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Are there methods of informal logic?

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ABSTRACT: This presentation seeks to understand informal logic as a set of methods for the logical evaluation of natural language arguments. Some of the methods identified are the fallacies method, deductivism, warrantism and argument schemes. A framework for comparing the adequacy of the methods is outlined consisting of the following categories: learner- and user-efficiency, subjective and objective reliability, and scope. Within this framework, it is also possible to compare informal and formal logic.

KEYWORDS: logic, illative evaluation, conceptual standard, operational standard, methods, reliability, efficiency, scope

1. INTRODUCTION

Imagine that you have received a grant to study the argumentation surrounding a topic of current interest, the arguments about whether there should be unrestricted building of energy-producing windmills, for example, or whether your country should be involved in an overseas war, or whether we should eat genetically modified foods. You want to know all the different arguments that have been given on this topic, for and against, over a given period of time in such-and-such sources (these newspapers, these web-sites, those radio programmes). Not only do you want to know what arguments have been given, you also want to know which ones are good arguments and which ones are not good. But you can't do all this work yourself. You need others to help you.

Enter at this point: the graduate students. One of them is writing a thesis on Kierkegaard, another on the concept of social justice, and the third on the private-language argument. Being graduate students there can be no doubt about their intelligence and commitment; however, none of these students has had any special training or background in the analysis or evaluation of natural language arguments. So, since the Dean has told you that these are the helpers you must use if you want your grant, you now have a practical problem: how do you prepare these people to help you with your research?

We can use this fiction as a way of motivating and orienting a discussion about one of the practical problems that arise in connection with the evaluation of natural language arguments, namely, how to determine their logical strength. Pursuing this problem will invite a comparison between formal and informal logic. Which of these two approaches is best for evaluating the logical strength of natural language arguments (NLA's)? The claim has been urged that informal logic is best suited to the job or that it is at least just as well

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suited to it as formal logic is. That may well be so, but how are we to decide? What would justify our answer that the one approach is better than the other? Below, a framework is developed that will give us some guidance in answering these questions.

The concept of 'logical evaluation' is ambiguous because some people use it broadly to mean the logical evaluation of arguments, including an evaluation of the premises, whereas others use 'logical evaluation' narrowly to refer only to the evaluation of the premiss-conclusion relationship, that is, to the evaluation of the extent to which premises are sufficient for their conclusions (on the assumption the premises are acceptable). To avoid confusion, I use the term *illative evaluation* to refer to the evaluation of the premiss-conclusion relationship in an argument or inference. The general problems that concerns us, then, is, how to determine the *illative strength* of arguments, and how to justify our illative judgments? The practical and more immediate problem facing us is to decide on a serviceable method of illative evaluation that will be easy for our new-found assistants to learn and enable them to report back in fairly short order on the illative strength of the arguments they are studying.

2. IN PRAISE OF FORMAL LOGIC

The virtues of formal logic are many. One of them is that formal logic focuses on the premise-conclusion relation in exclusion to the question of premiss acceptability. True, formal logic texts introduce the concept of a *sound argument* as one which is deductively valid and has true premises. But the introduction of this concept usually comes at the point where the author(s) wants to distinguish logical pursuits from extra-logical ones. The truth is that formal logic doesn't have much to say about premiss questions except to offer a broad three-fold classification which sorts them into necessarily true propositions (logical truths), necessarily false propositions (logical falsehoods) and contingent propositions. The first two kinds of propositions are of interest to formal logicians and philosophers and mathematicians (the premises (axioms) of formal systems must be logical truths) but they are hardly of interest to anyone else since the premises of NLA's are for the most part made of contingent propositions. Formal logic has no means of evaluating contingent propositions as true or false, and that is why formal-logic texts do not have exercises on determining the truth or falsity of such propositions. Hence, formal logic is aware that it cannot take it as part of its business, in general, to pronounce on premiss acceptability, and that therefore its true concern must be with illative issues. This is not to say that formal logicians do not have views about premiss acceptability; most likely they all do, but those views are not part of the formal logic they espouse: they are something else, tacked on. This may explain why at least since the nineteenth century, the preference is to identify logic with the study and evaluation of premises-conclusion relations and disassociate it from premissary questions. '[T]he rules of Logic,' wrote Whately in the 1820's, 'have nothing to do with the truth or falsity of the Premises; except, of course, when they are the conclusions of former arguments' (Whately 1875: 153), and about 175 years later we have Skyrms expressing almost the same view when he writes that, except in special cases, 'It is not the business of a logician to judge whether the premises of an argument are true or false' (Skyrms 2000: 15).[21]

