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Arguments, Meta-arguments, and Metadialogues: A Reconstruction of Krabbe, Govier, and Woods

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ABSTRACT: Krabbe (2003, in F.H. van Eemeren, J.A. Blair, C.A. Willard and A.F. Snoeck Henkemans (eds.), *Proceedings of the Fifth Conference of the International Society for the Study of Argumentation*, Sic Sat, Amsterdam, pp. 641–644) defined a metadialogue as a dialogue about one or more dialogues, and a ground-level dialogue as a dialogue that is not a metadialogue. Similarly, I define a meta-argument as an argument about one or more arguments, and a ground-level argument as one which is not a meta-argument. Krabbe (1995, in F.H van Eemeren, R. Grootendorst, J.A. Blair, C.A. Willard and A.F. Snoeck Henkemans (eds.), *Proceedings of the Third ISSA Conference on Argumentation*, Sic Sat, Amsterdam, pp. 333–344) showed that formal-fallacy criticism (and more generally, fallacy criticism) consists of metadialogues, and that such metadialogues can be profiled in ways that lead to their proper termination or resolution. I reconstruct Krabbe's metadialogical account into monolectical, meta-argumentative terminology by describing three-types of meta-arguments corresponding to the three ways of proving formal invalidity he studied: the trivial logic-indifferent method; the method of counterexample situation; and the method of formal paraphrase. A fourth type of meta-argument corresponds to what Oliver (1967, *Mind* **76,** 463–478), Govier (1985, *Informal Logic* **7**, 27–33), and Copi (1986) call refutation by logical analogy. A fifth type of meta-argument represents my reconstruction of arguments by parity of reasoning studied by Woods and Hudak (1989, *Informal Logic* **11**, 125–139). Other particular meta-arguments deserving future study are Hume's critique of the argument from design in the *Dialogues Concerning Natural Religion*, and Mill's initial argument in *The Subjection of Women* about the importance of established custom and general feeling vis-à-vis argumentation.

KEY WORDS: criticism, fallacy, Krabbe, metadialogue, method of counterexample, method of formal paraphrase, meta-argument, parity of reasoning, refutation by logical analogy

1. INTRODUCTION

"A metadialogue is a dialogue about a dialogue or about some dialogues. A dialogue that is not a metadialogue will be called a ground level dialogue" (Krabbe, 2003, p. 641). With these definitions, Krabbe explicitly introduced the topic of metadialogues into argumentation theory. Similarly, I define a meta-argument as an argument about one or more arguments, and a ground-level argument as one which is not

a meta-argument (or which in a particular discussion is at a lower level as compared to some other higher-level meta-argument).

Here I see no need to define "argument," any more than Krabbe (2003) felt there the necessity to define "dialogue," since the present focus is the "meta" aspect of both dialogues and arguments. This focus is not meant to deny the importance of giving satisfactory definitions of these concepts. However, it is useful here to stress the overlap between dialogues and arguments. Krabbe himself has stated that his main interest lies with persuasion dialogues, or critical discussions, and these entities involve arguments in an essential way. Moreover, Barth and Krabbe (1982) have famously proved the equivalence between the axiomatic and dialogical methods; and this proof may be taken to suggest (see Finocchiaro, 2005, pp. 231–245) not only that the monolectical way of talking about arguments can be translated into a dialogical way of talking, but also that the reverse is the case. Here this reverse case will be exploited by discussing arguments and meta-arguments in a relatively monolectical manner, in the belief that this discussion could be translated into one about dialogues and metadialogues. Accordingly, in the next section I will attempt to reconstruct some of Krabbe's insights about metadialogues in terms of meta-arguments.

Although the explicitly meta-argumentative, or metadialogical, approach is a valuable step forward, both meta-arguments and metadialogues have been implicitly discussed for a long time in argumentation theory. This has happened primarily in the context of the evaluation or criticism of arguments, which everyone will admit to be a crucial part of argumentation theory. In fact, argument evaluation can be done seriously only if one gives reasons supporting the evaluative claim; such a reasoned evaluation is obviously an argument, and since the subject matter is the original argument, the evaluation is clearly a meta-argument. Thus, it should come as no surprise if much of my analysis will consist of attempts to reconstruct in explicit terms of meta-argument relevant insights by various scholars that deal with argument assessment.

Finally, although the focus on meta-arguments may be relatively novel in informal logic and argumentation theory, it should be noted that it is relatively more well-established in the branch of computer science that studies argumentation and reasoning. This is apparent from the work of such authors as Perlis (1988), Costantini (2002), and Wooldridge et al. (2005). In particular, the last three co-authors have developed a formalization of meta-arguments which takes as its "starting point the view that arguments and dialogues are inherently *meta-logical* processes. By this we mean that the arguments made by protagonists in a debate must *refer* to each other" (Wooldridge et al., 2005, section 1). And they give the example of the following hierarchy

of argumentation in a legal context: arguments by prosecuting and by defense attorneys in a lower court; arguments about these arguments by the judge presiding this court; attorneys' arguments at a court of appeals; judges' arguments in the appeals court; and so on for attorneys' and judges' arguments in the supreme court. The suggestiveness and potential relevance of these remarks and examples are obvious, although the difficulty of the practical application of such abstract formalizations to natural-language argumentation and reasoning by human beings remains.

