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# Thick Cogency

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A cogent argument, in its most generic sense, is a good argument; an argument by which you ought to be persuaded. But of course good arguments can be distinguished from bad arguments along many different dimensions. My aim in this paper is to develop an account of cogency which is available to individual arguers, as a practical and serviceable guide to which they can appeal, in evaluating arguments and monitoring their own argumentative behaviour.

Therefore, it won't do, for our purposes, to define cogency solely in terms of such laudatory "objective" properties as truth, validity or soundness. Argument (A), for example,

- (A) 1. Arithmetic is incomplete.  
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- 2. Minds are not machines.

might very well be sound. But that argument (A) is sound is by itself no reason for you to believe that proposition (2) is true – since you may not believe that (A) is sound. You may not even (be able to) understand proposition (1), or you may not (be able to) understand that (never mind how) (2) follows validly from (1). So, insofar as you have no reason within this context to feel confident that (2) is true, you ought not to be persuaded to believe (2), on the basis of (1).

At the same time, merely believing that (A) is sound does not guarantee that you ought to be persuaded by this argument. You might believe that (A) is sound only because Max told you so, and you might quickly realize, on reflection, that Max's testimony regarding philosophical matters is generally unreliable. So your belief about (A) may not withstand (even the mildest) critical scrutiny. So, once again, insofar as you are not justified in this context in feeling confident that (2) is true, you ought not to be persuaded to believe (2), on the basis of (1).

We'll therefore adopt a middle path according to which you ought to be persuaded by an argument *A* just in case it's rational for you to believe that *A* has certain (soon to be specified) properties; where it's *rational* for you to believe a proposition *P* just in case you are justified in feeling confident that *P* is true. This understanding of rational belief is deliberately vague, and hopefully innocuous enough that readers can embellish the following account of cogency, as they see fit, by plugging in any preferred, more robust conception of rational belief. However, we will insist upon readings which are "internalist" in the following sense. It must be possible for individuals, in their current epistemic state, to form rational beliefs about the rationality of their own beliefs. We'll insist, that is, that individuals generally have epistemic access to whatever information is required in order for them to make an appropriate determination as to whether any particular belief of theirs is rational; and it must be possible for them to process that information so that they are able to appreciate, in some principled way, when their feelings of confidence in the truth of their beliefs are justified, and when those feelings are not justified. This of course

does not mean that an individual's judgments about the rationality of her own beliefs are infallible. (We uncontroversially allow for the possibility that rational beliefs, of this internalist sort, can be false.) But unless something like these conditions are met – unless an individual can realistically apply the relevant standards of rational belief to her own beliefs – any appeal to such standards would be of no practical assistance to individuals interested in monitoring their own argumentative behaviour.

Our account of cogency is therefore designed to delineate the conditions under which it's rational for an individual to believe the conclusion of an argument, on the basis of the evidence cited within that argument's premises. And since we're operating with an internalist conception of rational belief, we can also say that an individual who is persuaded to believe the conclusion of an argument, which is cogent for her, has behaved in a (propositionally) *non-culpable* fashion. She has adopted a belief in a conclusion on the basis of certain beliefs, in other propositions, which are rational in the sense that they would withstand critical scrutiny, relative to her current epistemic state. So she can't be faulted for being persuaded by *those propositions* (although it's a separate question whether she is blameworthy because of the specific manner by which she holds, or has come to adopt those rational beliefs). Conversely, an individual who is persuaded to adopt the conclusion of an argument, which is not cogent for her, has behaved in a (propositionally) *culpable* fashion. She has adopted a new belief on the basis of certain beliefs in other propositions, when she herself is in a position to recognize that her confidence in the truth of those beliefs is not justified. By her own lights, she ought to have known better. So she can be faulted for being persuaded by *those propositions* (although it's a separate question whether she is blameworthy because of the efforts she has, or has not made to avoid having irrational beliefs).

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Typically, whatever we believe, we believe to be true. And, generally speaking, we engage in the practice of argumentation because we're interested in acquiring true beliefs and avoiding false ones. So you ought to be persuaded to adopt a new belief, within an argumentative setting, only if that belief is acquired under conditions which would justify you in having confidence that the belief is true. More precisely, we'll say that an argument *A* is *cogent* for you just in case, relative to your current epistemic state and the broader argumentative context, it's rational for you to believe that

- (i) each proposition within *A*'s premise set *S* is true – the **T** condition
- (ii) *S* is relevant to *A*'s conclusion – the **R** condition
- (iii) *S* grounds *A*'s conclusion – the **G** condition, and
- (iv) *A* is compact – the **C** condition.