[2] Angell (1964: 43) concurs, writing that "traditional logic has *not* concerned itself much with the *acceptability of reasons*; the main concern has been the analysis and critique of *argument connections.*"

Many informal logicians take the practical task of their discipline to be the evaluation of *arguments*, and hence they include both premissary and illative questions in informal logic. But questions of premiss evaluation must be shared with colleagues in epistemology, philosophy of science, politics, history, economics, rhetoric and dialectical studies, colleagues who have premissary standards and means for evaluating premises, and are thus in a much better position to say whether a given premiss is acceptable than a logician would be. My point here is that although informal logicians have been among those who have urged that the standard for premises must be acceptability rather than truth, informal logic has hardly any means of determining whether premises meet the standard of acceptability. Thus, with regards to premissary questions, informal logicians are not in a much better position than that of formal logicians. Judgments about premises must ultimately be made by experts in other fields or by informal logicians in the guise of being experts in other fields. Conversely, the experts about premiss acceptability in other fields do not make a special study of how to evaluate illative relations. I do not mean that they are not discriminating in their illative judgments. They work with the standards implicit in thier fields, but they make no specialty of the study illative goodness. Accordingly, my preference is to use 'informal logic' in a narrow sense, parallelling that of the range of formal logic, such that it is concerned only with illative issues.

Narrowing informal logic in the way that I propose does not diminish the importance of argument evaluation. Argument evaluation is the larger enterprise that gives significance to the less encompassing field of illative evaluation. But by narrowing informal logic to deal only with illative issues we not only have the benefit of distancing ourselves from a variety of approaches to argument evaluation (rhetorical and dialectical approaches, for instance) and setting up a unique area of study, we also prepare the ground for a comparison with formal logic that puts both parties on equal footing.

Let us now consider another of the virtues of formal logic. Not only does formal logic value conceptual clarity (the basic concepts are few and well-defined), it is devoted to methods of illative evaluation, to making them perspicuous and transparent. Different methods have been identified and detailed: the truth-table method, for example, the truth-tree method, normal forms methods, the Venn and Euler methods, natural deduction method, etc. (see Quine 1982). All these methods share the same *conceptual standard of illative goodness*. It is deductive validity. Judgments about formal validity, however, are seldom made by direct appeal to the conceptual standard, but rather by testing the argument against some *operational standard*. *Truth-table validity* is one such operational standard, and each of the methods of formal logic has its own operational standard in the service of the conceptual standard. The various methods of formal logic (used for testing for validity) are really methods for determining whether an argument satisfies an operational standard of illative goodness. The truth-table method consists of an operational standard (there should be all T's in the final column), a set of concepts (e.g. the definitions of the truth-functional constants, etc.) and a set of techniques (e.g., how to construct a truth table, how to compute the value of the final column, etc). Employing the techniques constitutes a test for seeing whether the operational standard has been satisfied. If the operational standard is satisfied, so is the conceptual standard.

(There are many illative methods of formal logic but in what follows the truth-table method will serve as *the* method of formal logic for the sake of making the compar-

ison with informal logic. The same points of differences and similarities could be made as well with any of the other formal logic methods.[3])

The formal-logic method of illative evaluation of NLA's is attractive for several reasons. One of these is that it can help us decide hard cases, i.e., those which are near the edge of or beyond our intuitive competence. Most of all, however, formal methods are intertwined with a satisfying answer to the question, 'What makes an argument logically good?' Postulating logical form as the source of illative goodness is in line with our philosophical urge to seek the real truth behind surface appearances, the deep structures that underlie the surface grammar of arguments. Thus, taking the natural language arguments (NLA's), transforming them into formal language arguments (FLA's), making illative evaluations of the FLA's by one of the methods of formal logic, and then extending our findings to the original NLA's, seems like a good method. But this way of illatively evaluating NLA's has come under criticism. For one thing, formal logic requires a lot of learning; maybe six-months to a year to get comfortable with the predicate calculus and its modal extensions. Moreover, it is sometimes difficult to find the right FLA equivalent to an NLA. Furthermore, it may be that the illative strength of some NLA's just can't be captured in a corresponding FLA, resulting in the disadvantage that the argument must remain unevaluated. There is also the problem that the formal logic we have is meant for arguments that are to be measured by the deductive standard, but it is generally recognized that not all arguments are like that; some of them are more reasonably evaluated by, say, an inductive standard of illative strength. Finally, because formal logic can only give us a verdict of 'valid' or 'invalid', using formal logic we cannot ever arrive at intermediate judgments of illative strength: no judgments like 'pretty good, but could be better' are possible, yet, intuitively, that seems to be the appropriate thing to say about the illative strength of many NLA's. Given these problems (and others not mentioned here) we can see that although there is much to appreciate about formal logic, there are also some reasons to be dissatisfied with it as a way to make illative evaluations of NLA's—reasons enough to consider alternatives.

