Can we ever pin one down to a formal fallacy?

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Abstract

In this paper, some circumstances are discussed in which it is possible to track down a formal fallacy. Charges of formal fallaciousness often seem impotent as instruments of argument evaluation and criticism. In a special dialogical setting, however, it does seem possible to pin down a formal fallacy. In order to show that, the Oliver-Massey asymmetry needs to be neutralized.

1. Introduction

Among charges of fallacy, that of having committed a formal fallacy seems particularly intractable. Whenever one tries to lay one's hands on what at first seems a flagrant case of objectionable formal invalidity, one is confronted with a plethora of devices that allow the alleged perpetrator to escape from logical criticism. In this paper I hope to show that in some special dialectical circumstances the charge may nevertheless hold water. First I shall briefly summarize the multifarious defenses that one may put up to parry the charge (Section 2). Then I shall indicate what notions of 'fallacy' and 'formal' are presupposed in this paper (Section 3). In Section 4, the dialogical setting that may give rise to the charge of having committed a formal fallacy will be described. However, upon second thoughts, we have to admit that all formal fallacies, as far as they are cases of invalidity, are cases of non sequitur, and that non sequitur is the better label for vicious invalidity in general, whereas formal fallacies in the strict sense constitute a special type of case. In order to deal with charges of invalidity, we need to refute or at least to neutralize the Oliver-Massey asymmetry thesis according to which, though we do have bona fide methods of establishing the validity of arguments, we do not have any satisfactory method of establishing their invalidity (Section 5). The question in the title is answered in Section 6.

2. Nothing but excuses

The argument that since it rains, we won't go out, is invalid. The reason being that it is quite possible to go out in the rain. The form of this argument is 'P, therefore Q', so how does the arguer escape a charge of having committed a formal fallacy?

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In fact the arguer is confronted with an embarrassment of riches. One way is to plead that the argument is to be given a charitable reading: quite obviously, there is, by conversational implicature, an implicit premise to the effect that whenever it rains, we won't go out. In general, the application of even a moderate type of charity in argument interpretation provides a strong pull towards a reconstruction that makes the argument a valid one. Of course this may mean that the trouble now resides in the premise, but at least the arguer is off the hook as far as formal fallaciousness is concerned. This strategy, which Massey called the enthymematic ploy (1975a), is reasonable up to a point. As the pragma-dialecticians have shown us, Grice's Cooperative Principle provides a starting point for theories that allow us to reconstruct the so-called missing elements of given arguments (van Eemeren and Grootendorst 1984: Ch. 6, 1992: Ch. 6). Govier (1987: Ch. 7: 'A new approach to charity') discusses the extent to which charity can be used in argument interpretation, without making it a ploy that does away with each and every flaw in argument.

Sometimes a more straightforward defense is available. For instance, if one argues that since everyone does what Simon does, and since everyone is doing a handspring, Simon is doing a handspring, one does not need to have recourse to the enthymematic ploy in order to rebut a charge of asserting the consequent. That is, if the critic adduces the invalid form 'for all x: if Dsx then Ex, Ef, therefore Dsf' (with Dxy: x does y; Ex: everyone does x; s: Simon; f: the act of doing a handspring), and claims this to be the best paraphrase, the arguer may retort that the critic's analysis of the argument is too shallow to bear out its validity. An alternative analysis shows the conclusion to follow from the second premise alone: 'for all x: Fx, therefore Fs' (with Fx: x does a handspring; s: Simon). So, by monotonicity (addition of premises cannot undo validity), the argument is valid. Generally, it is possible to counter a charge of having committed a formal fallacy by giving a refined analysis, either within the same, or within some other acceptable system of logic. That a paraphrase showing the argument to be an instance of an invalid form does not suffice to establish the invalidity of an argument is of course well-known. It is the correct part of the Oliver-Massey asymmetry thesis (Oliver 1967; Massey 1975a, 1975b, 1981).

A further line of defense consists of the destruction of the counterexamples yielded by the critic's formal analysis. For instance, let the argument be: 'if it doesn't rain, my parents are coming, it doesn't rain, therefore my father is coming'. The critic's claim is that the form of this argument is 'if not R then P, not-R, therefore F' (using obvious abbreviations), that this paraphrase is sufficiently detailed and, moreover, that it is formally invalid, because of the counterexample assignment of truth to P and falsity to both R and F. This counterexample assignment, however, shows the invalidity of the form, but not the invalidity of the original argument, since if we revert to the assigned meanings for the variables, it turns out that the counterexample situation would have to be such that it does not rain, that my parents are coming, but that my father is not coming, and this is quite impossible. Thus invalidity (of the argument itself) has not been shown. In fact, since there are no other counterexample assignments to the form, the destruction of the one possible counterexample shows that the original argument was valid. Thus the critic is hoisted with his own petard: his formal analysis is used against him to prove validity, instead of invalidity.

