Historical Origins of *Argumentum ad Consequentiam*

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ABSTRACT: What are the historical origins of the *argumentum ad consequentiam*, the argument from (or literally, to) consequences, sometimes featured as an informal fallacy in logic textbooks? As shown in this paper, knowledge of the argument can be traced back to Aristotle (who did not treat it as a fallacy, but as a reasonable argument). And this type of argument shows a spotty history of recognition in logic texts and manuals over the centuries. But how it got into the modern logic textbooks as a fallacy remains somewhat obscure. Its modern genesis is traced to the logic text of James McCosh (1879).

KEY WORDS: fallacy, reasoning, consequences, Aristotle, Pascal, decision-making, deliberation, informal logic

Argument from consequences has been shown to be an interesting and fairly important informal fallacy, but its historical origins are obscure. *Argumentum ad consequentiam*, as noted in (Walton, 1996, footnote 1, p. 168), looks to be a modern addition to the list of fallacies. It is not in Aristotle's list of fallacies, and it looks like it must have just been added in somewhere, as the list of fallacies expanded in the modern textbook accounts. But is that perception right? In this paper, we will see that it is only partly right. In fact, argumentation from consequences was identified as a specific type of argument with a distinctive form in the ancient world, was known to the ancients as such, and does have a long history. However, it did not appear to be recognized as a fallacy in the ancient sources. That recognition as a fallacy appears to have come much later, in a nineteenth century logic textbook.

The scope of this article is restricted to the historical question of the origins of the *argumentum ad consequentiam*. I have already made my views clear on how to analyze the fallacy in (Walton, 1996, chapter 6). It would inappropriate to try to tackle such a major problem in this short article, or to re-state my views here on how it should be solved. Nevertheless, the reader will inevitably be curious about what criterion could or should be used to distinguish between the fallacious and nonfallacious instances of argumentation from consequences. So I have included an account of three hypotheses (in section six) that purport to offer

Argumentation **13**: 251-264, 1999.

useful methods for making such a judgment. The reader can judge which hypothesis is best.

Argument from consequences is an important form of reasoning for informal logic. It is a type of argumentation that is very common in everyday argumentative discourse, and its structure underlies many of the best known informal fallacies - like the slippery slope argument, for example. Investigating its historical origins is a worthwhile pursuit, even though very little if any research on the subject has been done. In this paper, I will attempt to make a beginning at remedying this situation. Before getting to the historical matters, it is best to begin with a brief explanation of what argument from consequences is generally taken to be, both as a reasonable kind of argumentation and as a fallacy.

1. A SHORT INTRODUCTION TO ARGUMENT FROM CONSEQUENCES

This type of argumentation may be broadly characterized as the argument for accepting the truth (or falsity) of a proposition by citing the consequences of accepting that proposition (or of not accepting it). Some logic textbooks describe this type of argumentation as inherently fallacious. For example (Rescher, 1964, p. 82) writes that 'logically speaking, it is entirely irrelevant that certain undesirable consequences might derive from the rejection of a thesis, or certain benefits accrue from its acceptance'. One of the cases cited by Rescher (1996, p. 82) shows what he is driving at.

Case 1

The United States had justice on its side in waging the Mexican war of 1848. To question this is unpatriotic, and would give comfort to our enemies by promoting the cause of defeatism.

One can see why Rescher used the word 'irrelevant' to describe such a case. There seems to be a dialectical shift in the argumentation in the case from a critical discussion of the ethical issue of which side was supposedly more in the right, to a deliberation or practical type of discussion about the consequences of having such a critical discussion, or at least of taking a particular side in this discussion.

This case is very puzzling, and an extensive analysis of the various strands in it is given in (Walton, 1996, chapter 6). One thing that is especially puzzling about argumentation from consequences is that despite its portrayal as a fallacy, as indicated above, it often seems to be quite a reasonable form of argumentation. In fact, arguing for or against a proposed policy by citing the positive or negative consequences of the policy is one of the most common forms of argument in everyday deliberations, and very often, it can be quite reasonable as a defeasible and presumptive form of argumentation. An example is the following argument.