4. ARE THERE METHODS OF INFORMAL LOGIC?

If illative evaluation is what is wanted and formal logic has significant shortcomings, then we may consider an alternative, informal logic, for instance. Informal logic attempts to do what formal logic can do but without relying on logical forms. We are thus led to wonder whether there are methods of illative evaluation for NLA's that eschew a reliance on logical form. In *The Logic of Real Arguments* (1988), Alec Fisher suggests that there might be. In this paragraph, which nicely summarizes Fisher's goals, the word 'method' occurs five times.

> Our objective is to describe and demonstrate a systematic method for extracting an argument from its written context and for evaluating it. We want a method which will apply to a wide range of both everyday and theoretical arguments and which will work for ordinary reasoning as expressed in natural language (and not just for those made-up examples with which logicians usually deal). We also want a method which draws on the insights and lessons of classical logic where these are helpful, but which is non-formal and reasonably efficient (both re-

[3] Natural deduction, not being an effective method, is the exception.

> quirements exclude a method which requires us to translate real arguments into the symbolism of classical logic). Besides all this we want a method which is teachable and which combats—to the proper extent—our tendency to rely on experts. (Fisher 1988: 128)

Fisher's method is clearly the kind of method that should interest us but we must narrow it down two times. First, we will leave aside the part of the method having to do with argument extraction, and concentrate on the method of argument evaluation. Argument evaluation also has two parts since for an argument to establish its conclusion 'its premisses must be true, … , and its conclusion must *follow* from its premisses' (Fisher 1988: 130). It is the 'following-from' part of argument evaluation that Fisher thinks constitutes 'the big question' (ibid.) and also 'the interesting question' (Fisher 1988: 5), and it coincides exactly with what we are focussing on—*illative questions.* Are there then methods of informal logic—methods of informal illative evaluation—just as there are methods of formal illative evaluation? Do informal logics have conceptual standards of illative evaluation? Do they have operational standards? Are there methods for determining whether the operational standards have been met, consisting of key informal concepts and informal techniques?

Consider the following extant approaches to argument evaluation in the informal logic literature: the fallacies approach, first suggested by Aristotle and developed by Copi (1961), and Johnson and Blair (1977); the deductivism approach, championed by Whately (1828) at the beginning of the nineteenth century, and still favoured by the brothers Groarke (1999, 2009); the logical analogies approach urged by Burbidge (1990); the argument schemes approach, much in favour recently, and developed by Douglas Walton (1996). There is also the approach using argument warrants, central to Mill's logic (1843), and promoted by Toulmin (1958). Finally, there is something we might call 'the thinking about it' approach; it is the method advocated by Fisher (1988), and also by Pinto and Blair (1993), which involves thought experiments to see whether conclusions follow from premises. Although, for the most part, these approaches have not been presented as full-blown methods, they include many of the nuts and bolts needed to reconfigure them as methods of illative evaluation. Let us see how far we can go with this.

We may begin by comparing a method built on Aristotle's list of fallacies in the *Sophistical Refutations* with the truth-table method in formal logic. Aristotle's fallacies are fallacies of following-from,[4] so they can be part of a method of illative evaluation. The *conceptual standard* for formal logic is that of deductive validity. Aristotle has a narrower conceptual standard, that of syllogistic consequence: a conclusion follows from premises if, and only if, the premises necessitate the conclusion, the premises cause the conclusion and the conclusion is non-identical to any of the premises.[5] The *operational standard* on the formal logic side will be that of truth-table validity whereas on the fallacies method it will be that of not committing any of the fallacies on the A-list (the inventory of fallacies in the *Sophistical Refutations*). The *test* for the formal method is to determine whether there are only T's in the final column whereas on the fallacies method it is to determine whether the argument commits any of the fallacies on the A-list. The techniques involved on the formal side consists of making truth tables and computing the values of compound sentences. For the fallacies method the technique consists of carefully reading the argument and then comparing it to each of the definitions that identify the

[4] See Woods and Hansen (1997, 2001).

[5] See the first page of *Prior Analytics*, *Topics*, and *Sophistical Refutations*.

fallacies on the A-list, one-at-a-time. The concepts involved on the formal side are the basic concepts of propositional logic; on the informal side they are the component concepts in 'syllogistic validity' and the definitions of the fallacies.