Another way out, for the arguer, would be to short-circuit the discussion. If it is admitted that the argument is deductively incorrect (invalid), but, at the same time claimed that the argument has some other virtue, such as inductive strength, or presumptive force, the show is over as far as formal fallaciousness is concerned.

Again, if all defenses fail (the argument really is invalid, there is no conversational implicature of a helpful missing premise, and the deductive intent is announced clearly by words like 'necessarily') a last resort might be to claim that no fallacy was committed, because the argument does not even *seem* valid. Or because this type of reasoning does not occur frequently, or does not constitute a serious problem for argumentation or cognition. And so on. Anyhow, it was an error, not a fallacy.

3. Fallaciousness and formality

The considerations given above make charges of formal fallaciousness seem almost impotent as instruments of argument evaluation and criticism. Yet, I would argue, to give them up altogether would be rash. Before we can make any advance, however, it must be made clear what the present notion of formal fallaciousness amounts to. There are so many notions of 'fallacy' and 'formal' that we cannot hope to deal with them all in this essay. No precise definitions are to be given here and now, and so an element of vagueness will remain, but a choice has to be made with respect to the types of concepts that we want to use.

The notion of fallacy used here is the pragma-dialectical one of a violation of a code for what is called 'critical discussion' or 'persuasion dialogue', i.e., a code of conduct for rational discussants whose goal is the resolution of a conflict of expressed opinions (cf. van Eemeren and Grootendorst 1984: 182, 1992: 104). The element of vagueness is that this code will not here be specified.¹ A fallacy, then, is a transgression of a rule of persuasion dialogue, whereas acts that conform to the rules, but are strategically inferior, are to be characterized as errors or blunders. The distinction can be drawn sharply only with reference to a specific set of rules. As long as our model of dialogue is incomplete, all we mean by calling an act fallacious is *that we expect it to contravene the rules, once the latter are fully specified*. Another noteworthy aspect of this notion of fallacy is that it primarily pertains to (argumentative) acts in dialogue, and only derivatively to the arguments as products (texts or recordings).

¹ Ultimately, a code is to give us 'a stylized picture of how people reason or should reason'. It is to display empirical realism (to be plausible), yet it must also show 'normative bite' (Walton and Krabbe (forthcoming): Section 5.1). Thus codes of conduct for dialogue are to be based both upon the empirical study of dialogue (empirical logic) and upon normative considerations.

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The term 'formal' refers to the schematic aspect of language, more specifically to the schemata that show how complex expressions are grammatically constructed from simpler expressions. (This is the second sense of 'formal' in Barth and Krabbe 1982: 15.) In a broad sense, any fallacy that somehow hinges upon the schematic aspect of language could be called formal. But this is too indefinite and would give us too much (*petitio principii, ad ignorantiam, ad hominem*, and many other types of fallacy have formal aspects). Our concept of formal fallaciousness is to be tied to the concept of formal validity. Formal validity refers (primarily) to a specific premise-conclusion relationship in an elementary or basic argumentative step (with premises P1,...,Pn, and conclusion C). Hence it does not refer to argumentation structures in general (trees built up from basic arguments), or to other global aspects of argumentation.

A counterexample to a basic argument (P1,..., Pn/C) is a situation, actual or fictitious, (a possible world, if one wishes) such that in that situation all the premises are true and the conclusion is false.² The argument is valid if there is no counterexample to it. The concept of what constitutes a counterexample, that is, of what is deemed to constitute a possibility and what not, depends on context and is, moreover, subject to the vicissitudes of intellectual history. Hence, the same holds for the notion of validity. But this does not mean that anything goes: we have to reckon with the conceptual possibilities and concepts of validity of our own age and with the context in which we appeal to them.