2. FORMAL-FALLACY CRITICISM

An important type of meta-argument occurs when a ground-level argument is criticized for having committed a fallacy. As Krabbe (2002, p. 162) has stated,

> in fallacy criticism it is upon the critic to show why an alleged move in critical discussion is so completely wrong that is cannot even prima facie be accepted as a serious contribution to the discussion. Thus fallacy criticism leads to a critical discussion on a second level, a discussion about the permissibility of a move in the ground level discussion.

This meta-argumentative interpretation of fallacy criticism is presented by Krabbe (1995, p. 338; 2003, p. 642) as a generalization of a thesis first advanced by Hamblin (1970, pp. 283–303). In the last chapter of his seminal work, Hamblin argues that it is important to distinguish between "points of order" and "topic points" in a critical discussion. The former raise metacognitive questions, whereas the latter raise substantive issues, and so this is Hamblin's way of distinguishing between meta-level and ground-level. Furthermore, he argues that equivocation criticism essentially involves meta-arguments and metadialogues, writing in the last sentences of the book that "the road to an understanding of equivocation, then, is the understanding of *charges* of equivocation. For this, the development of a theory of charges, objections or points of order is a first essential" (Hamblin, 1970, p. 303). More recently, the metadialogical ramifications of this thesis have been systematically explored by van Laar (2002a, b, 2003).

Krabbe's thesis about fallacy criticism is also presented by him as a solution to the problem of the asymmetry between favorable and unfavorable evaluations of arguments. In several challenging papers, Massey (1975a, b, 1981) had asked and answered negatively the question, "Are there any good arguments that bad arguments are bad?" By contrast, Krabbe (1995) asks and answers affirmatively the question, "Can we ever pin one down to a formal fallacy?" Despite the terminological variance, and the opposition of their respective conclusions, the metadialogical dimension of the discussion is obvious.

What is being discussed is the nature and cogency of meta-arguments to the effect that some ground-level argument is bad, fallacious, or invalid. Let us reconstruct Krabbe's own argument (a third-level meta-argument!) that it is possible to construct cogent (second-level) meta-arguments to the effect that some ground-level argument is a formal fallacy.

First, what is a formal fallacy? For Krabbe (1995, p. 336), "*a formal fallacy, in dialogue, is committed as soon a party presents a formally invalid (i.e., not formally valid) argument that violates the code of conduct of the dialogue*." Here it is important to note that, besides formal invalidity, there is a second element in this definition – code violation; that is, a violation of some rule either agreed upon by the two interlocutors, or arguably relevant in the context of that discussion. Although it is unrealistic to expect prior or explicit agreement about the rules of a particular discussion, learning the contextual relevance of various types of arguments and criticism is a normal part of the education designed to achieve mastery of a given field. For example, historians often argue for chronological theses by means of arguments which, however strong, are formally invalid; and the same happens in the more experimental branches of empirical science when one gives evidence to support some empirical generalization. But everybody knows, or ought to know, that in these contexts such formally invalid argument do not violate the rules of the game. My point here is simply to underscore the fact that, following Krabbe, there are two things and not just one that must done to prove a formal fallacy; and since these two things embody different claims, two distinct meta-arguments must be advanced in effective formal-fallacy criticism.

Next, what is formal invalidity? Or equivalently, what is formal validity? And more fundamentally and generally, what are validity and invalidity? Again, I follow mostly the spirit and occasionally the letter of Krabbe's (1995) discussion. An argument is *valid* iff there is no "situation, actual or fictitious (a possible world, if one wishes) such that in that situation all the premises are true and the conclusion is false" (Krabbe, 1995, pp. 335–336); i.e., iff it is impossible for the premises to be true while the conclusion is false; i.e., iff "there is no *counterexample* to it" (Krabbe, 1995, p. 336). Such a counterexample to an argument should not be confused with a counterexample to an argument-form, which is an argument instantiating the form and having true premises and false conclusion; thus to be clearer, we may speak of *counterexample-situations* (to arguments) and of *counterexample-arguments* (to forms). Finally, an argument is *invalid* iff it is not valid.

Formal validity is a special case of validity. An argument is *formally valid* iff "it can be correctly paraphrased… such that its schema (or form) is valid" (Krabbe, 1995, p. 336); i.e., iff it instantiates a valid

argument form; i.e., iff it instantiates a form that has no counterexample arguments. And an argument is *formally invalid* iff it is not formally valid; i.e., iff it does not instantiate any valid argument form. Note that this is not equivalent to instantiating an invalid form. Thus, validity is more general than formal validity: all formally valid arguments are valid, but not all valid arguments are formally valid; and all invalid arguments are formally invalid, but not all formally invalid arguments are invalid.

