

# Refutation by Parallel Argument

André Juthe

Published online: 9 December 2008  
© Springer Science+Business Media B.V. 2008

**Abstract** This paper discusses the method when an argument is refuted by a parallel argument since the flaw of the parallel argument is clearly displayed. The method is explicated, examined and compared with two other general methods.

**Keywords** Parallel argument · Method of counterexample · Analogy · One-to-one correspondence · Counterpart · Argument structure · Inconsequence · Target-argument · Parallel-argument

## 1 Introduction

Philosophical argumentation has generally been characterized by the use of deductive arguments; one philosopher presents a deductive argument for a thesis and an opponent provides a counterexample to one of the universal premises of the argument and therewith invalidates the argument. The philosopher who used the deductive argument then tries to refine his universal premise in order to avoid the counterexample and so on.<sup>1</sup> Arguments are not only often presented in a deductive mode; they are also more often than not interpreted as such by opponents, even when they are not in an explicit deductive mode. This is especially true within the analytic tradition. The use of counterexamples as a method of refuting arguments goes hand in hand with the use of deductive argumentation.

This article is a sequel to my previous article *Argument by analogy* where I discussed argument by analogy in general,<sup>2</sup> and it will also be followed by another

---

<sup>1</sup> See Facione (1976) for more about this.

<sup>2</sup> See Juthe (2005).

article called *Defence against argument by analogy*. Each article can, however, without effort be read independently of the others. The goal of this series of articles is to enhance the reader's skill in analogical argumentation in both practice and theory and recognize the philosophical and non-philosophical application of arguments by analogy.

In this paper, I will discuss a certain application of argument by analogy which works as a certain kind of method of refuting arguments, what I call *Refutation by parallel argument*. The refuting parallel argument is analogous/parallel to an attacked target argument with the difference that it is clearly untenable that it gives reason to believe its conclusion. Thus, there must be something flawed in the reasoning of the attacked target argument. The usual way for the parallel argument to display this is by having obviously plausible premises but an obviously implausible conclusion. But as we shall see it is not the only way. The method of refutation by parallel argument is frequent both in philosophy and in an everyday conversation where the method is employed in a less technical way. Sometimes it can be used more as a social attack where the analogy severely ridicules the opposition's views.<sup>3</sup> The more specific goals of this article are:

- (1) To give a general characterization of the method of refutation by parallel argument, and contrast it with the two other general methods of refuting arguments. This is done in Sects. 2 and 3.1–3.2.
- (2) Explain how refutation by parallel argument refutes other arguments and the ad-and-disadvantages and differences with the two other methods. This is done in Sects. 3.3 and 3.4.
- (3) To give an account of how refutation by parallel argument works in an undialectical context as well as in a dialectical context. This is done in Sect. 4.

## 2 The Three Methods of Refuting Faulty Arguments

According to Edward Damer there are three general ways of attacking a faulty argumentation that deserves special attention.<sup>4</sup> All these methods share similarities but they also have their differences. The first way of refuting a faulty argument is to reconstruct an argument in its standard form and display the abstract pattern of its argument scheme and therewith reveal its flawed character. This can be called the *Method of displaying the flawed argument scheme*. Damer gives an example:

Consider the following argument expressed in a recent conversation.

Jason: I think that the college orchestra's performance of Mahler—symphony was terrible.

Dave: Why do you say that?

Jason: Because the way they played it was not the way the composer intended it at all.

<sup>3</sup> Whaley (1998) discusses this more extensively.

<sup>4</sup> Damer (2001, pp. 46–47).

A simple reconstruction of this argument will immediately expose its flawed character—almost without further comment.

(Since orchestral performances of a composer’s work that are not in line with the composer’s original intention cannot be good ones),  
and this orchestra’s performance was not in line with composer Mahler’s intention,

Therefore, this was not a good performance.

Even though the arguer was clearly using the principle found in the first premise to justify his conclusion, once it is stated as starkly as it is here, it will probably seem so clearly unacceptable that even the arguer may want to withdraw it.<sup>5</sup>

The second way of refuting an argumentation is the *Method of counterexamplng*. The method of counterexamplng means presenting an example that falsifies a universal generalization of one of the premises of the argument that is under attack. The method of counterexamplng can also be employed to show that a conclusion does not follow from true premises, that is, that the argument is invalid. One could describe a possible situation in which the premises are true and the conclusion false. Or one could assign new meaning to the extra-logical constants in the argument so as to make the premises true and the conclusion false. Another way is to make substitutions for the extra-logical constants in such a way that one produces an argument with true premises and a false conclusion. When the method of counterexamplng is used in that way it becomes easy to confuse it with the method of refutation by parallel argument. See Sect. 3.3 for more comments about this.

The common and necessary features with counterexamplng are, however, to show that a universal generalization, whether it be a premise, conclusion, or argument scheme, is falsified by a counterexample. Peter Facione has given a correct account of the method of counterexample.<sup>6</sup> Suppose someone provides the following analysis of “being an F”:  $(\forall x) ((Fx) \equiv (Ax \& Bx \& Cx))$ . There are two ways a counter-example can show that this universal generalization is wrong. Either it can be shown that it is too narrow so that it rules out genuine Fs:  $(\exists x) ((Fx) \& (\sim Ax \vee \sim Bx \vee \sim Cx))$ , or that the definition is too broad, allowing things to be Fs which are not genuine Fs:  $(\exists x) (Ax \& Bx \& Cx \& \sim Fx)$ . The technique of counterexamples is allegedly the most prevalent employed philosophical method within the analytical tradition. George Schlesinger remarks:

It is probably safe to state that no technique is more frequently employed in philosophy than is the technique of counterexamples.<sup>7</sup>

Hector-Neri Castaneda states:

[C]ounterexamples probably constitute 95 percent of the product. Counter-examplng, though we all do it in varying degrees, is practiced by some colleagues as a special, highly revered art. This emphasis on

<sup>5</sup> Damer (2001, p. 46).

<sup>6</sup> Facione (1976).

<sup>7</sup> Schlesinger (1984, p. 151).

Counterexamplification is perhaps, the most distinctive technical contrast between so-called analytic philosophy and other, especially Continental and Asian, philosophies. To many a non-analytic philosopher, the passion for counterexamples, and for deduction in general, seems like an Anglo-Saxon and Anglo-American perversity.<sup>8</sup>

Even if the method of counterexamples is by far the most prevalent employed philosophical method in analytical philosophy, it is not always the best or the most practical method. Damer also discusses the third method of refuting flawed arguments:

A third way of attacking faulty reasoning is perhaps the most imaginative and effective of the strategies. It is called the “absurd example method” and shares some features of the other two. This method is a way of demonstrating faulty patterns of reasoning without appealing to technical jargon or rules... If you wish to demonstrate the flaw in your opponent’s argument by using the absurd example method, you simply construct an argument of your own that has the same form or pattern as the faulty argument of your opponent. Construct your argument, however, so that it leads to an obviously false or even absurd conclusion. Since a good argument cannot yield an obviously false conclusion, your opponent should be able to understand, with a little help from you, that your argument is flawed. Once you point out that there is no essential difference in the pattern of reasoning exhibited in both arguments, your opponent will be compelled logically to acknowledge the faulty nature of his or her argument as well.<sup>9</sup>

What Damer calls the “absurd example method” is actually the method of refuting an argument by presenting an analogous parallel argument that is clearly flawed because it has clearly true premises whereas its conclusion is obviously untrue or unacceptable. The method of refutation by parallel arguments works by revealing that two arguments are *analogous* and that only one of the arguments is accepted, while they must either be accepted or rejected *together*. Since the analogous parallel argument obviously does not confer reason for its conclusion there must be something wrong with the original argument as well. The method shows that the content of the premises is irrelevant or insufficient to give reason to believe in the content of the conclusion. As stated earlier the usual way to demonstrate this is that the parallel argument has obviously true or plausible premises but an unacceptable or false conclusion. However, while this may be the most common way of refutation by parallel argument to show that an argument is flawed, it is not the only one. The parallel argument can have a true or plausible conclusion but still be unacceptable in another way. The absurdity would then be to accept the parallel argument as cogent when it is obviously flawed; although, the target argument and the parallel argument are analogous with regard to their argumentative merits. The parallel argument may not reveal exactly what is wrong with the original argument,

<sup>8</sup> Castaneda (1984, p. 248).

<sup>9</sup> Damer (2001, p. 47).

but it indicates that there is something wrong with it and that it therefore cannot be used as a reason for its conclusion. As shall be shown, it is even possible to use refutation by parallel argument to refute a deductive argument that would be sound if one only would consider its explicit premises. Such a refutation shows that there must be an implicit false premise, whether we can find it or not, that is lurking somewhere in a seemingly valid argument with seemingly true premises. An example of this will be discussed in Sect. 3.3. Refutation by parallel argument is argument by analogy applied to arguments; it is a meta-argument that refutes an *argumentation*, not the believed thesis supported by the target argument.

Although no extensive discussions about the third way have taken place, some philosophers have discussed this particular kind of argument; Trudy Govier, John Woods, Bent Hudak, David Hitchcock, Bryan Whaley, Marcello Guarini, Bruce Waller, Pascal Hugon and Irving Copi are perhaps the most noteworthy.<sup>10</sup> There has been some different terminology here; Woods and Hudak call arguments of this kind “arguments from analogy”, Trudy Govier, uses “logical analogies”, Hitchcock “counterexamplifying parallel arguments”, Marcello Guarini “Analogical arguments”, Pascal Hugon uses “Arguments by parallels”, Irving Copi “refutation by logical analogy”, Bryan Whaley “rebuttal analogy”, while Erick Krabbe uses “method of logical analogy.”<sup>11</sup> I think *Refutation by parallel argument* is a good description because it distinguishes the method from the genus, argument by analogy, and because the method is about refuting an argumentation and not a thesis (see Sect. 3.2 for more about this). I label the attacked original argument the *target-argument* and the refuting parallel argument is called the *parallel-argument*.