An argument is formally valid in logic L, if it can be correctly paraphrased in L such that its schema (or form) is valid in L. It can easily be seen that whenever an argument is shown to be formally valid in classical propositional or predicate logic, it has to be valid in the more general sense of not allowing a counterexample. If it were not, the counterexample would give us all the structural features necessary to define a countermodel to the argument form (in propositional logic it would give us instructions of how to assign truth and falsity). Hence, this form would have to be formally invalid, and could not have been used to show the formal validity of the argument. In any case, a system of formal logic that did not have this property (the property that formal validity as defined by the system implies unqualified validity), would not be acceptable. Hence we may conclude that formal validity, i.e., validity on the strength of some extant and acceptable system of formal logic, implies validity. (We shall not speculate about future possible logics, and gladly accept the historical relativism in the notion of formal validity.) That the converse implication does not hold

² It is important to distinguish between this notion of a counterexample (situation) and the notion of a countermodel or counterexample assignment (also often called 'counterexample') as it occurs in formal logic. The first pertains to basic arguments, the second (set-theoretical) notion pertains to basic argument *forms*. Other notions of counterexample, not discussed in this paper, pertain to universal statements, or, more generally, to theories.

is shown by the argument about the rain, the parents, and the father in Section 2: it is valid, but not formally valid.³

A formal fallacy, in dialogue, is committed as soon as a party presents a formally invalid (i.e., not formally valid) argument that violates the code of conduct for the dialogue. This stipulation both opens the possibility of a (formally or simply) invalid argument that is presented without there being a violation of the code (and hence without fallaciousness), as well as that of a valid argument whose presentation nevertheless violates the code, so that it must be condemned as fallacious. The former situation occurs if the code proscribes only a subset of the (formally or simply) invalid arguments, for instance, only those that violate certain rules of thumb. The latter situation occurs if the code banishes a subset of the valid arguments, for instance those that are formally invalid. But, in order to keep matters relatively simple, let us from now on assume that only invalid arguments are proscribed by the code.

4. A profile of dialogue

When and where can a charge of having committed a formal fallacy function in dialogue? With a specific code or dialectic system in hand, answers would be easily forthcoming. But one needs to gain some insight into the various possibilities and their consequences, before a code is fixed. This can be achieved without going too far into technical details, and may, moreover, help us make up our minds when we try to get to a plausible system of normative rules of dialogue. Also, there is a simple method available that helps one to structure a discussion of various dialectical possibilities. I refer to the method of profiles used by Douglas Walton in his discussions of the spouse-beating question (Walton 1989a: 68, 69, 1989b: 37, 38) and elsewhere applied to a discussion of fallacies of relevance (Krabbe 1992). This method will now be applied to the present discussion.

Let the context of dialogue be one of persuasion dialogue. There are two parties: Wilma and Bruce. Wilma has advanced a thesis T (move 1). Bruce has challenged this thesis (move 2). Thus, after two moves the dialogue has yielded a conflict of expressed opinions. This conflict is *pure* or simple or nonmixed, since only Wilma has a thesis to defend, and it is *single*, since there is only one thesis (Barth and Krabbe 1982: 56; van Eemeren and Grootendorst 1984: 80; 1992: 17). Now the goal of the discussion is to reach conflict resolution, and this goal is shared by the two participants. In this sense the dialogue is cooperative. However, in order to reach that goal Bruce has to put his efforts into criticism of the thesis, whereas Wilma is to defend the thesis to the

³ Notice that a formally invalid argument is not an invalid argument of a special kind: it may very well be valid. For arguments, formal invalidity does not imply invalidity. The class of invalid arguments is just a subset of the class of formally invalid arguments, not the other way around.

best of her ability. Thus the aims of the two parties within the discussion are opposed, and in this sense the dialogue is competitive.

In the next move (move 3) Wilma is to give some reason R (possibly a conjunction of a number of statements). The dialogue has now yielded one argument: 'R, therefore T'. This is Wilma's first defense. It is now up to Bruce to make a move. There are various reasonable possibilities for the profile to display (see Figure 1).⁴

- (4a) Bruce agrees and accepts the thesis. End of discussion, conflict resolved.
- (4b) Bruce challenges R (or a conjunctive part of it). This is *tenability criticism*. It brings about a subdiscussion focused on R.
- (4c) Bruce challenges the connection between R and T. This is *connection* criticism. Wilma is to give more reasons in her next move in order to strengthen the argument.

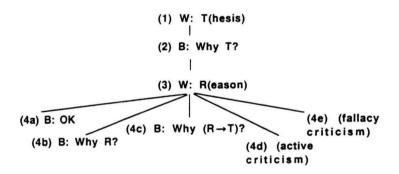


Figure 1.