Based on these definitions, Krabbe discusses several methods of proving formal invalidity, i.e., several types of meta-argument concluding that some ground-level argument is formally invalid.

One method is what Krabbe (1995, p. 341), following Massey (1975a, p. 64; 1981, p. 494), calls ''the trivial logic-indifferent method.'' This amounts to proving that the argument's premises are true and the conclusion is false. By the definition of validity, such a proof shows that it is possible for the premises to be true while the conclusion is false, and hence that the ground-level argument is not valid. Then from the relationship that formal validity is a special case of validity, we get that the ground-level argument is not formally valid, namely is formally invalid. Krabbe does not deny the correctness of this method but agrees with Massey that it does not go very far.

For example, suppose someone, perhaps in a context of learning geography, thought that: (1) Reno is the capital of Nevada, because (1.1) Las Vegas is not, and (1.2) if Reno is the capital of Nevada then Las Vegas is not. Based on empirical or archival research one can easily show that Las Vegas is indeed not the capital of Nevada, since the capital is Carson City; but it remains true that if Reno were the capital then Las Vegas would not be, since American states have only one capital; and it is false that Reno is the capital, again because the capital is Carson City.

I agree with Krabbe and Massey that here we have triviality and little if any logic. However, I would stress two things: we do have, inevitably, argumentation, indeed a meta-argument; and the proof is indirect in the sense that the meta-argument shows formal invalidity without appealing to anything ''formal,'' but rather by showing (simple) invalidity, and using the principle that all formally valid arguments are valid.

The same indirect proof is used in another method, which Krabbe discusses at greater length. He calls it ''the method of *counterexample*. This is the royal road of showing invalidity'' (Krabbe, 1995, p. 340). Krabbe clarifies that ''counterexample'' is commonly used with several different meanings, but that here he is using it in the sense defined above, namely a *situation* in which the premises are true and the conclusion is false. The correctness of this method is grounded on the definition of validity (to intermediately conclude invalidity), and on

the relationship between validity and formal validity (to finally conclude formal invalidity). Krabbe also gives the following insightful description.

> In general, the method of counterexample works as follows: find an obviously consistent set of logically simple and perspicuous sentences that together demonstrably entail the truth of the premises and the falsity of the conclusion, i.e., find the description of a counterexample. A counterexample may be fictitious, therefore it is not required that these sentences be true. To find the required set, logical analysis may be very helpful. E.W. Beth's method of semantic tableaux, in particular, is an effective instrument for the discovery of counterexamples. But in order to convince one's opponent, one need not expound the techniques used in the discovery of the counterexample. It suffices to convince her that these sentences describe a possible situation and then derive the required truth values from the premises and conclusion of the original argument [Krabbe, 1995, 342–343].

For example, regarding the argument above about the capital of Nevada, without doing any empirical research or knowing whether Las Vegas or Reno is the capital, we can simply imagine a situation in which neither Reno nor Las Vegas is the capital. If one is acquainted with the names of other Nevada cities (e.g., North Las Vegas, East Reno, Virginia City), one could simply imagine that one of them, say East Reno, was the capital. It would then follow that Las Vegas is not, and so the first premise is true; the second premise would still be true, by the rules of states' administration; but it would also follow that Reno is not, and so the conclusion is false. Here is then a situation in which the premises are true and the conclusion false. Therefore, by the definition of validity, the argument is not valid. Therefore, formal validity being a special case of validity, the argument is formally invalid.

From the general description of the method of counterexample-situation, and from this example, the meta-argumentative nature of the process is obvious.

Krabbe (1995, pp. 341, 343, 344) admits that because of the indirectness of such proofs of formal invalidity, it might be preferable to reserve the label "formal fallacy" to cases where one proves formal invalidity more directly by exploiting logical forms. This he calls the method of formal paraphrase (Krabbe, 1995, p. 340). Such a preference would amount to modifying the definition of formal fallacy to read: a formal fallacy is an argument (1) which is formally invalid, (2) which violates some rule of critical discussion, and (3) whose formal invalidity is shown by the method of formal paraphrase. This is an interesting suggestion, but Krabbe does not explicitly commit himself to it; so we too shall leave it merely as a possible terminological convention.

More importantly, the method of formal paraphrase appeals explicitly and directly to the definition of formal validity. The ground-level argument is paraphrased in some more or less formal logical system,

and ''the reason that the argument is [formally] invalid is expressed as follows: 'this paraphrase captures the gist of your argument (meaning: the ground of its presumed validity), and this paraphrase constitutes an invalid logical form'" (Krabbe, 1995, p. 340). It is crucial to understand that there are three things which the meta-argument must try to prove: (1) that the ground-level argument instantiates a particular argument form; (2) that this argument form is invalid; and (3) that that this argument form captures ''the gist of the argument,'' or ''the ground of its presumed validity,'' or all logically important features of the argument. The third clause is especially important; if it is ignored, one would conclude that a ground-level argument is formally invalid simply because it instantiates an invalid argument form, even though it might also instantiate another form that is valid, thus committing ''the fallacy behind fallacies'' exposed by Massey (1981).