### 3 Reasoning by Analogy and Parallel Arguments

#### 3.1 The Argument Structure of Argument by Analogy

There is always a basic type of reasoning presupposed with the different methods of refuting a faulty argument. The method of counterexample, for instance, is tacitly based on deductive argument as its underlying reasoning, whereas refutation by parallel argument is based on argument by analogy as its basic reasoning structure. Remembering the two ways of giving a counterexample of the explication of “being an F” above, this seems to tacitly assume some kind of deductive reasoning as the following:

- (1)  $(\forall x) ((Fx) \equiv (Ax \ \& \ Bx \ \& \ Cx))$  then  $\sim ((\exists x) (Ax \ \& \ Bx \ \& \ Cx \ \& \ \sim Fx))$
  - (2)  $\sim ((\exists x) (Ax \ \& \ Bx \ \& \ Cx \ \& \ \sim Fx))$
- 
- (3)  $\sim (\forall x) ((Fx) \equiv (Ax \ \& \ Bx \ \& \ Cx))$

or:

<sup>10</sup> Woods and Hudak (1989), Govier (1985, 1989), Hitchcock (1992), Copi and Burgess-Jackson (1992), Copi (1990), Whaley (1998), Guarini (2004), Waller (2001), Hugon (2008).

<sup>11</sup> Krabbe (1996, p. 137).

- (1)  $(\forall x) ((Fx) \equiv (Ax \ \& \ Bx \ \& \ Cx))$  then  $\sim (\exists x) (Ax \ \& \ Bx \ \& \ Cx \ \& \ \sim Fx)$ .  
 (2)  $\sim (\exists x) (Ax \ \& \ Bx \ \& \ Cx \ \& \ \sim Fx)$ .
- 
- (3)  $\sim (\forall x) ((Fx) \equiv (Ax \ \& \ Bx \ \& \ Cx))$

Consequently, the method of counterexample assumes deductive arguments as its underlying reasoning structure, while refutation by parallel argument assumes argument by analogy as reasoning structure. What are the conditions for a successful refutation by parallel argument? Since it is a species of argument by analogy they share the same conditions. Refutation by parallel argument is an argument by analogy applied to arguments. It is an analogical inference between two arguments. Thus, in an argument by analogy there are premises that state an analogy in order to provide reason to believe a conclusion, which is inferred from the analogical relation. Any good argument must fulfil the criteria for good arguments in general. The general criteria for good arguments are relevance, acceptability and sufficiency.<sup>12</sup> The satisfaction of the *relevance* condition means that a rational agent or an interlocutor accepts that the premises of the argument, if true, increase the plausibility of the conclusion. The satisfaction of the *acceptability* conditions means that a rational agent or interlocutor would accept that the premises are more plausible than their negations. The satisfaction of the *sufficiency* condition means that the relevant premises of the argument is a sufficient reason for a rational agent or interlocutor to accept the conclusion as more plausible than its negation. The premises of an argument may all be relevant for its conclusion but still insufficient to establish it. Sufficiency entails relevance but insufficiency does not entail irrelevance, thus relevance is an independent concern from sufficiency in construction of an argument and in evaluating it once it has been constructed.<sup>13</sup>

Thus, a good argument by analogy must fulfill the general criteria for a good argument with the specification that the adequate evidence for the conclusion is in virtue of a correct analogy stated in the premises. The premise that states the analogy is then the crucial premise for arguments by analogy.

In order to clarify how refutation by parallel argument works, it is necessary to clarify the basic reasoning structure which is assumed with the method; namely *argument by analogy*. There is a lot one can say about argument by analogy in general that cannot be undertaken here. I have given a more comprehensive discussion about argument by analogy in general in a prior article, to which the present one is a sequel.<sup>14</sup> In that article I argued that there are two main types of argument by analogy; argument by *inconclusive analogy* and argument by *conclusive analogy*.

The conclusion of a correct argument by conclusive analogy is as certain as a deductive argument even though it is not a deductive inference. In argument by inconclusive analogy the conclusion follows only with plausibility less than certain. Probably, most refutation by parallel argument will be a species of argument by

<sup>12</sup> See Blair (1992) for a discussion about these criteria.

<sup>13</sup> Ibid., p. 203.

<sup>14</sup> Juthe (2005).

conclusive analogy, so I will not discuss argument by inconclusive analogy. The basic formal argument structure for argument by conclusive analogy is as follows:<sup>15</sup>

- (1) Target-Subject<sub>(TS)</sub> has elements<sub>( $\varepsilon_1 \dots \varepsilon_n$ )</sub>
  - (2) The Analogue<sub>(A)</sub> has the Assigned-Predicate<sub>(AP)</sub> in virtue of the elements<sub>( $\varepsilon_1^* \dots \varepsilon_n^*$ )</sub>
  - (3) The elements<sub>( $\varepsilon_1^* \dots \varepsilon_n^*$ )</sub> of the Analogue are counterparts<sub>( $\varepsilon_1 \dots \varepsilon_n$ )</sub> of the Target-Subject<sub>(TS)</sub>
- 

- (4) Thus, the Target-Subject<sub>(TS)</sub> has the Assigned-Predicate<sub>(AP)</sub>

The basic formal argument structure for argument by inconclusive analogy is as follows:<sup>16</sup>

- (5) Target-Subject<sub>(TS)</sub> has elements<sub>( $\varepsilon_1 \dots \varepsilon_n$ )</sub>
  - (6) The Assigned-Predicate<sub>(AP)</sub> correlates with the elements<sub>( $\varepsilon_1^* \dots \varepsilon_n^*$ )</sub> of the Analogue
  - (7) The elements<sub>( $\varepsilon_1^* \dots \varepsilon_n^*$ )</sub> of the Analogue are counterparts<sub>( $\varepsilon_1 \dots \varepsilon_n$ )</sub> of the Target-Subject<sub>(TS)</sub>
- 

- (1) Thus, the Target-Subject<sub>(TS)</sub> probably has the Assigned-Predicate<sub>(AP)</sub>

The *Target-Subject* (TS) is the source object of comparison, in this case an argument, to which the analogical inference assigns a new predicate. The *Analogue* (A) is the object which is compared with the Target-Subject in order to assign a new predicate to the Target-Subject. The Analogue is the source of the new predicate which is assigned to, and concluded about, the Target-Subject. The *Assigned-Predicate* (AP) is the predicate of the Analogue which is assigned to the Target-Subject in virtue of the analogical relation between them. The Target-Subject and the Analogue are analogous with respect to the Assigned-Predicate, if and only if, each of the elements of the Analogue ( $\varepsilon_1^* \dots \varepsilon_n^*$ ), which determine the Assigned-Predicate, corresponds one-to-one with a counterpart element in the Target-Subject ( $\varepsilon_1 \dots \varepsilon_n$ ).<sup>17</sup> This would also mean the Target-Subject and the Analogue are counterparts of each other. Two conditions must be fulfilled if an argument by conclusive analogy is going to be valid.<sup>18</sup>

<sup>15</sup> For more discussion about different types of argument by analogy, see Juthe (2005).

<sup>16</sup> For more discussion about different types of argument by analogy, see Juthe (2005).

<sup>17</sup> This means that the Assigned-Predicate refers to one of the element that constitutes the Analogue. The notation then is on two levels; the logical grammar and the metaphysical one. On the level of logical grammar it is the 'Assigned-Predicate' that is the employed term. On the metaphysical level it is an 'element' that means a property or relation or a substance or any relevant truthmaker. As the reader can see I do not strictly talk only on the level of logical grammar since I use the terminology of elements also in the structure of arguments. This is because of convenience; the terms are already known and need not be further explicated. When it for instance is written "the elements that determine the Assigned-Predicate." what is actually meant is: "the elements that determined the element denoted by the Assigned-Predicate." It is only to avoid complicated sentences that I tend to use the former description.

<sup>18</sup> 'Valid' means here that the premises give conclusive support to the conclusion.

First the elements ( $\varepsilon_1^* \dots \varepsilon_n^*$ ) of the Analogue must determine the Assigned-Predicate *definitely*. In arguments by conclusive analogy the relation of determination is strong; the relation of determination of Assigned-Predicate is strictly determined (causally, epistemically, normatively, evaluatively, resultantly or superveniently) by the ( $\varepsilon_1^* \dots \varepsilon_n^*$ ) of the Analogue. Thus, the “virtue of” relation should be interpreted broadly but so that its relation determines definitely. This is why the conclusion can be said to follow conclusively from the analogy even if it is not in virtue of logical necessity. The only difference between argument by conclusive and inconclusive analogy is that the elements of the latter that stand in a one-to-one correspondence with the elements of the Target-Subject only determine the Assigned-Predicate with a certain probability or plausibility.

There is a distinction between a *same-domain* analogy and a *different-domain* analogy.<sup>19</sup> A same-domain-analogy is an analogy where not only the relations between the elements of the different objects are the same but also the *elements* are of the same type. In a different-domain-analogy, the analogy only comes in virtue of having the same relation between the elements of the different objects; the elements of the two objects belong to wholly different domains. It is in virtue of this that the Assigned-Predicate of the Analogue can be assigned to the Target-Subject.<sup>20</sup> Since the Target-Subject has a counterpart of every element of the Analogue that determines the Assigned-Predicate it follows that a corresponding element in the Target-Subject also counterparts the Assigned-Predicate and therefore can be predicated *mutatis mutandis* about the Target-Subject. Thus, the Assigned-Predicate can be concluded *mutatis mutandis* about the Target-Subject even if the Analogue belongs to a different domain with a different type of elements.

An example of a different domain argument by conclusive analogy is given by Michael Smith in his *The Moral Problem*. He employs an argument by analogy when he argues that amoral agents do not give real moral judgment even when they give seemingly correct statement about right and wrong. The analogy is a blind girl with a helping machine that helps her feel a certain sensation on her skin when she touches a certain color. Thus, she gives true accounts about which color she touches without having any visual experience. In other words, she does not make real color *judgments* when she makes color *statements*, although she is always correct when she states which color she touches. For example, if she touches a red flower, the machine signals that she should say “it is red”. The amoral individual is analogous to the color blind girl. The socialization of how to use words like “right” and “wrong” give the amoralist the ability to give outwardly correct statements about right and wrong without having any real moral content in his statement. Smith’s argument is an argument by conclusive analogy but between different domains, morality and visual experience.<sup>21</sup> It could be standardized according to my suggested structure of argument by conclusive analogy:

<sup>19</sup> This is more extensively discussed in Juthe (2005).

<sup>20</sup> For a discussion about the relations of determination in analogical reasoning see Davies (1988).

<sup>21</sup> See Juthe (2005) for more about this.



