author does not infer the conclusion from the explicit premisses alone, but from the combination of implicit and explicit premisses. One works out what implicit premiss to attribute to the enthymeme by combining the requirement that it should logically strengthen the argument (making the combination of implicit and explicit premisses imply the conclusion when the explicit premisses do not) with the requirement that it be epistemically basic. The requirement of logical strengthening rules out redundant reiterations of an already explicit implication relationship, e.g. a modally qualified ungeneralized conditional whose modal qualifier is of the same degree as that of the conclusion. It also rules out adding as an implicit premiss something which is already presupposed or implied by the propositional elements of the premisses. (Plumer actually rules out anything implied or presupposed by a propositional element or elements of the argument, but in some cases the intuitively supplied implicit premiss is implied by the combination of the explicit premisses and the conclusion; consider, for example, the argument:

(5) *"Star Wars" is the only movie playing in town right now. So Armaity is watching "Star Wars".*

The intuitively supplied implicit premiss, that Armaity is watching a movie playing in town right now, is in fact implied by the conjunction of the argument's premiss and conclusion. But it is not logically superfluous to add it.) The requirement of being epistemically basic rules out singular propositions whose justification is an empirical or analytic generalization. An argument whose explicit premiss or premisses already imply its conclusion is not an enthymeme; it has no implicit premiss.

The associated conditional of an argument expresses the relation of implication. Hence, the explicit associated conditional of an enthymeme is false; if the enthymeme's implicit premiss is a conditional with its explicit premisses as antecedent and its conclusion as consequent, that conditional is not the associated conditional but a weaker homonym. If an argument's explicit associated conditional is true, then it is not an implicit premiss of that argument, because by hypothesis the explicit premisses already imply the conclusion.

This argument holds for probabilistic implication as well as for formal and material implication. Thus, if an argument has an implicit premiss which is a probabilistic ungeneralized conditional, then that conditional is by hypothesis not the probabilistic explicit associated conditional but a weaker homonym. Hence Plumer does not need to harbour any misgivings about the possibility that some arguments have such an implicit premiss. Any such argument is an enthymeme, and its associated conditional is not the implicit premiss but the full associated conditional with both the implicit and the explicit premisses in the antecedent.

Further, Plumer should not concede that the author of an enthymeme is committed to the explicit associated conditional, even hypothetically. For, by modus ponens, the author of an enthymeme would be committed non-hypothetically to the explicit associated conditional. But the explicit associated conditional means that the enthymeme's explicit premisses imply its conclusion, which by hypothesis is false. The fault in Plumer's reasoning is to assume that exportation applies to a conditional expressing an implication relation. In fact, that I and E together imply C does not imply that I implies that E implies C. Counterexamples are easy to produce. For example, that St. Catharines is in Ontario or in Quebec and that it is not in Quebec together imply that St. Catharines is Ontario. Further, St. Catharines is in Ontario or in Quebec. But that St. Catharines is not in Quebec does not imply that St. Catharines is in Ontario. This point can be put formally, if we restrict our attention to formal implication, symbolized by a necessary material conditional: '$\Box[(I \,\&\, E) \supset C]$' does not entail '$\Box[I \supset \Box(E \supset C)]$'. The same point applies to material implication (in the sense of the implication relation between the premisses and conclusion of a materially valid argument), as well as to probabilistic implication, as can be shown by counterexamples.

3. Why Plumer's argument fails

If we grant Plumer's premisses, then, his argument is decisive. Contrary to scholars like myself who assert that every enthymeme assumes the truth of its explicit associated conditional, in fact no enthymeme assumes the truth of its explicit associated conditional.