For example, consider again the argument about the capital of Nevada. Firstly, one could claim that it is of the form: (2) R because (2.1) not-L and (2.2) if R then non-L; indeed this is the well known form ''affirming the consequent.'' Secondly, one could point out that this form is commonly known to be invalid; if need be, this invalidity could be exhibited by assigning the truth value falsity to both R and L, or by constructing this counterexample-argument: (3) New York is the capital of the USA, because (3.1) Boston is not the capital of the USA, and (3.2) if New York is the capital then Boston is not. Thirdly, one would have to argue that affirming the consequent is all that is happening in the original argument; that is, that the form affirming the consequent does indeed capture the gist of the argument. To better grasp that this third point is needed in this case, let us contrast it to another case in which the claim would not hold.

Consider this argument, devised for this purpose by Massey (1981, p. 492): (4.1) if something has been created by God then everything has been created by God; (4.2) everything has been created by God; therefore, (4) something has been created by God. This argument instantiates affirming the consequent: if S then E; E; so, S. However, this form ignores another crucial feature of the argument, namely the relationship between the second premise and the conclusion; the conclusion is a special case of the second premise; indeed the conclusion follows from the second premise alone, by the rule of universal specification.[1] Hence affirming the consequent per se is an improper paraphrase of the argument (4), and the third clause of the method of formal paraphrase rules out this paraphrase.

There is a fourth method briefly mentioned by Krabbe (1995, p. 340), the method of logical analogy. He does not elaborate. However, other authors have. Let us therefore go on to examine this other type of meta-argument.

3. REFUTATION BY LOGICAL ANALOGY

An important technique for criticizing arguments is "refutation by logical analogy." Without claiming to give a complete history of this notion, it will be useful to review some literature.

One of the first to explicitly use this label was Oliver (1967, p. 469), who describes the technique as follows:

> To prove the invalidity of any argument it suffices to formulate another argument which (*a*) has the same form as the first, and (*b*) has true premises and false conclusion. This method is based upon the fact that validity and invalidity are purely *formal* characteristics of arguments, which is to say that any two arguments having the same form are both valid or both invalid, regardless of any differences in the subject matter with which they are concerned.

Oliver goes on to dismiss this method as incorrect; for he interprets it as a version of the flawed utilization of formal paraphrase, that is the oversimplified version of the method of formal paraphrase that ignores the third requirement that the form in question should capture the gist of the argument. But we have seen that there is no reason to oversimplify the method of formal paraphrase in this manner. Moreover, there is no reason to equate this method even with the properly nuanced method of formal paraphrase, because to say that one argument has the same form as another is not equivalent to saying that each has a unique form and that these two forms are identical.[2] Furthermore, as the label suggests, here we are talking about two arguments being logically *analogous*, rather than of their having the *same* form; and logical analogy should refer to some kind of one-to-one correspondence from the formal point of view. This may be the reason why in his brief description, Krabbe (1995, p. 340) says that "this technique consists of drawing up another, *formally analogous*, argument such that it can be shown… that its premises are true, whereas its conclusion is false" (italics added).

Besides being important for its terminological priority, Oliver's account is notable because its description makes it clear that this method is more widespread than the term "refutation by logical analogy" suggests. In fact, some scholars give a definition of what they call the "method of counterexample" that is identical to Oliver's definition of refutation by logical analogy. For example, Salmon (1984, p. 21) states that "a common way of exposing a fallacious argument is to compare it with another argument of the same form in which the premises are true but the conclusion is false. We shall call this method of proving invalidity the *method of counterexample*." Obviously this is *not* equivalent to Krabbe's method of counterexample, which we have seen involves a counterexample-situation; instead Salmon's "method of

counterexample'' involves a counterexample-argument, and so it rather corresponds to Krabbe's ''method of logical analogy'' (as one can infer from his brief description quoted in the last paragraph).

Govier (1985), too, speaks explicitly of refutation by logical analogy. However, she gives a slightly different definition than Oliver's:

> the technique of refuting arguments by constructing logically parallel ones … is based on a perception that the argument refuted has a structure which is general. If that structure is shown flawed by the presentation of another argument which has the structure and is flawed, then the original argument is refuted [Govier 1985, p. 27].