- (1) The amoralists<sub>(TS)</sub> make reliable use of moral terms<sub>(e1)</sub> without appropriate motivation<sub>(e2)</sub>
  - (2) The blind girl with the helping machine<sub>(A)</sub> has a reliable use of color terms<sub>(e1\*)</sub> without making real color judgment<sub>(AP)</sub> since she has no real visual experience<sub>(e2\*)</sub>
  - (3) The reliable use of color term<sub>(e1\*)</sub> without real visual experience<sub>(e2\*)</sub> is a counterpart to reliable use of moral terms<sub>(e1)</sub> without appropriate motivation<sub>(e2)</sub>
- 
- (4) Thus, The amoralists<sub>(TS)</sub> *mutatis mutandis*, make no real moral judgment<sub>(AP)</sub>

However since refutation by parallel argument aims at showing that the reasoning of the target-argument is untenable, it means that the argument that is to be refuted is the Target-Subject (target-argument) and the Analogue is the constructed refuting analogous parallel argument (parallel-argument).

### 3.2 The Argument Structure of Refutation by Parallel Argument

The argument structure of refutation by parallel argument is similar to the structure I have suggested for argument by analogy in general but with some modifications. Refutation by parallel argument has another definite argument structure besides being a species of argument by analogy, which has not been noted by writers of the subject. In a refutation by parallel argument, the parallel-argument shows that the premises of the target-argument do not provide a relevant or sufficient reason to believe or accept its conclusion. Therefore, in refutation by parallel argument, the failure of the parallel-argument to provide a relevant or sufficient reason to accept its conclusion, is assigned onto the target-argument. I suggest the following argument structure for refutation by parallel arguments:

- (1) The Analogue<sub>(A)</sub> (analogous argument) has elements<sub>(e1\*...en\*)</sub> [Premise]
  - (2) The elements<sub>(e1\*...en\*)</sub> of the Analogue (analogous argument) are counterparts<sub>(e1...en)</sub> of the Target-Subject<sub>(TS)</sub> (target-argument) [Claimed analogy]
  - (3) The Analogue<sub>(A)</sub> (analogous argument) has not the Assigned-Predicate<sub>(AP)</sub> (an sufficient/acceptable reason) in virtue of elements<sub>(e1...en)</sub>
- 
- (4) Thus, The Target-Subject<sub>(TS)</sub> (target-argument) does not have the Assigned-Predicate<sub>(AP)</sub> (provide a sufficient/acceptable reason to believe the conclusion) in virtue of elements<sub>(e1...en)</sub>

The structure is slightly different because the goal of refutation by parallel argument is to show that the Target-Subject (in this case the target-argument) does *not* have the Assigned-Predicate in virtue of its elements. Furthermore, the Assigned-Predicate<sub>(AP)</sub> will always be the *same*, namely: *providing an acceptable, good, sufficient, or relevant reason to believe the conclusion* of the Analogue. Thus, refutation by parallel argument works by displaying an Analogue (the parallel-argument) which does not give a acceptable reason to believe its conclusion. Consequently, since the parallel-argument is analogous to the target-argument it

*mutatis mutandis* lacks the Assigned-Predicate (an acceptable, good, sufficient or relevant reason) as well. Let us confer this on a hypothetical but concrete example:

The proponent asserts that there probably are no moral principles because there is no agreement, even among rational agents, on which those principles are. The opponent counters that this is no reason to reject moral principles any more than a failure to agree on the exact height of mountains is a reason to believe that mountains have no height.

The constituents of the structure can be summarized in the following table:

Target-Subject (TS)	Analogue (A)	Assigned-Predicate (AP)
The argument that moral principles probably does not exist because there is no agreement among rational agents on which those principles are	The argument that mountains probably does have height because there is no agreement among rational agents on the exact height of mountains	A sufficient reason to believe
Elements in one-to-one correspondence		
Element(s) ( $\epsilon$ ) of Target-Subject	Counterpart element(s) ( $\epsilon^*$ ) of Analogue	
$\epsilon_1$ General disagreement on which principles there are	$\epsilon_1^*$ General disagreement on the exact height of mountains	
$\epsilon_2$ Moral principles probably do not exist because of element $\epsilon_1$	$\epsilon_2^*$ Mountains probably do not have height because of element $\epsilon_1^*$	

According to my suggested argument structure for refutation by parallel argument, the argument structure would be outlined:

- (1) There is no general agreement<sub>( $\epsilon_1^* \dots \epsilon_n^*$ )</sub> on the exact height of mountains<sub>(A)</sub> [Premise]
- (2) The lack of general agreement<sub>( $\epsilon_1^* \dots \epsilon_n^*$ )</sub> on the exact height of mountains<sub>(A)</sub> is a counterpart of the proposition that moral principles lack general agreement<sub>( $\epsilon_1 \dots \epsilon_n$ )</sub> (TS) [Claimed analogy]
- (3) The lack of agreement<sub>( $\epsilon_1^* \dots \epsilon_n^*$ )</sub> of the exact height of mountains does not provide a sufficient reason to believe that<sub>(AP)</sub> that mountains do not have height<sub>(A)</sub>  
\_\_\_\_\_
- (4) Thus, the lack of agreement<sub>( $\epsilon_1 \dots \epsilon_n$ )</sub> of moral principles<sub>(TS)</sub> does not provide a sufficient reason to believe<sub>(AP)</sub> that moral principles do not exist<sub>(TS)</sub>

In short, the method works by claiming that the target-argument

- (1) There is no general agreement on which moral principles there are.  
\_\_\_\_\_

(2) Therefore, there probably are no moral principles

and the parallel-argument:

1. There is no general agreement on the exact height of mountains.

---

2. Therefore, there probably are no mountains

are parallel and analogous, and since the parallel-argument is clearly a bad argument, the target-argument is a bad argument as well.

The strength of refutation by parallel argument is a function of three things, (a) how clearly the parallel-argument and the target-argument are parallel; (b) how clearly the premises of the parallel-argument are true or plausible; and (c) how clearly the conclusion of the parallel is untrue or implausible. Thus, the method of refutation by parallel arguments works best when the parallel-argument is clearly parallel and is clearly flawed.<sup>22</sup> What the parallel argument aims to show is that the fact that there is no general agreement on which moral principles there are, is not sufficient, or perhaps not even relevant, to justify the conclusion that they probably do not exist.

It is obvious that even a seemingly simple argument by analogy in general and a refutation by parallel argument in particular may demand a lot of work if one wants a reconstruction that captures all the argument's features essential for evaluation. According to my suggestion of argument structure for argument by analogy all these essential features are referred to as elements that determine the Assigned-Predicate. Thus, any reconstruction that follows this scheme will make it clearer to judge whether the cases in question really are parallel, but it will in turn be more painstaking. Let us now compare with some real examples.

Bryan Wilson uses refutation by parallel argument against an argument for the morally impermissibility of abortion provided by Harry Gensler.<sup>23</sup> The latter had used the following kantian argument:<sup>24</sup>

(1) If you are consistent and think that abortion is normally permissible, then you will consent to the idea of your having been aborted in normal circumstances.

(2) You do not consent to the idea of your having been aborted in normal circumstances.

---

(3) If you are consistent then you will not think that abortion is normally permissible.

Wilson provides the following parallel argument that such a reasoning would prove that contraception is normally wrong as well, something which most people probably would not find acceptable:

---

<sup>22</sup> Govier (1985, p. 29) points this out.

<sup>23</sup> Wilson (1988).

<sup>24</sup> This is taken from Wilson's article p. 121 and it is thus his reconstruction of Gensler's argument.

- (1) If you are consistent and think that contraception is normally permissible, then you will consent to the idea of your having had your conception prevented.
  - (2) You do not consent to the idea of your having had your conception prevented.
- 
- (3) If you are consistent you will not think that contraception is normally permissible.

The constituents of the argument structure can be summarized in the following table:

Objects of comparisons		What is projected from Analogue to Target-Subject
<b>Target-Subject (TS) (Target-argument)</b>	<b>Analogue (A) (Parallel argument)</b>	<b>Assigned-Predicate (AP)</b>
The kantian argument that abortion is not normally permissible because you would not consent to you being aborted in normal circumstances	The argument that contraception is not normally permissible because you would not consent to you having had your conception prevented	Sufficient reason to believe
<b>Elements in one-to-one correspondence</b>		
$\varepsilon_1$ General consistency principle about abortion		$\varepsilon_1^*$ General consistency principle about contraception
$\varepsilon_2$ You do not consent to the idea of you being aborted in normal circumstances		$\varepsilon_2^*$ You do not consent to the idea of you having had your conception prevented in normal circumstances

According to my suggested structure it the refutation by parallel argument would be:

- (1) If you are consistent you will not think that contraception is not normally permissible<sub>( $\varepsilon_1^*$ )</sub>, because you would not consent to you having had your conception prevented in normal circumstances<sub>( $\varepsilon_2^*$ )</sub> (A) [Premise]
  - (2) Being consistent about contraception<sub>( $\varepsilon_1^*$ )</sub> and that you do not consent to the idea of you having had your conception prevented in normal circumstances<sub>( $\varepsilon_2^*$ )</sub> counterparts the propositions that you are consistent about abortion<sub>( $\varepsilon_1$ )</sub> and that you do not consent to the idea of you being aborted in normal circumstances<sub>( $\varepsilon_2$ )</sub> (TS)
  - (3) Being consistent about contraception<sub>( $\varepsilon_1^*$ )</sub> and that you do not consent to the idea of having had your conception prevented in normal circumstances<sub>( $\varepsilon_2^*$ )</sub> does not provide a sufficient reason to believe that<sub>(AP)</sub> if you are consistent you will not think that contraception is normally permissible<sub>(A)</sub>
- 
- (4) Being consistent about abortion<sub>( $\varepsilon_1$ )</sub> and that you do not consent to the idea of you being aborted in normal circumstances<sub>( $\varepsilon_2$ )</sub> does not provide a sufficient reason to believe<sub>(AP)</sub> that abortion is not normally permissible<sub>(TS)</sub>

The suggested argument structure for refutation by parallel argument can be even more simplified by reducing it to only two premises and a conclusion:

- (1) The Analogue<sub>(A)</sub> does not have the Assigned-Predicate<sub>(AP)</sub> in virtue of elements<sub>(ε1\*...εn\*)</sub> [Premise]
  - (2) The elements<sub>(ε1\*...εn\*)</sub> of the Analogue counterparts the elements<sub>(ε1...εn)</sub> of the Target-Subject<sub>(TS)</sub> [Claimed analogy]
- 
- (3) Thus, The Target-Subject<sub>(TS)</sub> does not have the Assigned-Predicate<sub>(AP)</sub> in virtue of elements<sub>(ε1...εn)</sub>

Let test the structure against some other concrete examples. James Fieser has used the method of refutation by parallel argument against a common design argument for the existence of God.<sup>25</sup> He summarizes one of the most common arguments from design in the following argument scheme:

- “1. The existence of life-sustaining conditions on earth is *probable* under the theistic hypothesis.
2. The existence of life-sustaining conditions on earth is *improbable* under the non-theistic hypothesis.
3. When considering two competing hypotheses, we should accept the one that offers the more probable outcome.
4. Therefore, we should accept the theistic hypothesis as the explanation of the world’s life-sustaining conditions.”