If we grant Plumer's premisses. But, I shall argue, we should not. The burden of

my writing on enthymemes (Hitchcock 1985, 1987, 1998) has been that our conception of implication or consequence is in one important respect too narrow. Besides formal and material consequence, there is what has been called enthymematic consequence (George 1972, 1983). In our reasoning and our argumentation, in the vast majority of cases, the conclusion we infer is not a formal or material consequence of the premisses from which we infer it. It is simply a prejudice to suppose that, in cases where such reasoning or argument is intuitively respectable, there must be some unstated premiss which must be made explicit in order to exhibit the whole argument for purposes of understanding and evaluation. Why should we assume that the only way a conclusion can follow from premisses is by following logically from them? Why can we not allow that it follows factually? As I have argued at some length, there is a concept of non-logical, enthymematic consequence, which has all the desirable properties of a consequence relation. In particular, if a conclusion is an enthymematic consequence of the stated premisses, then it is excluded that the premisses are true and the conclusion false. Furthermore, this exclusion is not a trivial consequence of the falsehood of a premiss, or the truth of the conclusion; it follows from a connection between the explicit premisses and the conclusion.

Thus, I would reject the second premiss of Plumer's argument. An enthymeme's explicit premisses do imply their conclusion, if "imply" is taken in a broad sense which includes enthymematic implication. The explicit associated conditional of an enthymeme is thus not an implicit premiss of the enthymeme. Rather, if true, it is an instantiation of a generalization in virtue of which the enthymeme's conclusion follows from its explicit premisses. The sense in which an enthymeme assumes the truth of some such generalization, then, is not that in which the generalization is an implicit premiss, but that in which the enthymeme implies the truth of a covering generalization. The derivation of a conclusion from stated premisses, even when not explicitly marked by an inferential particle or phrase, involves a claim that the conclusion follows from those premisses. To say something of the form, "P, so c, but c does not follow from P", is to contradict oneself, to fall into inconsistency. What it means to use the word "so" in such a context with an inferential sense is to claim that the conclusion follows from the stated premisses. And that is what the explicit associated conditional reports.

Given this account of consequence or implication, the first premiss of Plumer's argument requires reinterpretation. It is true only if one construes the word "imply" differently than he does, so as to allow that premisses can enthymematically imply a conclusion. In fact, I myself would use the word "imply" in some respects more narrowly than Plumer does. The paradoxes of Lewis' strict implication are just as paradoxical as the paradoxes of material implication. It is no more true that anything at all strictly implies a logically necessary truth than it is that anything at all materially implies a truth; the conclusion of the argument

(6) *The earth is a planet, so cheese is cheese*

is no more implied by its premiss than is the conclusion of the argument

(7) *The earth is a planet, so cheese is edible*.

Likewise, it is no more true that a logical falsehood strictly implies anything at all than that a falsehood materially implies anything at all; the premiss of the argument

(8) *No planet is a planet, so the moon is made of green cheese*

no more implies its conclusion than does the non-logically false premiss of the argument

(9) *The earth is a star, so the moon is made of green cheese*.

Our conceptions of consequence and implication need to be revised as indicated in my (1998).

Is the idea simply mistaken that some arguments have implicit, unstated premisses which need to be made explicit to permit the evaluation of the argument? No, just greatly exaggerated. There are arguments which are deployed against a background of particular information, assumed to be shared by author and audience, whose explicitation is necessary to show how the conclusion follows from the premisses. Consider the following sort of argument, which one might hear on a sports broadcast:

(10) *Detroit edged out Baltimore in the ninth inning. So Toronto is now alone in first place.*[1]

In a particular context of utterance, this might be (informally and intuitively) a perfectly good argument. But what conception of consequence will explain how the conclusion follows from the premiss? On the account which I favour, a conclusion follows from a premiss if and only if the argument has a covering generalization, with at least one variable instantiated both in a premiss and in the conclusion, which is true either always or for the most part or *ceteris paribus*. The only constant common to the premiss and conclusion of (10) is an implicit time constant, "today". But the covering generalization with respect to this constant is not true, either always or for the most part or *ceteris paribus*; it is not the case (always, or generally, or *ceteris paribus*) that, on any day on which Detroit edges out Baltimore in the ninth inning, Toronto moves from sharing first place to being alone in first place. This generalization holds only on days when very special circumstances obtain. These circumstances can be reconstructed by anybody who knows how standings in the major leagues of North American baseball are calculated. A sports broadcast is directed to an audience who is assumed to be following the sport reported on; in the context of a pennant race, the audience in the city of the team striving to end up on top would be assumed to know its standing before the game reported on, especially in a period when only the top team advanced to the playoffs. In such a context, the received account of enthymemes, which goes back to Aristotle,