(4d) Bruce admits that Wilma was entitled to bring up this argument, but nevertheless claims that the argument is wrong or mistaken or insufficient. This is *active criticism*. Bruce has taken it upon himself as a burden of proof

⁴ Other authors have shown how various ones of these moves generate specific argument structures (Freeman 1991; Snoeck Henkemans 1992).

to show exactly how the argument went wrong or why it is insufficient. From now on Bruce is not only putting critical questions, but also arguing for certain points of view. One possibility is that Bruce offers a counter-argument, that is, an argument for not-T. If T happens to refer to a matter that can only be decided upon a balance of considerations, Bruce may do so without denying the worth of Wilma's initial argument, as far as it goes. But there are various other ways to actively criticize an argument (Finocchiaro 1980: Ch. 15, 17).

(4e) Bruce denies that Wilma was entitled to bring up this argument. The argument is claimed to be inadmissible. This is *fallacy criticism*. Again Bruce has taken it upon himself as a burden of proof to show what is wrong with the argument. But now it will not suffice to show that the argument went wrong or is insufficient to make the conclusion acceptable. A point of order has been made (Hamblin 1970: Ch. 9, esp. 283, 284) and the discussion moves up one level. Bruce has to show that Wilma's argument does in fact violate the rules of dialogue. A lawsuit is on in which Wilma stands accused.

By way of illustration, suppose that Wilma and Bruce are discussing whom to appoint as a staff member, Jack or Jill. Suppose that Wilma argues that Jill is to be preferred, since the number of women on the staff is deplorably low. Bruce could agree (4a), or question the data about the number of women (4b), or ask for additional reasons to select Jill (4c), or bring up the consideration that Jack is better qualified for the job (4d), or decry Wilma's argument as totally irrelevant (4e). Which of these reactions would be most suitable depends, of course, upon the circumstances of the case.

The only part of the profile where a charge of having committed a formal fallacy could have a place is that engendered by move 4e. So let us consider that part in more detail. Bruce has claimed that the argument presented by Wilma is inadmissible (move 4e). This is Bruce's thesis. Wilma challenges this thesis (move 5). This gives us another nonmixed and single conflict of opinion, but this time it is located on the metalevel. The first defense move on Bruce's part consists of a specification of the type of fallacy. If it is just one rule that has been violated, Bruce could state that rule. Alternatively, Bruce could use a fallacy label, provided the meaning of this label is ultimately analyzed in terms of rule violations. So Bruce could claim that R has nothing to do with T (*ignoratio elenchi*) or that R is a red herring or *ad hominem*, and so on. In the present case let the claim be that there is an inadmissible lack of validity (formal fallacies must be found in that area), and let the label be *non sequitur* (move 6). In Section 2 we had a preview of various ways to wriggle out from under accusations of invalidity. Which ways of defense would it be reasonable to allow Wilma to use?

There is one fast way that should be allowed: Wilma may grant that her argument is not deductive (move 7a). In that case Wilma is to be acquitted on the spot of the

charge of having committed a *non sequitur*. However, this speedy acquittal involves some cost: Wilma may be forced to restate her thesis with a qualifier like 'probably', or 'presumably'. The rules of dialogue are to contain adequate provisions for this. After such an amendment has been made the discussion may shift to some other branch of the profile.

If Wilma does not move out, in the way just described, we shall assume that she holds to the deductive validity of her argument. But, in this branch of the profile, Wilma, as the accused, does not have to prove this deductive validity. She does not have to prove her innocence. Hence, as an alternative to move 7a, it suffices to ask a critical question, for instance: why would my argument be deductively invalid? (move 7b). See Figure 2.

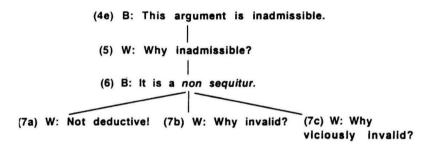
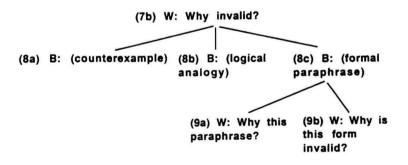


Figure 2.