He then provides the following parallel argument with a conclusion most would like to reject:

- “a. The existence of pyramid-building technology is *probable* under the alien hypothesis.
- b. The existence of pyramid-building technology is *improbable* under the non-alien hypothesis.
- c. When considering two competing hypotheses, we should accept the one that offers the more probable outcome.
- d. Therefore, we should accept the alien hypothesis as the explanation of the existence of pyramid-building technology.”

According to the structure Fieser’s argument could be formulated:

- (1) That the existence of pyramid-building technology is *probable* under the alien hypothesis<sub>(ε1\*)</sub> and that the existence of pyramid-building technology is *improbable* under the non-alien hypothesis<sub>(ε2\*)</sub> does not give a good reason to believe<sub>(AP)</sub> the alien hypothesis of the existence of life sustaining conditions on earth<sub>(A)</sub> [Premise]
- (2) The propositions of probability under the alien hypothesis<sub>(ε1\*)</sub> and the improbability under the non-alien hypothesis<sub>(ε2\*)</sub> of the pyramid-building technology counterparts the propositions of probability under the theistic

---

<sup>25</sup> Fieser (2006).

hypothesis<sub>(e1)</sub> and the improbability under the non-theistic hypothesis<sub>(e2)</sub> of the existence of life-sustaining conditions on earth<sub>(TS)</sub> [Claimed analogy]

- (3) Therefore, the probability under the theistic hypothesis<sub>(e1)</sub> and the improbability under the non-theistic hypothesis<sub>(e2)</sub> does not give a good reason to believe<sub>(AP)</sub> the theistic hypothesis as the explanation of the existence of life sustaining conditions on earth<sub>(TS)</sub>

In his *Dualism Metaphysics* Ted Sider reconstructs Swinburne's argument for souls:<sup>26</sup>

“c) Swinburne's argument for souls

- (i) Necessarily: if I continue to exist without any of the same physical stuff as my previous self, then I must have a soul (Aristotle)
- (ii) Possibly, I continue to exist but without any of the same physical stuff as my previous self (Descartes)
- (iii) Therefore, I have a soul”

and uses the method of refutation by parallel argument against it:

“A parallel argument:

- (i) Necessarily: if a thing is a bachelor, then it is unmarried
- (ii) Possibly: Bill Clinton is a bachelor
- (iii) Therefore, Bill Clinton is unmarried”

The argument structure can be outlined:

1. That it is necessary<sub>(e1\*)</sub> that if a thing is a bachelor then it is unmarried<sub>(A)</sub> and that it is possible that Bill Clinton is a bachelor<sub>(e2\*)</sub> is not a sufficient reason to believe<sub>(AP)</sub> that Bill Clinton is unmarried<sub>(A)</sub>
  2. That is necessary<sub>(e1\*)</sub> that if a thing is a bachelor then it is unmarried and that it is possible<sub>(e2\*)</sub> that Bill Clinton is a bachelor<sub>(A)</sub> counterparts the propositions that it is necessary<sub>(e1)</sub> that If I continue to exist without any of the same physical stuff as my previous self, then I must have a soul and that it is possible that I could continue to exist<sub>(e2)</sub> without any of the same physical stuff as my previous self<sub>(TS)</sub>
- 
3. Thus, that it is necessary<sub>(e1)</sub> that If I continue to exist without any of the same physical stuff as my previous self, then I must have a soul<sub>(TS)</sub> and it is possible that I could continue to exist<sub>(e2)</sub> without any of the same physical stuff as my previous self is not a sufficient reason to believe<sub>(AP)</sub> that I have a soul

Hitherto we have analyzed refutation by parallel argument where the parallel argument has shown that the relevance or sufficiency conditions for a good argument is unsatisfied. However the method can be used to show that the *acceptability condition* is unsatisfied as well. In such situations the analogue shows that a proposition is false or dubious. The assigned predicate (AP) will here still be

<sup>26</sup> Sider (2008).

*reason to believe* but what is in question is not the justificatory structure of the target argument but rather the tenability or truthfulness of its premises. This can be done in different ways. One way is to present an parallel argument that is apparently valid if on only considers its explicit premises but with a obviously false conclusion which shows that there must exist tacit but false proposition in the target argument as well (see Sect. 3.3 for more about that). Another way is to present a parallel argument which proves the *opposite conclusion* which shows that there must be a (implicit or explicit) premise that is false or dubious in both the parallel argument as well as the target argument (Sect. 4 have another example of this but within a dialectical context). The corresponding proposition *mutatis mutandis* in the target argument is false or dubious. If the refutation works by proving the opposite conclusion the structure could be formalized:<sup>27</sup>

- (1) The Analogue<sub>(A)</sub> (parallel argument) have the Assigned-Predicate<sub>(AP)</sub> in virtue of elements<sub>(e1\*...en\*)</sub>
  - (2) The Target-Subject<sub>(TS)</sub> (target argument) have the Assigned-Predicate<sub>(AP)</sub> in virtue of elements<sub>(e1\*...en\*)</sub>
  - (3) The elements<sub>(e1\*...en\*)</sub> of the Analogue<sub>(A)</sub> (parallel argument) counterparts the elements<sub>(e1...en)</sub> of the Target-Subject<sub>(TS)</sub> (target argument) [Claimed analogy]
  - (4) The conclusion of the Analogue<sub>(A)</sub> (parallel argument) and of the Target-Subject<sub>(TS)</sub> (target argument) are contrary.
- 
- (5) Thus, the Target-Subject<sub>(TS)</sub> (target argument) does not have the Assigned-Predicate<sub>(AP)</sub> in virtue of elements<sub>(e1...en)</sub>

Sometimes the parallel argument utilizes the exact same premise as in the target argument, it can be a inference-licensing principle or a more general premise as in a deductive argument. I will give a an example of this that can elucidate this type of refutation by parallel argument. Michael Huemer in his dissertation uses the method of refutation by parallel argument against Hume's objection against a direct realist account of perceptual awareness.<sup>28</sup> Huemer summarizes an interpretation of Hume's objections as:

1. Either we are directly aware of the real table, or we are directly aware of a mental image of the table (exclusive or).
  2. The thing we are directly aware of seems to diminish in size as we move away from it.
  3. The real table does not diminish in size as we move away from it.
  4. If one is directly aware of X, then X is the way it appears.
  5. Therefore, the thing we are directly aware of is not the real table.
- 

<sup>27</sup> This argument structures assume of course that the Analogue and the Target-Subject are arguments and the universal premise: "if two arguments are parallel/analogous and have contrary or contradictory conclusions then they are either invalid or both have at both least one untrue premise".

<sup>28</sup> Huemer (1998, § 5.1).

6. Therefore, we are directly aware only of a mental image of the table.

He then provides a shorter but parallel argument that proves the opposite conclusion with the using the same general premise:

- (1) The thing we are directly aware of seems to be the real table.
- (2) If one is directly aware of X, then X is the way it appears.

---

(4) Therefore, the thing we are directly aware of is the real table.

With my suggested argument structure this would be:

- (1) We have reason to believe<sub>(AP)</sub> that what we are directly aware of is the real table because the thing we are directly aware of seems to be the real table<sub>(ε1\*)</sub> and if one is directly aware of X, then X is the way it appears<sub>(ε2);(ε2\*)</sub> (A)
  - (2) The proposition that what we are directly aware of seems to be the real table<sub>(ε1\*)</sub> is a counterpart of the proposition that the table we are directly aware of seems to diminish in size<sub>(ε1)</sub> and the proposition that if one is directly aware of X, then X is the way it appears<sub>(ε2\*)</sub> is a counterpart of the proposition that if one is directly aware of X, then X is the way it appears<sub>(ε2)</sub> [claimed analogy]
  - (3) The conclusion of the target argument<sub>(TS)</sub> that we are directly aware of a mental image and the conclusion of the parallel argument<sub>(A)</sub> that we are directly aware of the table are contrary
- 
- (4) Thus, the target argument gives not reason to believe<sub>(AP)</sub> that we are directly aware of a mental image<sub>(TS)</sub> (it is either invalid or have at least one untrue premise).

Objects of comparisons		What is projected from Analogue to Target-Subject
<b>Target-Subject (TS)</b> (Target-argument)	<b>Analogue (A) (Parallel argument)</b>	<b>Assigned-Predicate (AP)</b>
The argument that we are directly aware only of a mental image of the real table <sub>(TS)</sub>	The argument that we are directly aware the real table <sub>(A)</sub>	Reason to believe <sub>(AP)</sub>
<b>Elements in one-to-one correspondence</b>		
The thing we are directly aware of seems to diminish in size as we move away from it <sub>(ε1)</sub>		The thing we are directly aware of seems to be the real table <sub>(ε1*)</sub>
If one is directly aware of X, then X is the way it appears <sub>(ε2)</sub>		If one is directly aware of X, then X is the way it appears <sub>(ε2*)</sub>

What is interesting with this kind of refutation by parallel argument is that the unacceptability of the analogue, that is the parallel argument, is not taken to be obvious just from the parallel argument itself but from its juxtaposition with the



target argument. The two arguments, as presented, use the same premise in combination with other (allegedly obviously true) premises to come up with conclusions that are incompatible with one another. This means that the assigned-predicate (AP) cannot be viewed as projected *from the Analogue* to the Target-Subject, but rather concluded *from the juxtaposition* of the two. The knowledge of the untrue premise of the target argument is realized not because the Analogue has an obviously untrue premise that the Target-Subject also must have (since they are analogues). Rather the knowledge about the untrue premise of the target argument is realized because the Analogue and the Target-Subject both must have a false premise, since although they are analogues, their conclusions *contradict* (or are contrary) each other.