Case 2

The federal govermnent's decision to lower taxes on cigarettes will have bad consequences, because there is evidence to show that cigarette consumption increases as prices decrease, and increase in consumption leads to smoking-related illnesses that shorten lives and consume millions of health-care dollars. Therefore, we should be against the government policy expressed by this decision.

In this case, the use of argumentation from consequences seems reasonable. At any rate, although it is not a conclusive type of argument perhaps, it would be too strong to categorize the argument in this case as fallacious. So the problem posed by such cases, and studied in (Walton, 1996, chapter 6), is to distinguish between the fallacious and the nonfallacious cases of *argumentum ad consequentiam*. Some of these cases are quite difficult, as one can see by recognizing that arguments for censorship of literary works are often based on cited consequences (that they lead to increased violence, or other bad consequences), and involve interesting dialectical subtleties.

Perhaps the most celebrated problematic case of argumentation from consequences is Pascal's famous *infini-rien* argument for accepting the existence of God, often called Pascal's Wager. The argument can be summarized as follows.

Case 3

Either God exists or not. Reason cannot decide for us one way or the other. Since a choice has to be made, think of it as a bet. If you bet that God exists, and conduct your life following that assumption, you win an eternity of bliss. If you lose, you lose nothing (or very little). Pascal concludes that the rational choice is to believe in God, because where there is an infinity to be won 'that removes all doubt as to choice' (Quoted from the passage in the *Pensees* reproduced in Rescher, 1985, p. 9). If you cannot make yourself believe, Pascal gives the advice that you should start acting as though you do. So you should go to mass, take holy water, and do what other religious people do.

The basis of Pascal's argument is a balancing off of theoretical reason against practical reason, as shown by Rescher (1985). The Wager argument is essentially a use of argumentation from consequences. The basis for proposing acceptance of the assumption that God exists is in the weighing of the consequences of believing against those of not believing. Against an infinity of good consequences there seems to be no equally weighty counter-argument. On the grounds of the good consequences of believing, you should go ahead and accept the assumption that God exists, and act as though it were true.

Whatever we are to say about Pascal's Wager, it an extremely clever

use of argumentation from consequences based on the Enlightenment ideal of seeing probability (the calculus of numerical probabilities) as the model of rational argumentation, even in matters of the heart. Is the argument from consequences in the Wager a fallacy, like the argument in Case 1, or is it a reasonable argument, like the one in Case 2? Without making any attempt to solve this knotty problem, I will now pass on to the historical question addressed in this paper. Where did the *argumentum ad consequentiam* come from?

If the *argumentum ad consequentiam* is a modern addition to the list of fallacies, was there any prior recognition of argument from consequences that may or may not have been related to the modern appearance of this fallacy? The answer, as we shall see below, is that while argumentation from consequences may be a modern addition to the list of fallacies, it has a long lineage of recognition as a type of argument which is reasonable that goes back to ancient times.

2. ANCIENT HISTORY: ARISTOTLE'S ACCOUNTS

Aristotle shows quite a clear awareness of argumentation from consequences as a distinct form of reasoning in *Topica* 117a7-117a15 (as quoted from the Loeb Classical Library Edition, p. 391, below).

> . . . when two things are very similar to one another and we cannot detect any superiority in the one over the other, we must judge from their consequences, for that of which the consequence is a greater good is more worthy of choice, and, if the consequences are evil, that is more worthy of choice which is followed by the lesser evil.

This passage expresses the basic idea of argument from consequences as a distinctive form of inference very clearly. When choosing between two course of action, if things are otherwise balanced, we should choose according to the consequences. Good consequences are a reason for choosing the one course of action. That is, the rule is to choose the one that has the greater preponderance of good consequences. If the consequences are bad, then the rule is the other way around. Choose the one that has the least bad consequences.

It is clear that Aristotle sees the context of his citing of argumentation from consequences above as being that of a deliberation, involving a practical kind of reasoning or decision making, where an agent is choosing between various possible courses of action. In such a case, it seems very reasonable, almost to the point of being obvious or trivial, that the principle of reasoning from the consequences of an action, insofar as these are known, or can be conjectured, represents a nonfallacious type of inference.