Moreover, unlike Oliver's unfavorable evaluation, she claims that the method is in principle correct: ''the technique of logical analogy can in some cases provide a conclusive refutation of an argument'' (Govier, 1985, p. 30). As suggested by her language of ''flawed'' arguments, by contrast to Oliver's talk of invalidity, she argues that this technique ''seems to be applicable to nondeductive arguments as well as deductive ones'' (Govier, 1985, p. 27). Furthermore, Govier's account is less formalist than Oliver's, partly because her notion of ''parallelism'' involves structural considerations but not multiple instantiation of the same unique form:

> we construct a parallel argument in which the central features of the original are preserved while its incidental features may be varied. In this case we do not formalize in order to reveal the structure of the argument. Rather, we make structure appear by presenting a logical analogy. The structure or 'form' is repeated in the parallel argument. We 'see' it as we see sameness of shape in a blue circle and a red circle. The shape is common to both and can be seen as such without appearing as a separate structure. [Govier 1985, p. 30]

Finally, Govier's ''parallelism'' involves generality, but not formalism: ''the technique of logical analogy illustrates the fact that connections may be general without being, in the standard logician's sense, formal'' (Govier, 1985, pp. 30–31).

In 1986, Copi included a discussion of refutation by logical analogy in both the seventh edition of *Introduction to Logic* and the first edition of *Informal Logic*. Like Govier, Copi gives a favorable evaluation of the method. And like Govier, Copi views the technique as aiming to prove not only invalidity, but also, more generally, other logical errors. In fact, he is more explicit than Govier that ''the method of refutation by logical analogy can be used with (almost) equally telling effect in criticizing an inductive argument'' (Copi, 1986b, p. 423). Moreover, Copi's examples are so incisive that they deserve quotation. One example comes from a 1952 opinion of the U.S. Supreme Court written by Justice Clark:

> It is urged that motion pictures do not fall within the First Amendment aegis because their production, distribution, and exhibition is a large-scale business conducted for private profit. We cannot agree. That books, newspapers, and magazines

> are published and sold for profit does not prevent them from being a form of expression whose liberty is safeguarded by the First Amendment. We fail to see why operation for profit should have any different effect in the case of motion pictures. [Copi 1986b, p. 423]

Another example comes from a campaign speech by Abraham Lincoln on 2 March 1860:

> The South were threatening to destroy the Union in the event of the election of a republican President, and were telling us that the great crime of having destroyed it will be upon us. This is cool. A highwayman holds a pistol to my ear, with "stand and deliver, or I shall kill you, and then you will be a murderer." To be sure the money which he demands is my own, and I have a clear right to keep it, but it is no more so than my vote, and the threat of death to extort my money, and the threat of destruction to the Union to extort my vote, can scarcely be distinguished in principle. [Copi 1986a, p. 189]

Finally, Copi's account contains a novel claim that deserves special attention. That is, refutations by logical analogy are themselves inductive arguments, specifically arguments by analogy. Although Copi does not give an explicit elaboration of this point, the claim is implicit in the fact that the section discussing this topic (Copi, 1986b, pp. 421–423) is in chapter 12, on "Analogy and Probable Inference," which in turn is a chapter of part III, on "Induction." However, this claim is partly explicit when Copi (1986b, p. 421) introduces the topic by saying "there is a special kind of argument that uses an analogy to prove that another argument is wrong, or mistaken." The proof involves "constructing a refuting analogy. A refuting analogy for a given argument is an argument of exactly the same form or pattern as the given argument, but whose premisses are known to be true and whose conclusion is know to be false" (Copi, 1986b, p. 422). What Copi here calls a "refuting analogy" corresponds to what Salmon calls a counterexample, and what I have called a counterexample-argument. Although a better label might have been "refuting analogue," Copi's label indicates that he views this technique as involving analogical reasoning about two analogous arguments, namely a meta-argument by analogy.

The question of the inductive nature of refutations by logical analogy should not be confused with the question whether this technique applies to inductive as well as deductive arguments. The former question is about the meta-argument, the latter is about the ground-level arguments. Even if Copi's suggestion here were incorrect, the inclusiveness of the technique might still hold; in that case we would have deductive meta-arguments about deductive or inductive ground-level arguments. Copi does not ask these questions, let alone answer them. But in his brief mention of this technique, Krabbe refers to a contribution by Woods and Hudak (1989) that discusses these issues. To this we now turn.

4. BY PARITY OF REASONING

In an article ostensibly about arguments by analogy, but more revealingly entitled "By Parity of Reasoning," Woods and Hudak (1989) focus on arguments which I will call *arguments by parity of reasoning*. These are such that "they argue that two or more target arguments stand or fall together and that they do so because they are relevantly at parity, that they possess similar deep structures by virtue of which they coincide in their logical form" (Woods and Hudak, 1989, p. 127). This brief description is elaborated when they say that these arguments have a

> *basic structure*… somewhat as follows: 1. Argument A possesses a deep structure whose logical form provides that the premises of A bear relation R to its conclusion. 2. Argument B shares with A the same deep structure. 3. Therefore, B possesses a deep structure whose logical form provides that its premises likewise bear R to its conclusion. 4. Hence, … A and B are [both] good or [both] bad arguments, by parity of reasoning, so called. [Woods and Hudak 1989, p. 127]