The last example in of refutation by parallel argument that reveals a false premise of the target-argument, will be the perhaps most infamous parallel argument of all. It is employed in Judith Thomson's violinist analogy against the standard argument that abortion is morally impermissible. Thomson's argument is intended to show that abortion is morally permissible, even if we accept that the fetus is a person, if the pregnancy is due to a rape. That is, the argument aims to show that the premise that the fetus's right to live always outweighs the mother's right to her body is false or at least dubious, not that it is irrelevant or insufficient as a reason to believe anything. This is her argument:

I propose, then, that we grant that the fetus is a person from the moment of conception. How does the argument go from here? Something like this, I take it. Every person has a right to life. So the fetus has a right to life. No doubt the mother has a right to decide what shall happen in and to her body; everyone would grant that. But surely a person's right to life is stronger and more stringent than the mother's right to decide what happens in and to her body, and so outweighs it. So the fetus may not be killed; an abortion may not be performed. It sounds plausible. But now let me ask you to imagine this. You wake up in the morning and find yourself back to back in bed with an unconscious violinist. A famous unconscious violinist. He has been found to have a fatal kidney ailment, and the Society of Music Lovers has canvassed all the available medical records and found that you alone have the right blood type to help. They have therefore kidnapped you, and last night the violinist's circulatory system was plugged into yours, so that your kidneys can be used to extract poisons from his blood as well as your own. The director of the hospital now tells you, "Look, we're sorry the Society of Music Lovers did this to you—we would never have permitted it if we had known. But still, they did it, and the violinist now is plugged into you. To unplug you would be to kill him. But never mind, it's only for nine months. By then he will have recovered from his ailment, and can safely be unplugged from you. Is it morally incumbent on you to accede to this situation? No doubt it would be very nice of you if you did a great kindness. But do you *have* to accede to it? What if it were not nine months, but nine years? Or longer still? What if the director of the hospital says, 'Tough luck, I agree, but you've now got to stay in bed, with the violinist plugged into you, for the rest of your life. Because

remember this: all persons have a right to life, and violinists are persons. Granted you have a right to decide what happens in and to your body, but a person's right to life outweighs your right to decide what happens in and to your body. So you cannot ever be unplugged from him.' I imagine you would regard this as outrageous...<sup>29</sup>

Thompson's argument could according to my suggested argument structure be outlined:

- (1) Your connection with a violinist due to a hijack<sub>(A)</sub> is a connection with a person<sub>(e1\*)</sub>; who has a right to life<sub>(e2\*)</sub> and is involuntary induced<sub>(e3)</sub>
  - (2) The right to life<sub>(e1\*)</sub> of the connected violinist<sub>(A)</sub> does not outweigh your right to your body (to terminate the connection)<sub>(AP)</sub>
  - (3) The right to life<sub>(e1\*)</sub>, and personhood<sub>(e2\*)</sub> of the violinist and the involuntary connection to him<sub>(e3\*)</sub> counterparts the right to life<sub>(e1)</sub>, the personhood<sub>(e2)</sub> and the involuntary connection<sub>(e3)</sub> to a fetus in a rape induced pregnancy<sub>(TS)</sub> [Claimed analogy]
- 
- (4) Thus, even if every person has a right to life<sub>(e1)</sub> and the fetus is a person<sub>(e2)</sub>, it does not necessarily outweigh the mother's right to her body; to terminate<sub>(AP)</sub> an involuntary induced<sub>(e3)</sub> pregnancy

Thompson's arguments aims to show that the premise that a person's right to live always outweighs another persons right to his or hers body is dubious, not that there is anything wrong in the inference, sufficiency or relevance of the premises of the target argument. Here the Assigned-Predicate i.e., *does not outweigh right to body* was projected from the Analogue. However, given that Thompson's argument is a refutation of an *argument*; her parallel-argument could be reconstructed as assigning *not a sufficient reason to believe* as in the examples earlier.

The crucial premise in arguments that refutes with parallel argument is as with argument by analogy in general; the premise that expresses the analogical relation. Does it express all those elements that determine the judgment of each situation? In the first hypothetical case with the comparison of moral principles with heights of mountains, an expected objection would be that the existence of mountain can be empirically verified by independent rational agents, which cannot be done with abstract principles. There are also problems with Thomson's analogy. If one or more elements that determine the right or wrongness of terminating a pregnancy are missing in the case of the violinist it means that there is no one-to-one correspondence between *every* element in each situation. If such correspondence is lacking it means there are relevant differences between the cases and consequently that the analogy fails. For example, firstly, in the case of the violinist it seems more like a case of *permitting* someone to die whereas in an abortion situation it is rather an active bringing about the death of the fetus. We usually ascribe a moral significance in the difference of letting someone die and killing someone. Secondly, any parent-child relationship gives *ceteris paribus* a parent a moral duty to protect and nurture the parent's child; this

<sup>29</sup> Thompson (1971, p. 55).

element is missing in the case of the violinist since he is a complete stranger wholly unrelated to you. Thirdly, a pregnancy does not produce the same extreme immobility and restrictions to your life situation as the connection to the violinist would do. On the contrary, it is only until the end of the pregnancy that there is any ground whatsoever for comparison with the being plugged to a half dead violinist. It is probably the extreme constrain on one's way of living that causes the unplugging of the violinist to seem *prima facie*, morally acceptable. All these elements seem to lack a one-to-one correspondence in the cases as described by Thompson. In the following third article I will discuss more exactly how one can refute and defend against arguments by analogy.<sup>30</sup> However this consideration is not relevant for the analysis of the argument structure of refutation by parallel argument or how the method intends to refute.

In the next Sect. 3.3 I will discuss how refutation by parallel argument refutes and argue that the method can refute by showing that the acceptability condition is unsatisfied without even knowing which of the premises of the target-argument that is unacceptable. The tacit premise that is unacceptable or false may never be possible to be explicitly formulate, still the parallel argument shows that the premise must exist and therewith refutes the target-argument. Furthermore, the example shows that an invalid argument refutes a deductive argument that would be valid if only its explicit premises were considered.

### 3.3 How Refutation by Parallel Argument Refutes

As some thinkers have noted, a refutation by a parallel argument can sometimes be a conclusive refutation, which merits a further study of this kind of argument.<sup>31</sup> Although refutation by parallel argument is a species of argument by analogy, it should not be confused with using argument by analogy to refute or prove a certain *thesis*. While arguments by analogy are inferences about any subject matter like ordinary inductive or deductive arguments, refutation by parallel argument refutes an *argumentation*, not the believed thesis supported by the target-argument. That is, the parallel argument reveals that there is something wrong in the justificatory structure or that a premise is false or dubious of the target-argument, not that a certain thesis is false or implausible.

As stated before in Sect. 3.1, there were three conditions for any good argument to fulfill the condition of (1) relevance, (2) acceptability and (3) sufficiency.<sup>32</sup> Thus, all methods of refuting argument work by revealing that an argument fails to fulfill one or more of these conditions.

There is an essential difference between the method of counterexample on the one hand and refutation by parallel argument on the other hand. A counterexample either shows that a premise is false or that the conclusion does not follow logically from the premises of the argument.

However, the method of counter exempling is generally useless against *non-deductive arguments*. One cannot with a counter-example refute a presumptive or

---

<sup>30</sup> Juthe *Defense Against Arguments by Analogy*, forthcoming.

<sup>31</sup> Govier (1985).

<sup>32</sup> Blair and Johnson (1987).

defeasible reasoning which by the nature of the case is inconclusive and allows for counterexamples. For example, the method of counter-examplng and deductive interpretations seem to have little relevance in presumptive reasoning like:

- (1) Jane is covered with red spots
  - (2) Jane has fever
- 
- (3) Therefore, Jane has the measles

It seems untenable to argue that this should be interpreted as a deductive argument which one can refute by showing that the universal generalization: “If a human is covered with red spots and has a fever, that human has the measles” is untrue. Rather, the basic reasoning seems to be:<sup>33</sup>

- (1) *A* is true in this situation
  - (2) *B* is generally indicated as true when its sign *A*, is true, in this kind of situation
- 
- (3) Therefore, *B* is true in this situation

It seems as a difficult task for a counterexample to show that an argument scheme like this is flawed. The same is of course true for basically every argumentation scheme that is *nondeductive*.

Refutation by parallel argument works in another way. It does generally not reveal a false premise, but rather demonstrates that the *relation* between the content of the premises and the content of the conclusion is flawed. The premises fail to give (sufficient) reason to believe the conclusion. In short, refutation by parallel argument is a species of argument by analogy where it is shown that an argument fails to satisfy the relevance or sufficiency condition.<sup>34</sup> It can be applied to any kind of argument: inductive, deductive, abductive, or any other argument including those that link the premises with their conclusion based on plausibility inference. Even other arguments by analogy can be refuted with a parallel argument. Thus, refutation by parallel argument has a broader applicability than the method of counterexamples. This should implicate that the method of counterexamplng is less prevalent than the other two ways of refuting arguments, but as noted before, it is the most common of them all, at least within analytical philosophy. The prevalence of the method of counter-examplng in philosophy is rather a witness of how the strong deductivistic endeavour has been in philosophy. The rise of informal logic with its development of nondeductive argumentation in general and argumentation schemes for presumptive reasoning in particular, shows how unbalanced this endeavour has been.<sup>35</sup> As with the method of counterexample, refutation by parallel argument can be a conclusive refutation of an argument.

---

<sup>33</sup> Walton (1996, p. 49).

<sup>34</sup> The method of exhibiting the flawed argument scheme can also work by showing that either the sufficiency or relevance condition does not hold.

<sup>35</sup> For documentation of argumentation schemes for presumptive reasoning, see Walton (1996).

In virtue of what are two arguments parallel? Is it because they instantiate the same logical form or for another reason? Many philosophers have uncritically accepted the view that refutation by parallel argument in general shows the invalidity of the abstract logical form of argument. This seems to be the received opinion. For instance, Trudy Govier asserts:

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 [...] Refutation by logical analogy is based on duplicating the ‘core’ of an argument in another argument by varying non-essential aspects while preserving essential ones [...]<sup>36</sup>

Another example is from one of Copi’s standard works:

A refuting analogy for a given argument is an argument of exactly the same form or pattern as the given argument, but whose premises are known to be true and whose conclusion is known to be false. The refuting analogy is thus known to be invalid, and the given argument—since it has the same form—also is known to be invalid.<sup>37</sup>

I will argue that this is faulty. When two arguments are analogous and parallel it means that the elements map to each other in one-to-one correspondence and should not be confused with the thesis that they instantiate the same unique logical form.

