

Book Review

INFORMAL LOGIC: A PRAGMATIC APPROACH, 2nd ed.
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The goal of *Informal Logic: A Pragmatic Approach* is to help the reader use critical methods to impartially and reasonably evaluate the strengths and weaknesses of arguments (p. 1). This is to be done by introducing the reader to the methods of logical pragmatics, an area of study concerned with the reasonable use of propositions in dialogue to carry out goals of the particular kind of dialogue. Logical pragmatics contrasts with the study of logical semantics, an area mostly concerned with the relationships between sets of true and false propositions, that is, with logical consequence. Logical pragmatics is a practical art and, accordingly, the book provides the reader with a wealth of insightful discussions of various cases of real-life arguments from different walks of life. The cases studied are the kinds of arguments and argumentative moves that the reader is likely to come across in her or his life, and Walton shows how to analyze and evaluate such arguments in practice. Naturally, the main objective cannot be achieved without some theoretical discussion of the nature of phenomenon with which we are dealing. If the relationships between sets of premise(s) and conclusion(s) are not sufficient to decide the worth of an argument, an analytically oriented reader will naturally want to know what is.

The first chapter of the book ‘Argument as reasoned dialogue’ provides a brief answer to this question by presenting an outline of the pragmatic approach Walton has championed in his long and duly recognized career. The basic idea of the approach is that the analysis and evaluation of an argument must take into account the various components that go to make a dialogue and the kind of dialogue in which the argument was proposed. First, we must understand the nature of the given dialogue in order to know the proper norms to which we can compare argumentation given in that dialogue. Different types of dialogues have different norms. For example, the standards of proper argumentative moves are different in the context of scientific inquiry and in the context of negotiation. Second, the evaluation of various argumentative moves on which the reasonability of a discussant’s overall argumentation depends cannot proceed without understanding the purpose that the moves within a specific dialogue were meant to serve. For example, the goal of some locution in a

dialogue may be to limit the scope of the discussion. This can be done fairly or unfairly but logical consequence is silent on such matters. By including the context and the nature of the dialogue in the analysis, we are in a better position to make reasonable assessments of the argumentation proposed.

This kind of approach may seem quite radical to someone schooled to view deductive argumentation aimed at producing knowledge as the paragon of good argumentation. Yet, Walton does not argue that logical consequence is not important for argument analysis and evaluation (Chapter Five discusses valid arguments). Instead, he emphasizes, in my opinion quite rightly, that deductive logic is not the only standard of evaluation: most of the arguments we encounter in real life are not meant, and should not be taken, as deductive arguments. Informal logic¹ must naturally be aware of deductive and inductive standards and especially of their application to the argument on the hoof, but it also aspires to develop standards and methods of evaluation for plausible argumentation in different contexts. This enterprise can be seen to be perfectly in line with the more traditional analytic approaches to argumentation. As to the aim of producing knowledge through argumentation, Walton does seem to aim for epistemic evaluations of the argumentation examined. The larger part of the book seems to try answer the question whether the examined arguments, as presented in that specific context under the norms of rational discussion, provide the arguers with good reason to believe the conclusion, or whether the arguers made an epistemically respectable decision in accepting or rejecting the issue of the debate on the basis of the presented argumentation, or whether they could have done so based on the arguments presented. The scope of informal logic is just larger than that of pure epistemic evaluations. There are often specific rules or rationality considerations in the examined discussions that influence the reasonability of the argumentation. For example, whether one should assume that one's rifle is loaded may vary significantly depending on whether one is in a normal civilian context or on a battlefield (p. 58–60). (Still, it should be noted that whether one is epistemically justified in believing that the rifle is loaded or not depends on one's evidence, not on the hostility of the situation, and that issues of rationality are no enemies of epistemology.) Also, unlike the close cousin of his approach, *Pragmatics-Dialectics*, Walton does not argue that the norms of the dialogue are completely independent of the norms arising from the related fields of logic and epistemology. As such, Walton's pragmatic approach appears more like a development and deepening of the views of

¹ I use this term in its general sense, see R. Johnson (2006) "Making Sense of Informal Logic", *Informal Logic*, Vol. 26, 231–258 for historical exposition and discussion.

analytic philosophy on the role and functioning of argument than a change of paradigm.