It is now upon Bruce to fulfil a burden of proof. How can he show Wilma that her argument is invalid? Notice that all Bruce has to do is to convince Wilma of this, and that 'proof' in an absolute sense has no role to play in the present discussion. Three techniques Bruce could use are the following (see Figure 3):





- (8a) The method of *counterexample*. This is the royal road of showing invalidity. A definitive proof of invalidity to which Wilma cannot refuse her assent is actually feasible, even if it is not the case that the premises are all true whereas the conclusion is false. According to Massey this is not possible, but Massey, as we shall see, is wrong. I shall return to this move in the next section.
- (8b) The method of *logical analogy*. This technique consists of drawing up another, formally analogous, argument such that it can be shown (to Wilma) that its premises are true, whereas its conclusion is false. This may induce Wilma to admit that her own argument was invalid 'by parity of reasoning' (Woods and Hudak 1989). However, for the purpose of undercutting a pretence of deductive validity, the method is less straightforward than that of giving a counterexample.
- (8c) The method of *formal paraphrase*. This presupposes the presence of some logical skills among the participants. Bruce is to paraphrase Wilma's argument in some formal logical system. The reason that the argument is invalid is expressed as follows: 'this paraphrase captures the gist of your argument (meaning: the ground for its presumed validity), and this paraphrase constitutes an invalid logical form'.

Wilma may, in branch 8c, go on and question why this would be a paraphrase capturing the gist of the argument (move 9a). And Bruce may have a hard job, if he wants to press this on. But remember that in this branch the participants are supposed to avail themselves of some logical skills. Presumably, there are cases in which Wilma would be willing to grant that a certain paraphrase is adequate. After all, those who refuse to grant concessions with unreasonable stubbornness are, in the long run, checked by the company of discussants! Once this point has been granted, there is still the question of whether the invalidity of the logical form in question can be sustained (move 9b). Bruce has to show this by logical techniques, for instance that of defining a countermodel to the form in question.⁵ If Bruce succeeds, Wilma must admit that her original argument was invalid.

If Wilma cannot be brought to concede the invalidity, she stands acquitted of having committed a *non sequitur*. But even if she does concede this, the verdict is not complete. She may ask Bruce to show her that this particular type of invalidity is vicious, i.e., that it is indeed proscribed by the code (move 7c). What Bruce's task now amounts to depends heavily on the details of the code. For instance, the code may stipulate that a case of invalidity, in order to count as a fallacy, must be discoverable

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A countermodel is often called a counterexample, but then it is a counterexample in a sense different from that presupposed in the description of move 8a. Cf. Note 2.

by a number of standard checks, so that Wilma may be held responsible for not having gone through these checks. Let us now suppose that Bruce manages to show that these conditions are indeed fulfilled. Then the verdict *non sequitur* can be pronounced, and Wilma may be sentenced to the retraction of her argument. She may also be held accountable for the costs of the procedure. But if she is acquitted Bruce will have to pay these costs.

To end this section, let us return to the concept of a formal fallacy. Since all *non* sequitur arguments are invalid, and since all invalid arguments are formally invalid (i.e., not formally valid), all cases of *non sequitur* are, trivially, cases of formal fallacy. But the formal aspects are most prominently found in branch &c. Perhaps it is better to reserve the verdict formal fallacy (in a strict sense) to those cases of *non sequitur* that are shown to be invalid by a discussion along that branch. But that will make the notion of a formal fallacy dependent upon the way the discussion is carried on. By these lights, there aren't any formal fallacies per se, yet there are techniques that may lead one to concede having committed such a fallacy, that is, to have misused logical forms in one's thought process.

5. Counterexample and invalidity

According to Massey there is only one legitimate method of establishing the invalidity of an argument: show it to have true premises but a false conclusion. This he calls 'the trivial logic-indifferent method' (Massey 1975a: 64, 1981: 494). Massey writes:

Apart from the trivial logic-indifferent method, I claim, there is no method whatsoever of establishing invalidity that has theoretical legitimacy. To falsify this claim a single counter-instance would suffice. To date my critics have failed to provide any. (Massey 1981: 494)

The reason he gives to support his claim is, roughly, that arguments can be paraphrased in many different ways and that, therefore, an argument that fails to yield a valid form in one system of logic, may still yield a valid form in some other system, the class of systems being open-ended.

If Massey's claim were true, it might still be possible to gain someone's concession that his argument was invalid, but it would be *very* hard to pin the recalcitrant down to their fallacies of *non sequitur*. Except, of course, in those cases where the trivial logic-indifferent method works. But matters are different. There is another method, and this method, the method of counterexample, provides a strong and solid instrument for showing invalidity. Consider the following argument (Massey 1975a: 65, 1981: 495):

If Harrisburg is the capital of Pennsylvania, then Pittsburgh is not. Pittsburgh is not the capital of Pennsylvania.