These four conditions are individually necessary and jointly sufficient for argument cogency. An argument is *non-cogent* for you just in case it's not cogent for you, i.e. just in case it's not rational for you to believe that all four clauses (i) - (iv) are true. And an argument's *premise set*, of course, includes all and only those propositions which function within that argument as premises.

Since cogency represents one kind of argumentative ideal, and since an argument is an attempt to rationally persuade someone to adopt a certain belief *on the basis of the evidence cited*, this account of cogency is guided by the following intuition. A good argument — an argument by which you ought to be persuaded — offers evidence in such a way that it appeals

only to accurate information, that every premise within the argument contains information which plays some essential role in providing evidential support for the argument's conclusion, and that the premises collectively offer enough evidence to justify belief in the argument's conclusion. More precisely, the four **TRGC** cogency conditions (which you can think of as "the really good conditions," if you're looking for a mnemonic device) ought to be interpreted as follows.

Clause (i) states the most straightforward condition, and requires just that it's rational for you to believe, of each premise within the argument, that it is true. The truth values of an argument's premises are typically independent of one another, and usually must be ascertained on an individual, case-by-case basis. However, when this is not so, in assessing whether an argument passes the **T** condition, one must also ensure that there is no (perceived) logical or empirical incompatibility within the argument's premise set. The **T** condition requires that it's rational for you to believe that the argument's premises are true together, at the time at which the argument is being appraised for cogency.

It follows that argument (B), for example,

- (B) 1. Bunny is from Bimini.  
 -----  
 2. Bunny is from the Bahamas.

is not cogent for you, if it's not rational for you to believe that (1) is true, even if Bunny is in fact from Bimini. But if Bunny is not from Bimini, (B) may nonetheless still be cogent for you, if it's rational for you to believe that (1) is true.

Regarding clause (ii), we'll say that a proposition *P* is *relevant* to a proposition *Q* just in case the truth of *P* would provide evidence in favour of the truth of *Q*; and that a set of propositions *S* is *relevant* to a proposition *Q* just in case, were the propositions within *S* all true, together they would provide evidence in favour of the truth of *Q*. So by "relevance" we mean what other philosophers have called positive, or favourable propositional relevance.

In order for a set of premises to be relevant to a conclusion, some premise(s) within that set must play some role, possibly in conjunction with other premises within the set, in providing evidential support for that conclusion. Otherwise, it wouldn't be possible for the set of premises, as a whole, to provide information which counts in favour of the truth of the argument's conclusion. It's not required, however, that each, or indeed any premise be relevant on its own to the argument's conclusion. Nor is it required that each, or indeed any premise within the set be true. Therefore, a set of premises can be relevant to a conclusion while containing nothing but (true or false) propositions which are irrelevant on their own, but relevant, in conjunction with other premises within the set, to that conclusion. And a set of premises can be relevant to a conclusion while containing some (true or false) propositions which are, as we'll say, *altogether irrelevant* to that conclusion, i.e. irrelevant both on their own as well as when considered in conjunction with the remaining propositions within the argument's premise set.

Clause (ii) requires that it's rational for you to believe, of an argument's entire premise set, that that set is relevant to the argument's conclusion. That is, it requires that it's rational for you to believe that the argument's entire premise set would provide some evidential support for the argument's conclusion, on the assumption that each of the premises within that set is true. With respect to the **T** and **R** conditions, therefore, it's possible, and in fact common for a particular argument to pass one of these conditions and yet fail the other, relative to the epistemic

state of someone appraising that argument.

Argument (C), for example,

- (C) 1. Camels are native to Cameroon.
- 
- 2. Camels are native to West Africa.

is not cogent for you, if it's not rational for you to believe that (1) is relevant to (2), although (1) in fact is relevant to (2). And even if it is rational for you to believe that (1) is relevant to (2), (C) will still fail to be cogent for you, provided it's not rational for you to believe that (1) is true.

Argument (D), on the other hand,

- (D) 1. Camels are cute.
- 2. Whatever is cute is cuddly.
- 
- 3. Camels are cuddly.

could be cogent for you, even though it's rational for you to believe that neither (1) nor (2), on their own, provide any relevant support for (3). (D) could be cogent for you if it's rational for you to believe that (1) and (2) together provide evidence in support of (3). However, (D) would still fail to be cogent for you, if it's not rational for you to believe that (1) and (2) are (or could ever be) true together.