Having introduced the framework of his approach, Walton (pp. 15–18) proceeds to describing one specific context, the persuasion dialogue (or critical discussion), which provides the benchmark for the discussion of arguments in the remainder of the book. This context is defined through negative rules—through what the participants to the dialogue are not permitted to do. They should not, for example, avoid or shift the burden of proof or fail to be relevant. This set of rules is not claimed to be either a necessary or a sufficient description of a reasonable dialogue. Still, generally some rule should have been broken or tampered with if there is to be a legitimate claim of a fallacy (or blunder) being committed in some persuasion dialogue (p. 17). Walton emphasizes that great care must be taken in applying these rules to specific argumentative contexts. This is understandable, for not only may there be several types of dialogue in one real-time discussion (should the participants make shifts, legitimately or illegitimately, from one type of dialogue to another in the course of the discussion), but also the rules of one type of dialogue may be enforced to a varying degree, with good reason. As the aim is to evaluate real arguments in their context, complexities and qualification are to be expected.

The biggest contribution this book makes is in the area of fallacy analysis, done under the framework of logical pragmatics. The remaining chapters, from two to nine, deal with different problems of persuasion dialogue, and Walton discusses all commonly recognized fallacies. There are discussions of loaded questions, problems of relevance, formal fallacies, various ‘*ad*’-arguments, problems in the use of statistics, and problems arising from the use of natural language. Walton’s approach is mostly, as the title reveals, informal and even the formal fallacies are treated with a minimum amount of formality.² The discussions are illuminating and approach the problems of rational persuasion from various perspectives taking due account of the versatility of the object of study. There is some repetition in the text but for the most part the discussion proceeds naturally, is clear and to the point.

One could, however, take issue with the way Walton uses the notion of fallacy, for it seems very elusive. The cornerstone of Walton’s approach is the modern view (in the formation of which his

² Walton mentions in the preface to this second edition that he would have preferred to call the book “Semi-formal Logic” but in order to preserve continuity with the first edition, decided to stick with “Informal Logic”. If one were to hold, as some do, that to use the term ‘formal logic’ is to use a neoplasm, and to use the term ‘informal logic’ is to use an oxymoron, the term ‘semi-formal’ might seem like an improvement. It would at least escape Michael Anderson’s quip defining ‘informal logic’ as ‘neither’.

input has been vital) that those problems of argumentation, namely fallacies, that the tradition has handed to us are typically arguments³ that can be good or bad, depending on the specifics of the use and the situation in which they were used. The support they provide may be weak or non-existent, but they may also at times provide good reason to accept the conclusion. So, to notice that some argument fits, to a greater or lesser extent, a description given in the traditional list of fallacies is by no means a sufficient reason to dismiss the argument altogether. But of course it may be: to spot a formal fallacy in a context where deduction is called for is a sufficient reason to dismiss the argument as it stands. A scholar of argumentation may nowadays reasonably take this as a starting point and then face the formidable task of providing answers both to the descriptive question ‘what are the criteria for something being a fallacy of the type x?’ and the normative question ‘why is x a fallacy?’ Walton has produced an impressive list of titles trying to answer just these questions and it would be unreasonable to require him to distill all that material into this one book, but it still seems that in many places the reader is left wondering what is the essential problem with the particular argumentative move under discussion. Let us elaborate on this point.

