

Begging the Question is Not a Fallacy

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1. *Getting started*

The present essay is part of a larger project with Dov Gabbay on the logic of practical reasoning. One of the principal foci of this work is the role of error in the cognitive economies of human reasoners. Logicians have been interested in error since the founding of their discipline. By and large, they have restricted their attention to three theoretical targets: the deductive error of invalidity, the non-demonstrative error of inductive weakness, and fallacies, characterized by Michael Scriven as “the attractive nuisances of argumentation” ([Scriven, 1976, p. 333]). In recent writings or in work under way, Gabbay and I have questioned the assumption that invalidity and inductive strength are in fact errors just as they stand ([Gabbay and Woods, 2007a]).¹ We have also advanced – with a tentativeness appropriate to its radicality – what we call the Negative Thesis. To see what the Negative Thesis proposes, it is necessary to take note of both the identity of the concept of fallacy which tradition has passed down to us, as well as the traditionally agreed members of its extension. The Negative Thesis asserts that the traditionally received list of the fallacies are not in fact in the extension of the traditionally received concept of fallacies ([Gabbay and Woods, 2007a]).^{2,3}

We are not in the least doubt that the Negative Thesis will strike many people as preposterous. What could be more obvious than that *ad hominem* retorts are destructively fallacious, that hasty generalization is a great folly,⁴ that begging the question is a despoiler of argument, and so on? The job of answering this scepticism is the business of our book in progress, *Seductions and Shortcuts: Error in the Cognitive Economy*⁵. My present purpose is to test the waters in a more modest way. I want to examine whether I can make good on the Negative Thesis in the particular instance of begging the question. Doing so will require us to have at hand an appreciation of the traditional concept of fallacy and the traditional concept of begging the question. I turn to these matters in reverse order in the next section. But first a word of clarification. In my usage here, the

¹ For one thing, most good reasoning and most good arguments are invalid and/or inductively weak. This inclines Gabbay and me to the view that validity and inductive strength are appropriate standards only relative to the reasoner’s cognitive agenda. For more on the relativity of error see [Gabbay and Woods, 2007a].

² Of course, there is not perfect unanimity about what the traditional fallacies have turned out to be in the present day. But most of the proffered lists exhibit a considerable overlap. [Woods, *et al.*, 2000] records the following eighteen: *ad baculum*, *ad hominem*, *ad misericordiam*, *ad populum*, *ad verecundiam*, *ad ignorantium*, affirming the consequent, denying the antecedent, begging the question, equivocation, amphiboly, hasty generalization, *post hoc, ergo propter hoc*, biased statistics, composition and division, faulty analogy, gambler’s and *ignorato elenchi*.

³ The present author is also of the view that the same kind of “disconnect” is demonstrable in Aristotle’s writings on fallacies; that is to say: that Aristotle’s list of the fallacies fails to satisfy his definition of them. I have tried to defend this claim in the case of the Aristotelian fallacy of Many Questions in [Woods, 2007a]. For a discussion of the connection between many questions in the modern sense and question-begging see [Jacquette, 1994].

⁴ For an attempt to apply the Negative Thesis to the *ad hominem* see [Woods, 2007c] and to hasty generalization see [Woods, 2007d].

⁵ Volume 3 of the omnibus work *A Practical Logic of Cognitive Systems*, Amsterdam: Elsevier/North-Holland, to appear in 2008.

expression “the traditional concept of *K*” means the standard present-day understanding of *K* as it has evolved over time.

2. *The modern conception of question-begging*

The idea that begging the question is a fallacy originates with Aristotle,⁶ as does the idea of fallacy itself.⁷ Given logic’s already long history, it should not be surprising that Aristotle’s views of these matters appear to have been superseded. But the modern view retains the original connection, for here too question-begging in the modern sense is said to be a fallacy in modern sense.⁸ As currently conceived of, begging the question and fallacies can be characterized in the following way:

- *Begging the question.* Let τ be a thesis advanced by Smith. Let α be a proposition forwarded by Jones as counting against τ . Then Jones begs the question against Smith’s thesis τ iff
 - 1) α is damaging to τ ,
 - 2) α is not conceded by Smith, does not follow from propositions already conceded by Smith, and
 - 3) is not otherwise ascribable to Smith as what we might call a “reasonable presumption” or a “default” (for example, the belief that water is wet or that Washington is the capital city of the United States).⁹
- *Fallacies.* A fallacy is an error of reasoning that satisfies the following conditions:
 - 1) the error is an *attractive* one
 - 2) it is a widely-committed or *universal* error, and
 - 3) it exhibits a substantial degree of *in corrigibility*; that is to say, levels of post-diagnostic recidivism are high.

⁶ See, for example, *Soph. Ref.* 5, 167^a, 37-40; 6, 168^b, 25-27; 7, 169^b, 13-17; 17, 176^a, 27-32; *Top.* 8, 161^b, 11-18; 162^b, 34-163^a, 13, 28; *Pr. Anal.* 24, 41^b, 9

⁷ Aristotle characterizes fallacies as arguments that appear to be syllogisms but in fact are not syllogisms (*Soph. Ref.*, 169, 17-21). A syllogism, in turn, “rests on certain propositions such that they involve necessarily the assertion of something other than what has been stated.” (*Soph. Ref.* 165^a, 1-3).

⁸ See, for example, [Johnson, 1967], [Sanford, 1972], [Barker, 1976], [Woods and Walton, 1975], [Woods and Walton, 1977], [Woods and Walton, 1978], [Mackenzie, 1978], [Walton, 1991].

⁹ These conditions are discussed further in [Woods, 2004, chapter 1].

If we add to our list of conditions that fallacies are also bad, we might propose an acronym BEAUI made up of the first letters of “bad”, “error”, “attractive”, “universal” and “incorrigible”.

That the BEAUI conception is the traditional concept of fallacy is attested to by a number of writers. Here again is Michael Scriven:

Fallacies are the attractive nuisances of argumentation, the ideal types of improper inference. They require labels because they are thought to be common enough or important enough to make the costs of labels worthwhile ... ([Scriven, 1976, p. 333]).

