

Modeling Corroborative Evidence: Inference to the Best Explanation as Counter-Rebuttal*

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ABSTRACT: Corroborative evidence has a dual function in argument. Primarily, it functions to provide direct evidence supporting the main conclusion. But it also has a secondary, bolstering function which increases the probative value of some other piece of evidence in the argument. This paper argues that the bolstering effect of corroborative evidence is legitimate, and can be explained as counter-rebuttal achieved through inference to the best explanation. A model (argument diagram) of corroborative evidence, representing its structure and operation as a schematic pattern of defeasible argument is also supplied. In addition to explaining the operation and theoretical foundation of corroborative evidence, the model facilitates the correct analysis and guides the evaluation (assessment and critique) of corroborative evidence as it occurs in argument.

KEYWORDS: argument strengthening; corroboration; corroborative evidence; corroborating evidence; counter-rebuttal; inference to the best explanation;

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This paper draws upon and incorporates previous work by the author (Godden 2010) on the topic of corroborative evidence in setting out its nature, the problems posed by it, and the explanatory model offered of it. Earlier versions of Godden (2010) were presented to the Old Dominion University Philosophy and Religious Studies Departmental Colloquium Series, February 16, 2010, and to the 13th Biennial Conference on Argumentation, Wake Forest University, Winston-Salem, North Carolina, March 19-21, 2010.

Also, thanks are due to Dale Miller for his perceptive and instructive comments on other work that has informed this paper. Most importantly, the account proposed in the paper has been significantly and objectively improved by incorporating the suggestions and responding to the comments made by *Argumentation's* anonymous reviewers, to whom I offer my sincere thanks.

Modeling Corroborative Evidence: Inference to the Best Explanation as Counter-Rebuttal

1. Argument Strength and Strengthening

Argument strength, or cogency, can be evaluated according to three criteria: premise acceptability, premise relevance and inferential sufficiency (Johnson & Blair, 1994; Govier, 2005, pp. 63-76).¹ Defeasible arguments are arguments for which the inferential link between premise and conclusion is something less than deductive validity – that is, it is logically possible for their conclusions to be false despite the truth of their premises. Unlike deductively valid arguments, defeasible arguments can be both weakened and strengthened when supplemented by additional information (i.e., premises) consistent with their initial premises. Such strengthening can occur in at least four ways:

1. *Premise support*: premise acceptability can be increased or established by supplying additional reasons which bear on the truth of the initial premises.²
2. *Convergence of primary reasons*: additional, independent and non-redundant primary reasons can be added to supplement the initial argument.
3. *Backing the warrant*: the acceptability or applicability of the premise-conclusion link in the argument can be supported by supplying backing for the warrant.
4. *Preemptive rebuttal of defeaters*: the premise-conclusion link can be strengthened by showing either the absence, unacceptability, or inapplicability of defeaters which might either
 - (i) undercut (undermine) the defeasible warrant, or
 - (ii) rebut (override) the argument's primary reasons with stronger reasons for an opposite conclusion.³

This paper concerns the strengthening function of corroborative evidence.

2. Corroborative Evidence

2.1 Intuitions about Corroboration

To introduce the idea of corroborative evidence, consider the difference between the following two types of case. In the first case, evidence in a criminal investigation or trial accumulates against a suspect or accused. First, motive is established, later means, and finally opportunity. In the second case, testimonial evidence about some event or occurrence (perhaps a theft or an accident) accumulates. Of the several witnesses at the scene, first one witness comes forward, testifying that things were thus-and-so (rather

¹ Shum (1994, pp. 66 ff.) seems also to have adopted this three-part standard for the evaluation of evidence in law, using the criteria relevance, credibility (acceptability) and force (sufficiency).

² This form of strengthening can also contribute to the cogency of deductively valid arguments by establishing their soundness.

³ On defeaters, see Pollock (1970, pp. 73-74; 1986, pp. 38-39; 1995, pp. 85-86) and Pinto (2001, pp. 13-14, 28, 102-103).

than such-and-thus). Later, another witness comes forward whose testimony matches that of the first, and finally a third witness comes forward telling the same story as the first two.

Each of these cases is an example of a convergent argument, where the overall probative weight of a mass of evidence increases as newly accumulating evidence supplies independent reasons in support of a conclusion, thereby strengthening the overall argument. Convergent arguments can be diagrammed as in Fig.1, adding as many lines as there are independent reasons for the conclusion, where “a reason is the smallest self-standing unit of support for a position” (Blair, 2000).^{4 5} A reason can either be simple, consisting of a single premise, or complex, consisting of several premises working together.

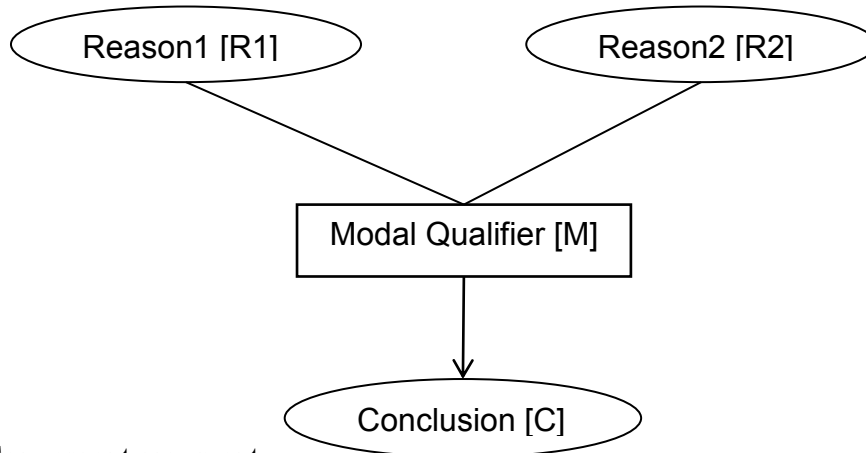


Fig.1 Convergent argument

Notice, though, that even in view of their similarities, our intuitions about these two initial arguments differ. Certainly mine do. It seems to me that something is occurring in the second type of case, that is not in the first. In the first (adapted from Cohen, 1977, p. 94) the argument is strengthened as new reasons accumulate. While,

⁴ It should be recognized that the very distinction between linked and convergent arguments (cf. Freeman, 1991, pp. 96ff.) is the subject of theoretical debate (primarily due to Goddu, 2003, 2007, 2009). Briefly, Goddu (2003, 2007) argues that the standard ways of operationalizing the distinction fail, and (2009) that the “we have no good reason for making the distinction,” even if it could be successfully operationalized, because it is not sufficiently useful to the structural analysis or evaluation of argument. I offer no reply to Goddu’s criticisms, instead relying on an intuitive understanding of the distinction (which seems to have paradigmatic exemplars) and on its continued employment in informal logic, argumentation and epistemology. For a thorough treatment of this topic see Freeman (2011, chapters 4-6, pp. 89-172).

⁵ The *expanded standard approach* to argument diagramming developed by Freeman (1991, 2011) will be used throughout. See his (2011, ch.1) for an overview. While the standard approach models many structural aspects of arguments (such as premises, conclusions, and inferential patterns and connections), Freeman’s expanded standard approach is capable of modeling additional argumentative components such as modal qualifiers, rebuttals (defeaters), counter-rebuttals, and counter-considerations. These additional resources permit Freeman’s approach to represent many dialectical aspects of argumentation in argument models.

As used here though, instead of representing individual sentences, nodes in the diagrams represent kinds of sentences differentiated by their functional role in the argument (schema).

showing opportunity provides some, albeit weak, evidence towards guilt, showing means *and* opportunity goes somewhat further, and showing all three goes somewhat further still. Yet, in the second type of case, something else seems to be going on as well. Here, as with the first case, as the evidence accumulates, its overall probative weight increases. Having two witnesses in agreement regarding their testimony is better than having only one, and having three is better still. But in addition to providing additional reasons in support of the truth of their testimony, that several independent witnesses agree in their testimony seems to provide a reason to count each piece of testimony as more credible than one would otherwise. By contrast, in cases of the first sort, showing opportunity in addition to motive does not make the fact of motive count any more towards guilt than it did on its own.

Another cardinal example of this first type of case, as Tony Blair observed to me in conversation, are convergent arguments against the death penalty: the cost argument (that it costs society more to keep an inmate on death row than to keep them in prison for life); the non-deterrence argument (that the death penalty does not offer a significant deterrence to prospective criminals); the moral argument (that the death penalty is inhumane and constitutes cruel and unusual punishment); and the wrongful conviction argument (that the judicial system is fallible and bound to falsely convict innocent people sometimes, and the injustice of doing so in a death-penalty case is intolerable). Surely, each of these arguments offers an independent reason for the abolition of the death penalty. Further, as the individual arguments accumulate, the overall case against the death penalty grows stronger. Yet, the success of, say, the cost argument does not increase the probative weight of the moral argument. Similarly, suppose that the reasons given in the non-deterrence argument were false. Although this would clearly diminish the overall case for the abolition of the death penalty on balance of considerations or on the basis of the total evidence, it would not defeat or diminish the probative weight of the wrongful conviction argument. While in cases of the first sort, the probative weight of each individual reason is independent of the others, in cases of the second sort it is not.

Importantly, the phenomenon at work in the second type of case is by no means unique to witness testimony. Many other examples can be given, and it is worth mentioning some of them now to give a more complete picture of the type of phenomenon we are interested in. In addition to the first case where:

- (a) the testimony of a witness is confirmed by the testimony of a second, independent witness, there are cases where,
- (b) the testimony of a witness is confirmed by a piece of circumstantial evidence,
- (c) the accuracy of a measuring instrument is verified as reliable by comparing it against a matching reading from a different instrument,
- (d) the accuracy of our different sensory organs are mutually confirmed by matching sensory information coming from different sensory organs,
- (e) the accuracy of our memory is confirmed by a piece of circumstantial evidence, and perhaps even
- (f) the inductive representativeness of a single example (or set of cases) is confirmed by the discovery of subsequent, relevantly similar instances.

The difference between these two types of case serves to introduce the evidential phenomenon of corroboration which will be the focus of this paper. Standard legal definitions of “corroborative evidence” (also called “corroborating evidence”) tell us that it is “evidence that is independent of and different from[,] but that supplements and strengthens[,] evidence already presented as proof of a factual matter.”⁶ Corroborative evidence has a dual function in argument: not only does it have a primary function of providing direct evidence supporting a main conclusion, but it also has a secondary, bolstering function which increases the evidentiary force of some other piece of evidence in the argument.

2.2 *Convergence and Corroboration*

We are now in a position to contrast the two types of argument just considered, by distinguishing convergent arguments that are not corroborative from those that are. First each is defined and then given a preliminary diagram for illustrative purposes.

Convergent, Non-Corroborative Arguments: each new reason strengthens the overall argument without increasing the strength of any single reason.

Convergent, Corroborative Arguments: at least one reason (the corroborating reason), in addition to strengthening overall argument by providing an independent reason for the main conclusion, also increases the strength of at least one other reason in the argument.

For simplicity, I will often speak of convergent, non-corroborative arguments merely as “convergent,” and convergent, corroborative arguments as “corroborative” or “corroborating.”

Diagramming convergent non-corroborative arguments is entirely straightforward. Consider a case where several independent reasons are found to (defeasibly) support a claim, as in Fig.2.

⁶ *Mirriam-Webster's Dictionary of Law* (1996, p. 172); cf. Findlaw Legal Dictionary entry for “evidence”: <http://dictionary.findlaw.com/definition/evidence.html>; cf. “evidence which strengthens, adds to, or confirms already existing evidence” (The Free Legal Dictionary, <http://legal-dictionary.thefreedictionary.com/corroborating+evidence>); “evidence that strengthens, adds to, authenticates, or confirms already existing evidence” (Nolo’s Plain-English Law Dictionary, <http://www.nolo.com/dictionary/corroborating-evidence-term.html>); “supplementary evidence that tends to strengthen or confirm the initial evidence” (MyLawTerms.com, <http://www.mylawterms.com/Corroborating-evidence.html>). All pages accessed July 12, 2011.