The two "target" arguments A and B can sometimes be usefully distinguished from each other insofar as one is the "original" argument and the other is a "comparison" argument. That is, an argument by parity of reasoning is

> an argument to the effect … that another argument—let's call it a 'comparison' argument—shares an identical form with the original argument. Thus the … [meta]argument both makes an argument and presents a (comparison) argument. The argument it presents … is not the argument it makes. The argument it makes… holds that the comparison argument is identical or—at a minimum—relevantly similar in form with the original, and therefore that the original stands or falls with it. [Woods and Hudak 1989, p. 128]

Finally, there is a fourth explanation. An argument by parity of reasoning is

> an argument to the effect (schematically represented) that since argument
> A: 1. p / 2. q /… / n. Therefore, w
> and another argument
> B: 1. s / 2. t / … / n. Therefore u
> both instantiate (or are cases of) an argument
> Q: 1. S_1 / 2. S_2 /… / n. [Therefore,] S_n
> and, furthermore, since B draws an assessment-verdict, V, by virtue of its relationship to Q, so too should A draw down the same verdict. [Woods and Hudak 1989, p. 132].

It should be noted, that by contrast with refutations by logical analogy, arguments by parity of reasoning do not always advance a negative assessment of the original argument, but sometimes advance a favorable judgment; the key point is that they advance the same assessment of the original argument as of the comparison argument. Moreover, in arguments by parity of reasoning, the notion of parity

suggests equality, identity, or sameness,[3] whereas in refutations by logical analogy, the notion of analogy suggests similarity; and similarity is not identity.

In the just-quoted passages, I have studiously avoided and edited out any talk of analogy, which I found confusing and confused. Insofar as I could understand such language, Woods and Hudak seem to be claiming that arguments by analogy (in the ordinary sense) are arguments by parity of reasoning (in their sense), which I found to be an untenable claim.

So far, I have also avoided Woods and Hudak's language of meta-argument or metadialogue, but here my motivation was to avoid a reconstruction in which it is true by definition that arguments by parity of reasoning are meta-arguments. This is a second important claim they advance, for if they are first taken to define arguments by parity of reasoning as indicated in the above quotations, then this second claim is an immediate consequence of those definitions. These authors explicitly advance this claim, for example when they say that "arguments by parity of reasoning… are arguments about arguments, *meta-arguments*" (Woods and Hudak, 1989, p. 127). I believe it is better to regard the meta-argumentative nature of arguments by parity of reasoning as a consequence, rather than a part, of the definition also because then we can appreciate better their metadialogical character. This emerges when Woods and Hudak (1989, p. 128) point out that arguments by parity of reasoning typically occur when one in attempting a "dialectical breakout from a stand-off," where "a stand-off is a kind of dialectical black hole," namely when a critical discussion has reached an impasse because of extremely deep disagreements; the point is that in such situations a change of level into a meta-discussion is a natural step to take and perhaps the only thing that can help the discussion.

In fact, Woods and Hudak's (1989, p. 127) paradigm example of an argument by parity of reasoning is Judith Thomson's 1971 "argument designed to show that the termination of a rape-induced pregnancy is morally justified." In this argument, the conclusion is defended by imagining a situation in which a violinist has been connected to my body, without my knowledge or consent, in order to use my kidneys to process his blood, which his own diseased kidneys cannot do. Thus, a third valuable claim I would attribute to Woods and Hudak is that Thomson's violinist-abortion argument is an argument by parity of reasoning.

Fourthly, Woods and Hudak seem to claim that arguments by parity of reasoning (as defined) are valid. For in arguments by parity of reasoning, the target arguments

> share a deep structure by virtue of which they stand or fall as arguments. Deep structure deserves the name of logical form when it binds logical appraisal in such ways. Of

> course, not every appraisal of an argument is determined by its deep structure; in simple cases, validity is settled thus, but not soundness. [Woods and Hudak 1989, p. 134]

Here they seem to be saying that arguments by parity of reasoning are deductively valid because by definition the target arguments share the same logical form, and the concept of logical form implies that arguments with the same logical form share the same logical appraisal. This is not true of all argument appraisal; for example, it does not apply to truth of the premises. However, it is not restricted to deductive appraisal, for "whatever verdict—whether of deductive validity, inductive strength or what not – that is conferred upon a given argument by virtue of the logical form of its deep structure is also conferred upon any argument sharing that structure" (Woods and Hudak, 1989, p. 126).

In summary, Woods and Hudak have defined an important class of arguments, called arguments by parity of reasoning. These are meta-arguments that argue that some original argument should receive the same logical assessment as some comparison argument because these two ground-level arguments share the same logical form. Thomson's argument about abortion and the violinist is a significant example of such a meta-argument by parity of reasoning. Such meta-arguments by parity of reasoning are deductively valid. But to say that arguments by analogy (as ordinarily defined) are meta-arguments by parity of reasoning is a problematic claim.