The same view is echoed by Trudy Govier.

By definition, a fallacy is a mistake in reasoning, a mistake that occurs with some frequency in real arguments and which is characteristically deceptive ([Govier, 1995, p. 172]).

It is endorsed by David Hitchcock as

the standard conception of fallacy in the western logical tradition ([Hitchcock, 2006, p. 1]).

Needless to say, the concept of reasoning exhibits a rather sprawling usage. The same may be said for the concept of “error”. This being so, it would be quite wrong to leave the impression that those who characterize fallacies as errors of reasoning are committed to the view that there is no sense of “reasoning” and no sense of “error” for which there are errors of reasoning that aren’t fallacies. So we must try to be more specific, and say something further about the sense in which the concepts embedded in the claim that fallacies are errors of reasoning actually operate.

It bears on this matter that the concept of fallacy first arose as a logician’s notion, and it has remained one ever since – albeit with some rather scruffy patches¹⁰ – as part of the research programmes of logic. It is quite true, as we will see in the section to follow, that certain disciplines other than logic have appropriated the term “fallacy”. There is nothing as such wrong with these appropriations. The important question is whether they preserve the traditional sense of “fallacy”.

Right at the beginning of it, the founder of logic introduced an interesting pair of distinctions. One is the distinction between

- *The consequences a set of propositions has*

and

- *The consequences of a set of propositions that it is necessary (or appropriate) to **draw**.*

¹⁰ See [Hamblin, 1970] for a diatribe against logicians for having given up on the fallacies programme.

This contrast is present in the definition of syllogism. A syllogism is an argument whose premisses necessitate its conclusion, and which satisfies further conditions, primary among which are the following two: The conclusion of a syllogism may not repeat a premiss; and no premiss may be redundant.

Consider any successful necessitation-argument which fails these conditions. In each case the conclusion is a consequence of its premisses – it is necessitated by them – yet in each case there are circumstances in which Aristotle decrees that these consequences not *be* drawn. Thus, like error itself, consequence-drawing is appropriate or inappropriate relative to the reasoner’s agenda.¹¹ In marking this distinction, we provide the means to characterize the “logical” meaning of “error of reasoning”.

- *One commits an error of reasoning in one or other of two ways: By inappropriately drawing from a set of premisses a consequence that it has; or by citing (or drawing from) a set of premisses a consequence that it does not have.*

The second distinction, also unmistakably present in *On Sophistical Refutations*, is that between a deduction and an argument. A deduction is a sequence of propositions, the last of which is the conclusion and the rest the premisses, which satisfies the definition of syllogism. Arguments, on the other hand, are concrete affairs, exchanges in real time between actual people. Refutations are paradigms of arguments in this sense. It was Aristotle’s view that the class of arguments in which he was interested all involved the construction of syllogisms. But it is also clear that there is much more (say) to refuting the thesis of an interlocutor than citing or drawing consequences. For one thing, one must ask him the right questions, questions that are designed to elicit answers damaging to his position. So we have a helpful contrast between errors of argument that are errors of reasoning and errors of argument that are not errors of reasoning.

- *In making an argument against an interlocutor one makes an error of reaching if one incorrectly cites a consequence or inappropriately draws a consequence. Other errors that might occur are not errors of reasoning.*

In the *Organon* Aristotle gives dominant attention to relations of deductive consequence. In the modern tradition this exclusivity is relaxed. Consequences are now of any stripe – statistical, probabilistic, abductive, or whatever else – that fall within the ambit of modern logic.

It is hard to see how begging the question in the modern sense squares with the BEAUI-conception of fallacy. Question-begging is an attribution error. Jones’s advancement of α against Smith’s τ presupposes that Smith is committed to α . If, in so assuming, Jones begs the question against Smith, it is clear that his error is one of false

¹¹ A case in point: On most accounts of deductive consequence, a set of premisses has infinitely many consequences. Many logicians, including Aristotle himself, would be of the view that the consequences that a reasonable person would actually draw from this multitude are those propositions *relevant* to the task at hand, that is, to the task that motivated in the first place the reasoner’s interest in knowing what the consequences *are*.

ascription. Jones' move can also be seen as a premiss-selection error. Jones appropriates as a premiss in his attack upon Smith a proposition α that Smith does not accept and is not committed to accepting.

Does this perhaps bring us a little closer to the idea that question-begging is a mistake of reasoning? If we schematize Jones' move as the construction of an argument in the form $\langle \alpha / \sim \tau \rangle$, we can say that the argument is faulty to the extent that it embodies a premiss-selection error, but this is not enough to sustain the claim that, in making the argument, Jones has reasoned badly. For reasoning here is a matter of what consequences Jones draws from α , and, not only is it not obvious that $\sim \tau$ is *not* a consequence of α , the very fact that $\langle \alpha / \sim \tau \rangle$ is a question-begging argument, guarantees that it is.

What these reflections suggest is the usefulness of the distinction between *defective arguments* and *errors of reasoning*. Certainly, someone damages his own argument by the selection of premisses that are not properly available to him; yet, equally, in drawing the consequences of those premisses his reasoning might well be impeccable. If we decided to give sway to this distinction, we could amend the BEAUI-conception of fallacy in the obvious way. We could replace condition (1), according to which a fallacy is an error of reasoning, with a disjunctive variant (1'), according to which a fallacy is an error of reasoning or a deficiency of argument.

There is something to be said for this latitude, not all of it bad.¹² But, on the whole, I think it preferable to resist it. If we allow fallacies to include premiss-selection errors, there is nothing to prevent the idea from extending to the employment of any proposition as premiss if it happens to be false. It is true that some of the falsehoods to which we are drawn are fallacies in the most common non-technical meaning of the term, where a fallacy is simply a widely held false belief. But although not every false belief is a fallacy in *this* sense, our revised definition would make an argument a BEAUI-fallacy if it had any false proposition as premiss.