A somewhat different context where Aristotle cites argumentation from consequences is in *Rhetorica* 1399a14-1399a15, where he is writing about

the use of this form of argument in rhetorical persuasion (as quoted below from the Loeb Classical Library Edition, p. 311).

> . . . since in most human affairs the same thing is accompanied by some bad or good result, another topic consists in employing the consequences to exhort or dissuade, accuse or defend, praise or blame. For instance, education is attended by the evil of being envied, and by the good of being wise; therefore we should not be educated, for we should avoid being envied; nay, rather, we should be educated, for we should be wise.

Greek rhetoricians must have been familiar with this form of argument as a distinctive tool of persuasion, for Aristotle mentions (1399a15), that 'this topic is identical with the "Art" of Callippus'. The so-called 'topic' or form of inference is the same as that described above in the *Topica* passage, but the use of it for some purpose in a context of dialogue is different. In the *Rhetorica,* Aristotle portrays *argumentum ad consequentiam* as being used by one party to persuade another party that something is good or bad, by citing the good or bad consequences. The example he gives expresses the basic idea of how the inference should be used very clearly. Education can be argued against by pointing out (correctly) that it will lead to envy. But contravening this argument from consequences, there is also the consideration that education leads to being wise. And since being wise is (presumably) more valuable as a positive consequence than the negative side effect of producing envy, the positive argumentation from consequences in this case is stronger than the negative. The conclusion is that someone can be exhorted to educate himself, on the grounds that education has the good consequence that it leads to wisdom (even though it also has some bad side effects).

One of the interesting things to note about Aristotle's two accounts of *argumentum ad consequentiam* is how he portrays it as a form of argument that can be used for different purposes in different contexts. In deliberation, it can be used as a reasonable basis for deciding which of a balanced pair of courses of action is the better, or more prudent to select. But it can also be used for purposes of persuasion, when exhorting an audience, as for example, in a court of law, where one is accusing someone of bad conduct, or arguing that someone should be blamed for alleged conduct. Such a context of persuasion dialogue could be different from that of deliberation, where one is trying to choose a prudent line of conduct, either for oneself or for a group decision or policy. It is the possibility of the dialectical shift from one type of dialogue to another that holds the clue to the problem of evaluating *argumentum ad consequentiam* as a form of inference that is sometimes reasonable and sometimes not. But at any rate, it suffices here to see that Aristotle did recognize *argumentum ad consequentiam* as a distinctive form of argument, and to be aware that he did portray it not as a fallacy, but as a form of argumentation that is inherently reasonable (although he did not rule out that it could be subject to abuse).

3. THE FALLACY OF CONSEQUENT

Inevitably, someone will ask: didn't Aristotle have a fallacy in his list of the fallacies in the *De Sophisticis Elenchis* called 'the fallacy of consequent' that is the same as the fallacy of the *argumentum ad consequentiam?* The answer is that, yes, Aristotle did have a fallacy called the fallacy of consequent, described in the *De Sophisticis Elenchis* (167bl), but no, it is not the same thing as the *argumentum ad consequentiam*. To clear up this question, an explanation of the fallacy of consequent is called for.

In the *De Sophisticis Elenchis* (167b1), Aristotle explains that the fallacy of consequent is 'due to the idea that consequence is convertible'. What he means, in the language of modern logic, is that a conditional can get turned around, so that where we have a conditional, like 'If A then B', it can be easy to assume in some cases that 'If B then A' also holds, even where the conditional is not 'convertible'. Aristotle gives three examples.

Case 4
Men often take gall for honey, because a yellow color accompanies honey.

Case 5
Since it happens that the earth becomes drenched when it has rained, if it is drenched, we think that it has rained, though this is not necessarily true.

Case 6
When men wish to prove that a man is an adulterer, they seize upon the consequence of that character, namely that the man dresses himself elaborately or is seen wandering abroad at night.