Harrisburg is the capital of Pennsylvania.

Even though the propositional form of this argument can be shown to be invalid by truth tables, the invalidity of the argument itself cannot be thus established. After all, there might be some other system of logic in which the argument could be paraphrased so as to exhibit a valid form. Since the conclusion is true, Massey's trivial logic-indifferent method cannot be used either. The method of counterexample, however, works. Suppose that Philadelphia were the capital of Pennsylvania. This fictitious situation is what I call a counterexample. To be more precise: there is in this situation a unique capital of Pennsylvania, and this capital is Philadelphia. So Harrisburg would not be the capital of Pennsylvania in this situation, hence the conclusion would be false, and the first premise would be true, since it now would have a false antecedent. Also, Pittsburgh would not be the capital of Pennsylvania, hence the second premise would be true. Thus the premises would be true, and the conclusion would be false. The imagined situation constitutes a counterexample, and, by definition, the argument is invalid. (Therefore, it must also be *formally* invalid, according to any respectable system of logic.)

In general, the method of counterexample works as follows: find an obviously consistent set of logically simple and perspicuous sentences that together demonstrably entail the truth of the premises and the falsity of the conclusion, i.e., find the description of a counterexample. A counterexample may be fictitious, therefore it is not required that these sentences be true. To find the required set, logical analysis may be very helpful. E.W. Beth's method of semantic tableaux, in particular, is an effective instrument for the discovery of counterexamples. But in order to convince one's opponent, one need not expound the techniques used in the discovery of the counterexample. It suffices to convince her that these sentences describe a possible situation, and then derive the required truth values for the premises and conclusion of the original argument.

The method of counterexample does not merely reduce the problem of invalidity to the problem of consistency. These problems are, of course, equivalent, and a reduction of one to the other would not, by itself, constitute any advance. The method, however, does more: it reduces complicated cases of invalidity (or consistency) to relatively simple cases of consistency and entailment. Massey's trivial logic-indifferent method constitutes just a special case: the case where we present (part of) the actual world, instead of some fictitious world. But the actual world is just one of the possible worlds. Why would it be theoretically illegitimate to use our imagination?

6. Conclusions

We saw that charges of having committed a formal fallacy can be made in persuasion dialogue, but that a more prominent place may be given to the charge of having committed a *non sequitur*. The metadialogue in which the critic tries to substantiate a case of *non sequitur* is concerned with two claims: on the one hand, there is the claim that the original argument was invalid, on the other hand there is the claim that this

is a vicious type of invalidity, that it constitutes a violation of dialogue rules. The critic has to establish both claims in order to make the charge stick.

To show invalidity the critic may avail himself of several techniques: counterexample, logical analogy, and formal paraphrase. The use of these techniques is, by the way, not restricted to a metadialogue that follows upon a charge of fallacy. The very same techniques can also be used in active criticism (branch 4d of the profile), where there is no charge of fallacy.

The most vigorous technique is that of presenting a counterexample. The Oliver-Massey thesis propounding the asymmetry between the methods of proving validity and the methods of proving invalidity can not be taken to imply that there is no robust method of showing invalidity, and hence does not stand in the way of establishing cases of *non sequitur*.⁶ The method of counterexample seems even strong enough to warrant charges of *non sequitur* fired at 'monolectic' arguments, such as argumentative texts (which according to a pragma-dialectical tenet are to be viewed upon as implicit discussions). That is, the method could be used to show that any reasonable reconstruction of a certain (monolectic) argument is invalid, and that this invalidity is of a type that a responsible author should have avoided.

Whether a fallacy of *non sequitur* is to be called a formal fallacy in the strict sense depends upon the way the invalidity claim was defended in dialogue. It is proposed that this label be restricted to cases where the, relatively sophisticated, technique of formal paraphrase has been used. This technique, in order to be successful, presupposes a fair degree of cooperativeness on the side of the accused: at a certain point she is to stop quibbling about the paraphrase.

It seems that the answer to the question whether we can ever pin the opponent down to a formal fallacy must be: yes we may be able to pin her down, but only if she lets us.

⁶ Cf. Govier (1987): Ch. 9: 'Four reasons there are no fallacies?', Section 2: 'Formal invalidity as no story'.

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