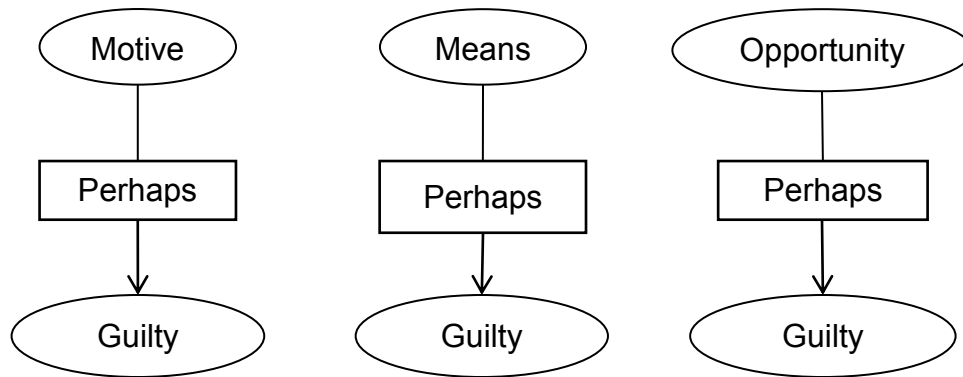


Fig.2 Accumulating independent, defeasible, non-corroborating reasons for a claim

These reasons can be accumulated into a convergent, non-corroborative argument (Fig.3) where the cumulative strength of the reasons is indicated by the strengthened modal qualifier.⁷

⁷ Importantly, incorporating modal qualifiers into the diagramming method allows the strength of the inferential link in the argument to be variegated. This might be done qualitatively, in terms of degrees of plausibility, by using a spectrum of qualitative qualifiers (e.g., perhaps, plausibly, on balance of considerations, probably, presumptively, practically certain, to a moral certainty, beyond a reasonable doubt, necessarily, etc.) each of which could be operationalized in logical, epistemic, or dialogic terms according to the normative framework employed. Alternately, following Godden (2005, p. 171) this spectrum might be articulated in terms of the possibility or relative likelihood of potential counter examples (e.g. no counter-example is logically possible, no counter-example is nomologically possible, as a matter of fact there are no counter-examples, any counter-example would be highly improbable, any counter-example would be less likely than the combined likelihood of the premises, any counter-example would be less likely than the conclusion, no counter-examples are known, no counter-examples are among our present beliefs). Alternately, modal qualifiers might be articulated quantitatively in terms of the degree of probability conveyed by the inference.

Yet, the *expanded standard approach* is limited in the way it handles qualifiers. A fully probabilistic account attaches probability values to individual claims, or nodes within the diagram. By contrast, Freeman (1991, ch. 5; 2011, pp. 18 ff.) argues that, in the spirit of Toulmin, “qualifiers indicate the strength conferred by the warrant on the step from data to claim” (Freeman, 2011, p. 18), and hence are best modeled as attached to lines in the diagram. As such, although not ideal, degrees of credence ascribed or attached to individual claims in the argument must be represented as part of the content of the claims themselves.

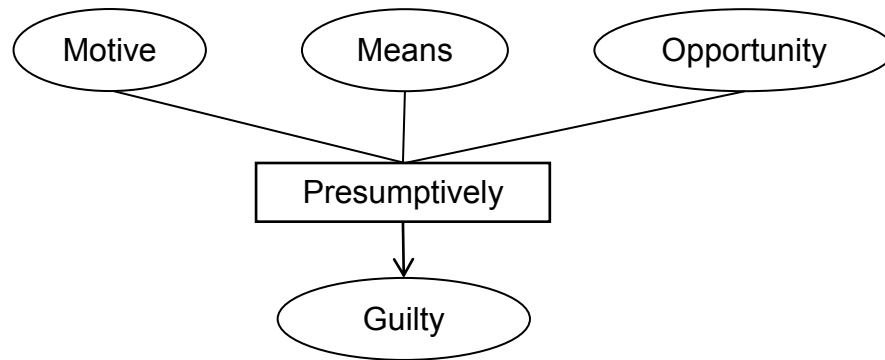


Fig.3 Convergent non-corroborative argument

Notice that the reasons accumulated in Fig.2 are individually insufficient to establish the claim – the modal qualifier “perhaps” might be taken to mean something like “merits further investigation or elimination.” Yet, when accumulated they combine to meet a threshold of evidence for presumption, which is standardly understood as shifting the burden of proof from a proponent to an opponent in a dialectical exchange, as well as defeasibly licensing the claim for use as a premise in further inference and deliberation.⁸

To diagram a convergent, corroborative argument, begin again with a case where several independent reasons are found to (defeasibly) support a claim, as in Fig.4.

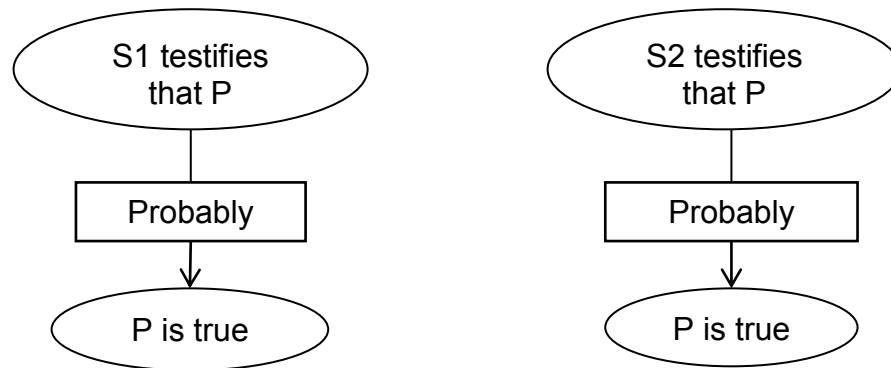


Fig.4 Accumulating independent defeasible corroborating reasons for a claim

⁸ It might seem as though the premises in Fig.3 concerning motive, means, and opportunity should be linked together rather than depicted as separate and convergent, since on their own they fail to provide sufficient support to establish guilt. At best, the premises seem individually necessary and jointly sufficient. As such, denying any one of them would be sufficient to rebut the entire argument. Thus the premises are interdependent rather than independent. While this is true, the arrows in the diagram do not represent lines of sufficient support, but merely lines of support – that is, they mark reasons, not sufficient reasons. While this technique comes with the cost just noted, the benefit is that the independence of the individual reasons is correctly represented; disproving motive does not discount opportunity. Also, while in this example there seems no other way to achieve sufficiency, in other cases there might be alternative combinations of primary reasons capable of sufficiently supporting a conclusion.

As before, these reasons can be accumulated into a convergent argument (Fig.5).

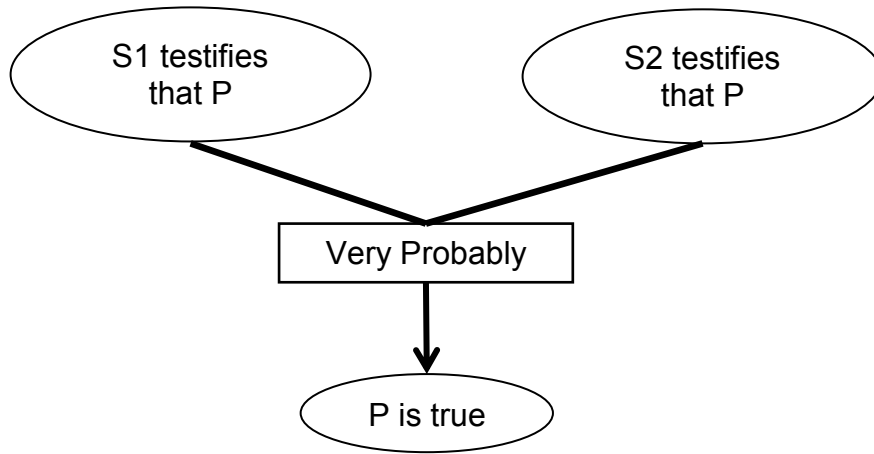


Fig.5 Convergent corroborative argument

As with the merely convergent argument (Fig.3), the cumulative strength of the reasons in the corroborative argument is indicated by the strengthened modal qualifier. Yet, while this might incorporate, it cannot represent the secondary, bolstering function of corroborative evidence. In Fig.5 the bolstering function is indicated by the bolder inferential arrows indicating the strengthened links between the premises and conclusion.⁹ By contrast in Fig.3 the arrows from motive, means and opportunity converging on guilt are not bolded, indicating that no strengthening has occurred. Clearly though, there is something unsatisfactory about Fig.5. While illustrative of the bolstering function, bolding inferential lines and arrows will not do as a diagramming technique. The diagram (Fig.5) does not represent the evidential operation of this bolstering function; it does not form part of an explanation of how corroboration works. The task of this paper is to provide such an explanation, and to offer a corrected technique for diagramming convergent corroborative arguments.

2.3 Corroboration as a Problem for the Theory of Evidence

This apparently dual role of corroborative evidence presents a variety of problems for the theory of evidence and argument. Put simply, several questions for argumentation theory seem to arise from our intuitions about the differences between these two sorts of case. In short, these are the questions of whether, why and how. First it must be determined whether our intuitions are indeed correct. Is the secondary, bolstering effect of corroborative evidence normatively legitimate? Second, if our intuitions are correct, argumentation theory ought to be able explain why. That is, some theory ought to be supplied explaining normative legitimacy of corroboration. Indeed, our determination about the correctness of our intuitions might well rest upon whether an adequate explanation can be produced. Finally, how does corroboration really work? How do the

⁹ Such a technique is entirely foreign to Freeman's *expanded standard approach* of argument diagramming, and is proposed here for illustrative purposes only.

reasons in the second type of case operate differently from those in the first, such that in the second the bolstering effect is realized? While the answer to the why question has the form of an explanation, the answer to the how question has the form of an argument model, diagram, or map. The aim of the model is to incorporate the features of the explanation into an accurate representation of the evidential structure and operation of corroborative evidence, thereby allowing it to be better recognized, understood, employed, and evaluated by arguers and analysts.

3. Explaining Corroboration: Inference to the Best Explanation

My position on the whether question is affirmative; it is my view that our intuitions about corroboration are correct. With corroborative evidence, something else really is going on besides a mere convergence of primary reasons.¹⁰

3.1 Specifying the Operation of Corroboration

Original accounts of corroboration (Cohen, 1977) ignored its bolstering function, instead modeling it as having a merely convergent evidential structure. Next, there is a very weak notion of corroboration drawn from the idea that any piece of negatively relevant evidence, in counting against a conclusion, thereby fails to corroborate all positively relevant evidence. Thus, perhaps the weakest notion of corroboration is simply “is not inconsistent with,” while a slightly stronger notion would count any piece of positively relevant evidence as corroborating all other positively relevant evidence. Notions of corroboration which amount to consistency or positive relevance are not especially useful, and moreover they pose no special problems for the theory of evidence or argument. More recent accounts (Walton, 2008; Walton and Reed, 2008) have suggested either (i) that corroboration might function as a kind of premise support whereby the corroborating evidence directly supports some piece of corroborated evidence, or (ii) that corroboration is a separate argument scheme in which all corroborating claims are linked together to support the conclusion that there is corroborative evidence for some claim. The scheme itself acts as an additional convergent reason together with each piece of primary and corroborated evidence. Walton (2009) postulates that corroboration can occur in two basic ways: (iii) as convergence, providing direct support to a main conclusion, and (iv) as backing, supporting the inferential link between the corroborated evidence and the primary conclusion. Theoretical problems with each of these accounts are discussed in (Godden, 2010). Further, if corroboration only amounts to either premise support, convergence, or backing, then corroborative evidence poses no special problems to the theory of argument and can be dealt with by the analytical and evaluative tools already on hand.

This paper concentrates on a stronger, more restrictive sense of corroboration, that highlights the double function corroborative evidence sometimes has, whereby in addition to acting as a reason for some conclusion it also somehow increases the

¹⁰ At least one argument against the epistemic legitimacy of the bolstering effect of corroborative evidence is that it gives rise to the fallacy of double counting, whereby the probative force of some piece of evidence is overvalued by counting it twice (Redmayne, 2000). In previous work (Godden, 2010), I have offered a rebuttal of Redmayne’s arguments that corroboration involves the fallacious double counting of evidence.

probative weight of some other piece of evidence. This second, ‘bolstering’ function of corroborative evidence distinguishes it from merely convergent evidence, and poses unique problems to the theory of evidence.

3.2 Corroboration, Foundations, and Coherence

As to the why question: in previous work (Godden, 2010) I have offered an explanation of the operation of corroboration by way of the inference to the best explanation.

Both the operation of, and problems presented by, corroboration seem to be structurally analogous to the problem of coherence as a source of justification. A justificatory relationship between claims occurs when the acceptability of one claim serves as the basis for the acceptability of another, by acting as a reason for it. Clearly, the justificatory relationship is successful only if the base claim is itself justified. It would seem then, and foundationalists maintain, that some claims must be epistemically primary, primitive, or basic. That is, some claims must be intrinsically and transparently acceptable – they must ‘wear their acceptability on their sleeves’ as it were. These ‘basic’ or ‘primitive’ justifiers provide the ultimate bases on which all our knowledge rests. In addition to infinitely long chains of justification, two pitfalls must be avoided on this picture: arbitrariness and circularity. The basic starting points of justification cannot be arbitrary, since claims which are not themselves acceptable cannot lend acceptability to other claims built upon them. Yet to tell a story about how or why a claim is intrinsically justified seems to offer a reason for its acceptance, thereby conceding that its acceptability is neither intrinsic nor apparent (cf. BonJour, 1985, pp. 30ff.).¹¹ Similarly,

¹¹ Justification, in the sense just used, is something (call it a “justifier”) *on the basis of which* the acceptability, or epistemic status, of a claim is founded.