All of theses cases are very interesting, and they reveal that the fallacy of consequent is a genuinely interesting kind of fallacy that has been neglected by modern logic, and often wrongly identified with the so-called formal fallacy of affirming the consequent. These two fallacies are related, but they are not the same thing. The fallacy of consequent is a fallacy of turning a conditional around, exactly as Aristotle says. It has to do with the form of inference called argumentation from sign, something also neglected in modern logic, but that was very important as a kind of argument in the ancient theories of dialectical reasoning. The fallacy of consequent arises because a conditional (and particularly those conditionals based on argument from sign) is often stronger one way, but still holds, only in a weaker inference, the other way around. The fallacy then is in turning the conditional around (when such a conversion is not warranted). A detailed analysis of how this fallacy works, and how it is related to the currently fashionable idea of abductive inference, is given in (Walton, 1996a, pp. 266-278).

The long and the short of this digression is that the fallacy of the con-

sequent is an interesting type of fallacy in its own right, and it is somewhat related to the kind of inference called *argumentum ad consequentiam*, but the two things are quite different. Argument from consequences is a very common, and generally quite reasonable form of argument to the effect that a projected course of action is a good (bad) course to take if the consequences of it are good (bad). The fallacy of consequent is the error of turning a conditional around when such a turning around (converting) of the conditional is not warranted (generally because the inference from consequent to antecedent is weaker when turned around). But the fallacy of consequent is certainly something interesting to pursue, because of the neglect of any adequate and useful treatment of it in modern logic.

4. MEDIEVAL TREATMENTS

There do appear to be some types of argumentation recognized in medieval logic manuals that are similar to argumentation from consequences. In Peter of Spain's *Topics*, there is a topic called 'generation', described as 'a coming into being from nonbeing' (Kretzmann and Stump, p. 237). Peter defines a topic he calls 'from generation' as 'the relation of generation to the thing generated', giving the following example.

Case 7
The generation of the house is good; therefore, the house is good.

This form of inference appears to involve a kind of reasoning that can be described as goal-directed practical (or means-end) reasoning - if the means towards producing something is good, then the thing produced must itself be good. Whatever kind of reasoning this form of inference is, another topic that Peter sees as related to it (Kretzmann and Stump, pp. 237-238) is the focus of interest here.

> The Topic *from the thing generated* will be the converse of this one, and the maxims are these: If the thing generated is good, its generation is good; and if the thing generated is bad, its generation is bad.

This particular topic cited by Peter is interesting, because it does appear to be very similar to the form of argument we have described as argumentation from consequences above. It may not be exactly be the same thing. And it is hard to know exactly what Peter has in mind generally by the whole idea of 'generation'. But the outline of the form of inference he describes does appear to be quite similar to the *argumentum ad consequentiam*.

William of Sherwood, in his *Introduction to Logic* (3.2.12), also recognizes a topic he calls 'on generation' (Kretzmann, 1966, p. 87). As with Peter's treatment, the type of reasoning mainly being studied appears to

be goal-directed (practical) reasoning, and the focus is not really on argumentation from consequences *per se*. But even so, some of the forms of inference described by William do appear to bear some resemblance to, or to have some connection with *argumentum ad consequentiam*.

Given these preliminary indications then, it would not be too surprising if argumentation from consequences were to be found in the medieval topics literature of the logic manuals of the time, as a distinctive form of argument.

5. MODERN TREATMENTS

The first occurrence I have been able to find of the *argumentum ad consequentiam* in the modern textbooks is in McCosh (1879, pp. 189-190). Under the heading of fallacies McCosh treats 'argument from consequences' in less than half a page, but his description of it is quite balanced and useful. He treats it as a form of argumentation that can be reasonable in some cases, and illegitimate or unreasonable as used in other cases.

> *Argument from Consequences.* This is allowable in questions of pure expediency, as for example, in considering a proposal to pass a law for the suppression of intemperance, or gambling, or licentiousness; we ought to inquire whether it would effect the end in view. But when the question is one of truth or right, we should not in the first instance appeal to results. There is a constant tendency on the part of some, when a new scientific truth is divulged, to reject it because it may produce evil consequences by undermining religious beliefs, or good social sentiments. But if a doctrine be true, and a deed be right, the consequences must be good whether we see it or not. After we have established the truth or falsehood of a doctrine on independent evidence, then we may allowably trace the consequences - always, however, in a spirit of candor and fairness.