People's mistaken beliefs range far and wide – from the things of everyday concern, to macroeconomics, biochemistry and theology. If someone soils his argument by appropriating a biochemical falsehood as a premiss, there is plenty of room to think him a defective biochemist but a splendid reasoner. It is true that since the beginnings of systematic logic, fallacies have been associated with defective arguments. But one finds it neither in the ancient writings nor in the traditional modern writings that everything whatever that defaces an argument convicts the miscreant of fallaciousness.¹³ What our present example suggests is that even defective arguments can be occasions of brilliant reasoning. Embedded in this contrast is the well-known distinction between errors of fact and errors of inference. Up to a point, people may classify things as they like. But for those who are attracted by the suggestion that the present contrast captures a significant difference of kind, this will be sufficient to reinforce the traditional inclination to reserve the name of fallacy for transgressions of the second kind only. Accordingly, we might now hazard that

¹² The present suggestion puts one in mind of Hintikka's distinction between *definatory* and *strategic* rules, which is similar but inequivalent. ([Hintikka, 1987], [Hintikka, 1989]). Roughly speaking, a definatory rule is a consequence-spotting procedure. A strategic rule offers guidance as to when it is appropriate actually to apply a definatory rule. Donald Gillies picks up on this distinction, proposing that logic = the definatory + the strategic rules ([Gillies, 1994]).

¹³ I will consider a modern exception in the section just below.

- *Question-begging does not instantiate the BEAUI-conception of fallacy.*¹⁴

3. Reinstating premiss-selection as a mode of reasoning?

Perhaps this would be a good place to explain that I intend no semantic imperiousness about the words “logic”, “reasoning” or “fallacy”. My point is only that the mainstream interpretations of these things create a tangled picture. It is a picture in which if we persist with those interpretations of “logic”, and “reasoning” we will have difficulty in also persisting with this interpretation of “fallacy” in its application to begging the question. What I am proposing is that the disentanglement that best preserves these mainline interpretations is one which leaves them all intact, ruling instead that begging the question in its modern sense is not indeed in the extension of the traditional concept of fallacy. Pivotal to that recommendation is the claim that, in as much as question-begging is a premiss-selection error, it is not an error of reasoning; that is, not an error of reasoning whose attribution and investigation fall within the province of logic as standardly understood.

Some people will not like this at all. Everyone will agree that the reasoning investigated by logic has to do with the citing and drawing of consequences. But it will likewise be agreed that logic also concerns proof, and that proof is a consequence-generating exercise that involves a search for the requisite theorems to serve as inputs. Proofs, too, are premiss-searches; proofs fall within the investigatory reach of logic; proofs are a kind of reasoning; so premiss-searches can be a kind of reasoning.

It would appear that much the same can be said about abduction. Abductions, too, are processes that complete a consequence-connection, albeit often of a softer kind than deductive consequence. The completion is effected when an appropriate hypothesis is grafted onto the reasoner’s database. As we might expect, then, abduction is in part a search for the right hypothesis (as the name “logic of discovery” clearly suggests). If, as many logicians believe, abductive reasoning falls within the bounds of logic, then we seem to have it that hypothesis-searches are modes of reasoning that lie within the competence of logic to pronounce upon.¹⁵

Why, then, would we exclude the premiss-searches that drive the engines of refutation?

Here is why. If I search for a premiss in a proof and fail to find a theorem and/or find a theorem that doesn’t effect the consequence-completion, I have made a mistake of a sort that we might not mind a logician categorizing as a mistake of reasoning. Similarly,

¹⁴ It may be of some interest to note in passing that Aristotle is not indifferent to the problem of faulty attribution. Indeed he thinks that it is related to the fallacy of *ignoratio elenchi* (*Soph. Ref.* 5, 167^a, 21-36; 6, 168^b, 17-21; 169^b, 9-13). This is the mistake of either miseducing a purported consequence of something one’s opponent holds (hence is a mistake of reasoning) or correctly deducing a consequence of something one’s opponent does not hold. Either way, it is a fallacy by Aristotle’s lights. By our own lights, it is in the second instance the argument-error of faulty attribution, but not an error of reasoning, hence not a BEAUI-fallacy.

¹⁵ There are abductive logicians aplenty for whom hypothesis-selection is governed by considerations of relevance and plausibility, both of which properties are the subject of investigation by logicians. See here [Gabbay and Woods, 2003].

if, in casting about for a hypothesis with which to complete an abductive inference, I hit upon a proposition that isn't plausible and/or fails to make the connection, perhaps it is fine to call this a mistake of reasoning of a kind of interest to logicians. But if I am searching for a premiss in a refutation, my candidate is not subject to the condition that it be true or even plausible, never mind that it makes the consequence-connection. All that is further required of this proposition is that *my opponent concede it*. When I get this wrong, there are two cases to consider. In the first case, I believe falsely that my opponent does concede it. In the second case, I know that he doesn't concede it, but attribute it anyway. In the first instance, I am guilty of not knowing something that I should know. But this far from showing that I have been landed in this ignorance by an error of reasoning. In the second instance, I am either stupid – I fail to see that pressing it is useless – or mischievous – perhaps I can catch my *interlocutor* in a hoped-for stupidity. Perhaps my own stupidity – a kind of dialectical clumsiness – is something like an error of reasoning, but such stupidity is not common, to say nothing of universal. On the other hand, if I am being mischievous, I might be trying to get you to make an error – possibly an error of reasoning. But my mischief is not an error of reasoning. I conclude, then, that the premiss-attribution errors that beggings of the question are fail the logician's mainline "error of reasoning" and "fallacy".