Justification, standardly understood, has both externalist (or objective) and internalist (or subjective) aspects, each of which contribute to its epistemic desirability. Objectively, justification must serve to *reliably connect belief to truth* somehow, such that justified beliefs are more likely to be true than unjustified ones. Subjectively, justification must somehow *bestow entitlement* upon justified believers, perhaps by underwriting claims to *rationaly, blamelessly, or responsibly* held belief. Because of this last aspect, justification must be *accessible* to justified believers. Without the first aspect, justification is not worth having even if it is accessible; without the latter justification cannot serve as a guide or norm for thought and action. Importantly, these two aspects of justification can come apart. One can blamelessly hold an objectively faulty or unreliably-formed belief; and one can irresponsibly hold an objectively good or reliably-formed belief. Internalists are inclined to forgive the former and condemn the latter, while externalists are inclined to reject the former and endorse the latter.

The challenge concerning primitively justified claims goes as follows. Given that a justifier is something on the basis of which the acceptability of a claim is founded, unless justification can be circular, justifiers must be something *other* than the claim being justified. Now, for a claim, P*, to be *primitively* justified (sometimes called a “basic belief”) it must be non-inferentially justified – there must be *no other claim* on the basis of which P* is justified. Yet, as BonJour (1978; 1985, p. 31) observes, the selection of some beliefs rather than others as basic gives rise to the problem of the criterion: on what basis does the foundationalist select *these* (kinds of) beliefs, P*, rather than *those*, P†, as primitively justified? Answering the problem of the criterion – at least in a non-arbitrary way – seems to require *justifying* one’s answer. Yet, any account that one gives, involving any claim *other* than P* in an effort to demonstrate (or even merely illuminate) that P* is primitively justified is *prima facie* evidence that P* is *not* primitively justified.

Some have attempted to navigate the horns of this dilemma by pointing to putatively non-propositional (i.e., conceptually non-contentful) items as primitive justifiers. *Externalists* point to a special set of justificatory facts in the world, while *giventists* point to a special set of justificatory, non-cognitive items of consciousness (or conscious events), such as the experience of being appeared to in a certain way. The

claim is that, while these facts or appearances themselves stand in no need of justification, they can effectively be justifiers, i.e., a source of justification for basic beliefs.

Problematically, as Bonjour (1978) observes, neither strategy satisfactorily answers or avoids the problem of the criterion. Rather, the foundationalist must give some account of why *these*, rather than *those*, factual properties or conscious characteristics are proper grounds for primitive justification.

Further, against the givinist, BonJour (1978) presents the following paradox of non-cognitivism: to the extent that items of consciousness are conceptually non-contentful they might stand in no need of justification, but it is not at all clear how they can confer justification to conceptually contentful items such as propositions or beliefs. (To confer justification at least involves making the truth of something more likely that it would have been otherwise. Yet non-cognitive items lack the semantic properties required to do this.) On the other hand, to the extent that items of consciousness are conceptually contentful, and thereby capable of conferring justification on other conceptually contentful items, it is not clear why they do not, themselves, stand in need of justification. (Cf. Sosa (1980, §4, pp. 6-9) for a critical discussion of this last argument.)

Against the externalist BonJour (1978) notes that, to the extent that a believer is unaware of the relevant justificatory facts, she is epistemically irresponsible, and hence lacks justification in that, internalist, sense. Yet, to the extent that a believer is aware of the relevant facts, she seems to have a belief whose justification may be sought, challenged, and given.

Developing the externalist strategy Alston (1989, p. 82) distinguishes between *being* justified and *justifying*, stressing that one may *be* justified (understood as an epistemic state a subject can be in) without ever producing the justification or otherwise *doing* anything to demonstrate one's justification (understood as an epistemic activity one can engage in). Thus, the claim is that one can *be* justified in accepting some prospective P* without having to *do* anything to demonstrate this. This distinction is thought to relieve the force of the challenges just given.

Importantly, though, the distinction between being and doing justification does not uniquely apply to *primatively* justified claims, but can apply equally to claims whose justification is derivative. A more articulated set of distinctions begins with one between *being* justified and *having* justification, where the latter stresses something that one *possesses* such that they *could* produce it if called upon to do so. A second distinction can then be drawn concerning the activity of justifying – specifically concerning the nature of *what one produces* when one gives one's justification. Here what is to be distinguished is an *explanation* of one's justification from the *justification* itself. The question here is whether, in the activity of justifying, one produces a justification (which they possessed all along), or whether what is produced is merely an explanation of a justification (which itself is never really produced, and perhaps never really possessed). In the latter case, one does not “give” one's justification as it is something which, in an important sense, cannot be shared e.g., in the way we could share the same reasons for believing something. Rather, either one is justified (and perhaps has the justifiers), or one isn't (and doesn't).

In the end, though, the distinctions between being justified and having justification, and giving a justification or merely an explanation of a justification, do not satisfactorily answer the challenge on the table. To the extent that the basic believer *possesses* a justification, they are epistemically entitled to their belief, yet it is not basic, since they are in a position to produce some justification or reason for the belief. Alternately, to the extent that the basic believer does not possess any justification, their belief may be properly basic, but it is not clear that they are justified – at least not in any traditional, internalist sense since they cannot demonstrate (even to themselves!) any epistemic entitlement to their belief. At the very least, then, such believers are epistemically irresponsible. The only way to avoid this challenge is to concede that justification, in basic cases anyway, can be non-viciously circular or not required at all. As BonJour (1978, p. 8) writes, such a move abandons the traditional conceptions of justification and knowledge entirely: “it constitutes a solution to the regress problem or any problem arising out of the traditional conception of knowledge only in the radical and relatively uninteresting sense that to reject that conception is also to reject the problem arising out of it.”

The distinction between giving justifications and giving explanations of justifications is, similarly, of little help. Seemingly, if “telling a story about how or why a claim is intrinsically justified” is understood as explaining why one *is* justified, no problem arises for the foundationalist here. Offering an explanation *why* something is the case rather than not is not to give a reason *that* it is the case. Yet, insofar as such stories are offered in response to criticisms of the view held, or challenges of entitlement to the view held, they appear *prima facie* to be justifications, not explanations of intrinsic justifications. Again, if the justification

patterns of justification cannot be circular. Since the acceptability of any derived claim is secondary to, and dependent on, the acceptability of the claims on which it is based, any justification of a basing claim cannot involve or depend upon a derived claim. Questions surrounding just what these basic justifiers are, and how they can lend justification to other claims without seeming to have any themselves, presents a deep set of problems which some epistemologists have sought to avoid.

Against such a picture, coherentists claim that the overall structure of justification is neither linear nor atomic, as the foundationalist picture assumes. Rather, coherentists claim that patterns of justification, like definitions in a dictionary, can be circular without thereby being flawed. The acceptability of a set of claims is determined holistically, and the internal structure of a set of claims can contribute to its overall acceptability. For example, inconsistency is a form of incoherence because it entails that at least one of the claims in the set must be false. Thus, consistent sets of claims are, generally speaking, more coherent than inconsistent ones. A significant problem for coherence theorists is to explain why coherence can be a source of justification, since the coherence of an account is no indication of its truth – consider, for example, the highly coherent yet entirely fictional worlds of Dickens or Tolkien.

3.3 Corroboration, Explanatory Coherence, and Justification

The picture that we require does not embrace a strictly coherentist account of justification, rather it simply seeks to understand how coherence can be a source of justification (albeit one among many). How then, can coherence indicate truth? C.I. Lewis (1946) considers a case where several independent witnesses agree in their testimony as to the occurrence of some event, say a theft. (Perhaps, one might further suppose that the initial credibility of the witnesses is unknown, or perhaps even suspect. Yet, curiously, their stories agree.) In this case, each piece of testimony coheres with that of the other witnesses. “Given the unreliability of the witnesses,” Elgin (2005, p. 157) writes, “we might expect them to be wrong about the thief. But we would not expect them to all be wrong in the same way. The fact that they agree needs an explanation.”

This agreement might be explained in a variety of ways: the witnesses might have conspired to concoct a fabricated story, they might all be suffering from some sort of common illusion or delusion, or they might all be independently mistaken or lying. Indeed, there is a vast array of possible explanations for such agreement. Among these will be the explanation that their testimonies are indeed true – that their testimonies agree because things really did occur the way the witnesses perceived and reported them to have occurred. Now, some of these explanations will be more plausible than others. For example, given the independence of the witnesses the first explanation of collusion can be ruled out. Also given their independence, it seems highly implausible that they might each have come up with the same lie, or made the same mistake, randomly or merely by

were intrinsic and intrinsically apparent, no story would be required. Further, such stories tend to cite evidential factors neither identical with nor equivalent to the supposedly self-justified claim, again indicating that claims *other* than the basic belief itself are doing justificatory work.

The point here is not to resolve, or even to take a stand on, any of these well-known problems which sit on the ground floor of any foundationalism. Rather it is to explain one historical motivation for coherence as a source of justification.

chance. Had they done so independently, we would expect a lack of agreement in their stories. Some of these alternate explanations might merit further investigation, such as whether their agreement is due to some common cause other than the truth of their testimony. Yet, if the most plausible explanation of their agreement is that their testimony is indeed true, then the agreement of their testimonies can strengthen the probative weight or evidential merit which should be attached to each individual piece of testimony. Thus, as Elgin (p. 160) writes, “coherence conduces to epistemic acceptability only when the best explanation of the coherence of a constellation of claims is that they are (at least roughly) true.”¹²

That, in brief, is the explanatory hypothesis with which I am working. I now proceed to explain how this explanatory hypothesis might form the basis of a model representing the evidential structure of corroborative evidence.

4. Three Models That Don’t Work

Before proceeding to consider the question of how explaining corroboration by way of inference to the best explanation might be used to model the operation of corroborative evidence, let us consider some models worth avoiding. Here are three legitimate, indeed basic, argumentative structures that don’t work as models of corroborative evidence.

1. Premise Support: Premise support occurs when the acceptability of a premise used in an inference is strengthened or established through the provision of additional reasons which bear upon the truth of that initial premise.

Initially, it might seem that corroborating evidence increases the strength of an initial argument by increasing the acceptability of an initial, corroborated premise by directly providing a reason for it. Thus, perhaps corroborative evidence might be modeled as a kind of premise support, as follows (Fig.6).

¹² As van Cleve (2005) observes, there remains the issue of whether each independent source must have some positive initial credibility which can be amplified by coherence, or whether coherence alone can produce credibility where initially there was none. A moderate foundationalism holds that coherence has an ampliative but not a productive function.

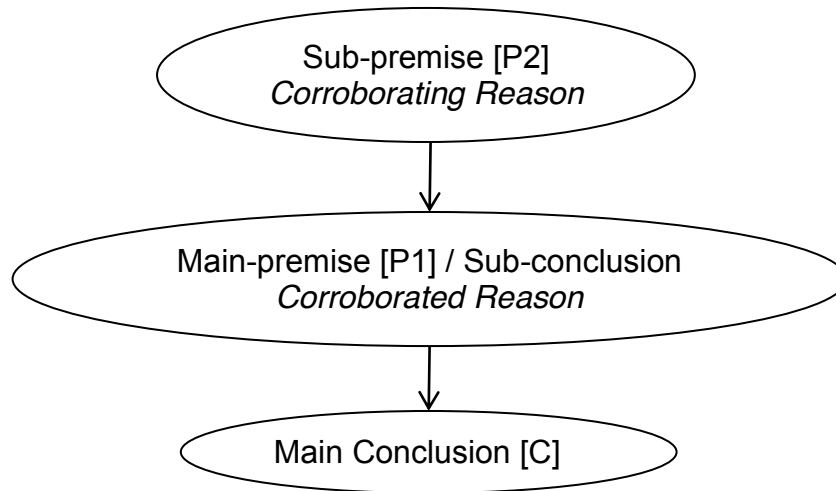


Fig.6 Corroboration as Premise Support

Yet, such a model does not seem to fit with paradigm instances of corroboration. For example, that a second witness testifies that P does not make the premise that a first witness said that P any more likely or acceptable. Indeed, such information plainly seems to have no relevance whatsoever to the claim that the first witness said P. (What kinds of evidence would provide premise support in a case like this? A transcript, perhaps, or a recording, or perhaps some notes made at the time of an interview. Or another witness testifying, not that she saw P, but that she heard the first witness say that P.) Rather, the primary effect of corroborative evidence is that it provides direct support to the main conclusion of some initial argument, a feature which is entirely missed in diagrams of this sort. And the bolstering effect of corroboration seems to support, albeit indirectly, the claim that what the first witness said is true – i.e., that the first witness’s testimony is credible or reliable.

In view of this point, a variant of the premise support model, then, represents corroboration as bolstering an unstated premise in the initial argument (Fig.7).