I will here give an example of refutation by parallel argument that has the interesting feature in that it refutes an argument which would be sound if one only would consider its explicit premises. As Mackie himself claims, Sidgwick’s version of Kant’s moral argument (the target-argument) is “plainly valid”.<sup>38</sup> Furthermore, both Sidgwick and Mackie accept the *explicit* premises of the target-argument as *true*, yet they both *reject* its conclusion.<sup>39</sup> The target argument is seemingly a valid deductive argument which has overt premises that are seemingly true. Furthermore, the refuting parallel argument has acceptable (the overt) premises and an acceptable conclusion although it is invalid. Still, the parallel argument clearly manages to refute the target argument. It means that sharing the same logical structure is neither sufficient nor necessary for being analogical. A seemingly sound target argument is refuted by a clearly invalid parallel argument. The example of this is taken from Mackie’s *The Miracle of theism* where the author employs the method and refutes a more convincing version of Kant’s moral argument for the existence of God by Henry Sidgwick:

Another variant of the moral argument is clearly stated, but not endorsed, by Sidgwick...Its premisses are:

<sup>36</sup> Govier (1985, pp. 27, 29).

<sup>37</sup> Copi and Burgess-Jackson (1992, p. 209).

<sup>38</sup> Mackie (1983, p. 111).

<sup>39</sup> Mackie (1983, pp. 111–112).

- I. What I have most reason to do is always what will best secure my own happiness in the long run.
  2. What I have most reason to do is always what morality requires.
  3. If there is no moral government of the universe, what will best secure my own happiness is not always what morality requires.
- ... it follows that there must be such a government, that is, either a god or something like a god...
- ... what should we say about a general who accepted these three premisses:
- I. If the enemy are advancing in overwhelming strength, then, if we do not withdraw, our army will be wiped out;
  2. We must not allow our army to be wiped out;
  3. We must not withdraw, because that would mean letting down our allies; and concluded, on these grounds alone, that the enemy were not advancing in overwhelming strength?
- In all such cases, what it is rational to do depends upon what the facts are; but we cannot take what we are inclined to think that it is rational to do as evidence about those facts.<sup>40</sup>

In this example Mackie uses refutation by parallel argument to refute a deductive reasoning that would be valid if one only considers its explicit premises. Consequently, his counterargument cannot be interpreted as counterexamining an abstract logical form. There is another conclusive reason against the interpretation that refutation by parallel argument amounts to a counterexample of a certain logical form, and that is the simple fact that the arguments in question clearly do *not* share the same *logical* structure. The arguments do not share the same logical form, a clearly invalid parallel argument refutes an argument that would be valid only if one assumes that no implicit premise necessary for its validity is false. Thus, the only way to claim parallelism must reasonably be that the relevant elements are mapping each other one-to-one with regard to their argumentative merit. The arguments do not have the same logical form but are yet analogous and must be accepted or rejected together. It is a different-domain analogy that is utilized; morality is compared with military action.

The parallel argument is also unusual in that both its premises as well as its conclusion taken by itself are plausible. There is no necessary falsehood in the conclusion like “the enemy were not advancing in overwhelming strength”. That an enemy is not advancing in overwhelming strength is something that very often has been and very well could have been true. The parallel argument is however clearly not valid.<sup>41</sup> The parallel-argument exposes that the target-argument cannot provide acceptable reason to believe the conclusion, but how can this be done if the parallel argument refutes a deductive argument that is seemingly valid? The only explanation to this is that Mackie’s parallel argument reveals that there is a *tacit* premise in Sidgwick’s version of the moral argument which is false, and that the argument is invalid after all. The parallel argument does not spell out the tacit

<sup>40</sup> Ibid., pp. 111, 113.

<sup>41</sup> It is possible that what “we must not do” (allow the army to be wiped out, withdraw) will nevertheless happen.

premise; it only shows that it must exist and that it is necessary for the validity of the target-argument. Thus, as stated earlier, refutation by parallel argument needs not *always* show that an argument fails the relevance or sufficiency condition (that the premises fail to lend sufficient support to the conclusion) but also that a premise, explicit or implicit, is false, that is, the acceptability condition.

When the arguments are analysed further it seems that the tacit false premise of the target argument is that practical rationality can settle a factual issue. The parallel-argument demonstrates that this leads to an argument that is clearly unacceptable. The parallel argument shows that practical rationality cannot (at least not universally) settle a factual issue.<sup>42</sup> However the parallel argument manages to refute the target-argument even if this implicit premise cannot be made explicit. The parallelism between them is obvious and it is obvious that the parallel-argument is an unacceptable argument. Consequently, the target-argument must be unacceptable as well even though we would not know the exact formulation of the tacit premise that must be false.

Moreover, one can take it a step further and argue that refutation by parallel argument *never* works by revealing the invalidity of an abstract pure logical form, because a 'pure logical form' does perhaps not exist at all. The doctrine of laws of deductive form is thought to be either *logical truths* (propositions true by virtue of their form alone, true for all interpretations of their non-logical components) or rules of supposedly valid inferences like *modus ponens* or *modus tollens*. However, contrary to the received opinion there exist severe problems with this doctrine so commonly taken for granted; it has epistemological, as well as metaphysical and semantical objections and is even refuted by several counterexamples.<sup>43</sup> If this is true then the necessity of a 'valid logical form' has an inevitable material aspect, because the point of validity is that from truth only truth should be obtained. The result of a critical investigation of the doctrine of laws of deductive form seems rather to indicate that validity is a subject-matter-dependent relationship, and therefore parallelism of two arguments must be in virtue of an analogical relationship between their particular elements and not in virtue of sharing the same abstract pure logical form.

Thus, we can conclude that the method of refutation by parallel argument also can refute *deductive arguments* in a way that does not coincide with the method of counter-examplifying any supposed pure logical form of arguments, and that it even can be used against prima facie valid deductive arguments revealing they have implicit false premises that make them invalid.

Bruce Waller has argued for the existence of two types of argument by analogy, what he calls deductive and inductive arguments by analogy.<sup>44</sup> The same terminology is used by many other authors. Sometimes the same distinction is called a priori argument by analogy versus *a posteriori* argument by analogy by authors that do not believe that argument by analogy can be reduced to deductive or inductive arguments. I think that a better terminology is a distinction between

<sup>42</sup> See Mackie's own discussion about this, Mackie (1983, pp. 112–114).

<sup>43</sup> See for example: Theron (1997), Smith (1986, pp. 173–194; 1988, pp. 124–176), McGee (1985).

<sup>44</sup> Waller (2001).

*conclusive* versus *inconclusive* argument by analogy, because what is relevant in the assessment of an argument by analogy is first the correctness of the analogy; and secondly whether its conclusion follows conclusively or just with a certain plausibility (inconclusively).<sup>45</sup> Since I have argued earlier, in the previous article *Argument by Analogy*,<sup>46</sup> that argument by analogy is an argument type nonreducible to any other type I will not deepen myself in this here, but will only briefly criticize some of Wallers' arguments for a deductivist interpretation.<sup>47</sup> Waller argues:

So long as everyone agrees that an analogy is effective and accurate, then perhaps intuitive grasp of relevant similarities will suffice. But if there is dispute over whether an a priori analogy is legitimate or faulty, or concerning whether a point of difference in the analogical cases is trivial or fatal, then scrutiny of the underlying universal principle is essential. For how do we decide (when our intuitions are in conflict) whether B is a priori analogous to A? Only by asking what underlying principle justifies A, and then determining whether the same principle applies to case B. Or if we are trying to decide (after intuitions have failed us) whether a difference between A and B is important or irrelevant, how can we determine that except by asking whether that difference in detail places the case outside the scope of the universal principle?<sup>48</sup>

The nondeductivist answer to Waller's rhetorical question: "how do we decide (when our intuitions are in conflict) whether B is a priori analogous to A?" is not by searching for the underlying principle that justifies A and evaluate whether it applies to case B, but rather by searching for the elements in B that corresponds one-to-one with the elements in A, and which elements determine the Assigned-Predicate. My definition of analogy is:<sup>49</sup>

The Analogue is *analogous* with the Target-Subject with regard to the Assigned-Predicate if and only if there is a *one-to-one correspondence* between the elements of the Analogue which determine the Assigned-Predicate and the elements of the Target-Subject.

The elements of the Analogue and the elements of the Target-Subject are in a *one-to-one correspondence* if, and only if, every element of the Analogue which determines the Assigned-Predicate has a *counterpart* element in the Target-Subject.

An element  $\varepsilon_1^*$  of the Analogue is a *counterpart* of an element  $\varepsilon_1$  of the Target-Subject if and only if element  $\varepsilon_1^*$  has *relation R* to another element  $\varepsilon_2^*$  in the Analogue and element  $\varepsilon_1$  has *relation R* to another element  $\varepsilon_2$  in the Target-Subject.

<sup>45</sup> See Juthe (2005).

<sup>46</sup> Juthe (2005).

<sup>47</sup> For more objections against Waller's position, see Guarini (2004).

<sup>48</sup> Waller (2001, p. 210).

<sup>49</sup> Juthe (2005, p. 5).



The ultimate question concerning whether *A* and *B* really are analogous then, according to my model of analogy is: are the elements of *A* (the Target-Subject) in the same relation as the elements of *B* (the Analogue)? This question seems as answerable as any question about an underlying principle. Thus, Waller's argument for deductivism fails. One also needs to answer whether the elements of *A* that counterpart the elements of *B* really determine the Assigned-Predicate i.e. the predicate that is assigned from the Analogue to the Target-Subject. All this will perhaps require a judgment of relevance; but it is the same kind of judgment one needs in order to determine any underlying universal principle. There is no relevant difference between *evaluating* relevance in formulating an abstract principle compared to evaluating the relevant features in a concrete particular situation. On the opposite, it seems easier to judge which features are relevant in a *concrete* situation (see Sect. 3.4 for more support of this).