4. *Dialectifying the fallacies*

Perhaps the best-known alternative conception of fallacy is that of [van Eemeren and Grootendorst, 1984], in which fallacies are characterized as *any* violation of a discursive rule that governs a particular form of argument which these authors call a "critical discussion".¹⁶ In a more general form, it is proposed that in all or more contexts most – if not all – fallacies are dialectical errors, rather than errors of reasoning or inference.¹⁷ This is not the place to debate these claims in any detail. But I do want to pause long enough to register a basic reservation about the dialectification of fallacies. Of course, some of the things traditionally conceived of as fallacies lay no claim to a dialectical identity – consider for example, the gambler's fallacy or the fallacy of *post hoc, ergo propter hoc*. On the other hand, it is certainly true – as Aristotle was well-aware – that interpersonal wranglings are a natural context for the commission of fallacies, especially those that involve a reference to persons. In this regard, the *ad hominem* comes easily to mind as a typical example. In its modern conception, it takes two forms – the abusive and the circumstantial. The former alleges some flaw of character, the latter a behavioural inconsistency.¹⁸ What counts here is that, whether or not these are indeed fallacies, there is nothing that requires that the person of whom these ascriptions are made be an *interlocutor* of the person who makes them.¹⁹

¹⁶ For reservations, see [Woods, 2004, chapters 9 and 10] and [Woods, 2006].

¹⁷ See here [Hintikka, 1987], and, in reply, [Woods and Hansen, 1997], and in rejoinder, [Hintikka, 1997].

¹⁸ For example, citing an interlocutor's bias is usually thought of as abusive (albeit in a somewhat technical sense), whereas alleging that an opponent's behaviour is a defection from his own views is the circumstantial variant. As mentioned earlier, my own view is that *ad hominem* retorts aren't BEAUTIFUL fallacies either, but that it is an issue for another time ([Woods, 2007c]).

¹⁹ We should mention that on an earlier conception, originated by Aristotle (*Soph. Ref.* 167^b, 8-9 ff; *Pr. Anal.* B27, 70^a, 6-7, *Metaph.* 1006^a, 15-18) and revived by Locke ([Locke, 1699/1975, pp. 686-688]), an *ad*

This allows us to take note of a quite general point. Even if one is arguing against a view held by another person, it is not in the least necessary that one's case be directed to that person himself. One need not have chat with Plato in order to find fault with the Theory of Forms. The same is also true of begging the question. Fallacy or not, it is not essential to its commission that it be spoken to an interlocutor. Plato is dead, alas, but nothing in his death inoculates him against question-begging criticisms of his views. Accordingly,

- *Although n-person disputes are a natural context for the commission of fallacies, fallacies on the BEAUI-model are not intrinsically dialectical.*

Before leaving this section, I want briefly to deal with another objection. It is that what I am calling the BEAUI-conception is in fact *not* the standard conception of fallacy that has come down to us to the present day. Some commentators are of the view that the standard conception is one according to which a fallacy is an *invalid argument* that *appears to be valid*.²⁰ I have three things to say about this complaint.

- 1) With a little imagination, the inapparent-invalidity conception can be seen as instantiating the BEAUI-conception. So the gap between the two conceptions is not as great as might be supposed.
- 2) The claim of the inapparent-invalidity model to standardness is contradicted by the empirical record ([Hansen, 2002]). Roughly speaking, the present definition is not the one proposed by the authors of the standard works.²¹ So it is hard to see how it gets to be the standard definition.
- 3) If the present definition were indeed the standard conception of fallacy, it would remain the case that question-begging is false attribution. And, since picking an unacceptable premiss does not, just so, invalidate the argument in which it occurs, much less disguise its invalidity, question-begging in the modern sense is not a fallacy even on the inapparent-invalidity model.²² So it is not essential to my present purposes whether the inapparent-invalidity model or the BEAUI-model is the standard (modern) conception of fallacy.

5. An ambiguity

hominem move is an intrinsically dialectical manoeuvre, but it is not a fallacy by Aristotle's lights or by Locke's. Nor does it instantiate the BEAUI-conception. See here [Woods, 2004, chapter 7].

²⁰ That this is the standard definition is advanced by, e.g., [van Eemeren and Grootendorst, 1984].

²¹ Chiefly, the standard *textbooks* published in the period 1930 onwards.

²² Lawrence Powers turns the present point on its head. He says that notwithstanding Hansen the standard (and correct) definition is that a fallacy is an invalidity that appears to be valid. Since question-begging arguments are valid, they can't be fallacies ([Powers, 1995]). Powers holds to this definition of fallacy, even though he allows that it is not reflected in the empirical record. Perhaps we might persuade ourselves to agree that this is what the standard definition *should* be. But it is too much of a stretch to insist that this is what it is in fact. (Ought-is problems.) Powers also conflates question-begging with circularity, which certainly doesn't comport with what I am calling the modern conception of question-begging.

This would be a good point at which to take note of a pointful ambiguity in the word “refutation”. In so doing, I want to remove the tentativeness that presently attaches to my principal claim that question begging is not an error of reasoning, hence not a fallacy in the BEAUI-sense. In common parlance, as well as in numerous technical writings, “refutation” has two quite different senses.

- 1) *The propositional sense.* A proposition α is a refutation of a proposition τ iff α negates τ and α is true.
- 2) *The personal sense.* A person Jones refutes the thesis τ of a person Smith iff there is a proposition α which Jones advances, Jones believes that $\alpha \vDash \sim\tau$, Jones believes that Smith accepts α , or would accept it if he considered it, and that Smith accepts that $\alpha \vDash \sim\tau$, or would accept it if he considered it.

In the first sense, a refutation stands or falls independently of what any addressee might think of it. In order to construct a sound refutation in this sense, one must be right about two things. One must be right in thinking that α is true (or anyhow that one’s believing that α is justified), and one must be right in thinking that $\alpha \vDash \sim\tau$. Reasoning correctly is a matter of drawing the right inference from the premisses at hand. Refutations in the first sense fail when the reasoning is defective. (They also fail when a premiss is unjustified, but that is a different matter). It is easy to see that

- *In contexts of disputation between Jones and Smith, two things are perfectly possible with respect to Jones’ argument $\langle\alpha/\sim\tau\rangle$. Jones might beg the question against Smith, and yet Jones might have made a perfectly sound refutation in the first sense of Smith’s thesis τ .*

Refutations in the second sense are another matter. They are a kind of achieving solutions of a kind of co-ordination problem. The problem is one of producing unanimity between Jones and Smith with respect to τ . The problem is solved if both come to agree that τ is not the case, or if both come to agree that Smith cannot consistently hold to τ . Whether τ is or is not in fact the case in fact need not be a factor in the construction of such solutions. Refutations in the second sense are a kind of solution that produces the shared belief that τ is not the case or that Smith cannot consistently persist with τ . Here, too, it is easy to see that