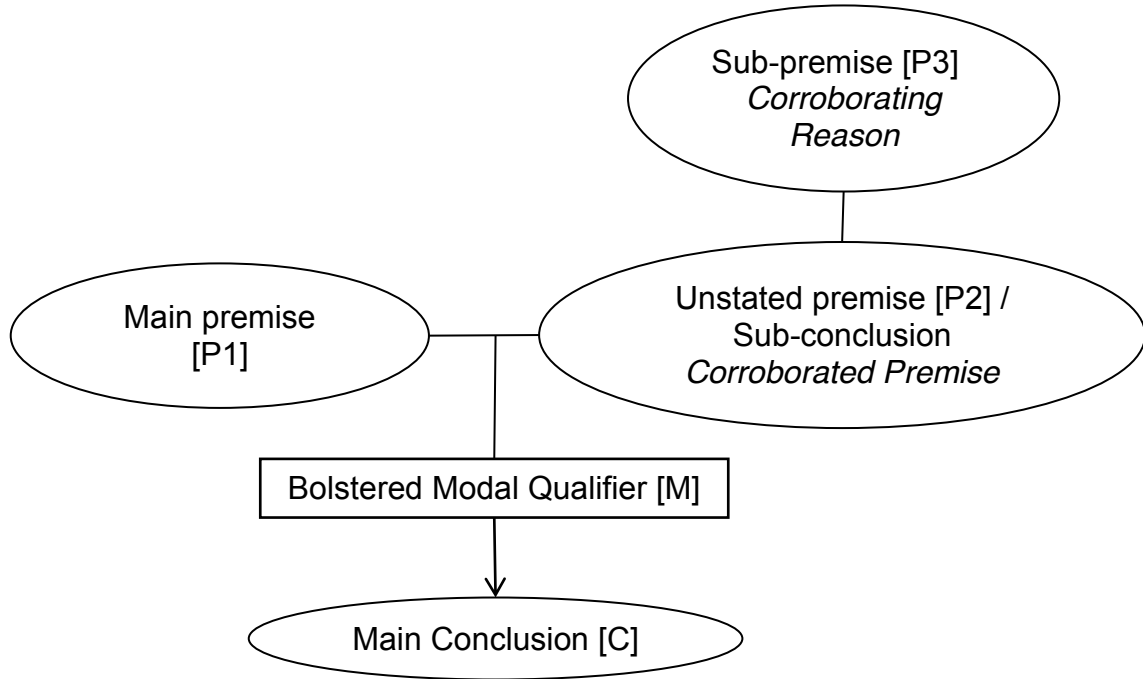


Fig.7 Corroboration as premise support (of an unstated premise)

The unstated, corroborated premise in the argument would typically assert something to the effect that the source cited in the first, stated premise (e.g., a witness, measuring instrument, or sensory mechanism) is trustworthy, credible, accurate, or reliable. For example, in a case of witness testimony, the unstated premise might state that the witness is credible; in a case of measurement, the unstated premise might state that the instrument is accurate.

Yet this variant of the premise support model faces the same two problems as the initial model. First, it still fails to represent the primary function of corroborative evidence which is to directly support the main conclusion. Second, paradigmatically corroborating reasons do not directly support hidden premises of the sort just considered. That some second witness states that P, where P happens to agree with what some initial witness stated, does not directly, or by itself, support the claim that the first witness is trustworthy. Similarly, that a reading of a second measuring instrument matches that of a first does not directly support the claim that the first instrument is accurate. Rather, premise support of this type would involve claims like the following: in the case of witness testimony, character evidence that the witness is truthful, and evidence that the witness is capable of making accurate observations in the relevant conditions; in the case of instrument readings, evidence of the instrument's past accuracy, or that it was recently calibrated. By contrast, corroborating reasons in these kinds of cases seem to directly support the argument's main conclusion – just as the corroborated reason did, instead of supporting the corroborated reason or some unexpressed premise about its probative merits.

Thus, if corroborating evidence actually supports a hidden premise concerning the reliability of an initial source, it does so only indirectly, and hence corroborative evidence cannot be modeled as a kind of premise support.

2. *Corroboration as Convergence / Corroboration Scheme*: A second possibility is to model corroboration as convergence. That is, to treat the corroborating effect –i.e., the secondary, bolstering effect – of corroborating reasons as a separate, convergent reason to the main conclusion. Such a model might look like this (Fig.8).

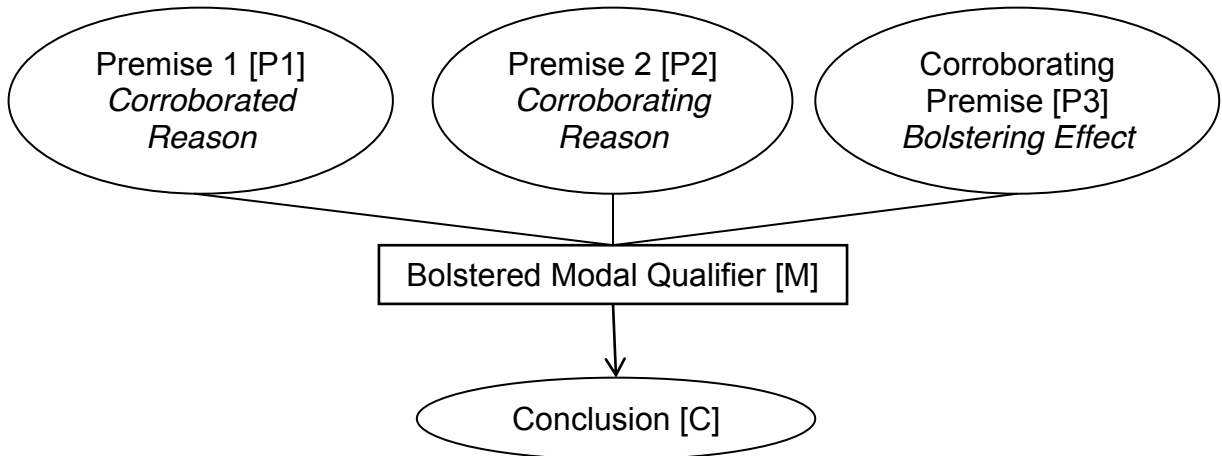


Fig.8 Corroboration as convergence

Here, the bolstering effect of corroborative evidence is treated as though it were an additional, single premise, which might be phrased as something like “there is corroborative evidence for the conclusion.” A variant of this approach is to model the bolstering aspects of corroboration as a separate argumentation scheme, which would involve a complex of several premises working together to supply a bolstering reason, and which might be called the corroboration scheme (Fig.9).

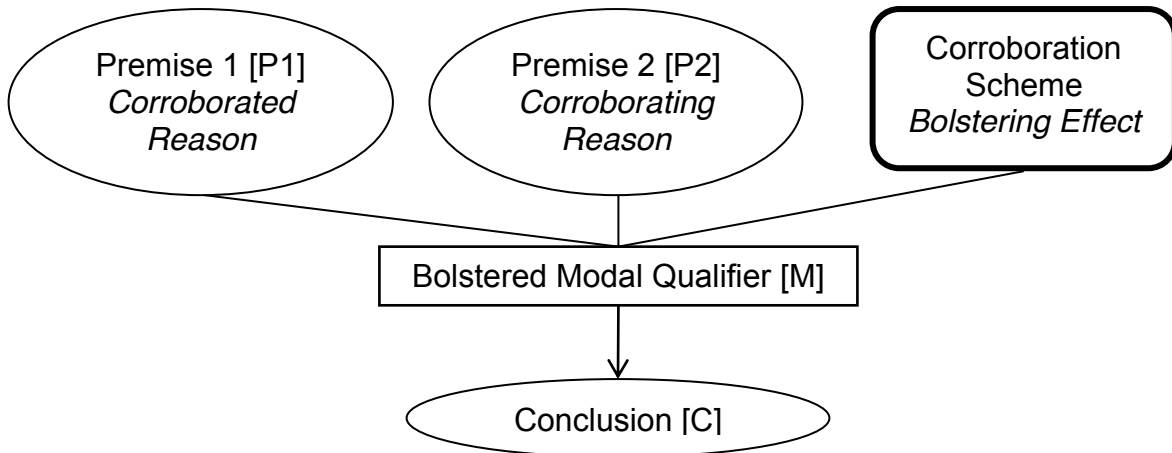


Fig.9 Corroboration scheme as convergent

Since the internal structure of the corroboration scheme is not relevant to my present purposes, I here represent it as a black box, without attempting to represent or speculate as to what its internal structure might be.¹³

Still another variant combines the models of convergence and premise support by depicting the bolstering effect as a separate premise, or schematic argument, which provides premise support to either the corroborated premise or an unexpressed premise.

The awkwardness of such proposals is not their most detrimental feature. Rather, the fundamental problem with this approach is that it models the specifically corroborative value of corroborative evidence as a separate and independent line of support for the main conclusion. Yet, it plainly is not. For example, a premise asserting that the other main premises of the argument are mutually consistent is, by itself, intuitively irrelevant to the conclusion being argued. Rather, the secondary, bolstering effect of corroborative evidence is dependent upon – indeed it results from – its having some primary effect. Modeling corroboration as convergence gets this wrong, making it seem as though the bolstering effect of corroborative evidence is independent of its primary effect.

3. Strengthening the Warrant: A third possibility is to suggest that corroborating evidence somehow strengthens the warrant of an initial inference. Such an account supposes that corroborating evidence functions initially as data in support of some conclusion, and separately as backing, strengthening the warrant of some previous inference. It might be modeled as follows (Fig.10).

¹³ Walton and Reed (2008, pp. 544 ff; cf. Walton, 2008, pp. 300 ff.) model the corroboration scheme as a linking of all the corroborating claims supporting the conclusion that there is corroborative evidence for some claim. This schematic argument then acts in a convergent manner together with each individual premise in directly supporting the main conclusion.

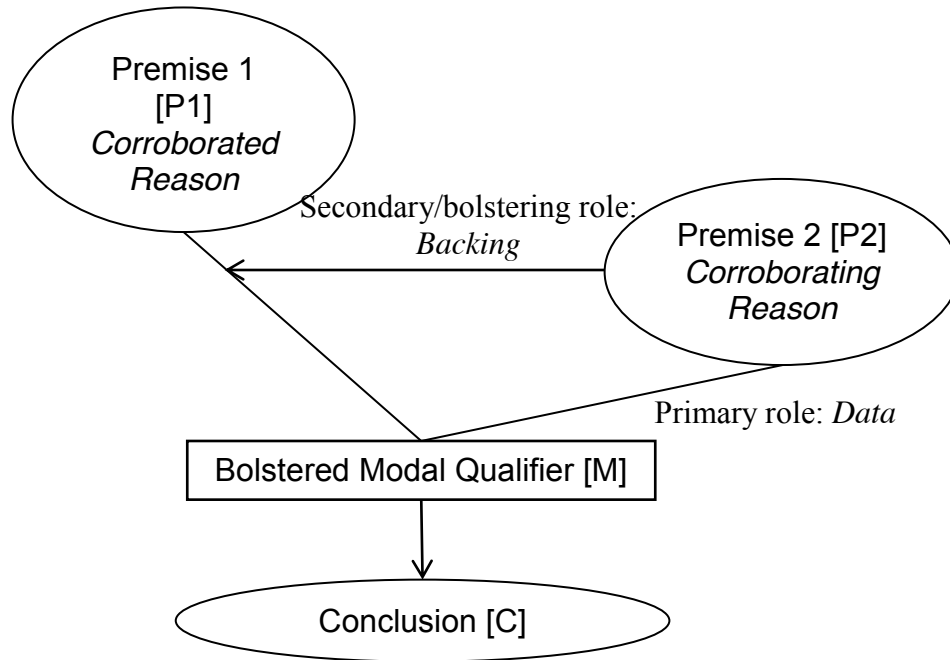


Fig.10 Corroboration as backing (strengthening the warrant)

On first inspection, this model seems to be the most promising of the three. First, it correctly represents the primary function of corroborative evidence as directly supporting some main conclusion. And, it captures the intuitive idea that corroborating evidence strengthens the evidential weight or probative merit of corroborated evidence, rather than increasing the acceptability or probability of that evidence itself.

How can such warrant strengthening be explained? A warrant is a rule or inference-license and has the logical structure of a covering generalization of some sort which expresses a relationship of consequence between the premises and the conclusion of an argument.¹⁴ For simplicity, let's say that a warrant, W, can be expressed as a

¹⁴ Such an understanding of the nature of warrant might encourage the view that, in any argument there is only one warrant which (implicitly) expresses the consequence relation held to obtain between all of the argument's premises (taken together) and its conclusion. There is certainly something to the idea that we, in the end, take our judgements to be based on the sum total of our evidence. As a corollary, all argument diagrams should then have only one arrow (representing the warrant). Such a position seems to accommodate Goddu's recent criticisms (*op. cit.*) of the linked/convergent distinction.

To my thinking, though, such a position does not sit well with the fact that arguments can involve several different reasons, even several different, individually sufficient reasons.

Yet, even if such a view is accepted, it remains important to understand the contribution made by individual premises and reasons to arguments. For example, a theory of evidence or argument should be able to explain the structural and evaluative impact of the defeat of a single premise or reason in an argument, and similarly when a single premise or reason is added. On a 'single warrant' model of argument, such changes merely occasion the drawing of a new warrant which must be evaluated from scratch. Rather than this, I suggest, it is preferable to try to understand, explain and represent the probative contributions of individual premises and reasons in an argument. Doing so, I suggest, involves tracking, mapping and explaining their evidentiary interrelationships with one another, as well as their individual acceptability, since these structural features help to explain the relevance and probative force of premises (as they contribute to reasons), and reasons (in their contributions to complex argumentation).

conditional of the form ‘ $P \rightarrow C$,’ where “ \rightarrow ” asserts some, perhaps defeasible, implication, where ‘ P ’ indicates some (sub)set of premises, and ‘ C ’ the conclusion.¹⁵ Call statements of the form ‘ $P \rightarrow C$ ’ a *warranting conditional*.¹⁶

Intuitively, there are problems with the notion that paradigmatically corroborative evidence bolsters the warrant of some initial inference. Consider this example:

[Data] S1 says that P;
 [Warrant] Generally, if S1 [or, perhaps, any S] says that P, then P;
 So, [Claim] P;

together with the corroborating evidence,

[Corroborating evidence] S2 says that P.