This very intelligent and balanced treatment of argumentation from consequences takes a middle way that, in my opinion, is exactly the right approach needed to instruct students of logic on how to evaluate cases where this kind of argument has been used. The first step McCosh takes is to point out that in practical deliberations (matters of expediency), the use of argumentation from consequences can be perfectly reasonable, and should be presumed to be nonfallacious. However, when there is a shift from its use in such a context of action-directed deliberation to another kind of use, where 'the question is one of truth or right', one needs to be extremely careful not to commit the fallacy of leaping to condemn a view because of the cited or alleged bad consequences of holding that view.

I have not been able to find any citation of argument from consequences as a distinctive form of argument in the treatment of fallacies, or for that matter anywhere in logic textbooks in the modern period, before McCosh's mention of it. As noted in (Walton, 1996, p. 168, footnote 1), the most plausible potential counter-example is the account of a fallacy in DeMorgan (1847, pp. 276-277), which does seem to be a subspecies of *argumentum ad consequentiam*. But it is argued in (Walton, 1996, p.199) that this

fallacy, of drawing a hasty conclusion from a single consequence, or too few consequences of an action, is a special subtype of *argumentum ad consequentiam*, and that it would be a mistake to identify it with *argumentum ad consequentiam* as a generic type of argument.

6. HYPOTHESES TO EXPLAIN THE FALLACY

There are three hypotheses that have, or can be put forward to try to mark the difference between the fallacious and nonfallacious cases of *argumentum ad consequentiam*. The first, due to an anonymous referee of this article, is expressed as follows.

Hypothesis One

The fallacious mode of argument is defined as argument for accepting the truth (or falsity) of a proposition by citing the consequences of accepting that proposition (or not accepting it). The nonfallacious mode of argument is argument against (or for) some course of action, policy, etc., on the basis of undesirable (or desirable) consequences.

Hypothesis Two

The second hypothesis has been expressed in (Van Eemeren and Grootendorst, 1992, p. 162). The fallacious form involves a confusion between propositions that express facts and propositions that express values: 'It is not permissible to test an assertion (descriptive proposition) by pointing out the undesirable effects of the assertion (evaluative proposition), because facts and values are then confused' (p. 162). The nonfallacious form involves an 'inciting' proposition that recommends a course of action: 'in the case of a suggested course of action, for instance, it is justifiable to examine the possible consequences' (p. 162). The distinction appealed to is that between the use of a proposition to describe facts (descriptive function) and the use of a proposition to express values, and in particular to recommend a course of action (expressive function).

Hypothesis Three

The third hypothesis has been expressed in (Walton, 1996, chapter 6). The fallacious form involves a shift from one context of use of the argument to another. Argument from consequences is both common and appropriate when used in a type of dialogue called deliberation to argue for against a proposed course of action. But if the dialogue is supposed to be that of a critical discussion, or other type of dialogue in which a thesis is to be proved true or false, use of argument from consequences (arguing that the thesis is true or false because accepting or rejecting it has good or bad consequences) is not relevant. The reason why such an argument may appear to be relevant is because of the dialectical shift.

Each hypothesis depends on prior distinctions that have been subject to debate. Hypothesis one depends on the distinction between so-called practical reasoning or *phronesis,* of the Aristotelian kind, that concludes in an imperative for a course of action, and theoretical reasoning (for lack of a better term), that concludes that a proposition is true or false. Hypothesis two depends on the fact-value distinction, defended by Stevenson (1963). Hypothesis three depends of the distinction between different types of goal-directed conversational frameworks (dialogues) in which an argument is used for some purpose (Walton, 1998). So each hypothesis depends on how well this prior distinction holds up, and can be used as a clear criterion that is applicable to problematic cases of argument from consequences.