Moreover, contrary to Waller's assertion, the usual course of events in a dialectical situation where analogical argumentation is employed is not that a proponent tries to formulate the underlying principle for case *A* and then ask whether the difference in detail places case *B* outside the universal principle. Rather what happens in dialectical conversation where analogical argumentation is employed is that if a proponent asserts that *A* and *B* are disanalogous then the proponent points out allegedly relevant differences and compare with concrete cases where the features are more clearly relevant. If a proponent asserts that *A* and *B* are analogous then he points out that they are relevantly similar and supports this by comparing with other concrete cases with the same features, but which have a more intuitive appeal. A good example of this is Hume's *Dialogues Concerning Religion*. The argumentation between Philo and Cleanthes never work by means of an investigation about whether the 'design' of the world would fall under any abstract principle or not. On the contrary, the argumentation works by comparing different complex things and appealing to particular intuitions about whether the complexity of the world is the type of complexity that needs a designer.<sup>50</sup> Actually, that is probably the only way the argumentation *could* work since any formulation of a specified abstract principle as a premise in an argument would itself be controversial and at risk of begging the question.<sup>51</sup>

Philo rather uses a refutation by parallel argument against Cleanthes design argument (yes, an argument by analogy applied to an argument by analogy!), in effect arguing:<sup>52</sup> "suppose it is a good argument to assert that because the world is observed to resemble machines in having intricately interrelated parts, therefore the world probably originated, as machines do, by an intelligent design. But then you ought also to regard at least equally good argument that the world is observed to resemble a plant, so probably it grew from a seed as plants are seen to do. But since the two arguments are parallel and of approximately equal strength, that means that neither of them can be convincing."

<sup>50</sup> Barker (1989, see especially pp. 178–181).

<sup>51</sup> Barker (1989), see also Cohen (1986, pp. 82–91).

<sup>52</sup> Barker (1989) points this out see p. 181.

In the argumentation different particular objects are compared in order to discern between opposing particular judgments about whether the kind of complexity of the world is more like that of a machine than that of a plant. Cleanthes uses comparisons with machines to support that the world is like a machine and since a machine needs a designer, so does the world. Philo uses comparisons with another concrete object, a plant, arguing that the complexity of the world is more like that of a plant. The reasoning goes from particular to particular; there is no appeal to any abstract principle. Thus, Waller's description about how analogical argumentation works is counter-exemplified from actual case scenarios.

### 3.4 The Dis-and-Advantages of Refutation by Parallel Argument

We have already seen the differences between the method of counterexamples, the method of displaying flawed pattern and refutation by parallel argument. All are based on recognition of the structure of an argument. Each of the three methods of refuting an argument has their advantages.

When it is difficult to construct a parallel argument of the target-argument where the flawed character is clearly exposed then the method of displaying the flawed abstract pattern may be a better method. When it is easy to find a dubious universal premise, then the method of counterexamples may be the best choice.

What then are the main advantages of refutation by parallel argument compared to the other methods? There are some advantages with refutation by parallel argument that are unique to this method. First, as we have seen it can be applied to *all* types of argumentations, deductive as well as non-deductive.

Secondly refutation by parallel argument can have a *pedagogical* advantage because it uses a *concrete exemplification*. The pedagogical advantage is that concrete examples are more near our own situation with which we are more familiar than with abstract reasoning. Exemplification relates to our social practice and our experience. Thus, it has a stronger pedagogical value in communication. It is generally easier to grasp concrete examples than abstract argument schemes.

Another advantage is the *dialectical* advantage in that the formulation of abstract universal principles can be avoided. It has been noted that the formulation of crucial abstract principles, which *both* parties in a dialectical conversation can agree on, is very difficult. Thus, any formulation of an abstract principle as a premise in an argument will be at risk of making the argument beg the question.<sup>53</sup> A further dialectical advantage in contrast to counterexamplification is that counterexamplification—although it is in itself (if it is a genuine counterexample) a conclusive refutation—is seldom the end of the dispute; the discussion will go on and on.<sup>54</sup> The refuted universal premise of the argument is just refined to avoid the counterexample and the story goes on. There is also a problem of making the *correct* specification of the universal premise that is targeted for the counterexample.<sup>55</sup>

<sup>53</sup> Barker (1989), see also Cohen (1986, pp. 82–91).

<sup>54</sup> Facione (1976)

<sup>55</sup> See Juthe (2005) and Govier (1989) for more about that.

An *epistemic* advantage is that concrete examples are more epistemically certain than abstract principles or arguments, since they are in a sense “closer” to reality. The knowledge from concrete examples are more “similar” with reality than abstract principles, the knowledge is in a sense, *immediate*. It is the map that is determined true or false by reality, not the other way round. That is why a more concrete thought experiment is generally seen as more trustworthy than more abstract hypothetical ones. A concrete description is “closer” or “similar” to the reality of our experience compared with a more abstract description, and it is the reality of our experience that ultimately determines what we judge as real or true. This is because experience is a necessary part of the process that gives meaning to the concepts we use. There is an analogy with scientific research here; it is the concrete experiments and observations that evaluate whether a certain scientific hypothesis is verified or falsified, not the other way round.<sup>56</sup> An additional argument to all this is the consideration that some version of *particularism* might be true. In that case, the whole enterprise of deductive reasoning with general principles is problematic and amounts to a distorted picture of our reasoning in general.<sup>57</sup> Then analogical reasoning will have an even more important role in philosophical and everyday reasoning.

What then are the disadvantages with the method? First of all, there is always a psychological aspect in the use of analogies that may backfire. Although there is no philosophical difference between same-domain and different-domain analogies, if the analogy is correct the conclusion follows with equal strength (conclusively or inconclusively) according to its argument type regardless of whether the elements belong to the same domains or not. However, in a dialectical situation it may be important to reconstruct a parallel argument with consideration to the audience or interlocutor. There is a psychological inclination to find same-domain analogies more reasonable, as psychological studies have shown.<sup>58</sup> The soundness of different-domain analogies is far harder to prove than the soundness of same-domain analogies because the relevance of different-domain analogies can be doubted and criticized far more easily. People seem to think that analogies that would be judged as same-domain analogies in my terminology are more trustworthy than those that would be judged as different-domain analogies. “You can’t compare apples with oranges!” is a usual but often misused statement that elucidates this point. The truth is that you can compare *any* object, even those belonging to very distant domains as long as you compare those aspects that stand in a one-to-one correspondence; if they do the objects of comparison will be analogous and can justly be compared.

Research has also shown that listeners of rebuttal analogy users (like users of refutation by parallel argument) perceive the employer of such method as less

<sup>56</sup> Cohen (1986), pp. 84–85, see pp. 82–91 for more about the difference between singular and general principles. In my opinion Cohen’s discussion is misguided, it is not a matter of *singular* intuitions versus *general* intuitions, but about *concrete* examples versus *abstract* principles. Cohen’s argument depends not on generality versus singularity. Rather it concerns the concrete versus the abstract. If the general principles were as concrete as the particular cases then they would be as intuitively strong as the latter.

<sup>57</sup> See Kilhomb (2002) for a discussion about ethical particularism.

<sup>58</sup> Brown (1995) mentions this.

ethical and less competent than communicators using nonanalogy counterparts.<sup>59</sup> However this is concerned when the rebuttal analogy instrumentally also functions as a social attack device used to demean the competence or character of opponents. For example, research has shown that refutation by parallel argument such as:<sup>60</sup>

Finally, most whale stocks are at least holding steady, and some have begun to recover, as the result of the moratorium on whaling. Populations of humpbacks off South Africa have grown substantially. A study by the National Marine Fisheries Service shows an estimated 2,050 blue whales off California in 1991, up from several hundred in 1980. Minke whales are so plentiful – there are an estimated 86,700 living off the coast of Norway alone, and a total of 90,000 worldwide – that a controlled hunt wouldn't harm the species. Again, nobody wants to hunt the large whales anymore because they are threatened. But the argument that whales must therefore not be hunted at all is like saying that because one breed of pig is on the verge of dying out, nobody should eat pork.

are found as less ethical and less competent by an audience than that of the non-analogy form:

Finally, most whale stocks are at least holding steady, and some have begun to recover, as the result of the moratorium on whaling. Populations of humpbacks off South Africa have grown substantially. A study by the National Marine Fisheries Service shows an estimated 2,050 blue whales off California in 1991, up from several hundred in 1980. Minke whales are so plentiful – there are an estimated 86,700 living off the coast of Norway alone, and a total of 90,000 worldwide – that a controlled hunt wouldn't harm the species. Again, nobody wants to hunt the large whales anymore because they are threatened. But the argument that whales must therefore not be hunted at all ignores the fact that there are other nonthreatened whales that could be hunted.

Even if very effective in ridiculing and silencing the opponent such rebuttal analogies may in the long run be counterproductive to the aim of the user of the parallel argumentation. Even though the audience of the rebuttal may not be able to point out anything wrong with the parallel-argument it may be that it gives the impression of a sophism. Thus, for rhetorical and dialectical reasons, it may be pragmatically wise to use same-domain-analogies, when one employs the method of refutation by parallel argument. Furthermore it is wise to make the object of comparison in the parallel-target not too ridiculing so that the proponent of the target-argument looks stupid. Too ridiculing examples may, even if philosophically correct, *seem* far-fetched and unserious.

There is another dialectical reason to consider when one utilizes refutation by parallel argument in a debate. They can backfire in another sense. If one suspects that one's opponent will not follow the principle of charity and just point out psychologically appealing but philosophically irrelevant differences between the compared objects, then it is, so to speak, better to let the opponent do the job. In a

<sup>59</sup> Whaley (1998).

<sup>60</sup> Whaley (1998, see Appendix p. 360).

heated debate where one agent is trying to persuade another, any difference between two cases can be affirmed. statement like: “that’s not the same thing, that is about \_\_\_\_\_ and not \_\_\_\_\_” or: “but you can’t compare \_\_\_\_\_ with \_\_\_\_\_ that’s different thing’s” will be used, and one could virtually fill in whatever in the blank; the very idea of comparing different objects becomes pointless since just being *different* objects is by the opponent taken as a reason to dismiss any comparison between them. An actual example can explain what I mean. With the header *Why do you lock the lav?* the editorial for a Swedish local paper wrote the following concerning the Swedish proposition to increase the governmental right to bug and log peoples’ internet habits:

He who still thinks that personal integrity is only an obstacle in the haunt for criminals should consider why most of us lock the door when we use the toilet. Is it just because we have something unnatural to hide? Or is it simply because we want to do certain things in private... without anyone’s view.<sup>61</sup>

One could interpret this argument as a refutation by parallel against the argument that whoever has nothing to hide should not have anything against being bugged or logged on the internet.