Intuitively, the corroborating evidence does not seem to bolster the warrant whatsoever. It doesn’t even seem to be relevant. Indeed, it doesn’t seem to be the right *kind* of evidence count as a *warrant-establishing argument*, which Toulmin (1958/2003) described as follows:

Warrant-establishing arguments will be ... such arguments as one might find in a scientific paper, in which the acceptability of a novel warrant is made clear by applying it successively in a number of cases in which both ‘data’ and ‘conclusion’ have been independently verified. (Toulmin, 1958/2003, p. 112)

¹⁵ Toulmin (1958/2003, ch. 3) explains a warrant as a having the form of a general statement relating the data and claim of an argument, and which articulates the rule or principle which a reasoner relies upon in inferring the claim from the data. Recent work on the nature of warrants (Pinto 2006, 2007, 2009) and on the nature of non-logical consequence (Hitchcock 2009, 2011) represents significant theoretical advancements on this general idea. According to Hitchcock (2011, p. 224):

On the elaborated and expanded account, a conclusion follows from given premisses if and only if an acceptable counterfactual-supporting covering generalization of the argument rules out, either definitively or with some modal qualification, simultaneous acceptability of the premisses and non-acceptability of the conclusion, even though it does not rule out acceptability of the premisses and does not require acceptability of the conclusion independently of the premisses.

The treatment of a warrant as a *warranting conditional* employed in this paper is intended a simplification of these theories – one that captures their core idea without distorting or contradicting any of their details. As such, it should be recognized warranting conditionals might have the form of covering generalizations of some sort, whether universal or defeasible, complete with any quantification, qualification, specification, modality, or counterfactuality as required.

¹⁶ Following Hitchcock (2009, 2011) warrants are more accurately represented as covering generalizations. For simplicity and convenience, they are here treated as a special kind of conditional: a *warranting conditional*. The differences between these two ways of representing warrants do not bear on the present argument.

Warranting conditionals of the form ‘ $P \rightarrow C$ ’ are related to, and can be markers for, (defeasible) consequence relations of the form ‘ $P \sim C$ ’ (read as “ C follows from P ”), just as the hook (material implication) is related to the turnstile (entailment). That is, there is some operator ‘ \rightarrow ’ such that the (defeasible) consequence relation ‘ $P \sim C$ ’ is satisfied if and only if ‘ $P \rightarrow C$ ’ is true under some appropriate modal qualification.

Paradigmatically corroborative evidence does not independently verify successive cases of the co-occurrence of data and claims. Intuitively, then, there are problems counting corroborative evidence as backing for a warrant.

Yet, the problems here are not merely intuitive. To appreciate the theoretical problems, consider the matter in more detail. How does a premise, Q , which directly provides evidence in support of C but does not directly support P , also support a warranting conditional of the form ' $P \rightarrow C$ '? Only by supporting the consequent of the conditional. This is most easily seen if we consider the case where ' $P \rightarrow C$ ' represents a material conditional, which is logically equivalent to ' $\sim P \vee C$.' More generally, an argument's warrant expresses the exclusion of the case where the argument's premises are true and its conclusion false, i.e., ' $\sim (P \ \& \ \sim C)$,' in some domain or context – e.g., merely in the present circumstance, in all possible situations, as a matter of fact in this actual world, etc. Thus, the warrant is equivalent to ' $\sim P \vee C$ ' appropriately modified so as to retain all initial modal qualifications. Clearly, any direct evidence supporting C also supports the (modified) disjunction ' $\sim P \vee C$,' because, having C , we can derive $C \vee \phi$, for any ϕ , using disjunction introduction. Put another way, since, by stipulation, Q counts towards the truth of C , it also counts towards the truth of C in cases where the premise(s), P , obtain as well. This would seem to be the only way that corroborating evidence can provide backing for a warrant.

Yet, there are three immediate problems facing this answer. First, the support for the warranting conditional fails to be relevant. The same evidence provided by the corroborating evidence for the relevant warrant ' $P \rightarrow C$ ', equally supports the following irrelevant warrants ' $R \rightarrow C$,' ' $S \rightarrow C$,' ' $T \rightarrow C$,' and even ' $\sim P \rightarrow C$.' Call this the *relevance problem*.

The second problem derives from the first. On this account, warrant strengthening occurs because – and therefore whenever – independent evidence directly supports the consequent of the warranting conditional (i.e., the conclusion). Yet, such an account will count all positively relevant evidence for a conclusion, C , as corroborating any other positively relevant evidence for C . Thus, it fails to distinguish convergent, non-corroborative arguments from convergent, corroborative ones, instead counting all convergent arguments as corroborative. Call this the *systemic false-positive problem*.

Finally, there is the problem of whether the corroborating evidence can provide any epistemic support to the warranting conditional. As Hitchcock observes, in order for a warranting conditional to correctly express a consequence relation capable of serving as an epistemic warrant, and thereby to identify evidence for a conclusion, the acceptability of the warranting conditional must be independent of, and prior to, the acceptability of the conclusion. Hitchcock (2011, p. 199) writes:

It seems then that a crucial requirement for a conclusion to follow from given premises is that it has a covering generalization that is not only non-trivially true, but also can be known to be true independently of knowledge of the truth of the conclusion.

This requirement is built on the idea that a conclusion's following from premises, or being based upon the acceptability of premises, connotes something quite different than

the prior or premise-independent truth or acceptability of the conclusion. Now a reasoner who invokes or relies upon some warrant is presumably committed to some prior level of independent acceptability in the warranting conditional. The question is, can this acceptability be raised by corroborative evidence whose primary operation is to directly support the argument's conclusion – i.e., consequent of the warranting conditional? The answer here seems to be “no,” since any additional backing provided in corroboration only speaks to the truth of the argument's conclusion. Hence it does not contribute to our knowledge of, or confidence in, the acceptability of the warranting conditional independently of our knowledge of the argument's conclusion. Hence, it fails to meet Hitchcock's requirement. Because of this, any support corroborative evidence offers to the warrant cannot be used to bolster or enhance our acceptance of the conclusion without circularity. Call this Hitchcock's *ex quolibet verum* (from anything a truth follows) *problem*.

In my view, these problems are fatal to any view that takes corroborative evidence as bolstering arguments by providing backing for warrants. At least, if it is the warrant of some initial inference that is being strengthened by corroborative evidence, then these problems must be overcome and seemingly some quite different account of corroboration must be supplied.

5. Modeling Corroborative Evidence: Preliminary Considerations

5.1 Defeasibility

To begin to see how corroborative evidence might correctly be explained and modeled recall that it is a kind of argument strengthening. As such, it can occur only in cases where strengthening is possible – i.e., in inferences that are defeasible.

Consider, for example, an inference from witness testimony: S testifies that C; therefore C. This inference is subject to defeat – it can be undermined – on the grounds that S is either unreliable or insincere. Let us use “credibility,” and “trustworthy” as terms which connote both of these elements: reliability and sincerity. Suppose that S is unreliable or insincere, then the fact of S's testimony fails to give us a good reason for concluding that what they say is true. Indeed, we might be inclined to conclude just the opposite, on the grounds that it is likely that they are mistaken or lying. And, being defeasible, inferences from testimony convey something less than certainty to their conclusions, even if their premises are true. Thus, arguments from witness testimony are properly schematized as defeasible, having both a modal qualifier (e.g., presumptively) and a rebuttal condition (unless D).

Argument from witness testimony

S testifies that C; therefore, presumptively C, unless D.¹⁷

¹⁷ We might just as well have considered an example inference from observation of the reading or output of some measuring instrument, in which case we would have something like the following scheme: Instrument I reads that P, therefore, presumptively P, unless D (where D indicates some defeater, e.g., the instrument is defective, malfunctioning, or miscalibrated).

The credibility of witnesses and attestors is presupposed in arguments from testimony. If S's credibility is taken to be unknown or indeterminate, then the mere fact of their testimony gives us no reason to draw any conclusion one way or the other (cf. Freeman, 2005, pp. 284 ff.). Rather, given that we cannot say what bearing the data we possess has on the matter at issue, we should instead be inclined to withhold judgement on the matter until more probative evidence comes in. That we regularly rely on arguments from testimony without making specific, case-by-case credibility checks shows that we normally presuppose the credibility of the witnesses whose testimony we rely upon.¹⁸

¹⁸ Having noted that it is our practice to routinely rely on the testimony of individuals and the reports of instruments without making specific, case-by-case credibility or reliability checks, the account to follow is neutral with respect to the presumptive (or primitive) acceptability of these kinds of evidence. This note explains how this neutrality is achieved.

In the case of testimony, for example, Lackey (2006, pp. 4-6; 2008, ch.5) distinguishes between *reductionist* and *non-reductionist* accounts of the acceptability of testimony. On the *reductionist* view, the acceptability of testimony (even if taken to be defeasible) is not basic, but rather depends upon the prior acceptability of non-testimonial reasons supporting the testifier's credibility. As an example, Lackey (2006, p. 21 fn. 17) quotes Ficker (1995, p. 404) who writes "My reliance on a particular piece of testimony *reduces locally* just if I have adequate grounds to take my informant to be trustworthy on this occasion independently of accepting as true her very utterance." By contrast, *non-reductionists* hold that testimony is a primitive kind of evidence whose acceptability (if only presumptive) is basic and not based on the prior acceptability of evidence from other sources. As an example, Lackey (2008, p. 156) quotes Audi (1998, p. 142) who claims that "gaining testimonially grounded knowledge normally requires only having no reason for doubt about the credibility of the attestor." Each of these positions has adherents (cf. Lackey, 2006, pp. 20-21 fn. 10 and 16). Lackey herself (2008) recommends a hybrid, or *dualist*, position.

As an aside, and despite our routine practices, I have reservations about the non-reductionist's acceptance policy for testimony, which has been described as follows:

so long as there are no relevant defeaters, hearers can justifiably accept the assertions of speakers *merely* on the basis of a speaker's testimony. Otherwise put, so long as there is no available evidence *against* accepting a speaker's report, the hearer has no positive epistemic work to do in order to justifiably accept the testimony in question. (Lackey, 2006, p. 4)

In my view, there can be cases where one has no available evidence against a speaker's report, and yet still should not accept it merely on the basis of their say-so. Consider any claim, P, about which one lacks (sufficient) evidence one way or another, but about which one knows, could reasonably anticipate, or might just suspect, there is reasonable disagreement. Suppose I now come upon some speaker, S1, who attests that P. According to the non-reductionist, lacking any evidence to the contrary, I should accept P on the basis of S1's testimony. Now, suppose I later chance to meet S2 who assures me that ~P. Having accepted P uncritically on the basis of S1's say-so, I now have evidence that counts against S2's credibility – namely, S1's testimony (if not my own belief that P formed on the basis of it). Thus, the non-reductionist advises that I not accept ~P on the basis of S2's say-so. As such, local non-reductionism prescribes accepting uncritically only the first piece of controversial testimony one is confronted with about some issue; yet, typically, the order in which one receives information from the world – including witnesses – is only a matter of chance and is entirely epistemically irrelevant. Clearly, such a policy is not rational. And on two counts: (i) it mistakenly advises acceptance of claims on epistemically irrelevant grounds (it is only a matter of chance that I now accept P rather than ~P), and (ii) it mistakenly treats attestors differently for epistemically irrelevant reasons (it is only a matter of chance that I accept S1 at his word and not S2 at hers). (The argument offered here parallels Walton and Godden's (2005, p. 440) rejection of trust over suspicion as a policy for accepting or challenging (declining to accept) assertions made by an interlocutor in argumentation. Roughly, suspicion advises committing only to interlocutors' assertions that are either already among one's present commitments or are logical consequences of them. Trust, by contrast recommends accepting all interlocutor's assertions which are not contradicted by one's present

Inferential defeasibility can be modeled by adding a rebuttal condition to the argument diagram as in Fig.11. (Freeman, 1991, ch. 6). Generally, rebuttal conditions can include both undercutting (undermining) and rebutting (overriding) defeaters (see note 3), and these defeating conditions can be treated as functioning like assumptions or exceptions (Gordon, Prakken and Walton, 2007) (see note 18).