- *Jones’ refutation in the second sense of Smith’s thesis τ succeeds independently of whether it succeeds as a refutation in the first sense. So, $\langle\alpha/\sim\tau\rangle$ can fail as a refutation in the second sense and succeed as a refutation in the first sense.*

Whether a refutation in the second sense succeeds or fails is strictly speaking entirely in the hands of the addressee.²³ He may reject α and he may reject that $\alpha \vDash \sim\tau$. In this, he may be objectively right or wrong, but it doesn't matter. Refuting the addressee is wholly a matter of getting the addressee to give up on τ by way of his concession that α . It goes without saying that

- *If in a refutation in the second sense Jones begs the question against Smith, the refutation fails.*

Clearly, since refutation in the second sense has an expressly dialectical goal, we may surely say that in such contexts, begging the question is a *dialectically unavailing* manoeuvre. Only at the risk of considerable distortion of the concept of error of reasoning is Jones' move an error of reasoning. For in making the error, the following pair of conditions can still hold true:

- 1) Jones had good reason to think that Smith would accept α .
- 2) Jones had good reason to think not only that $\alpha \vDash \sim\tau$ but that Smith would think this too.

Where, then, is Jones' alleged misreasoning to be found? The answer is that it cannot be found. Failed refutations in the second sense are not errors of reasoning.

6. *Correction by contradiction*

Since on the BEAUI conception, a fallacy is always an error of reasoning, question-begging cannot be a fallacy. Fine as far as it goes, it is also advisable to keep in mind that BEAUI-fallacies are errors of reasoning that satisfy the three additional conditions of attractiveness, universality and incorrigibility. This reminds us that there are four ways, not one, in which reasoning can be fallacy-free. It can, as we have noted, fail to be an error. But, error or not, it can also fail to be attractive or universal or incorrigible.²⁴ Consider the universality requirement. As here intended, universality is not a matter of strict universal quantification. It is rather a generic matter. It is not that everyone whomsoever commits the error. Neither is it intended by the universality condition that a fallacy is an error that everyone commits all the time. It is universal in the sense that committing it in the appropriate circumstances is something that is typical of human reasoners to do. So we may say that a form of reasoning is universal when, (a), it is a form of reasoning which is in the repertoire of the typical reasoner and, (b), it is a form of reasoning to which he recurs with notable frequency. No one will think for a

²³ Accordingly, we should also take note of the limiting case in which, although he presses α and $\alpha \vDash \sim\tau$ against Smith, he himself doesn't believe α but does believe that α is something to which Smith is committed. In these cases, the force of Jones' move is to confront Smith with a choice: "You cannot have it both that τ and α . So, if you're going to hold onto α , you'll have to give up on τ ".

²⁴ It can also be an error that is attractive, universal and incorrigible, but not *bad*, concerning which see [Gabbay and Woods, 2007a].

moment that this is as complete an account of universality as it would be desirable to have, but is enough to be getting on with here.²⁵ What I want now to suggest is that there is a second reason for saying that question-begging fails the universality requirement.

We have already – in note 22 – touched on the inclination of some logicians to link question-begging to circularity. This quite naturally calls to mind the following picture: That where τ is some thesis advanced by Smith, any utterance by Jones of an α that immediately implies the negation of τ is question-begging. I want to say two things about this picture. First, the practice it documents is empirically widespread in human dialectical practice. Second, in the general case, it is not question-begging. The two most conspicuous instances of this behaviour are *correction by contradiction* and *counterexamplng*, the first of which we take up now, and the second in the section to follow.

Far and away the most common situation in which a proposition is used against an opponent and implies in one step the negation of what the opponent holds, is correction by contradiction. Here are some examples, with Smith the proponent and Jones the corrector.

1. Smith says: “Tomorrow is Barb’s birthday”. Jones replies: “No, it’s the day after.” Smith responds: “Oh, I see.”
2. Smith says: “Harry is a bachelor and is married to Sarah.” Jones: “Bachelorhood is defined in such a way that that can’t be true.” Smith: “Of course. I was speaking loosely.”
3. Smith: “Some ravens aren’t black.” Jones: “Oh no, all ravens are black.” Smith: “I must have been thinking of swans.”

It is easy to see that in each case Smith contradicts Jones by uttering a sentence which in one fell swoop delivers the negation of what Smith says. In two respects this kind of case differs from those we have been considering. One is that when I contradict you by uttering a α that implies the negation of what you say, I needn’t be attributing to you the belief that α . In some cases, I am *informing* you of something of which you appear to be unaware. In others I am reminding you of something you seem to have forgotten. The other is that a context in which I contradict you in this way needn’t be one in which you

²⁵ Here is a case. Suppose that Jones is examining a sample. Suppose that he is interested in whether it supports the generalization of which it is an instantiation. If the sample is a properly representative one, the generalization may be made. If not, not. (This, anyhow, is the standard story. Let it stand for present purposes.) Jones has two generalization-options. This is the *context* for his subsequent determinations. It bears on this in a crucial way that our record as generalizers from instancial samples is actually quite good. Informally and intuitively, the probability of getting our generalizations right is quite high. We might say that, when it comes to generalization, beings like us have a significantly positive *track-record TR*. If in the present context Jones generalizes correctly, well and good. It is what the relevant *TR* would predict. If she generalizes incorrectly, she has committed the fallacy of hasty generalization. By the universality requirement, hasty generalization is a manoeuvre in Jones’ repertoire that is applied with a “notable frequency”. We can now be a bit more precise about this. Hasty generalization occurs with a notable frequency if and only if in contexts such as these, the frequency of commission is, in the light of *TR*, *anomalous*. Informally, its rate of commission exceeds *TR*’s “margin of error”.

are actually defending τ . In fact, when it succeeds, correction by contradiction pre-empts defence; that is to say, obviates the need for it.