With respect to clause (iii), we'll say that a set of propositions *S* grounds a proposition *Q* just in case, were the propositions within *S* all true, together they would provide *enough* evidence in support of *Q* to make it rational for you to believe that *Q* is true. It follows that it's a necessary (but not a sufficient) condition of a set of premises grounding a conclusion that that set must be relevant to that conclusion. No set of premises can provide enough evidence to justify belief in a proposition (under certain conditions) unless it provides some evidence which counts in favour of that proposition (under those same conditions). However, it's not necessarily true of a *grounded argument* – an argument in which the premises ground the conclusion – either that *A* contains all true premises or that every premise within the argument plays some role in providing evidential support for *A*'s conclusion.

The **G** condition is the most complex of the four cogency conditions, since it contains one rationality clause embedded (or nested) within another. An argument *A* passes the third cogency condition for you just in case it's *rational* for you to believe that the premises of *A*, were they all true, together would provide enough evidence in support of *A*'s conclusion to make it *rational* for you to believe that conclusion. That is, an argument passes the **G** condition for you just in case it's rational for you to believe that its premise set grounds in its conclusion.

Since every set of premises which grounds a conclusion is also relevant to that conclusion, if it's rational for you to believe that an argument *A* is grounded, then it will (almost certainly) be rational for you to believe that *A ipso facto* contains a relevant premise set as well. However, it's possible for an argument to pass the **R** condition and fail the **G** condition, relative to the epistemic state of someone appraising that argument. It's possible that it's not rational for someone to believe that a premise set provides enough evidence to justify belief in an argument's

conclusion, but that it is rational for that same person to believe that that set provides information which counts in favour of that conclusion. For many people, argument (E), for example,

- (E) 1. Camels have large incisors.  
 -----  
 2. Camels are carnivorous.

would pass the **R** but fail the **G** condition. Whether (E) would pass or fail the **T** condition, for any particular individual, is of course an independent matter.

Regarding clause (iv), we'll say that an argument *A* is *compact* just in case each proper subset of its premise set *S* provides less evidential support for *A*'s conclusion than does *S* itself. (An argument is *non-compact* just in case it is not compact.) It follows, if *A* is compact, that each premise within *S* plays some essential role in providing a certain level of evidential support for *A*'s conclusion, since removing any single premise from *S* would decrease the particular level of evidential support provided by *S* for *A*'s conclusion. Therefore, the information contained within the premise set of a compact argument is packaged in such an economical or "compact" fashion that no premise contains information which is either altogether irrelevant to the argument's conclusion (because it has no bearing on that conclusion, even when considered in conjunction with other propositions within the premise set) or superfluous to providing a certain level of evidential support for that conclusion (because that information is redundant given the information provided by the remaining propositions within the premise set).

It follows that every compact argument contains a premise set which is relevant to that argument's conclusion. For suppose that the premise set of an argument *A* fails to be relevant to *A*'s conclusion. Then those premises collectively offer *no* evidential support for that conclusion. So no proper subset of *A*'s premise set can offer *less* support (than no support). So *A* is a non-compact argument. Therefore, if it's rational for you to believe that an argument *A* is compact, then it will (almost certainly) be rational for you to believe that *A ipso facto* contains a relevant premise set as well.

However, just as it's possible for a premise set to be relevant to a conclusion without grounding that conclusion, it's possible for a premise set to ground the conclusion of a non-compact argument. Suppose that argument (F), for example,

- (F) 1. Fiona does not know how to operate the flamethrower.  
 2. Fiona has fair skin.  
 -----  
 3. We shouldn't hire Fiona to operate the flamethrower.

is offered within a context in which someone is needed to operate the flamethrower immediately. So (1), on its own, disqualifies Fiona from being a suitable candidate for this position. That is, (1) grounds (3). Proposition (2), however, being an expression of racial prejudice, is altogether irrelevant to (3). Therefore, (1) alone provides (3) with exactly the same level of evidential support as does (F)'s entire premise set. So (F) is a non-compact argument. Assuming it's rational for you to believe all this, for you (F) passes the **G** but fails the **C** condition.