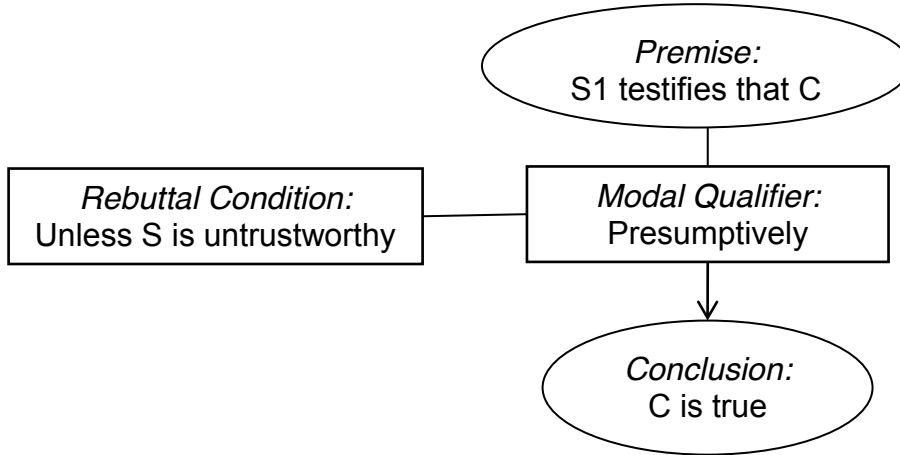


Fig.11 Modeling defeasible inferences using rebuttal conditions

5.2 Strengthening Through Counter-Rebuttal

By showing that a defeater, or rebutting condition, does not hold, our initial inference is strengthened to whatever extent the initial defeater threatened the initial inference. Defeating a defeater in this way is called “counter-rebuttal.”

There are two basic ways in which counter-rebuttal can occur, and they can be modeled as follows (Fig.12) (Freeman, 2011, pp. 24-28). First, one might *undermine* or undercut the initial rebuttal by showing that the excepting condition, even if it obtains, does not apply in the present case. Since it is the link between the defeater and the initial

commitments. While suspicion is clearly too stringent, following the policy of trust leads to the problems just described.)

Despite my reservations about a blanket local non-reductionism of testimony, the account offered here is neutral between these accounts. The neutrality can be achieved by employing Gordon, Prakken and Walton’s (2007) distinction between defeating conditions (which they approach through the lens of critical questions) that function as *assumptions* and those which function as *exceptions*. *Assumptions* mark defeating conditions which work like normal premises in this way: proponents bear the burden of proof to show the assumption holds (i.e., the defeating condition does not obtain) if they are challenged. Here, merely raising the possibility of the defeater is sufficient to rebut the initial argument, and it is the responsibility of the initial proponent to rebut the defeater. *Exceptions*, by contrast, are those defeating conditions which are presumed not to hold, such that challengers raising an excepting condition as a rebuttal bear the burden of proof of showing the excepting condition to obtain. Here, merely pointing to the possibility of the defeater is not sufficient to rebut the initial argument; rather the objector must also show that the defeating condition actually obtains. Reductionist accounts of testimony treat credibility as an assumption, while non-reductionist accounts treat it as an exception. Using this terminology, I take no position here on whether the credibility of the attestor is an assumed or exceptional defeater to arguments from testimony.

inference that is here undermined, this is diagrammed by having an arrow point from the counter-rebuttal to the link itself. Second, one might override or *directly rebut* the initial rebuttal by providing direct evidence that the excepting condition does not obtain. This is diagrammed by having an arrow point from the counter-rebuttal to the initial rebutter. While the inferential arrows used are the same kind as those marking positive evidential support, in modeling counter-rebuttal an “X” is placed on the line linking the rebutting condition to the initial inference, indicating that the defeating condition is defeated.

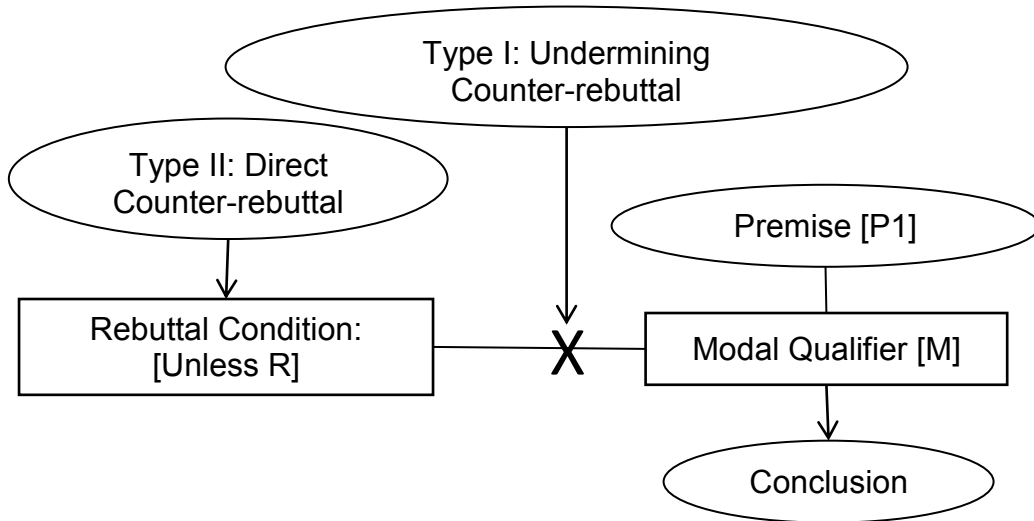


Fig.12 Modeling the two kinds of counter-rebuttal

Having successfully counter-rebutted a (potential) defeater – even if this counter-rebuttal is itself defeasible and hence only presumptive – the strength of our initial inference is increased proportionally to the degree it was threatened by the initial defeater.

Regrettably, neither of these two kinds of counter-rebuttal accurately captures what is going on with corroboration. Of the first kind, paradigmatic instances of corroboration do not show that a defeating condition does not apply in some case. That a second witness testifies that P in agreement with the testimony of some first witness does not directly or by itself show that the possible untrustworthiness of the initial witness is not a factor in present considerations. Rather, the undermining counter-rebuttal would involve some claim to the effect that *even if* the initial witness were generally untrustworthy (say, she needs glasses to see clearly), her testimony in this case can nevertheless be counted on (since what is being testified to doesn’t require much visual acuity). Of the second kind of counter-rebuttal, paradigmatic instances of corroboration do not show that a defeating condition is itself counter-rebutted either. As already noted, that some second witness gives testimony in agreement with a first does not directly support the claim that the first witness is credible; hence neither does it rebut the defeater that she is untrustworthy. Instead, direct counter-rebuttal requires something more like the following: in the case of witness testimony, a character witnesses might testify that the witness is not prone to lying, or an expert might testify that the witness has good eyesight and that the conditions were suitable for making reliable observations. Alternately, calibrating an instrument goes to show that its readings are not mistaken due

to defect or inaccuracy. While these kinds of cases are clearly instances of counter-rebuttal, they operate quite differently from paradigmatic instances of corroboration. First, methods of counter-rebuttal such as these lack the primary function of corroboration: that of directly supporting a main conclusion. Second, they do not correctly represent the bolstering function of corroboration.

So, argument strengthening through counter-rebuttal can occur in a variety of ways that do not involve corroboration. The question is can the ideas of defeasibility and counter-rebuttal inform a working model of corroboration? Specifically, can these ideas be worked into the proposed explanation of corroboration as involving inference to the best explanation?

6. Modeling Corroborative Evidence: Inference to the Best Explanation as Counter-Rebuttal

6.1 Defeasibility Conditions, Corroboration, and Inference to the Best Explanation

To answer these questions, consider that rebutters, or defeating conditions, represent counter-examples to the initial inference: possible situations in which the premises are true yet the conclusion is false. Defeaters are thus explanatory in an important sense: they give a condition or scenario on which the truth of the premises is (or could be) explained by something other than – indeed something inconsistent with – the truth of the conclusion. As such, one way in which counter-rebuttal can occur is to supply a better explanation of the evidence other than that given by the defeating condition – specifically one involving the truth of the conclusion. Thus, if we can come up with some explanation of the evidence that (i) involves the truth of the conclusion, and (ii) is better than the one provided by the defeater, then the rebutting condition considered would be defeated, thereby strengthening the initial inference.

My claim is that this is precisely what occurs in corroboration. To see how, suppose that we initially receive some data, or make an observation, that is *prima facie* incredible.¹⁹ Recalling the argument from witness testimony:

S1 testifies that C; therefore, presumptively C, unless D,

perhaps we receive what Coady (1992, ch.10) calls an *astounding report*. Suppose we were to find ourselves in the position of the King of Siam who, as Locke (1690, IV.xv.5; 1975, pp. 656-657) described, was once told by a visiting foreign dignitary “that the water in his [the dignitary’s] country would sometimes in cold weather be so hard that men walked upon it.” Upon hearing this testimony, Locke tells us, the King exclaimed: “Hitherto I have believed the strange things you have told me, because I look upon you as a sober, fair man: but now I am sure you lie” (cf. Coady, 1992, p. 180).²⁰

¹⁹ The point here is not that corroboration brings testimony or evidence from the realm of the incredible to the realm of the credible, although this can happen (see example in the next note). Rather, the point is that corroboration bolsters the credibility or probative worth of existing but defeasible evidence.

²⁰ To pick a real-life example: readers may recall the grisly murder of Lin Jun by Luka Rocco Magnotta which occurred in Montreal, Canada in late May, 2012. The murder was especially gruesome as it involved the dismemberment of the victim; as well a video of the murder was made by the killer and posted online.

The murder was discovered by authorities on Tuesday, May 29, when dismembered body parts of the victim were found to have been mailed to the offices of the Liberal and Conservative political parties in Ottawa, Canada. That same day, the victim's torso was discovered in a suitcase left in the garbage behind an apartment building in Montreal.

Importantly, the video of the murder was uploaded to the internet on Friday, May 25, where it was quickly discovered by members of the online community, at least one of whom, Roger Renville, a Montana lawyer, repeatedly attempted to report the footage of the murder to authorities. Their response is instructive to our present considerations.

Renville's story was reported by the Canadian Broadcasting Corporation's daily radio news interview program "As It Happens" (Thursday, May 31, 2012) where he was interviewed by host Carol Off. The interview may be heard at the following URL:

<http://www.cbc.ca/asithappens/episode/2012/05/31/the-thursday-edition-31/> [November 15, 2012]

As Renville describes to Off: he discovered the online video on Saturday, May 26, and immediately tried to report it to local and federal US authorities as well as news outlets. In each case his report was disregarded. On Sunday, May 27, having discovered a connection to Toronto, Canada, Renville attempted to report the video to Toronto police. He describes his attempt in this way: "I admitted [to the police] at the outset that this was going to be a strange report – very, very unusual – and I stated that I'd seen a video online of a murder and dismemberment." In response, Renville reports that he was told by the officer taking the report, "that what I was seeing was probably fake, that it was probably special effects, that special effects were very good, and could make the fake look real. And I was told that it did not make sense what I was saying; it did not make sense that a killer would film himself committing his crime and then post it on the internet." Indeed, the Toronto police were not even interested in seeing the video for themselves, and declined to be provided with its URL.

Renville actually gave up trying to report the crime until the evening of Tuesday, May 29, when he learned of the body parts having been discovered in the mail. At that point he again attempted to contact authorities, this time the Royal Canadian Mounted Police (RCMP), Canada's federal police service, in Ottawa. As Renville describes it, the officer to whom he made the report "at first wasn't really interested to hear that there was a video of a murder online, but when I pointed out that it ... included dismemberment she got more interested. And then ... I said, 'You know, I also have his name.' And she said, 'You have his name?' And I started to spell out his name. Half-way through she interrupted me and got excited and she put me on hold for five minutes, and when she came back she was very excited and she said something to the effect that 'We are looking for this man.'"

For our purposes, what is interesting about this case is that Renville's initial reports were treated as incredible by everyone whom he contacted. And their disregarding of his testimony was subsequently defended as reasonable. In the course of the interview, host Carol Off reports that "the Toronto police have issued a statement just now saying that the call taker –the person who took [Renville's] call – they say, acted reasonably given the information that had been provided." And, Renville himself agrees, saying "That's hard for me to take issue with. You know, one thing I've been clear about is that it was a very, very strange story that I tried to share. It's only the fact that we now have proof – that we are now having bloody packages arriving in the mail, that's causing anybody to take it seriously." That is, while Renville's testimony was initially – and reasonably – received as incredible, once it was corroborated by other known evidence, such as the body parts found in the mail or the name of the suspect, the credibility of his testimony was re-evaluated and deemed to be trustworthy.