5. CONCLUSION

We have seen that the trivial logic-indifferent method of proving formal invalidity argues that (M1) an argument A is formally invalid because (M1.1.1) its premises are true and its conclusion is false, and hence (M1.1) A is invalid. The method of counterexample-situation proves that (M2) an argument A is formally invalid because (M2.1.1) there exists some situation in which the premises are true and the conclusion is false, and hence (M2.1) A is invalid. The method of formal paraphrase is the meta-argument that (M3) argument A is formally invalid because (M3.1) A instantiates some argument form F, (M3.2) F is an invalid argument form, and (M3.3) F captures the gist of A. A refutation by logical analogy is the meta-argument that (M4) argument A is flawed in the sense F because (M4.1) A is logically analogous to argument B, given that (M4.1.1) there is a one-to-one correspondence between their respective structures and contents, and (M4.2) B is flawed is the sense F. Arguments by parity of reasoning show that (M5) argument A receives an evaluation E because (M5.1) A has the same logical form as argument B, given that (M5.1.1) both arguments instantiate argument form F, and (M5.2) B receives

evaluation E. Finally, it should be noted that we have also discussed formal-fallacy criticism, namely meta-arguments concluding that (M6) some argument A commits a formal fallacy because (M6.1) it is formally invalid and (M6.2) it violates the agreed-upon rule to use only formally valid arguments.

These are obviously definitions of types of meta-argument since their subject matter is arguments and each definition stipulates what type of conclusion and what type of premises the meta-argument has. These six types are not, nor are they meant to be, exhaustive; for example, a special and interesting class of meta-arguments consists of arguments whose conclusion is the denial of the conclusion of another argument. Moreover, here the names have been adapted ad hoc from the literature, but by further reflection we might also devise a more systematic way of naming meta-arguments.

Additionally, interesting questions arise about the inter-relationships among these six meta-arguments. For example, what are the implications of the fact that any of the first three can be combined with the sixth one, insofar as (M6.1) is identical to (M1), (M2), and (M3)? Is a meta-argument by parity of reasoning really different from the method of formal paraphrase? Is it really different from a refutation by logical analogy? Are parity of reasoning and logical analogy really different? What is the ground for the correctness of refutations by logical analogy (when they are correct)?

Such meta-argumentative reflections have implications regarding metadialogues. In the introduction I asserted such a connection based primarily on the conceptual overlap between dialogue and argument (via the notion of persuasion dialogue or critical discussion) and on the demonstrated formal equivalence between the axiomatic and dialogical methods. To these general reasons, we can now add (as a case study) the translation carried out above of Krabbe's dialogical account of formal-fallacy criticism into a monolectical framework. Analogously, a metadialogical theorist could now undertake to translate into a dialectical framework the meta-argumentation of logical analogy and of parity of reasoning sketched above.

Finally, more concrete historical-textual analyses are desirable. This should be done partly to find significant illustrations of the various meta-arguments described here, and thus give empirical content to these relatively abstract conceptualizations. However, the reverse methodological possibility should also be left open, namely that perhaps the historical-textual study of meta-arguments will lead to the discovery of other types and principles of meta-argumentation. Previewing future research, besides re-examining the Galilean meta-argumentation already available (Finocchiaro, 1980, pp. 343–411), there are two projects. The first involves one of the most well

known cases of meta-argument in the history of thought—Hume's critique of the argument from design in his *Dialogues Concerning Natural Religion*; this task will be immensely facilitated by Barker (1989), who has analyzed this work with such great informal-logical insight that the main thing left to do is to adapt his conclusions to meta-argumentative or metadialogical purposes.

The second project involves another classic argument – Mill's *Subjection of Women* – on which Hansen (2005) has made a start but much more remains to be done. My preliminary research indicates that Mill's work has a tripartite structure. Most consists of an illative tier of reasons against the subjection of women, namely for Mill's conclusion that the principle and practice of the subordination of women should be replaced by that of equality. A shorter part amounts to a dialectical tier of criticizing objections to this conclusion. Another short part is best seen as a *meta-argumentative tier* in which Mill faces difficulties like the following: the subjection of women is largely based on feelings, and "so long as an opinion is strongly rooted in the feelings, it gains rather than loses in stability by having a preponderating weight of argument against it" (Mill, 1988, p. 1).

NOTES

[1] It could be objected that Massey's example works only if we understand the universal quantifier to have existential import. However, the existential import that is being presupposed is the principle that '(x)Φx' implies 'Φa', and hence 'there is an x such that Φx'; not the principle that '(x)(Fx $\rightarrow$ Gx)' implies 'there is an x such that (Fx & Gx)'.

[2] My argument here would be analogous to Quine's move about meaning and synonymy: sameness of meaning need not presuppose the existence of mysterious entities called meanings which words have, but may be conceived as a relationship of pairs of linguistic expressions; this relationship should be labeled synonymy in order to avoid being misled; see Quine (1961, pp. 11, 12, 22, 48).