Of course, contradiction-exchanges sometimes do not terminate with Smith's withdrawal of his claim. There are situations in which Smith won't accept the contradicting claim of Jones. When this happens, it would be question-begging of Jones to *persist* with it. It would be a stupid way to argue, but it would not, as we have seen, be an error of reasoning.

7. Counterexamples

Closely related to correction by contradiction is the use of counterexamples as a critical device. As it has evolved in philosophical practice, β is a successful counterexample of α only if β immediately implies $\sim\alpha$, and typically one of three further conditions is met.

1. α is a generalization and β is a true negative instance of it.
2. α is a definition and β is a true conjunction that instantiates its *definiens* and fails to instantiate its *definiendum*, or *vice versa*.²⁶
3. α is an implication-statement and β is a true conjunction of its antecedent and a contrary of its consequent.

It is interesting to observe an apparent asymmetry between producing a counterexample and begging a question. It is an asymmetry of which both parts pivot on the factor of presumed obviousness. Accordingly, whereas " a is a F that is not G" is, if true, a successful counterexample of "All F are G", "All F are G", even if true, has the look of a question-begging move against " a is a F that is not G". Similarly, "This figure is a square that is not a rectangle", if true, is a successful counterexample to "A square = df. a rectangle", yet "A square = df. a rectangle" strikes us as question-begging against "This figure is a square that is not a rectangle". Again, " p and $\sim q$ ", if true, is a successful counterexample against " p implies q ", but " p implies q " has the feel of a question begged against " p and $\sim q$ ". Examples such as these draw us to conjecture that

- *In their typical forms, successful counterexamples are the converses of apparent question-beggings.*

We appear to have it from this that

1. *Neither counterexamplehood nor question-begging is closed under the relation of being the converse of.*

At the heart of these claims is the factor of obviousness. When β is a successful counterexample of a generalization or definition or entailment-statement α , it is taken that β obviously contradicts α and, in many cases, that, *once it is pointed out*, β is obviously

²⁶ Similarly for equivalences generally.

true. In other words, successful counterexamples embed something that closely resembles correction by contradiction.

8. *Explaining the apparent asymmetry*

The issue before us divides into two subcases, depending on whether the interventions are taken as correcting an oversight or as providing new information.

Oversight. The oversight case preserves the asymmetry. If Smith's thesis is that all Fs are G (τ), he needn't be expected to believe, even if true, that a is an F that is G (α). This is perhaps the most valuable insight in Mill's famous analysis of general propositions: α is not in the belief-closure of τ . This being so, if " a is an F that is not G" is advanced against Smith's τ , it directly contradicts a proposition α that is not already in Smith's belief-set. Accordingly, unless there is independent reason to think that Smith is inconsistent with respect to α , there is room for the possibility that " a is an F that is not G" is something that Smith has indeed lost sight of. So pressing against "All F are G" does not beg the question against Smith.

On the other hand, if Smith's thesis is that a is an F that is not G, then that not all Fs are G is squarely in Smith's belief-set. That is, "Not all Fs are G" is in the belief-closure of " a is an F that is not G". Accordingly, if Jones advances against Smith the claim that all Fs are G, he advances a proposition that directly contradicts something in Smith's belief-set, a proposition which, therefore, it cannot (assuming consistency) be supposed that Smith has merely overlooked. So pressing it against " a is an F that is not G" begs the question against Smith.

New information. Here the asymmetry is erased. In principle, a subject is free to accept as new information anything that immediately contradicts something he currently believes. In principle, then, the asymmetry under review is disappears in any such context. It is hardly surprising, therefore, that it is a matter of empirical fact that practical agents are more open to accepting new information when it performs the function of a counterexample, rather than its converse.

A question-begging move is one in which Jones forwards against Smith a proposition α that Smith doesn't concede and that directly implies the contradictory of some thesis of Smith's or proves otherwise damaging to it. Schematically, Jones begs the question against Smith in pressing that $\langle \alpha / \sim \tau \rangle$. The empirical record clearly attests that in actual practice the great percentage of uses of $\langle \alpha / \sim \tau \rangle$ are in the contexts of correction by contradiction or counterexamplng, neither of which is question-begging as such. It follows, then, that if there are uses of $\langle \alpha / \sim \tau \rangle$ which are question-begging, they are *minority* uses of it. This suggests the failure of the universality condition. If in its minority uses $\langle \alpha / \sim \tau \rangle$ is question-begging, it would need to be shown that such uses are both in the repetoires of the typical reasoner and are resorted to by him with notable frequency. But here, too, the empirical record suggests otherwise, especially in the second instance. We may therefore conclude that

2. *In the form in which it has attracted the attention of logicians (i.e., as a move in the form $\langle \alpha/\sim \tau \rangle$, question-begging fails the universality requirement, and which is a further reason that it fails to be a BEAUI-fallacy.*

9. Babbling

In its present-day meaning, babbling is foolish, excited or confused talk. For Aristotle, however, it has a quite different meaning which I shall now briefly explain. According to Aristotle, one babbles when one repeatedly re-asserts one's own thesis (*Soph. Ref.* 3, 165^b, 15-17). Suppose that Jones has placed Smith's thesis τ under challenge. Suppose further that until now Smith has never been challenged to defend τ , that, until now, Smith has simply taken it for granted that τ is a proposition that everyone sees as obviously true. (For concreteness, let τ be the proposition that same-sex marriage is morally (or metaphysically) unsupportable). It is easy to see the difficulty that Jones has placed Smith in. For, while it cannot be ruled out that Smith has a perfectly satisfactory case to make for τ , very often in just this kind of situation, he has no case to make. If, up until now, no case has been demanded, if, up until now, no case has appeared necessary, it is not surprising that Smith may lack the resources to mount a defence of τ there and then.²⁷