How did this transformation occur? What about the corroborating evidence made this reevaluation of the Renville's credibility rational? According to the theory on offer, the corroborating evidence pointed to the truth of Renville's testimony as the best explanation of his giving it – rather than, say, the alternative explanation of the Toronto police officer, that the video had been faked since criminals tend not to post self-incriminating evidence on the internet. In this case, that alternative explanation represents a defeater to any argument relying on Renville's testimony, by explaining the fact of the evidence without granting the truth of what it is putatively evidence *of*. Thus, to whatever extent this alternative explanation is more plausible than his testimony's actually being credible, arguments relying on his testimony will be defeated. Importantly, although the corroborating evidence is not, *ceteris paribus*, consistent with the alternative, defeating explanation, it does not directly rebut or undermine it either. What it does do, though, is point directly to the truth of what Renville testified to. In doing this, the corroborating evidence directly supports one possible explanation of Renville's testimony – namely that he said what he did because it's true. And,

In an astonishing report, what is reported, C, is so foreign to our own experience of the world, or incoherent with our view of things, that we deem it to be unlikely.²¹ We are disinclined to proceed with the inference from testimony and accept what is reported on the basis of the attestor's say-so. Rather, although the premise of the inference is acceptable (indeed true), finding *what was said* so extraordinary, we are disinclined from placing much probative stock in the testimony – i.e., in *that it was said*. Rather, we are more inclined to think that there is some better explanation of why the testimony was given other than its being true. That is, we find there to be some defeater, D, to the inference, e.g., that the attestor is untrustworthy (lying or mistaken). And, being that we are more inclined to accept the truth of the defeater, D, than the truth of the testimony, C, unless and until the defeater is itself defeated the inference will not go through. What we would like is some additional reason to find the testimony credible.

It is important to stress the explanatory role of defeaters in cases like this. Notice that the defeater, D, represents a counter-example to the argument from witness testimony on which its premise is true but its conclusion, nevertheless, false. As a counter-example, the defeater represents a possible explanation according to which the evidence (i.e., the fact of S1's testimony, call this reason "R1") can obtain even though the state of affairs reported in the conclusion (i.e., the fact of C) does not. That is, it represents a possible explanation of S1's testimony that C (i.e., R1) on which the fact of the testimony's being given is explained not by the truth of C, but rather by the truth of D. Accordingly, then, in deeming S1's testimony incredible, we have judged that the best explanation of it is something other than the truth of what was said. In terms of possible worlds, this amounts to finding the (range of) possible world(s) W_d (R1, \sim C, D) more likely than the (range of) possible world(s) W_c (R1, C, \sim D).²²

having direct and independent evidence for *the truth of what was said* as the best available explanation of *why it was said*, we now have a reason to count the testimony as credible in a way that we previously did not.

²¹ See Coady (1992, ch. 10) on when such skepticism is rational. Coady notes, e.g., that the mere antecedent improbability of what is reported is an insufficient warrant for skepticism (p. 180), as is its failure to conform to our experience of things (pp. 181-189). On the other hand, Coady claims that, though something's being contrary to the laws of nature does warrant skepticism (p. 179), it may also be warranted in cases that conform to the laws of nature yet do not cohere well with our "general framework of knowledge" (p. 189). Finally, Coady (pp. 189-191) argues, though without explaining how or why, that the mutual corroboration of a number different witnesses can transform testimony that is, by itself, incredible into something that "need not be rejected" (p. 189). In doing this, Coady rejects Hume's anti-corroboration principle that: "a fact incredible in itself, acquires not the smallest accession of probability by the accumulation of testimony" (as quoted by Coady, p. 182).

²² These possible worlds represent alternative scenarios or states of affairs which can be contemplated, and the (relative) likelihood of which can be judged by rational agents. The notation denotes different possible worlds according to a set (incomplete, of course) of propositions taken to hold true in them. The probability considered here is subjective – that is, it represents the likelihood that the judging subject ascribes to the different possible worlds and the claims in them. Of course, these judgements of (relative) probability are made while taking a whole host of claims, representing the knowledge-state or background beliefs of the agent, as true. Although these background beliefs do comprise the context in which the agent ascribed probability and judges the relative likelihood of possible worlds, they are not included in the list defining the possible world itself.

According to the theory being proposed, corroboration provides evidence for a better explanation of the evidence, R1, than the defeater, D – namely, the truth of C. In doing so, it counter-rebutts the defeater and thereby bolsters the strength of the initial inference.

How does corroboration rebut this defeater? Paradigmatically, corroboration involves finding another, independent reason that directly supports the conclusion at issue. This is the primary evidential operation of corroborative evidence. Thus, finding a second witness, S2, who also testifies that C (call this reason “R2”) gives us an additional, direct and independent reason for accepting C.

Discovery of such evidence has two effects on our hypothesis that R1 is better explained by D rather than by C. First, notice that the initial defeater we had accepted, that S1 was untrustworthy, *fails* to explain the fact of S2’s testimony. As such, obtaining a second piece of agreeing testimony, R2, eliminates a range of possible explanations, alternative to the truth of C, which postulate that $\sim R2$. If *only* S1 were untrustworthy, we would expect S2’s reports to be credible. Thus, if we still wish to deny C, we must find some other, stronger defeater on which *both* S1 and S2 are untrustworthy. Perhaps they have conspired to deceive us. That is, obtaining R2 rules out a set of possible worlds We ($\sim R2, \sim C$) that includes the subset We' (R1, $\sim C, D, \sim R2$). Importantly, We' is a subset of Wd (proper, so long as the claims are contingent). As such, discovering R2 directly rebuts (by being inconsistent with) a range of defeaters – specifically all those in We' – for the initial inference. Importantly, the defeaters in We' constitute the weakest ones possible to defeat the initial inference: the ones which occur in worlds *closest* to the actual world but where $\sim C$ – i.e., the ones most likely to be true.²³ Thus, if we continue to reject C in favor of some defeater, we must now select some alternative explanation, D'' , that can hold in the world Wd'' (R1, R2, $\sim C, D''$) – i.e., one capable of explaining *both* R1 and R2, rather than merely R1. At the very least, then, finding corroborative evidence requires us to seek out and adopt stronger defeaters than would otherwise be required to rebut the inference from testimony.²⁴

²³ The relative proximity of possible worlds can be understood as follows. Possible worlds can be judged closer or further away from the actual world (or the world of the agent’s background beliefs) according to a principle of conservatism. The fewer and least severe the adjustments (redistributions of truth or probability over the other propositions in the set) required to accommodate (i.e., retain consistency with) the relevant change (e.g., introduction of a new proposition to the set, or removal of one from the set) the closer the possible world under consideration is to some target (e.g., the actual world). Given that we take the world we believe in to be actual, we take the claims that describe it to be true. Conservatism, then, serves as a subjective measure of the likelihood of some contemplated change. The more extensive or drastic the revisions required in a web of belief to accommodate some change, the less likely it should be taken to be.

The point here is this: the weakest rebutters sufficient to defeat to some initial inference will be those that make the least overall change to the other claims holding in the world. Thus, these defeaters will occur in relatively closer possible worlds than defeaters that require more significant adjustments. Further, according to the subjective measure of likelihood just described, the defeaters in the closest possible worlds will also be deemed most likely.

²⁴ Thus, corroboration shows a belief, C, based on some initial reason, R1, to be *sensitive* in a way that it was not prior to corroboration. A subject’s, S’s, belief, C, is sensitive if and only if, in the nearest (or nearby) possible world(s) to the actual one where C does not obtain, S would not believe that C (Nozick, 1981; Dretske, 1971; for an overview see Becker and Black, 2012). So long as it is granted that sensitive beliefs, even defeasibly sensitive ones, are epistemically stronger than insensitive ones, then corroboration

But, ruling out possible defeaters, and requiring the invocation of stronger, and hence less likely, ones, does not, in itself, suggest a best available explanation. Yet, R2 is not merely evidence that we do not live in a world W_e ($\sim R2$, $\sim C$). Moreover, by hypothesis, R2 is a reason for C. That is, it is evidence that we live in a world W_r (R2, C). And, C is an explanation of R1. Among the possible explanations of S1's testimony is that the events reported by it are indeed facts. That is, if C were indeed the case, we should no longer find S1's testimony that C incredible. Recall further that, by hypothesis, our *only* evidence for D was our disinclination to accept C, finding it extraordinary. As such, having an independent reason for C thereby provides a reason for thinking that the truth of C is the best explanation of R1 *ceteris paribus* – i.e., in the absence of evidence for any other explanation of R1 (and now R2) involving $\sim C$. Admittedly, this reason is defeasible; it does not *prove* that D is false, it merely gives us a reason for thinking D is false. Yet, in the absence of any further evidence of D's truth, such evidence is sufficient in the context to warrant the conclusion that C is the best explanation of R1, and thereby to counter-rebut D and create a presumption against it.

6.2 Diagramming Corroboration as Inference to the Best Explanation

The above account gives the following model of corroboration.²⁵

strengthens the probative value of beliefs by making them sensitive. While not advanced here, this line of reasoning is developed in subsequent work by the author (Godden, 2012, 2013).

²⁵ Circumstances require that a minor modification be made to Freeman's *expanded standard approach* to diagramming. Normally, rebuttal conditions would attach to the modal qualifier. Yet, to specify which defeaters are being counter-rebutted, rebuttal conditions are here depicted as attaching to individual lines of reasoning within the convergent argument structure.

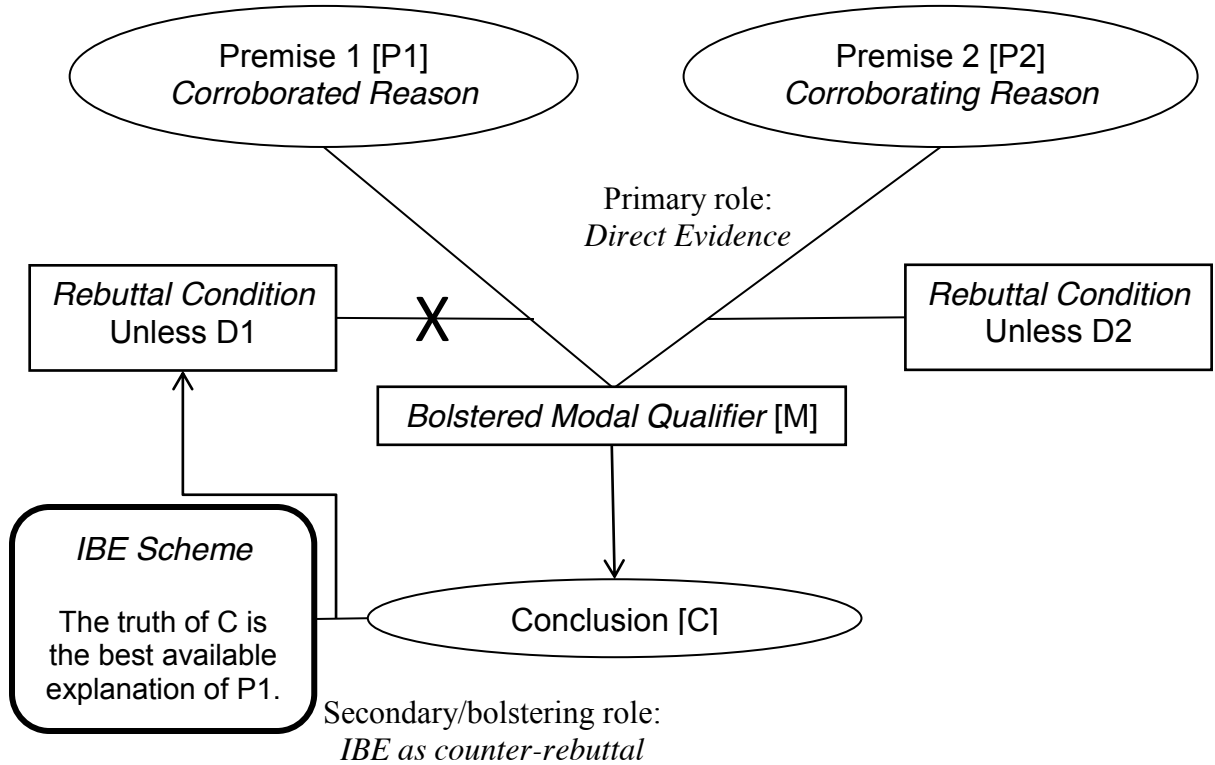


Fig.13 Corroboration as counter-rebuttal via inference to the best explanation

The diagram (Fig.13) represents the primary effect of corroborative evidence, P2, as a second, direct, convergent (and thus independent) reason for the conclusion, C. The secondary, bolstering effect of corroboration is represented as a consequence of this primary role. Provided that C is the best explanation of P1, then the independent support P2 offers C can in turn be legitimately used to counter-rebut the defeater, D1, to the initial argument. In the diagram, the exact structure of the IBE inference not represented. Rather it is depicted as a schematic black-box, with the key, explanatory claim identified. The bolstering achieved through counter-rebuttal can be incorporated into the model by strengthening the modal qualifier as appropriate.

Notice that the corroborating evidence itself only performs a single function within the argument: it provides direct support for the main conclusion. (This is importantly unlike the “Corroboration as backing (strengthening the warrant)” model (Fig.10) where corroborating evidence serves as both data and backing and is the source for two inferential arrows in the diagram.) In serving this single role, the probative weight of corroborating evidence is not overvalued through double-counting. Rather, the secondary, bolstering effect of corroborative evidence is not achieved directly, but derivatively, through IBE, and is a consequence of the increased probative weight the corroborating evidence legitimately transferred to the main conclusion. Because the truth of the main conclusion is the best explanation of the corroborated evidence, the credibility of the corroborated evidence is enhanced through corroboration.