All three hypotheses appear to deal adequately with drawing the line between the supposedly fallacious case 1 and the supposedly nonfallacious case 2. Perhaps hypothesis 2 has the most difficulty here, because the proposition that the U.S. had justice on its side in waging the Mexican war of 1848 appears to be appears to be evaluative rather than factual (descriptive). Since it is evaluative, hypothesis 2 would presumably classify case 1 as a nonfallacious use of argument from consequences. At any rate, there are some questions about how hypothesis 2 could deal with case 1.

Another commonly problematic type of case is the use of argumentation from consequences to condemn works of art and literature on grounds of the alleged consequences of exhibiting the work to the public. This kind of case has been considered at greater length in (Walton, 1996, pp. 188-191), but a simplified example will illustrate the problem.

Case 8

Bob argued that *A Clockwork Orange* is a bad film because the showing of this film led to brutal violence by gangs of hooligans.

In this kind of case, the problem is to know what was supposedly meant by 'good film'. If an aesthetic judgment about the literary merit of the film is meant, then the use of the argument from consequences would be fallacious, or at least problematic and questionable. If a moral judgment is being made, to the effect that 'bad' means 'open to moral criticism', or something of that sort, the argument could be defended as nonfallacious. This problematic type of case is common where works of art are condemned on ethical grounds. The problem seems to be a kind of shift from an aesthetic judgment to an ethical judgment. This sort of problem can arise in cases where censorship of literary works or works of art is being discussed.

Once again, it seems that hypothesis two has the most problems, because the conclusion that the film is 'bad' seems to be evaluative rather than descriptive, no matter whether you interpret it as making an aesthetic or an ethical claim. On hypothesis two, the argument in case two is judged to be nonfallacious. But as indicated above, the shift from the aesthetic to

the ethical interoperation would seem to involve a fallacious (or problematic) use of argument from consequences.

The problem with hypothesis one is that an argument for or against some course of action can always be reformulated as an argument for the truth of the proposition that the respondent of the argument should be for or against that course of action. For example, in case 2, the argument can be described as an argument for accepting the truth of the proposition that we should be against the government policy to lower taxes on cigarettes. The line between practical arguments that conclude in actions and theoretical arguments that conclude in a claim that a proposition is true or false may not be firm or easy to mark. For all practical arguments that conclude in actions can be rephrased as equivalent to arguments in which the conclusion is a proposition claiming that it is true that the respondent ought to carry out such-and-such a course of action. Despite this problem, there is a growing body of literature concerned with the analysis of practical reasoning, and presumably this literature indicates that it is possible to distinguish between practical reasoning and some other kind of reasoning that could be called theoretical reasoning (or something of the sort).

Another problem with hypothesis one is that case 8 could be reformulated as follows.

Case 8.1
Bob argued that anyone with artistic standards should not judge *A Clockwork Orange* as a good film, because the showing of this film led to brutal violence etc.

In this reformulated version, the argument is against a course of action, judging the film to be a good one, on the grounds of the bad consequences of showing the film. It seems to be a fallacious case of the use of argument from consequences, just as case 8 was. But it is an argument against a course of action, policy etc. It has the form of an Aristotelian practical inference. Hypothesis one seems to run into problems with this kind of case. Perhaps hypothesis one could be supplemented by hypothesis three, but it also has problems.

Hypothesis three would deal with case 8.1 by citing the contextual assumption that presumably, the case is supposed to represent a critical discussion on the issue of whether *A Clockwork Orange* is, from an artistic point of view, a good film or not. But then the reason given to support the claim that it is not a good film is that showing it to the public led to violence. This argument is not materially relevant to the critical discussion. It may seem to be though. Why is that? According to hypothesis three, it is because the dialogue has shifted to a deliberation type of dialogue in which the issue is whether showing the film is prudent, or is a good thing to do. The discussion is no longer about the artistic merits of the film, but

about the practical question of whether it is, or was, a good idea to show the film to the public.

The problem with hypothesis three is that it needs to be shown how practical deliberation is a different type of dialogue from a critical discussion type of dialogue so that (a) one or the other type of dialogue can be judged to be the proper context that is supposed to be the framework in which an argument was used in case, and (b) the one type of dialogue has a different goal from the other, so that a shift from one to the other during the course of the same argument can signal a fallacy. This approach requires a classification of different types of dialogue in which each type has its goals and its rules for the participants to follow, in order to contribute to the goals.