In such cases, Smith is faced with two options, both of them unattractive. One is to admit that τ is a proposition which he is unable to defend.²⁸ The other is to stand mute. The first is unattractive since it snags the presumption that challenges that draw no defence require the surrender of the thesis in question. The other is unattractive, since it convicts Smith of unresponsiveness. It is not uncommon in such cases for Smith simply to re-assert or re-phrase τ . In so doing, he performs the minimally necessary task of avoiding the other two options, each of which would be presumed to call for capitulation. In so doing, he keeps the conversation going; he keeps his own view of the matter "on the table". Re-asserting a proposition that is under attack is babbling in Aristotle's sense. It is not as such an error. It is not a case of begging the question. However, re-asserting it *as its own defence* does beg the question. It attributes to his attacker a proposition it is clear that he does not concede. Since this is evident to both parties, the begging of the question is rather stupid. It is a dialectically unavailing thing to do. But it hardly ever happens. Sticking to your guns when under attack is one thing. Using the proposition under attack as its own defence is another thing (and a comparative rarity).²⁹

Babbling is a kind of question-begging. It most nearly resembles a defence of τ in the form "Why, τ is obvious". It is a form of question-begging which reverses the roles of Smith and Jones. In the modern sense, Jones, the challenger, begs the question against Smith by attributing to Smith a proposition he doesn't concede. In the present case, it is Smith, the attacked, who begs the question against Jones. The question is whether it is a

²⁷ The dialectical vulnerabilities of this kind of case are discussed in greater detail in [Woods, 2000].

²⁸ Lest I be accused of using a loaded example, the present point applies equally to, say, the proposition that a person's life is his as a moral right.

²⁹ Rare as it is, the practice of defending a proposition by re-iteration or by way of a trivial equivalence is not unheard of, especially among philosophers. A case in point is the defendant's response to a challenge to a proposition he takes to be a "first principle" or analytically true. See here [Woods, 2003, chapter 4] and [Woods, 2005].

fallacy. The answer is that it is not a fallacy on the BEAUI-conception of it. For no one could miss that attributing to Jones acceptance of the very proposition that he judges that Smith has no right to hold, is a blatant premiss-attribution error. It is an error, therefore, that fails the attractiveness condition.

10. *Inconsistent commitments*

Suppose that Smith thinks that λ is false. Let Σ be any set of propositions that entail λ 's truth. On the face of it, Smith has no recourse but to reject Σ . One of the reasons for this is that what Smith thinks is so implies the falsity of the conjunction of the propositions in Σ . Another is that if – on whatever independent grounds – Smith came to accept Σ , he would have begged the question *against himself*. He would have begged the question against himself in a rather special way. Although Smith now concedes the propositions in Σ , he is also committed to rejecting them. He is committed to rejecting them in virtue of his persistence with the falsehood of λ . Upon reflection, however, it isn't very instructive to parse this situation as one in which Smith has begged the question against himself. What has actually happened is that Smith has fallen into an utterly common belief-update problem. Initially taking λ to be false, Smith comes to hold beliefs incompatible with λ 's falsity. Usually, when this is the case, people in Smith's position will restore consistency by changing their minds about λ or about one or more of the propositions in Σ . Sometimes they will be unaware of the inconsistency into which they have fallen. In other cases, they will know it, but will not know how best to climb out of the difficulty. Smith has found himself in an inconsistency-management difficulty, which he will handle intelligently or stupidly or in some other way. In so doing, he may fail to reason in ways that best addresses his problem. But no one seriously thinks that, either in getting into it or getting out of it, circularity or question-begging is the culprit.

11. *Spurious reflexivities*

I have been saying that the form in which it tends to attract the attention of logicians, question-begging is reasoning in the form $\langle \alpha / \sim \tau \rangle$ in which α is unconceded by the defender and immediately contradicts or otherwise damages his thesis τ . In this section and the next I want to touch on forms of question-begging that tend to attract the attention of philosophers.

Consider now what we might call *spurious reflexivities*. In their pure form, spurious reflexivities are sentences in the form $\langle \alpha R \alpha \rangle$, in which α is a sentence and R a non-reflexive relation on sentences. Consider for concreteness various interpretations of R : “causes”, “explains”, “justifies”, and “proves” (in its common sense meaning). A related category is that of circular definition and circular analysis, presented in formulations such as “Being a δ is what the definition of δ -hood is” and “Being δ analyzes what it is to be a δ ”, No one would want seriously to deny that such cases give rise to genuinely interesting problems, of which the so-called Paradox of Analysis is perhaps the most venerable. But it is clear that none of these spurious reflexivities comes within reach of anyone's conception of fallacy, and certainly, in any case, not the BEAUI-conception. Let us take a representative example: “That α is the case explains α 's

being the case”. This is an error, needless to say. But the error is not circularity; the error is *falsity*. It is the error of supposing that explanation is reflexive.

12. Triviality

The Paradox of Analysis is one of a family of problems having to do with triviality. Its modern version was introduced by the American logician C.H. Langford ([Langford, 1942]), although there are clear anticipations of it in antiquity, most notably in Plato’s *Meno* and Aristotle’s *Posterior Analytics*. In Langford’s version, the paradox arises as follows. Suppose we have a concept *A* for which we seek a conceptual analysis. Suppose that some proposes that something is an *A* if and only if it is a *BC*. If the putative analysis is correct then ‘*A*’ and ‘*BC*’ will have just the same information. If that is so, then the analysis is trivial. On the other hand, if it is not trivial to characterize an *A* as a *BC*, the analysis is false.

Another source of the same problem is the complaint of Sextus Empiricus that all syllogisms beg the question or, in its modern variant, that all valid arguments beg the question ([Sextus Empiricus, 1933, chapter 17]). Here, too, the concept of information lies at the heart of the problem. For if an argument is valid, all the information contained in its conclusion is contained in its premisses. Let us call this version the Paradox of Validity.

The connection with circularity is hard not to miss. Circularity may be understood in at least two ways. In one, it is a certain kind of linking of one and the same syntactic item (“Since α , then α ”). In a second, it is a certain kind of linking of semantically equivalent items (“Harry is a bachelor because Harry is a man who has never married”). The Paradoxes of Analysis and Validity introduce a third conception. Circularity is a certain kind of linking of expressions having the same (or subsuming) information-content $\langle \alpha, \alpha \rightarrow \beta / \beta \rangle$.