Walton sees fallacies as major obstacles to the reasonability of a persuasion dialogue and, as described above, he notes (p. 16) that we must avoid the conception that any argument coming under any of the traditional categories of ‘fallacies’ is inherently bad or worthless, and that, by the standards of logic, all such arguments should be thoroughly refuted in every instance. However, not every argumentative mistake in a dialogue qualifies as a fallacy either. Some bad moves are merely mistakes—blunders that are fairly easily corrected. A natural follow-up question is: What separates the two? The answer seems to be (e.g., in the case of loaded questions, *ad hominem* and *ad verecundiam* arguments) that the move is a fallacy when it is used to browbeat the opponent into acceptance, or to push the opponent to accept the presuppositions or conclusions without giving the opponent a fair chance of responding. But this makes the identity of the fallacy depend on the response of the opponent. If the putative ‘fallacy’ does not succeed in browbeating, is there no fallacy? Is there no inherent problem in, for example, inferring the truth-value of *p* from the (arbitrary) qualities of the person who put *p* forth? In addition, it is dubious for an informal logician to appeal to the actual effects on the reasonability of the discussion, for we typically have little or no evidence about what the actual effect was. It makes little progress merely to note here that some move, considered a fallacy, *may* harm the overall reasonability of the discussion, for the relevant

³ I am, of course, simplifying the matter: not all of these problematic argumentative moves are arguments. There is for example the straw man fallacy.

questions to the informal logician here are whether it *does* harm the discussion's reasonability, and, *if* it does, *why*. A further description of fallacy by Walton (*in passim*, e.g., p. 114, p. 133) is that the fallacy consists in taking the argument to be stronger than it really is. This is problematic, for we have little evidence of what the arguer really thought the strength of the argument to be. He or she might have thought it to be a fairly weak argument as such, but still worth considering. Further, the fact that the probative worth of an argument is exaggerated cannot be a sufficient condition of a fallacy, for perfectly reasonable arguments can be overvalued as well.

Another characterization of 'fallacy' by Walton (p. 16) is that "...many important kinds of fault and error in argumentation consist of failures to answer critical questions". One may ask whether this has more to do with having the right kind of inquisitive and cooperative attitude towards the discussion as a process that can enhance the reasonability of our belief sets than it has to do with 'fallacy'. The failure to answer critical questions can result from many things: the proponent may be contemptuous of the opponent, have poor communication skills, or know that the opponent is filibustering. Mere silence is not a fallacy, so the question is whether this characterization stretches the notion of fallacy too much.

This is not to say that there is nothing appealing in making part of the nature of the fallacy to depend on the ability to come up answers to critical questions, to browbeating, and to overall effects on reasonability. The worry is that the resulting analysis comes too relativistic to have substance. Yet, it must be admitted that Walton's description of fallacy may be elusive because the object of study is elusive. Let us probe further into these worries by looking into Walton's discussion on two different fallacies, *argumentum ad verecundiam* and the *post hoc* argument.

An *ad verecundiam* argument, the appeal to authority, has the following form:

(AV)

1. A said that *p*.
2. Therefore *p*.

Let us assume that *S* has presented such an argument, that she is confronted with some critical questions about it and that she is not able to answer some of them. We will also assume that *S* thought her argument was sufficient to make belief in *p* rational and that it required no further back-up, and that when questioned, *S* did not even try to give reasons why the expert *A* was any good. According to Walton's position, *S* committed a fallacy. However, it might also be the case that the matter was not very important to *S*, so we have no reason to suppose that *S* should have paid much attention to it. Let us assume her belief in *p* was based on a short newspaper article citing

some expert that had gotten some results on a matter that was only vaguely familiar to *S*. Arguably, she was *prima facie* justified in believing the expert, given, for example, that the newspaper she read is in general a reliable source of news about scientific results. If we identify the fallacy with the original argument, and exclude the ability to defend one's position, i.e., answer critical questions, we might have to accept that *S* was reasonable in believing *p*, based on the article in the newspaper, but she still committed a fallacy in trying to persuade the opponent that *p*, based on the newspaper article. This seems undesirable.