As a second illustration, let us consider a method based on argument schemes. What standard goes with that method? Walton offers this observation:

> Although the term valid does not seem to be quite the right word to use with many of these argumentation schemes, still, when they are rightly or appropriately used, it appears that they are meeting some kind of *standard of correctness of use* [my stress]. What is important to come to know is what this standard is, for the most common and widely used schemes especially, and how each of the schemes can be tested against this standard. (Walton 1996: 1)

From the gist of his project it seems that Walton is proposing the following conceptual standard: an argument is illatively good if its premises (assuming they are acceptable) establish a presumption that its conclusion is acceptable. This we may dub the standard of 'presumptive validity'. What then might the relevant operational standard be? The evaluation of arguments, on the schemes method, is guided by the unique set of critical questions associated with each of the schemes. These questions can be classified, some pertaining to the acceptability of the premises, others to illative strength, and so on. In constructing an informal method of illative evaluation based on argument schemes, we restrict ourselves to the questions relating to illative strength. Let us then propose the following as an operational standard: an argument is presumptively valid if it satisfies the questions (pertaining to illative strength) associated with the scheme of which it is an instance. The concepts of the method are found in the schemes and the associated questions. Some of the questions are loaded with important concepts like 'probable', 'plausible', 'consistent', 'commitment', 'cause' etc. The technique of the method will consist of fitting the NLA's to schemes, asking the relevant questions, and evaluating the answers to the questions.

I think that, with some work, similar comparisons can be made for the other approaches to informal illative evaluation: logical analogies, warrantism, and the methods of thinking about it. That is, all the informal approaches mentioned above can be analysed in such a way that they emerge as having the shape of a method, complete with standards, tests, concepts and techniques—just like formal logic.

4. ANALYSING AND COMPARING THE METHODS

When stated, methods give us discussible procedures for dealing with difficult questions. They can be scrutinized, criticized, and possibly improved. If there is more than one method available to achieve a given end, the methods can be compared with each other. For illative methods, I propose to compare them under three different headings: the *characteristics* of methods, the *content* of methods, and the *functional adequacy* of methods.

4.1 Characteristics of methods

Under 'characteristics' we may first identify the kind of standard a method embodies. Is it an ideal standard (like platonic forms) appropriate for evaluating argumentation? Or a precise standard such as deductive validity used to evaluate arguments by the deductive standard? Or a minimum standard, specifying that an argument is premiss sufficient if it

is *at least* up to a certain mark, like the standards of inductive and presumptive validity? Another aspect of the characteristics of methods is whether they are direct or indirect. Using schemes, or truth-tables, or warrants, seems to be a direct method of evaluation since no other arguments will be involved than the one being evaluated. The method of logical analogies, however, is an indirect method since it decides the illative value of an argument by comparing it to another argument whose illative value is given or assumed. One can also ask whether a method is polar or bipolar; that is, whether it is capable of giving both the result that arguments are illatively strong and the result that they are illatively weak. The truth-table and schemes methods are bipolar, but natural deduction is not, nor is a method built on an incomplete list of fallacies. Finally, we ask whether a method can be used to give us judgments of intermediate illative strength. It seems that the method of formal logic cannot do this and neither can methods of fallacies, but a schemes method could, since it involves several questions of which some can receive a favourable answer and others not, and so, overall, we might conclude an argument is of intermediate strength. How methods can be compared under these headings just introduced is displayed in the following chart.

	Formal logic	*Fallacies (Copi)*	*Logical analogy*	*Schemes*
Standards	Precise	Precise & Minimum[6]	Precise	Minimum
Direct	Direct (truth table)	Direct	Indirect	Direct
Polarity	Bipolar	Polar (negative)	Polar (negative)	Bipolar
Intermediate judgments	Not possible	Not possible for some; possible for others	Not possible	Possible

Table 1. Comparing the characteristics of methods

4.2 Comparing the content of methods

Methods can also be compared in terms of their *content*, by which I mean their operational standards, concepts and techniques. The content of methods is what is especially important for the practical dimension of our inquiry. What the student assessors need is help with making judgments about premiss sufficiency. If they are left to their intuitions, we can expect their judgments to vary greatly and, moreover, not to be justified. Having concepts, techniques, and standards tied together in a method, if that is possible, is a fix for both these problems.