The conclusion of a valid argument produces no new information, that is, no information not already contained in its premisses. Central to this claim is the notion of information-measure, introduced into the literature by Shannon and Weaver [Shannon and Weaver, 1963]. In this technical sense, not only is Sextus’ claim confirmed, but so too is the classical theorem – *ex falso quodlibet* – according to which an argument with inconsistent premisses is valid for any conclusion. Let α and $\sim\alpha$ be premisses. Then since $\{\alpha, \sim\alpha\}$ contains all information, there is no conclusion β which contains information not contained in $\{\alpha, \sim\alpha\}$. We may say, then, that if, in the claim that an argument is valid if and only if its conclusion contains no new information, the embedded notion of information-quantity is that of Shannon and Weaver, then valid arguments are always circular. On the other hand, if information is taken as *propositional content*, then neither Sextus’ claim nor *ex falso quodlibet* stands up to scrutiny.

Seen the first way, a valid argument can’t be informative. Seen the second way, it can be informative. Seen the first way, a correct conceptual analysis of something can’t be informative. Seen the second way, it can be. Accordingly, a correct conceptual analysis can be circular (in the Shannon and Weaver sense) without appearing to be (since it may not in fact be circular in the propositional content sense). This being so,

- *While there is a sense in which a correct conceptual analysis is circular, it is not a sense in which circularity constitutes question-begging.*

All of this also plays on the problem of determining the closure conditions for belief sets. Let $\langle \alpha/\beta \rangle$ be a valid argument, and let α be in Smith's belief set Σ . Is β in the deductive closure of Σ ? On the Shannon-Weaver model, all the information in β is already in α . If believing β is just a matter of the information imparted by β being contained in what one believes, then in believing α , Smith believes β . So β is in the deductive closure of Σ . On the other hand, if believing β involves an affirmative understanding of it, it is wholly implausible to put β in the deductive closure of Σ as a general principle. Accordingly, classical systems of belief-dynamics, such as *AGM* [Alchóurron *et al.*, 1985]), in which belief is closed under deduction, are right in so saying if belief is taken in the first way, but quite wrong if belief is taken in the second way.

13. *Re-orienting ourselves*

The nub of what I have been saying here is that attribution to another party of a commitment which contradicts or otherwise damages some proposition he has an interest in defending can hardly be regarded as an error of reasoning if the attribution is uncontroverted. Further, in most of those contexts in which such moves are actually made by beings like us, they are either not attribution-errors because they are not attributions (the "new information" cases) or not attribution-errors because they are true (the "overlooked" cases). What is more, while there are some cases in which $\langle \alpha/\sim\tau \rangle$ does employ an α that begs the question against the thesis of another party, these are dialectically unavailing moves to make, but they are not errors of reasoning.

If the onus of the preceding pages has now been met, we may say that the Negative Thesis is lent a degree of positive support by the real story of begging the question. Even so, most of the work required for the justification of this piece of heterodoxy still waits doing. This might seem to make of our present result rather small beer. For if there are eighteen things claimed to be fallacies, and begging the question is falsely in the embrace of that claim, that still leaves the other seventeen to take the proper measure of.

On the principle that one can only journey one step at a time, perhaps a record of one-out-of-eighteen is not so bad a result early in the proceedings. But we might also consider with some profit what we should think of a perfect record were possible eventually to produce it. In that case, none of the traditional fallacies would be in the extension of the traditional concept of fallacy. Although some people might see this as a kind of *tour de force*, others might have questions that evince a degree of underwhelmedness. Here are some of them.

1. If none of the traditional candidates (the "usual suspects", as we might say) is in the extension of the traditional concept of fallacy, what if anything, *is*?³⁰

³⁰ One prominent candidate is the "Conjunction fallacy" of [Kahneman and Tversky, 1974]. For reservations see [Gabbay and Woods, 2007].

2. If, as it turns out, the traditional concept of fallacy is empty (or nearly so), wouldn't that show that the traditional concept of fallacy is like (or nearly like) the traditional conception of phlogiston?
3. If it were true that none of the eighteen is a fallacy in the traditional sense, might it not be the case that our rather firm intuition that they *are* fallacies would be better served by a concept of fallacy that preserves it? And, if so, shouldn't be after all consider giving pride of place to the *dialectical* concept of fallacy, along the line proposed by Hintikka and others?³¹

These are fair and interesting questions. I see no reason to be discouraged by them, or to be led to think that the emptiness or near-emptiness of the traditional concept of fallacy is an underwhelming result. On the contrary, it would be a result with lots of whelm. It would lend some encouragement to two interesting conjectures which, if true, would be important to know.

Conjecture 1. In its traditional preoccupation with deductive invalidity and inductive weakness, as well as with the fallacies as traditionally conceived, logic has not managed to engage the concept of error in a central way.

Conjecture 2. Granting that the eighteen are in *some* non-trivial sense errors, our failure to convict them of fallaciousness on the logician's traditional understanding of "error of reasoning" and "fallacy" suggests that human reasoners are not sufficiently inept at citing and drawing consequences to produce a track-record widespread enough and bad enough to satisfy the traditional concept of fallacy. Needless to say, beings like us hold lots of false beliefs, some of which are nothing short of appalling. But if the present suggestion has merit, these will not in the main be the result of faulty consequence-management.

Besides, it was quite worthwhile to learn that phlogiston was, well, *nothing*.³²

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³¹ For example, [Walton, 1995].

³² I take pleasure in dedicating this paper to our admired colleague Shahid Rahman on the occasion of his 50th birthday. For helpful comments or instructive demurrals, I warmly thank Peter Bruza, the late Jonathan Cohen, Bas van Fraassen, Dale Jacquette, Lawrence Powers, Patrick Suppes and, of course, my colleague in the investigation of the logic of practical reasoning, Dov Gabbay. I also acknowledge with gratitude financial support from The Abductive Systems Group at UBC and the Engineering and Physical Sciences Research Council of the United Kingdom, and the technical assistance of Carol Woods in Vancouver.

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