The escape from this undesirable result might lie in holding that the persuasion dialogue has stricter standards than *S*'s private thinking and believing. According to the dialogue standards, her argument was not sufficient to rationally persuade. The dialogue process can be taken to have the aim of assessing how good a reason the opinion of the posited authority is objectively. The ability to respond to critical questions is, we assume, a reflection of the plausibility of the original basing of the opinion on that authority. If the proponent is able to answer the critical questions, we typically assume that the proponent originally had based her or his opinion on that totality of beliefs that became externalized in the persuasion dialogue.⁴ *S*'s original use of (AV) was not fallacious. The standards of reasonable belief were raised when she entered the persuasion dialogue. Fallacies are context-dependent entities that can only be judged as such in reference to specific discussions. Nevertheless, what we still seem to be evaluating with this process, in the end, is the original argument itself. The final verdict we aim for is whether *the argument*, with those supporting reasons that were provided as answers to critical questions in the dialogue, makes the belief in the conclusion rational or justified. So even though the critical questioning serves an important role in the evaluation of reasoning, in some sense the identity of a fallacy should subsist in that very argument, not in the dialogue process, though judgments of fallacies need to make reference to the context.

Walton does, however, note that

[t]he fallacy is not a mere failure to answer a specific critical question, although that may be part of it. The fallacy is committed in the type of response that wards off asking critical questions altogether by suggesting that even asking them is inappropriate. The failure is treating the appeal to expert opinion as a conclusive type of argumentation instead of acknowledging that it is defeasible. The failure is one of not continuing the dialogue in a manner consistent with the recognition of the legitimacy of critical questioning. (p. 244)

⁴ This of course glosses over various complications: the proponent might have originally been totally oblivious to any reasons supporting her or his original *ad verecundiam*.

However, it is not difficult to imagine situations where warding off the asking of critical questions is done quite reasonably. Consider a case where I use an argument of the form (AV) and my opponent notices that I do not know the specific credentials of the expert or what kind of evidence the expert has behind her position. My opponent consequently rejects the appeal to this expert. But assume also that my opponent had no good reason to suspect the expert either. As a matter of fact, he raises critical questions merely because he does not want to believe the result. In the course of the discussion, I become aware that my opponent is so convinced that not- p on ideological grounds⁵ that the opponent reasons ‘if someone, regardless of her or his expertise, claims that p , then she or he is mistaken’. This, as a rule, is not a justifying inference.⁶ I now become convinced that the critical questions are not warranted and refuse to take heed of any further questions, and hold explicitly that the authority is a sufficient reason for both of us to believe that p . The rejection of the expert view may hence be totally unjustified, yet according to Walton’s position it is my original appeal to the expert plus my inability and unwillingness to answer critical questions that is fallacious.

Be that as it may, there is also a further worry of over-intellectualizing the subject matter of inference and argument. In general it seems too much to ask that one be able to answer an array of critical questions in respect to many beliefs one has in order to avoid the charge of holding those beliefs on fallacious grounds. I personally cannot produce answers to a multitude of critical questions about many issues I learned in school, but it seems to stretch the notion of fallacy intolerably to hold that the body of knowledge that I “learned” in school is fallaciously based, on the ground that it was based merely on the authority of my teachers.

Similar problems beset the discussion on the *post hoc* argument, which has the following form:

(C)

There is a positive correlation between A and B .

Therefore, A causes B .

Walton (pp. 260–261) notes that this argumentation scheme is basically reasonable and sometimes the positive correlation can be very good positive evidence that there is a causal relationship between

⁵ Or because of a fallacious use of the argument scheme of *argumentum ad consequentiam*.