Some of the points of contrast have already been noted, but a few further observations may be helpful. For the fallacies method, the concepts it employs are the definitions of the fallacies, and the technique it uses is that of investigating arguments to see

[6] Copi includes both deductive and inductive fallacies.

whether they have committed a fallacy. As for deductivism—in one of its guises—the technique is to 'reconstruct' arguments such that they are deductively valid according to the semantic conception of validity, and then determine whether the newly added validity-making premiss is acceptable. The concepts then are those of 'semantic validity' and 'statement acceptability'. Fisher's method of 'thinking about it' relies essentially on the concept of the 'assertibility question' and the notion of a 'field' or 'subject of study'; the technique for his method is that of thought experiments. Interestingly, different techniques ask different abilities of the argument assessors: all the methods require an ability to read and understand arguments carefully, but some methods require the ability to work with mathematical-like symbols, some require familiarity with the field to which the argument belongs, and some require the power of imagination. From this we may anticipate that some assessors will be better suited to some methods than to others.

	Formal Logic method	*Fallacy method*	*'Thinking about it' method*
Operational Standard	An argument is premiss sufficient if it is truth-table valid.	An argument is premiss sufficient if it commits none of the fallacies on the A-list.	An argument is premiss sufficient if, judging by appropriate standards of evidence, it is not possible that the premises are true and the conclusion is false.
Concepts	- truth functions; - truth-table validity.	- identifying conditions of the fallacies on the A-list; - syllogistic validity	- argument field; - assertibility question
Techniques	- constructing truth-tables; - computing value of compound sentences; - reading the results.	- careful reading of argument; - comparing argument with each of the fallacies on the list	- finding field-relative standard; - performing thought experiment
Comment	- mechanical.	- requires interpretation	- requires imagination

Table 2. Comparing contents of methods

4.3 Comparing the functional adequacy of the methods

Let us now turn to the basis for comparing the functional adequacy of methods. Writing about argument cogency (her term for 'argument goodness') Trudy Govier makes the following observations:

> An account of argument cogency is a *reliable* one if it can be used by different people to get the same result. Or, if there are variations in result, these are readily explicable in terms of pertinent background beliefs about the warrantedness of the premises. And it is *efficient* if it can be applied in a fairly uncumbersome way. (Govier 1999: 108 f.)

I want to adapt these remarks, giving them a slightly different twist, so they can be oriented toward the comparison of the adequacy of methods of illative evaluation. In addition to the two aspects mentioned by Govier, reliability and efficiency, I will add a third about the scope of methods.

Reliability. There are really two aspects of reliability. The one is given by Govier: a method of testing for premiss sufficiency is reliable to the extent that 'it can be used by different people to get the same result'. Govier's suggestion is that if a group of assessors were to disagree about an argument's cogency this would be explainable by the group-members having differing beliefs about the argument's premises. But beliefs about premises is a premiss issue, not an illative one. Could not the assessors disagree about the illative strength of the argument even though they were in agreement about the premises? And, if so, might there not be some method to help them overcome their disagreement?

Considering the kind of project imagined above which involves working with a group of student assessors, we should say a bit more about the make-up of the group. We stipulate that it is a group made of either senior undergraduate students or MA level students in the humanities or sciences; the group is an even mixture of men and women; the members are open minded and willing to revise their views following discussions, but they are not easily swayed. Importantly, no member of the group has undue influence over the opinions of the other members. The group of student argument assessors is competent in the language of the object arguments and they have neither learning disabilities nor idiosyncracies that would keep them from correctly applying the methods they are taught. Given this characterization of the argument assessors we can put the reliability aspect in more definite terms. Assume that the several members of a group, *G*, have been well trained in how to use a method and that they are serious about argument evaluation, then,

- A method, *M*, used by a group of student assessors, *G*, to test a set of NLA's, *A*, for premiss sufficiency, is reliable to the extent that members of *G* using *M* correctly will agree in their illative evaluations of the members of *A*.

We may call this the *subjective reliability* of an illative method. Subjective reliability will be a matter of degree: some methods may have a high level of subjective reliability, other methods a lower level.

The other way in which methods are reliable has to do with the actual results that they produce. It is possible that a method has a high degree of subjective reliability when rightly used—that assessors using the method tend to agree in their judgments—and yet that it sometimes or even frequently results in mistaken judgments, or even that it consistently misjudges certain kinds of arguments. Polling methods that fare better at predicting election winners are more reliable methods than those that aren't right as often. Similarly, of two methods of illative evaluation of NLA's, the one that results in false positives or false negatives less frequently than another method is, other things being equal, the more reliable method. This we may call the *objective reliability* of a method. Both subjective and objective reliability are a matter of degree and illative methods will be

comparable, vis-à-vis each other for both kinds of reliability. (If the arguments that are 'out there' are such that they should not all be evaluated by the same standard of premiss sufficiency, then it will be difficult for any single-standard method to be objectively reliable.)