[3] One might object that in their third explanation quoted above, Woods and Hudak seem to be denying this suggestion of mine when they say that "the comparison argument is identical or – at a minimum – relevantly similar in form with the original" (1989, p. 128). However, I think that this property of being "at a minimum, relevantly similar" amounts to being "identical in the reasoning"; the point is not that the two arguments are identical simpliciter, but rather that their reasoning is identical.

REFERENCES

Barker, S. F.: 1989, 'Reasoning by Analogy in Hume's *Dialogues*', *Informal Logic* **11**, 173–184.

Barth, E. M. and E. C. W. Krabbe: 1982, *From Axiom to Dialogue*, Walter de Gruyter, Berlin.

Copi, I. M.: 1986a, *Informal Logic*, Macmillan, New York.

Copi, I. M.: 1986b, *Introduction to Logic*, 7th edition, Macmillan, New York.

Costantini, S.: 2002, 'Meta-reasoning: A Survey', in A. C. Kakas and F. Sadri (eds.), *Computational Logic*, Springer, Berlin, pp. 253–288.
Finocchiaro, M. A.: 1980, *Galileo and the Art of Reasoning*, Reidel, Dordrecht.
Finocchiaro, M. A.: 2005, *Arguments about Arguments: Systematic, Critical, and Historical Essays in Logical Theory*, Cambridge University Press, Cambridge.
Govier, T.: 1985, 'Logical Analogies', *Informal Logic* **7**, 27–33.
Hamblin, C. L.: 1970, *Fallacies*, Methuen, London.
Hansen, H. V.: 2005, 'Does Mill Have a Theory of Argumentation?', Paper presented at the conference "The Uses of Argument," OSSA, McMaster University, Hamilton, Canada, 18–21 May.
Krabbe, E. C. W.: 1995, 'Can We Ever Pin One Down to a Formal Fallacy?', in F.H van Eemeren, R. Grootendorst, J. A. Blair, C. A. Willard and A. F. Snoeck Henkemans (eds.), *Proceedings of the Third ISSA Conference on Argumentation*, Sic Sat, Amsterdam, pp. 333–344.
Krabbe, E. C. W.: 2002, 'Profiles of Dialogue as a Dialectical Tool', in F. H. van Eemeren (eds.), *Studies in Pragma-Dialectics*, Sic Sat, Amsterdam, pp. 153–167.
Krabbe, E. C. W.: 2003, 'Metadialogues', in F. H. van Eemeren, J. A. Blair, C. A. Willard and A. F. Snoeck Henkemans (eds.), *Proceedings of the Fifth Conference of the International Society for the Study of Argumentation*, Sic Sat, Amsterdam, pp. 641–644.
Laar, J. A. van: 2002a, 'Equivocation in Dialectical Perspective', in H. V. Hansen, R. C. Pinto, C. W. Tindale, J. A. Blair and R. H. Johnson (eds.), *Argumentation and Its Applications*, OSSA, Windsor. CD-ROM. ISBN: 0-9683461-2-X.
Laar, J. A. van: 2002b, 'The Use of Dialogue Profiles for the Study of Ambiguity', in F. H. van Eemeren, J. A. Blair, C. A. Willard and A. F. Snoeck Henkemans (eds.), *Proceedings of the Fifth Conference of the International Society for the Study of Argumentation*, Sic Sat, Amsterdam, pp. 659–663.
Laar, J. A. van: 2003, *The Dialectic of Ambiguity*, Doctoral Dissertation, Faculty of Philosophy, Groningen University.
Massey, G. J.: 1975a, 'Are There Good Arguments That Bad Arguments Are Bad?', *Philosophy in Context* **4**, 61–77.
Massey, G. J.: 1975b, 'In Defense of the Asymmetry', *Philosophy in Context* **4**(Suppl.), 44–56.
Massey, G. J.: 1981, 'The Fallacy Behind Fallacies', *Midwest Studies in Philosophy* **6**, 489–500.
Mill, J. S.: 1988, *The Subjection of Women* (ed. S. M. Okin), Hackett, Indianapolis.
Oliver, J. W.: 1967, 'Formal Fallacies and Other Invalid Arguments', *Mind* **76**, 463–478.
Perlis, D.: 1988, 'Meta in Logic', in P. Maes and D. Nardi (eds.), *Meta-level Architectures and Reflection*, Elsevier, Amsterdam, pp. 37–49.
Quine, W. V. O.: 1961, *From a Logical Point of View*, 2nd edition, Harper & Row, New York.
Salmon, W. C.: 1984, *Logic*, 3rd edition, Prentice-Hall, Englewood Cliffs.
Woods, J. and B. Hudak: 1989, 'By Parity of Reasoning', *Informal Logic* **11**, 125–139.
Wooldridge, M., P. McBurney, and S. Parsons: 2005, 'On the Metalogic of Arguments', in *Proceedings of the Fourth International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-05)*, Utrecht, pp. 560–567.