7. ARGUMENT FROM CONSEQUENCES IN THE MODERN PERIOD

One can see that although argument from consequences is not all that easy to analyze as a fallacy, it is an important type of fallacy that deserves a somewhat more prominent place in the logic textbooks than it already has. How it got into the modern textbooks at all is not known, but it is possible that McCosh was the first to include it as a fallacy. I wouldn't be too surprised, however, to find it before McCosh, even though I have not found it in the usual sources (except for those, like Aristotle, cited above, where it is not treated as a fallacy). So I would throw it out as a project for those interested in the history of fallacies to try to find any citation of argument from consequences as a fallacy before McCosh.

The idea of argumentation from consequences has been tacitly incorporated into methods frequently used to evaluate arguments in the modern period, or at any rate, methods advocated in widely accepted philosophical theories. One example is the method of inquiry advocated by Dewey (1938). As one would expect, a pragmatist like Dewey advocates a framework of deliberation in which the consideration of the consequences of a proposed line of action is a primary factor in arriving at a rational decision on what to do. According to Dewey (1938, p. 170), 'Genuine deliberation proceeds by institution and examination of alternative courses of activity and consideration of their respective consequences.' Dewey sees the kind of reasoning used in rational deliberation as proceeding by the forming of disjunctive propositions that set up, or in his terminology 'institute', alternative possible courses of action, and then by the comparing of the goodness or badness of the (likely) consequences of each of the alternatives. This general method of evaluating reasoning used in practical deliberation has been overlooked by logicians in the past, who have not appreciated how reasoning works in deliberation, through the setting up of alternative courses of action, sometimes called dilemmas, and the elimination of some alternatives in favor of concluding to others. And that could

be the reason why *argumentum ad consequentiam* has largely been ignored in logic, or treated in such a superficial manner.

Another way in which argumentation from consequences has been tacitly incorporated into the methods used to evaluate arguments in the modern period is its acceptance in utilitarian approaches to ethics. According to Slote (1992, p. 212), act-consequentialism is the view that judges the rightness or wrongness of an act in relation to the probability of the good or bad consequences of the act. The method of formal decision making that became very widely accepted in the fifties and sixties under the heading of cost-benefit analysis is a way of formally representing the act-consequentialist viewpoint. This method breaks a decision down into a set of mutually exclusive 'outcomes', and then assigns a numerical probability value and utility value (typically, in dollars) to each outcome. The decision can then be made mechanically, by simply choosing the outcome that has the highest numerical value when the probability of each outcome is multiplied by its utility value (or if there is a tie, choosing among the ones that have the highest value). Since then, it is fair to say that this method has come under criticism on the grounds that it over-estimates the importance of calculations (especially by emphasizing more easily quantifiable factors) of costs and projected benefits, to the exclusion of other relevant factors that can't be quantified (nonarbitrarily) so easily. At any rate, whatever the merits of cost-benefit analysis are, as a method of assessing decisions, it is (or was) a widely used method that tacitly incorporated *argumentum ad consequentiam*.

But despite these tacit uses of *argumentum ad consequentiam*, this form of argument has not been recognized clearly enough as a distinctive argumentation scheme or form of inference in its own right, by logic textbooks, and by logical theories of reasoning generally (especially in relation to the branch of logic dealing with informal fallacies). As so often happened with informal fallacies (Hamblin, 1970), Aristotle had a good idea, but subsequent generations either watered it down, or distorted it, or simply ignored it altogether, despite the occasional logic textbook (among all the idiosyncratic treatments) getting it just right in a brief and isolated flash of insight that was not followed up the majority or the leading lights of the time.

ACKNOWLEDGEMENTS

I would like to thank the Social Sciences and Humanities Research Council of Canada for a Research Grant that funded this work, the University of Winnipeg for granting me study leave in 1996-1997, and the Oregon Humanities Center for inviting me to the University of Oregon as a Distinguished Visiting Research Fellow in 1997, and for providing facilities that made this research possible.

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