Efficiency. An account of argument cogency is efficient to the extent that 'it can be applied in a fairly uncumbersome way', says Govier. Being cumbersome seems to be something we might also say about the employment of a method. Let us say that a method is *learner-efficient* to the extent that its content—its operational standard, concepts and techniques—can be learned fairly easily by our group of argument assessors. Once learned, however, the method may not be easy to apply. Thus, not only is there a question of *learner-efficiency*, there is also a question of *user-efficiency*. That a method should be easy to learn and easy to use stems in part from the desideratum that all those with an interest in argument evaluation (which is, or should be, nearly everybody) should be able to use it. So, what is wanted is a method that is both learner- and user-efficient. However, one method might be easy to learn but hard to use, and another method, complex and technical, hard to learn, yet once learned, quite user-efficient. (Methods that are very difficult to learn and to use have a greater start-up cost than other methods, and that might be a reason for funded research not to prefer them.)

Scope. The more kinds of arguments a method can be used to evaluate, the greater is its scope, and the greater its scope the more useful the method is. Methods of truth-functional logic cannot deal with relational arguments and for that reason we consider them, *qua* illative methods, to have narrower scope than methods that can deal with relational arguments as well. Deductive logic, in general, cannot deal with inductive arguments, and so it has narrower scope than a method that can handle both deductive and inductive arguments. In general, methods built on short inventories of fallacies or schemes will have narrower scope than those built on longer ones. Like reliability and efficiency, the scope of an illative method will be comparable to that of other methods. When an illative method is applied to arguments that lie outside its scope, objective reliability suffers.

Our knowledge of how functionally adequate—efficient and reliable—methods of illative evaluation are must await empirical investigation. Still, we can make some tentative guesses at how how things *might* work out. Formal logic has been criticized for being hard to learn which means it has low learner-efficiency and we can predict that its user-efficiency will vary with the complexity of the arguments being evaluated. We should expect a high level of subjective reliability among assessors who have learned the method; however, formal logic is criticized for not being applicable to the main body of NLA's we meet in popular discourse because they aren't 'deductive arguments'; this implies formal logic has restricted scope, and that as we try to apply it to the arguments to which it is not a natural fit, the objective reliability of the method decreases.

The method of 'thinking about it' is advertised as being learner and user-efficient. True, it is not a hard method to learn, and Fisher thinks we can begin to use it even if we don't really have a lot of familiarity with the subject matter. Still, it is harder to apply the method than it is to learn (understand) it. It is noteworthy that the method has no limitation in terms of scope: in principle it can be applied to any argument. However, this method's subjective and objective reliability will depend on the field-relevant knowledge possessed by the assessors. What is needed for subjective reliability is that the assessors *agree* on the field-relative standards but, despite our requirement that they have about the same level of education, it is to be expected that agreement will often be hard to

come by, especially as the subject matter lies outside the common knowledge of the assessors. For objective reliability what is needed is that the assessors *have* the correct field-relative standards, and that they can use their imaginations well. Objective reliability will then depend on how good the fit is between the knowledge of the assessors and the subject matter of the arguments that will be examined.

	Formal Logic	*'Thinking about it'*	*Argumentation schemes*
Learner efficiency	LOW: difficult b/c of abstract nature; requires math-like skills	HIGH: not concept heavy and hardly any technical concepts	LOW TO MEDIUM: many schemes; even more associated questions; Qstns contain difficult concepts
User efficiency	This will DEPEND on the complexity of the argument	MEDIUM: b/c it requires some knowledge of field relative standards	MEDIUM TO HIGH: many arguments and schemes fit easily together
Subjective reliability	HIGH among those who have learned the method	DEPENDS on extent of shared field-relative knowledge of assessors; and parity of imaginative powers	MEDIUM TO HIGH: b/c the questions will direct the assessors to consider the same issues
Objective reliability	LOW: b/c of limited scope	DEPENDS on assessors identifying the correct field-relative standards; and powers of imagination	MEDIUM: b/c of scope restrictions
Scope	NARROW: b/c works only for arguments suited to be measured by the deductive standard	WIDE: can be applied to all kinds of arguments	MEDIUM: b/c restricted to presumptive reasoning (leaving out deductive and inductive); varies directly with the number of schemes in use

Table 3. Comparing the adequacy of methods

The method of argument schemes, although it is not formal or mathematical, does, nevertheless, take considerable effort to learn. This is because, if it is to have broad application, it must include many schemes (perhaps as many as 60) and their associated questions. So, we should judge it to have rather low learner-efficiency. Again, with a long list of schemes, the method may be cumbersome to employ, and hence its user-efficiency is hampered. The method may fare better in terms of subjective reliability because all the assessors will have to deal with the same critical questions, which will channel their attention in the same direction which should facilitate agreement. The degree of objective reliability will be a function of how well the inventory of schemes matches up with the arguments that are 'out there'; we should expect that the more comprehensive the list, the greater the objective reli-

ability. (So, objective reliability is inversely related to efficiency.) The presentation of the schemes method currently being promoted by Walton is, however, restricted to those arguments that are presumptively valid, leaving out arguments to be measured by the deductive and inductive standards, and this amounts to a scope limitation.