does apply. In order to show how the conclusion follows, we have to add the particular information which is assumed to be background knowledge shared by the argument's author and its target audience. Once that information is supplied, the conclusion will follow (in general enthymematically, not logically) from the combination of the explicit premiss and the assumed background information.

I am inclined to think that Plumer's water-resource argument (3) is of this type. The most ambitious covering generalization of it which one can construct is the generalization that everyone can do what some people actually do. This generalization is not true, either always or for the most part or *ceteris paribus*. Some people climb Mount Everest, but is not possible for everyone to do it. In times of high unemployment, some people find a job, but it is not possible at such times for everyone to find a job. (It may be that anybody can find a job, if they try hard enough, but that is, importantly, a different claim.) It is just a fallacy to take the fact that some people do something as proof that it is possible for everyone to do it, or even as establishing this as a presumption. (Incidentally, the argument from what some actually do to what all can do is not an induction by enumeration, since the universal generalization is modally qualified and the existential generalization is not; in fact, the argument itself asserts that not all farmers in the region buy their water from nongovernmental sources, so the inductive generalization from the observed cases is explicitly stated to be false.) Less ambitious covering generalizations are also untrue, as Plumer notes. But Plumer cites his argument (which I suppose is imagined rather than real) without any indication of its (real or imagined) author and audience, so that we have no basis for inferring what particular shared background information the author might be assuming. Without any such indication, it is in my opinion perfectly relevant to object to the argument that there might be regions where some farmers make a profit buying more expensive water from nongovernmental sources, but not all farmers can do so. Such an objection would force the author of the argument to make explicit the particular claims about these farmers in this region whose addition as premisses would make his argument enthymematically valid. For example, it might be that in all other respects relevant to profitability the farmers who get cheap water from the government are similar to those who make a profit while buying more expensive water from nongovernmental sources, and further that nongovernmental sources could supply the water to all the farmers in the region at their current price if the government stopped providing cheap water. Given such shared background information, the conclusion would follow, since adding it as additional premisses would produce an argument which was enthymematically valid.

In my opinion, there is no argument whose implicit premiss is a material conditional with the conjunction of the explicit premisses as antecedent and the conclusion as consequent. Certainly the author of any argument with a modally unqualified conclusion is committed to this conditional. It would be inconsistent to say, "P, so c; but it's not the case that if P then c", where the "if" is a material conditional, for that would be equivalent to saying, "P, so c; and P but not c."

And adding the material conditional as an extra premiss does make any previously invalid argument valid. But, if the argument has an implicit premiss, it will consist in background information about a particular case under discussion, information which in conjunction with a true covering generalization entails the material conditional. If the argument is already valid (formally, materially, or enthymematically), there is of course no need to add an implicit premiss.

Do Plumer and I just have a conflict of intuitions about this example, or is there some argument which either of us can deploy? Plumer argues, as reported in (1) above, that it would be a misconstrual to attribute to the water-resource argument a more general assumption than the ungeneralized conditional claim that if the premisses are true then the conclusion is true, on the ground that whether the argument's point is applicable to another situation depends on a number of factors about the region and the resource. I grant his premiss but reject his inference. Unless the author of the water-resource argument cites specific additional facts about these farmers, this resource and this region, or there are good contextual reasons for thinking that the author takes for granted that his or her audience is aware of such additional facts, the author is committed to some covering generalization or other. The fact that no covering generalization is true shows that the argument is defective as it stands, that the conclusion does not follow, and that further factual information about the specific region and resource needs to be supplied. Further, Plumer is I think mistaken in assuming that, if a conclusion about some instance is drawn from information about that instance, then the instance needs to be arbitrarily selected from a general class with respect to the specified information in order for one to use refutation by logical analogy to criticize the argument's inference. Suppose I argue:

(11) *I got a good deal on my new Mazda Protegé, because it cost me $3,000 less than a comparable Honda Civic*

Then I am committed to some covering generalization of this argument, e.g. that anybody gets a good deal on a new Mazda Protegé if it costs them $3,000 less than a comparable Honda Civic. That is so, even though I am not arbitrarily selected from humanity with respect to how much less I paid for my Mazda than a comparable Honda costs. If all covering generalizations of this argument were untrue (even for the most part or *ceteris paribus*), and there were no contextual grounds for imputing additional premisses about my car purchase to the argument, my argument would be a poor one, because its conclusion would not follow from its premiss. Refutation by logical analogy would be a perfectly appropriate strategy in that situation.

Do I have a positive argument for my claim that refutation by logical analogy is always an appropriate strategy? There is of course an inductive argument, that it is intuitively recognized as appropriate in a large number of cases, and that on analysis it is appropriate even for cases where it appears at first glance not to be appropriate. And there is something odd about concluding that some

individual a has a property G on the basis of a's having a property F, acknowledging that b has F but not G, and denying that a has a further property H such that anything with both F and H has property G. How could you conclude from a's having F that a has G, unless in general things with F (and perhaps some other contextually indicated properties) have G? This rhetorical question is at best a question-beginning argument, since the expected answer "nohow" simply repeats in slightly different words the claim which is at issue. Or, if taken as a serious question, it could be challenged as illicitly shifting the burden of proof; it is I who claim that refutation by logical analogy is always an appropriate strategy, so it is up to me to support my claim if it is challenged. But, if the question resonates with my reader, it may perhaps serve an illustrative function.

Someone might think that Plumer's argument that an enthymeme does not assume its explicit associated conditional applies to arguments like the water-resource argument (3) or the baseball argument (10). For I have conceded that, when advanced in suitable contexts, such arguments use contextually available background information about the particular case, and that any covering generalization in virtue of which their conclusion follows from their premisses must include this contextual information among those premisses. So at least enthymemes of this type, Plumer might argue, do not assume the truth of their explicit associated conditional. For I am ready to endorse such arguments as satisfactory from an inferential point of view even though their conclusion does not follow, even enthymematically, from their explicit premisses.

My reply to this new version of Plumer's argument is to claim that in such cases his argument equivocates on the word "imply". In one sense, the explicit premisses do not imply the conclusion; no covering generalization of the argument as stated is true, either always or mostly or *ceteris paribus*. In another sense, however, they do imply the conclusion. The combination of contextually available information about the particular case with the explicit premisses implies the conclusion; some covering generalization of the argument as thus expanded is true, either always or mostly or *ceteris paribus*. So, given this information, which is contextually available, the explicit premisses do imply the conclusion. In standard cases, an indicative conditional whose antecedent and consequent are in the indicative mood expresses the proposition that the consequent follows from the antecedent, i.e. that it can be derived from it. By hypothesis, given the assumed shared background particular information, the conclusion of this argument can be derived from its explicit premisses. Thus the explicit associated conditional is true.

One of my difficulties with Plumer's paper is the apparent confidence with which he is willing to identify *the* implicit premiss of an enthymeme, even without contextual clues. There is no agreement among scholars, or in the textbooks, on how one is to do so. In fact, many of the proposed criteria are vague, and many of them underdetermine which implicit premiss is to be attributed. On my approach, except in cases where the context gives good

reason to suppose that the author took particular information about the particular case under discussion to be shared between author and audience, there is no question of attributing a definite implicit premiss to the argument. There is only the evaluative question of determining whether the argument has a covering generalization which is true always or for the most part or *ceteris paribus*. That is, there is only the question of whether the conclusion follows from the premisses. Thus, the task of identifying implicit premisses is largely avoided.

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Note

1 I owe this example to Rolf George.