Without the **C** condition of cogency, therefore, we would be forced to conclude that an argument could be cogent for you, even though it's rational for you to believe that the argument

contains an altogether irrelevant premise. Our view is that you ought to be persuaded by an argument just in case it's rational for you to believe the argument's conclusion *on the basis of the evidence cited*. But there's something fundamentally problematic about the information appealed to within (F)'s premise set. So just as one ought not to be persuaded by an argument which offers *too little evidence* in support of its conclusion, one also ought not to be persuaded by an argument which offers *too much information* in support of its conclusion. Our concept of cogency, therefore, represents one particularly stringent kind of ideal evidentiary standard. In claiming that an argument *A* is cogent for you, you're claiming (in part) that the information contained within *A*'s premise set is packaged in such a way that each premise plays an essential role in providing evidence in support of *A*'s conclusion. So just as the elimination of evidence can adversely affect an argument's cogency, the introduction of additional information can also adversely affect its cogency. It follows that although (F) is not cogent for you, a closely related, slightly truncated argument – namely, (F) minus (2) – might be cogent for you.

Arguments can pass the **G** condition but fail the **C** condition in one other significantly different way, without employing any altogether irrelevant premises. Each premise within argument (G), for example,

- (G) 1. There are giraffes at the zoo.
- 2. There are gazelles at the zoo.
- 
- 3. There are mammals at the zoo.

is relevant to (3). However, (G) is a non-compact argument because its premise set *S* contains two proper subsets each of which fails to provide less evidential support for (3) than does *S* itself. That is, while (G) is valid, the inference from (1) to (3) is also valid, as is the inference from (2) to (3). Therefore, neither premise plays an essential role in providing evidential support for the argument's conclusion. Given the presence of (1) within (G), (2) provides superfluous evidence; and given (2), (1) provides superfluous evidence.

It's rational for most of us to regard (G) as a grounded, non-compact and therefore non-cogent argument. (G) illustrates how an argument's premise set can be problematic insofar as it provides too much *evidence* (rather than merely too much information) in support of its conclusion. You ought not to be persuaded by (G) to believe (3) *on the basis of the evidence cited*.

Recall, however, that even if a particular argument is not cogent for you, a closely related argument might be cogent for you. (G) is not cogent for you because it's rational for you to believe that it's not compact. But it's presumably also rational for you to believe that, within (G), each of (1) and (2) alone provides a compact, valid argument in support of (3). It's possible, therefore, that it's rational for you to believe that (G) in effect conflates two separate cogent arguments.

In our view, it's not only awkward and misleading, but also false to claim that you ought to be persuaded by an argument, such as (G), when it's rational for you to believe that you have in effect been presented with two separate arguments. This point is underscored by the fact that you might also rationally form different evaluative judgments about the two arguments in question. If it's rational for you to believe that (1) is true, but not rational for you to believe that (2) is true, then the argument from (1) to (3) is cogent for you, whereas the argument from (2) to

(3) is not cogent for you.

While (F) and (G) are non-compact arguments which ground their respective conclusions, it's possible as well for a non-compact argument to fail to ground its conclusion. Suppose, returning to (F), that this argument is offered within a context in which there is plenty of time available to teach Fiona how to operate the flamethrower. Then (1) would still be relevant to (3) – since it might be more efficient to hire someone else – but (1) would no longer provide a compelling reason not to hire Fiona. If it's rational for you to believe all this, it would be rational for you to regard (F) as an ungrounded, non-compact argument with a relevant premise set.

Suppose, finally, that someone argues as follows

- (H) 1. Fiona is female.
- 2. Fiona has fair skin.
- 
- 3. We shouldn't hire Fiona.

where it's rational for you to believe that both (1) and (2) are, in this context, altogether irrelevant expressions of prejudice. It would then be rational for you to regard (H) as an ungrounded, non-compact argument with an irrelevant premise set. Should it also not be rational for you to believe that each of (1) and (2) are true then, for you, (H) would fail all four cogency conditions. Notice, however, that in an important sense this says far less about (H) than it does about you – since it's not difficult to imagine contexts in which the sound argument (A), or something like it, might also fail all four cogency conditions for you.

The account of cogency articulated within this paper is "thicker" (or more layered) than most in that (a) it appeals to a total of *four* separate properties of arguments, and (b) it insists that cogency is dependent not upon whether arguments actually possess these properties, but upon whether it's *rational* for individuals to believe that they do. As the following chart indicates, this conception of cogency generates a tidy classification of ten different argument types; exposing nine different ways in which arguments can deviate from the straight and narrow path which constitutes the sole route to the attainment of the good.

### Nine Types of Non-Cogent Arguments