Let me repeat: these comparisons of functional adequacy are conjectures. They should be compared with other people's intuitions, and they should be revised or dismissed in light of our empirical findings.

5. CONCLUDING OBSERVATIONS

Some have suggested that the term 'informal logic' is an oxymoron, like 'business ethics'; it cannot both be logic and informal, they say. I disagree with this. But I also disagree with those who think that informal logic should be a kind of argument evaluation or argumentation theory that includes judgments about premiss acceptability as well as other dialectical and rhetorical considerations. Logic is about making illative judgments, and these can be made with the aid of logical forms, or without them. Insofar as that they can be made without them, there is informal logic.

What started this inquiry was the question whether it would be more advantageous to train a group of logiciners (logical novices), who were to be put to work evaluating natural language arguments, formal or informal methods of illative evaluation. Not enough has been found out for us to answer that question yet for, although it is true that formal logic has some shortcomings as a method of evaluating NLA's, so too do each of the informal methods, and what is wanted is an overall evaluation. Nevertheless, a framework has been proposed that, in conjunction with empirical enquiry, can be used to eventually give us a basis for answering that question.

This inquiry brings with it some externalities. We have come to see that it is possible to recast some of the work that has been done in informal logic as *methods* of informal illative evaluation. There are three benefits to this observation. One of them is that it demarcates an area of investigation distinct from dialectical theory, rhetorical theory and epistemological theory. A second and related benefit is that informal illative evaluation is identified as an area of research. Projects can be designed to mark and define the concepts and techniques needed for each of the methods, and to formulate the needed operational standards and, in general, to improve the functional adequacy of the methods. Our increased concentration in this area will be a benefit to our students who want to learn to make justifiable illative judgments. The final boon, and not an insignificant one, is that we can now propose a new definition of 'informal logic'. It is the set of methods of non-formal illative evaluation.

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Commentary on "ARE THERE METHODS OF INFORMAL LOGIC?" by Hans Hansen

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1. INTRODUCTION

The framework within which Hansen is working is clearly articulated, painstakingly delineated, and systematically explored. Moreover, he has provided us with the kind of programmatic directions for future development that promise fruitful research to come. The result is a terrific new lens for looking at informal logic, one that brings important aspects of argument evaluation into focus. Informal logic provides us with a dazzling array of diverse insights and concepts and techniques and methods. Choosing and deploying the right tool in a specific situation is indeed an art. We need something to grab onto. Hansen's advice—consider reliability, efficiency, and scope—is just the kind of handle that we need.

On the other hand, if we do follow his advice and restrict informal logic to the illative evaluation of arguments, it's a handle that will elude our grasp. If we judge Hansen's method for judging the methods of informal logic by the criteria he provides—reliability, efficiency, and scope—it comes up short.

But, on yet another hand, the shortcomings are all connected to things that are missing from his analysis, which means that with friendly amendments, essentially just grafting on a patch, the project can be rescued. My criticism is only that it is incomplete, not that it is unworkable, incorrect, or misguided. On the contrary, it is none of those things, and I do not disagree with what he says.

Finally, on what I suppose must be the fourth hand, the addition requires that we expand the concept of informal logic to argument analysis in a very full sense, rather than restrict it, as Hansen proposes, to just evaluation of the inferential aspects or illative core, so I do disagree with that part of it.

2. ARGUMENT IDENTIFICATION, EXTRACTION, AND REPRESENTATION

Hansen's original scenario called for preparing graduate students to be sent out into the field to evaluate arguments concerning some controversy in the public sphere. The assumption seems to be that arguments are discrete, identifiable, pre-packaged texts already out there just waiting to be collected and put under the microscope for analysis and evaluation. Arguments can indeed be found in the cacophonies that controversies generate, but there will also be a lot of other noise to deal with. Identifying what is and what is not an argument is no mean feat. The same can be said for extracting an argument from its dialogical context and putting it into a form appropriate for evaluation. For example, an adequate representation of an argument in the public sphere might have to bring together

Zenker, F. (ed.). *Argumentation: Cognitino and Community. Proceedings of the 9th International Conference of the Ontario Society for the Study of Argumentation* (OSSA), May 18-21, 2011. Windsor, ON (CD ROM), pp. 1-3.

parts from several different sources, perhaps a series of editorial columns, letters to the editors, and replies.