Notice also that this explanatory relationship between a conclusion and a reason does not always obtain. That the death penalty should be abolished is not the best

explanation of its cost ineffectiveness, or of its moral intolerability. Similarly, the guilt of an accused is not the best explanation of his having motive, means, or opportunity. Thus, the IBE as counter-rebuttal account of corroboration provides a principled basis for distinguishing between convergent, non-corroborative arguments – where the truth of the conclusion is not the best explanation of any of the premises – and convergent, corroborative arguments – where the truth of the conclusion is the best explanation of the corroborated premises.

6.3 Corroboration and Credibility

As discussed so far, the example suggests that corroboration functions to move some initial piece of evidence from the realm of the incredible to the realm of the credible. (In the example we have been considering, given the extraordinary nature of the initial testimony, whatever credibility we initially placed in it was overridden by our disinclination to accept what was attested to.) While this can happen, it is not the only way that the bolstering effect of corroboration occurs. Instead, the bolstering effect of corroboration works to increase the probative worth of defeasible evidence, *whatever* its initial probative value. By counter-rebutting a potential (range of) defeater(s), corroboration increases the probative worth of evidence by whatever extent it was threatened by those defeaters, and to whatever extent the truth of the conclusion actually is the best explanation of the evidence. Since the initial argument is no longer subject to rebuttal on the grounds of the counter-rebutted (potential) defeater, one possible counter-example to the initial argument, or one alternative explanation of the evidence which does not involve the truth of the conclusion, is foreclosed. This foreclosure should increase the value of that initial evidence accordingly.

Further, as discussed thus far, the proposed account assumes that the corroborating evidence, at least, is taken as presumptively credible. The bolstering effect of corroboration derives from the credibility ascribed to the corroborating evidence. As already noted (fn. 12), there remains the question of whether corroboration can occur even in cases where each piece of evidence involved is deemed incredible (van Cleve, 2005). Although this is a complex issue which cannot be given full discussion here, it can be remarked that the matter will ultimately be settled by explanatory considerations. Here, Elgin (2005, p. 157) notes, what must be explained is how all of the putatively unreliable sources (witnesses) went wrong *in the same way*. To whatever extent we are inclined to accept the truth of what they say, C, over some defeater, D, as the best explanation of why they said what they did, the probative value of their evidence will have been bolstered by corroboration.

6.4 Mutual Corroboration

Accepting this account of corroboration, a question presents itself. Should not the same bolstering effect occur between the corroborated reason, R1, and the corroborating reason, R2? After all, to the extent that R1 is credible, it does the same job of eliminating a range of defeaters for R2, as well as pointing to C as the best explanation for the fact of R2 rather than any prospective defeater. There is no categorical answer to this question. Rather, the answer, in any case, will depend on the initial credibility ascribed to the

evidence, and whether it is taken to be subject to defeat on grounds where counter-rebuttal of the sort discussed above is possible.

For example, consider a case where the reliability of a witness is in question: he has offered an alibi but his trustworthiness is in doubt. Suppose some corroborating circumstantial evidence whose reliability is not at issue is then discovered. Perhaps it is learned that his passport was scanned at a border check-point, and the security tapes clearly show him as present at the border station at the time in question. In this case, it would seem that the corroboration effect only goes in one direction. Since the reliability of the border security records are taken as authoritative or certain, that they agree with the witness's testimony does not bolster our confidence in their accuracy. On the other hand, this agreement does increase our inclination to accept the witness's statement as true. Similarly, suppose that in one's house there is one atomic clock whose accuracy is taken for granted, together with a variety of other clocks (some electric, some battery powered, some wind-up). Here, that the several non-atomic clocks might agree with each other would provide mutually corroborative evidence for the accuracy of each. By contrast, that any one of them agrees with the atomic clock would corroborate the accuracy of the non-atomic clock, but not vice versa. Thus, when the credibility of some piece of evidence is not subject to defeat in the context at hand, then it is not capable of being bolstered by corroboration.

By contrast, whenever the credibility of some piece of evidence is at issue, or it is subject to defeat, then it is capable of being bolstered by corroboration in the way described. In this way, several, individually defeasible pieces of evidence can be *mutually corroborative*. In such cases the credibility of each mutually corroborated reason is bolstered because some other, independent mutually corroborating reason directly supports the truth of some claim which, in turn, serves as the best explanation of the corroborated reason. Intuitively, consider a case where we seek to verify the alibi of a suspect, whose credibility we are initially unsure of. He has testified that he was at the cinema at the time the crime was committed. In checking his alibi, first we find a second, independent witness who recalls the suspect's attending the film. Second we find some circumstantial evidence such as a cinema receipt among his possessions, or a charge to his bank card made at the cinema ticket booth. Each piece of evidence speaks, defeasibly but directly, to the truth of our suspect's presence at the movies rather than at the scene of the crime. Further, while our original interest was merely to verify our suspect's alibi, the probative value of each of these pieces of evidence, not merely the testimony of the suspect, is bolstered by each of the others. And this bolstering occurs because each new piece of evidence, in counting towards the truth of his being at the movies, best explains why he said that's where he was, why someone else might have seen him there, and why his bank account would show such a charge.

6.5 Diagramming Mutually Corroborating Evidence

Mutually corroborative evidence can then be modeled as follows.

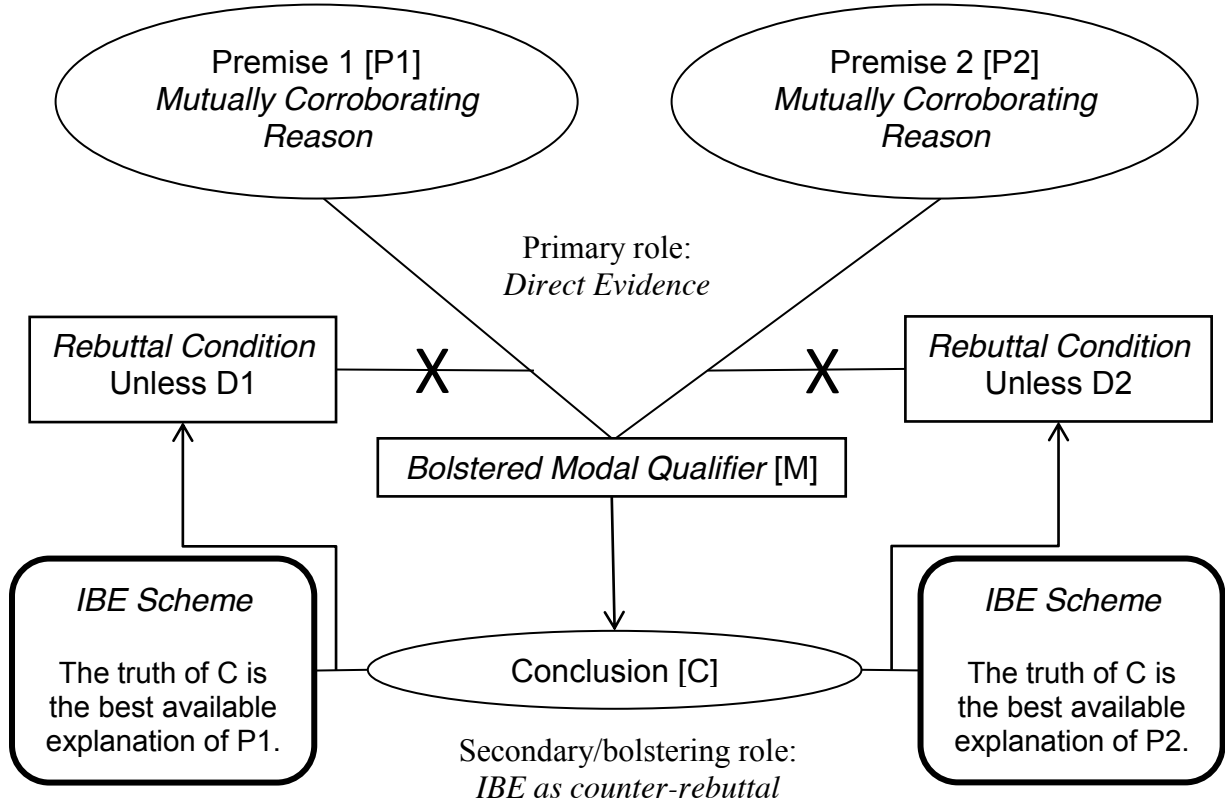


Fig.14 Mutual corroboration as counter-rebuttal via inference to the best explanation

6.5.1 Mutual Corroboration, Circularity and Double Counting

At this point, it might seem as though the fallacies of double counting evidence and even vicious circularity occur in cases of mutual corroboration. To illustrate the apparent problem, suppose that we, in finding the cinema receipt, now take our independent witness’s testimony to be more credible than we would have initially, and accept this bolstered probative value of the testimony, as well as the cinema receipt, in verifying our suspect’s alibi. Here we seem to have double counted the corroborating or bolstering value of the cinema receipt. Further, we might even imagine that, because the witness’s statement is corroborated by our suspect’s alibi, we should find it more credible than we would have otherwise, and could therefore use this increased credibility to further corroborate our suspect’s alibi. Here, the probative value of the alibi seems to bolster itself in a way that is viciously circular.

While clearly fallacies, these dangers are easily avoided. First, although the model proposes using a conclusion to bolster the strength of a piece of evidence for it, no epistemic circularity occurs. Rather, the bolstering effect of corroboration can occur only

because the conclusion is supported by some other, independent piece of evidence. As such, the probative force of the corroborated premise is not being transferred back onto itself. Rather, there is an independent path of justification, beginning with the corroborating reason and going through the conclusion, which serves to counter-rebut a defeater to the corroborated premise, thereby strengthening its probative worth (cf. Walton, 1985). Indeed, the account prescribes that the bolstering effect of corroboration is limited to the extent that any corroborating evidence makes the truth of the conclusion a more plausible explanation of the corroborated evidence than the defeater. Importantly, this method also captures the intuitive idea that an initially highly reliable witness corroborating the testimony of an initially unreliable witness might add substantially to the credibility of that initially unreliable witness, while the testimony of an initially unreliable witness might not significantly increase the credibility of another witness. Second, because corroboration acts to counter-rebut potential defeaters, once those defeaters are rebutted no further strengthening is called for or possible. This stops any vicious regress. The bolstering effect of corroboration occurs when some corroborating reason counter-rebutts a defeater for some corroborated reason via inference to the best explanation. If it were subsequently allowed that this newly bolstered, corroborated reason could in turn bolster the corroborating reason, then the justificatory path here would genuinely be circular, and the probative force of the corroborating reason would be illicitly transferred back onto itself. Thus, there is a principled reason that the operation of corroboration, though it can be mutual, is not recursive. Bolstering due to corroboration is not susceptible to an echo effect. As such, the probative worth of evidence is never double counted and vicious, i.e., recursive, mutual corroboration is excluded.

7. Conclusion

Corroborative evidence can have a dual function in argument, providing primary and direct support to some conclusion while bolstering the probative value of some other piece of evidence in the argument. This strengthening occurs as a kind of counter-rebuttal of potential defeaters to the initial inference – defeaters that represent possible explanations of the evidence on which the conclusion is, nevertheless, false. As Wigmore (1913, p. 751) once said in describing the operation of corroborative evidence in law, corroboration works by “closing up other possible explanations.” This occurs in two ways. First, corroboration forecloses on the weakest, and thus most probable, set of alternative explanations other than the truth of the conclusion, since they are explanations on which corroboration would not occur. Second, corroboration provides direct evidence that the best available explanation of the evidence is the truth of the conclusion. Having an independent reason for thinking a conclusion true, and having only our disinclination to accept the conclusion’s truth as a reason for thinking the initial evidence defeated, we ought to accept the truth of the conclusion as the best available explanation of the evidence. Thus, an inference to the best explanation is used to counter-rebut any defeater which hopes to explain the evidence by something other than the truth of the conclusion.

As such, the bolstering function of corroboration is epistemically legitimate in cases where the truth of the conclusion supported by the corroborating evidence is the best explanation of the corroborated evidence. The probative worth of corroborated evidence is bolstered to the extent that it was threatened by the counter-rebutted

defeaters, and to the extent that those defeaters are genuinely counter-rebutted. Inference to the best explanation, then, provides an explanatory theory for corroborative evidence.

This explanatory account has several virtues. Perhaps most importantly, it explains why some evidence, while convergent, is non-corroborative – namely when the truth of the conclusion is not the best explanation of the putatively corroborated evidence. Further, it avoids the fallacy of double-counting evidence (or overvaluing the contribution of corroborating evidence) (cf. Redmayne, 2000), and it explains why corroborating evidence must be independent of corroborated evidence (because otherwise a viable and competing explanation of the agreement of several pieces of evidence would be their causal inter-dependence rather than the truth of the conclusion).

A final virtue of this account is that it provides the explanatory basis for a model of corroboration which seems to correctly represent its structure and justificatory operation, while avoiding the problems of other possible models. The primary evidentiary role of corroborating evidence is to provide direct, convergent support to some conclusion, C. The bolstering effect of corroborating evidence can then be diagrammed as an inference to the best explanation that counter-rebutts a defeater, D, to the initial inference.

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