⁶ Although this depends on the content of p and the context of the argument. I am at the moment prone to reject any argument to the conclusion that two plus two does not equal four.

the two. Nevertheless, this inference is often subject to bias and error. Further, he argues that

...errors in *post hoc* reasoning can occur where an arguer leaps too quickly to conclude that one variable A causes another variable B where the only evidence given is that there has been a positive correlation between occurrences of A and occurrences of B [...] positive correlation is not enough, by itself, to conclusively establish a causal relationship. The errors implicit in *post hoc* reasoning may be in overlooking other factors, in addition to positive correlation, that may be important in evaluating a causal relationship between the two events. (p. 260)

I believe this is in the right direction but a lot hangs on our having a clear picture of what is the object of study here, and the relations of the original form of the argument, its supporting reasons, and the process of dialogue. Is *post hoc* a fallacious argument in any straightforward sense, or is it the whole process of dialogue that defines the fallacy? There are clearly tensions in Walton's view. He argues that the positive correlation is not, in itself, enough to establish a causal relationship, but also states (p. 261) that it is "basically reasonable to argue from correlation to causation" and further (p. 262) states: "it is an exaggeration to suggest that all reasoning from observed correlations to causal conclusions is inherently fallacious."

A critical reader might seize on the term 'inherently' here. It might be claimed that we have no meaningful way of evaluating the general reliability of inferring a causal relationship from a positive correlation as such. (To claim to know that, might be a case of unknowable statistics, see pp. 248–250). However, if we look into this more carefully, it does not seem completely implausible to hold that the amount of positive correlations is at least twice the amount causal relationships. This is for the reason that for any given causality from A to B, there are two correlations, namely A's correlation with B and B's correlation with A. On top of this, there is a countless number of correlations between arbitrary variables that are mere coincidences, and correlations that involve some indirect causality between two variables such that it is an oversimplification to say that one causes the other (see pp. 267–268), yet the variables correlate. But, plausibly, there are no cases where A causes B, and the two do not correlate. Then, the logical⁷ probability of A causing B, given that there is a correlation between A and B, is less than 0.5. Hence, the inference might be classified as an inductive fallacy, as an *inherently* fallacious argument.

⁷ I.e., absolute or inherent probability, in contrast to epistemic probability.

It does not follow from this that all reasoning from correlation to causation is fallacious, but it does follow that all reasoning from *mere* correlation to causality is. In many cases the inference is more reasonable than the logical probability would have it, because we already have a great deal of knowledge about the world around us and the appealing cases of inferring from correlation to causation are often supported by that further knowledge we have. This means that we can imagine, based on other knowledge, a causal structure to exist. So, in many cases it is not the logical but the epistemic probability of *A* causing *B*, given that *A* and *B* correlate, that we are talking about. But this inference is different from the inference from mere correlation and it is this inference that we must evaluate. Arguably, however, we have no way of assessing the epistemic probability in general in the manner we analyzed logical probability above, because that probability is, by definition, dependent on what else is known by the observers in that situation.

For this reason, we might opt for a different explanation to account for the problematic nature of the *post hoc* inference. We could argue that the inference from correlation to causation is fallacious exactly when it fails to rule out relevant alternative explanations of the correlation. Given that there is a positive correlation between *A* and *B*, to infer that *A* causes *B* from this mere correlation fails to rule out the possibilities that (1) *B* causes *A*; (2) there is a third factor *C* that causes *A* and *B*; (3) there is an indirect causality that does not hold without some intervening factors (i.e., it is an oversimplification or somehow misleading to state that *A* causes *B*); or (4) the correlation is a coincidence (Walton discusses these possibilities in section 8.6). One might argue that the mistake lies in this part of the inference, not in the inability to answer critical questions about the inference or in browbeating the opponent into acceptance. This would also be consistent with Walton's view about fallaciousness lying partly in the neglect of relevant factors. Of course, a critical discussion can bring the problems to light, but it can also turn out that the arguer in fact did have some reason to suppose that none of the four relevant alternatives was a real possibility in this case. One can then hold that *post hoc* reasoning is inherently fallacious, without thinking that *all* reasoning from observed correlations to causation is fallacious. Only all reasoning from *merely* observed correlations to causation, i.e., without any reasons to support the ruling out of the four relevant alternatives, is inherently fallacious.