Illative evaluation may well be the prime objective of the informal logic project, but it is a task that cannot even begin until arguments have been collected and presented for inspection. That involves three distinguishable, if not always discrete, activities, each requiring its own skill set. Arguments must be located; they must be isolated; and they must be readied for evaluation.

The first thing to do is simply locating arguments to be the subjects for evaluation, but argument identification is not always a simple endeavour. Was that politician's speech an argument for wind power or a rally for votes? Did she present one argument or two? Which parts of the speech were part of this argument, and which parts were serving other functions? I do not see any reasons for thinking that this crucial task does not properly fall within the purview of informal logic.

It is not enough, of course, just to recognize that, among other things, a text contains an argument. The argument needs to be extracted from context because that context may include all sorts of thing that are neither part of nor relevant to the embedded argument. Was that witticism part of the column's argument or just filler? Was the apparent digression germane or not? Are the carefully selected guests on the platform as the politician makes his case props for his argument? What of the flag pin on his lapel? It is one thing to recognize that there is an argument present, but it is quite another to pick out all of its pieces, and no others, from the buzzing, blooming confusion of the world.

Finally, there is the critical exercise of putting those pieces together. To cite an egregious case, imagine how great the effect on our illative evaluation of an argument can be if it is presented to us with a premise and the conclusion switched! An argument, once located and extracted, still needs to be assembled into a representation suitable for its assessment. Even the most reliable and efficient method of argument analysis operating within its intended scope cannot overcome the handicap of flawed input.

3. EXPANDING THE SCOPE

Arguments need to be tracked down and captured before they can be examined. My suggestion, then, is that we have to add another criterion to the list of factors to consider in comparing the methods of informal logic, even just as methods of illative evaluation, viz., how well each method equips its practitioners to be "argument hunters." This is not a trivial consideration. Consider what happens when students are first exposed to the fallacies approach to argument evaluation. They tend to see fallacies everywhere—in headlines, advertisements, casual conversation, and even jokes. An equivocation in a headline, however, is not a fallacy of equivocation if it is not part of an argument. Without an inference, the ambiguity is just that, a grammatical error, a stylistic mis-step, or perhaps just a pun, but not a logical fallacy. If the fallacies approach actually makes the identification task more difficult, that needs to be put on the balance scale.

We need to ask questions like these: Does thinking about arguments in terms of argument schemes help us in finding arguments? Alternatively, does the fallacies approach get in the way? If we think that arguments include backing and warrants, will that aid us in extracting arguments from public discourse? Will it serve us better than formal

logic in this regard? Is deductivism better than thinking-about-it for reconstructing arguments from scattered pieces?

When Hansen asked us to imagine that we received a grant to study the argumentation surrounding topic, he wrote, "Not only do you want to know what arguments have been given, you also want to know which ones are good arguments and which ones are not so good." And then, after the graduate students were brought in, he set the stage for the rest of his paper, "You now have a practical problem: how do you prepare these people to help you with your research?" I would think that the first—and biggest, most important, and most helpful—job for such an "Arg Squad" would be the first part of the charge: finding out what arguments have been given.

4. THE SCOPE OF INFORMAL LOGIC

Let me re-emphasize that I think of this all as a friendly amendment to Hansen's way of preparing for the main task of evaluating the illative strength of natural language arguments. Hansen offers several factors to use in evaluating the different approaches to argument. I am suggesting one more. In addition to considerations of objective and subjective reliability, learner and user efficiency, and scope or range of arguments to which the methods in question apply, we ought to consider how comprehensive a method is with respect to the different stages and tasks involved in coming to an evaluation of the strength of a natural language argument. Among those tasks are locating, extracting, and presenting natural language arguments.

Admittedly, this friendly amendment may have some less-than-friendly consequences. Let me end, then, with what I think should be five take-away points:

First, because the method for evaluating methods of illative evaluation cannot ignore argument identification and representation, informal logic cannot be restricted to just the evaluation of the illative component of natural language arguments.

Second, because natural language argument evaluation actually requires several different tasks, there might not be one single best method of informal logic, good for all occasions.

Third, the different tasks involve different skill sets, so there is good reason for informal logic instruction to include a variety of approaches to argument analysis.

Fourth, consequently, there is no informal logic algorithm to follow for analyzing arguments. Informal logic is an art, not a science.

And finally, Hansen has raised an important question in an especially well-focused way that deserves further input and elaboration from the argumentation theory and informal logic communities.