Walton discusses some examples that, I submit, give some credence to this view. The first one is a discussion of a black box health warning issued on the use Prozac, which led to a drop in prescriptions, followed by a jump in teenage suicides. Walton notes that the inference from correlation to causation is problematic in light of what is known but also suggests that it would be premature to dismiss the suggested causality as a product of fallacious reasoning.

Further examination of the case needs to be done by medical experts and, as new evidence comes to light, we might swing from acceptance to rejection. This is just another way of saying that at the moment the most reasonable stance on the matter is to suspend judgment. That is because we need to take notice of the fallibility of the inference and dismiss the mere correlation as a sufficient reason for believing in causation, since we do not yet have enough evidence to rule out any of the alternatives.

The second example is from section 8.10, where Walton discusses a case of Doctor Minot, who in 1926 noticed a correlation between eating great amounts of liver and recovery from pernicious anemia. Minot quite correctly did not accept the idea of causation on the basis of the correlation directly, but went on to investigate the matter. He thus put forth a hypothesis and tested it (*pace* Hintikka, he asked questions from nature); and as answers came in, the suspicion of causality grew stronger, although it was not positively established before vitamin B₁₂ was identified and its role in the matter explained. The first observation of correlation between *A* and *B* may indeed be an initial reason for the probing the matter, but it does not justify the belief or commitment in ‘*A* causes *B*’. Putting forth a hypothesis for testing does not mean that you are justified in believing the hypothesis to be true, only that you have some reason to start examining the relevant alternatives.

It should be emphasized that this is largely in agreement with what Walton writes; it is just the specific nature of ‘fallacy’ that is at issue here. For Walton, the fallaciousness seems to reside in some cases in the argument itself (especially in formal fallacies), in some cases in the follow-up discussion, in some cases in the effects on the opponent, and in some cases in the perception of the probative worth. At times, Walton also demands clearly too much from the respondent:

Only where the critic can show that the gap cannot plausibly be filled should the arguer be reasonably accused of having committed a fallacy in his argument from correlation to causation or statistical argument. Only if an argument is so weak or bad that any possible defense of it appears hopeless, and no response to relevant critical questions is given, should the argument be condemned as fallacious. (p. 287)

I would argue that to hold that only when the critic can show that the gap *cannot* plausibly be filled is too strict: it should suffice to show that the arguer jumps from mere correlation to causation to show that a fallacy has been committed. This claim can be further justified by noting that the arguer had no reason whatsoever to believe that any critical questions laid out by Walton can be answered; but to require that the respondent shows that it is not possible (in the nomic sense) for the causation to exist is too strict.

One final complaint is that although it is good that we get an updated version of the first edition that includes some developments in Walton's position, there are places where the inclusion of new material should have been done more carefully. In the section 7.6 on expert testimony in legal argumentation, new material has been inserted, but the text after the new material is no longer quite consistent with the addition. The problem discussed is the gradual lowering of standards concerning the introduction of expert testimony in courts of law in the United States, which is argued to have started after legal rules on the inclusion of expert testimony were made laxer than they were since the case of *Frye vs. United States* (1923), because of the pressure to accept new promising techniques that have not yet gained general acceptance in the relevant field of expertise. The inserted text notes that new standards have been introduced in (the so-called *Daubert factors* and *notes to Federal Rules of Evidence*), and they address the very same problem, yet the text after the insertion has remained the same from the first edition, discussing the problem of lowering of standards in the United States.

Despite these reservations, I believe Walton's book has important insights both to argument analysis and evaluation and to informal logic as a discipline. Its first edition, published in 1989 has been one of the key works of the field of informal logic. The updated second edition under review here gives a better picture of Walton's approach and the book as such still raises many thoughts and avenues for further study of argumentation. It is a must-read for anyone interested in this discipline.

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