However, the interpretation that this is a refutation by parallel argument makes it presumably easier to defend against. Probably would a defender that wants to increase the bugging claim that this is to compare apples with oranges, and that locking a toilet and surfing on the internet are too different to be compared. “You cannot compare doing your needs in your restroom with surfing on the internet!” The user of the parallel argument will have to convince an unreceptive interlocutor to accept certain features as relevant. However, if this argument instead is interpreted as a counterexample to a premise that is assumed in the pro-buggers argument, then the burden of proof is shifted on the pro-bugger to show that their argument does not assume the counter-exampled premise in question. The pro-bugger’s argument can be interpreted to be based on the generalization: “Whoever has nothing to hide should have nothing against being controlled”. The counter-example shows that there does exist legitimately needs to be anonymous even if one have nothing to hide. If interpreted this way, it becomes pointless to discuss differences between analogous cases. It rather becomes the task of the *defender* of pro-bugger’s argument to formulate a new premise that avoids the counterexample. This is more difficult than just rejecting a parallel argument as a bad comparison, because the pro-bugger will he himself be forced to clarify what features he consider relevant instead of just complaining about ‘bad comparisons’. Perhaps, the defender of the bugging could argue that: “whoever has nothing to hide should not have anything against being controlled as long the controlling is not about natural needs.” But that formulation is very vulnerable to the question why not ordinary conversations online are examples of ‘natural needs’.

When the proponent of the target-argument may be expected to be defensive and just point out irrelevant differences and claim them as relevant, then it is better to

<sup>61</sup> From the local newspaper UNT 2006-06-29 ([http://www2.unt.se/avd/1,1786,MC=25-AV\\_ID=510833,00.html?from=sectionlinks25](http://www2.unt.se/avd/1,1786,MC=25-AV_ID=510833,00.html?from=sectionlinks25)) (My translation).

utilize a method that makes *him* forced to formulate a principle that catch all the relevant features, instead of giving him the opportunity to say: “that’s not the same thing.” etc. Instead of trying to formulate a parallel argument that user of the target-argument will reject anyway, it is better to use a method that forces the proponent of an argument to explicitly claim which features *he* regards as relevant. This works of course only when the target-argument was deductive in the first place, if not, your interpretation was a just a straw man to begin with.

However, it is often the case that arguments in everyday conversation are so vague that not even the proponents of them has made up their minds of their exact structure. Thus your interpretation as an opponent will influence how the chain of argumentation will continue because it will influence how the proponent will perceive his own argument.

#### 4 Refutation by *Dialectical Parallel Argument*

Refutation by parallel argument is argument by analogy applied to arguments, where there is an analogical relation between two arguments by which they should be rejected or accepted together. Since one of the arguments, the parallel-argument is clearly flawed the argument which is the target-argument must be flawed as well. Of course, it may work the other way; the target-argument may be a sound argument since the parallel-argument is. Thus, a parallel argument can instead of refuting target-argument instead be used to vindicate it.

The utilization of parallel argument can be deployed in many different ways.<sup>62</sup>

However, so far the context has been *undialectical*. That is, the parallel-argument is addressing an audience which need not include the author of the target-argument. I will here show how this kind of argument works as a method of refuting argument within a dialectical context—the parallel-argument will be working off the commitments of the author of the targeted argument. In that context the refutation by parallel argument will be a type of valid *ad hominem* arguments. Valid *ad hominem* arguments are arguments based on the premises accepted by the opponent which are not necessarily accepted by the proponent of the argument. The proponent must hold the argument to be valid but need not consider it sound. To clarify how the method of refutation by parallel argument works in a dialectical context I will employ the concept of *a framework of a reasoned dialogue*, which is taken from Walton and Krabbe.<sup>63</sup> It is basically a communicating dialogue with at least two rational agent exchanging speech acts. The speech acts may consist of questions and replies as well as of assertions. There are many types of reasoned dialogues, for example, persuasion dialogues, information-seeking dialogues, inquiry dialogues and so on.<sup>64</sup> A quarrel would be an example of an “unreasoned” dialogue, and something which is of no concern here.

<sup>62</sup> Guarini (2004). Marcello Guarini discusses different ways of using the construction of parallel arguments in a recent article that may be of interest for the reader of this article.

<sup>63</sup> Walton and Krabbe (1995), Walton (1992), see also: Walton (1988, pp. 239–241; 1993, 1996, pp. 145–146; 1989, pp. 47–49). The version here is my own modified version of what a reasoned dialogue is.

<sup>64</sup> See Walton (1992) for more types of dialogues and a discussion about them.

The type of reasoned dialogues which is most pertinent for refutation by dialectical parallel argument is the *critical discussion*, which is a type of persuasion dialogue. The *persuasion dialogue* is an exchange of speech acts where at least one party tries to persuade another party to accept a thesis.

It consists of at least two sides where one side wants to convince the other side to accept a standpoint that it has expressed doubts about. Each side has a commitment-set, which is a set of propositions and principles to which each side is committed. The participants in a persuasion dialogue also have a number of criteria and principles that regulate when one of the parties should change this commitment-set. For example, one simple rule is that when a participant asserts a proposition, it goes into her commitment-set. This rule is what makes the dialogue a *reasoned* dialogue. Finally, there is an objective for the dialogue that can be described as a successful completion or resolution of the dialogue.<sup>65</sup>

A resolution of the dialogue is achieved when the opposing parties come to an agreement whether to accept the chosen controversial proposition into the commitment-set or not. The party asserting a controversial proposition is called the *proponent* and the party that needs to be convinced before accepting the controversial proposition is called the *opponent*. The natural exchange between a proponent and an opponent in a persuasion dialogue where the method of refutation by parallel argument is employed should be that the proponent asserts a controversial thesis and tries to convince the opponent with the target-argument. The opponent responds with a parallel argument that may or may not succeed in refuting the target argument. The concept of reasoned dialogue with commitment-sets is necessary for a dialectical parallel argument, since the parallel-argument gets its refutation strength in virtue of the *commitments of the proponent*.

The persuasion dialogue is how a rational discourse ideally should be in an argumentative and dialectical context. It is easy to see how valid argument *ad hominem* works in a persuasion dialogue. Valid *ad hominem* arguments would be arguments based on the premises accepted by the opponent but which are not necessarily *accepted* by the proponent of the argument. The proponent must hold the argument to be valid but needs not consider it sound. It is tempting to believe that refutation by dialectical parallel argument refutes the target-argument for the proponent by showing that his acceptance of the target-argument as a sound argument is *inconsistent* with his own commitments. This is in a sense true but only in an indirect way; let us look at an example:

Proponent: Marijuana should be legalized, because it is not more dangerous than alcohol, which is legal.

Opponent: But you have earlier argued that all drugs that cause shortened life span should be forbidden.

In this example the opponent points out an inconsistency in the proponent's commitment-set. But this is not an example of a valid *ad hominem* dialectical parallel argument like this:

<sup>65</sup> Walton (1988, p. 239).

Proponent: Marijuana should be legalized, because it is not more dangerous than alcohol, which is legal.

Opponent: That's like arguing that driving without a seat belt should be legalized, because it is no more dangerous than hang gliding, which is legal.

Assuming that the opponent for independent reasons knows that the proponent thinks that seat belts should be enforced, the proponent rejects the parallel-argument although he accepts the target-argument in his commitment-set. The premises of the parallel argument must be part of the proponent's commitment-set as well as the negation of its conclusion. In this way the parallel argument of the opponent will reveal that the proponent is inconsistent when he accepts the target-argument as a reason for the controversial proposition.

Bruce Waller has in a recent article asserted that argument by 'deductive analogy' has the following form:<sup>66</sup>

1. We both agree with case *a*
2. The most plausible reason for believing *a* is the acceptance of principle *C*
3. *C* implies *b* (*b* is a case that fits under principle *C*)

- 
4. Therefore, consistency requires the acceptance of *b*.

However this is wrong, refutation by parallel argument (which would count as 'deductive analogies') does not work this way. *Inconsistency* can mean different things, it can mean that contrary or contradictory statements have been asserted or in a more loose sense it can mean that an agent is *inconsequent*. That is, the agent is not consistent in his application of principles or argument and he does not follow the analogical inferences of his argumentation. It is in this sense that refutation by dialectical parallel argument works, they point out that an agent is inconsequent. Inconsequence is not the same as a contradiction in a commitment-set. When one points out a contradiction or ordinary inconsistency then one point out that a proposition is contrary or contradictory with itself or another member of the commitment-set. An inconsequence revealed by the method of parallel argumentation is rather a *violation of the principle of relevant similarity*. The principle of relevant similarity states that:

If *x* and *y* are relevantly similar without any relevant difference, then the same moral, epistemic, rational or aesthetic judgement apply to *x* as to *y* and vice versa.<sup>67</sup>

A reasonable understanding of relevant similarity without relevant difference is implied by analogy. Thus, another way of formulating the principle would be:

---

<sup>66</sup> Waller (2001, p. 201).

<sup>67</sup> The principle is taken from: Levis (1991, 1992). There is a slight modification; the formulation "relevantly similar" could be interpreted either as including or excluding the possibility of being relevantly different in some aspect at the same time. Levis use means that two object cannot be relevantly similar if there is any relevant difference between them. In order to avoid confusion I have modified the formulation as to make it more exact.



If  $x$  and  $y$  are analogous then the same moral, epistemic, rational or aesthetic etc. judgements apply to  $x$  as to  $y$  and vice versa.<sup>68</sup>

Thus, when two arguments are parallel then it also means that they are relevantly similar in every relevant aspect, and if one of them is given the judgement “should not be part of my commitment-set” then so must the other. If the proponent only has one of the arguments in his commitment-set then the proponent has violated this basic principle of reasoning and is *inconsequent*. Thus, if an agent is to be consequent (consistent with the principle of relevant similarity) then he must give the same judgement of any argument parallel to the argument he is committed to use. Dialectical parallel argument then works by inferring from an argument (the target-argument) via analogical inference to the parallel-argument (The Analogue) whose premises, but not conclusion, are part of the proponent’s commitment-set. In virtue of the content of the commitment-set the proponent is committed to reject the target-argument and admit that his argument failed to justify the controversial proposition. The degree of the strength of the refutation of this is dependent on which propositions the proponent are committed to. Consider the hypothetical example:

There is a reasoned dialogue whether active euthanasia is right or wrong. The proponent asserts that active euthanasia is wrong since one can never know whether the life of a person is really not worth living. One can never guarantee that the patient in the future will not find life worth living. The opponent rhetorically replies: the same argument shows that one should reject passive euthanasia as well; the doctors who are letting a patient die can never guarantee that the patient in the future does not want to live.

In order for this refutation by parallel to be a valid *argument ad hominem* at least two conditions must be met. The opponent must correctly assume that the proponent has accepted passive euthanasia as part of his commitment-set and that they agree on what ‘passive euthanasia’ means.<sup>69</sup> If the opponent’s assumption about the proponent’s commitment-set is correct, then the proponent is inconsequent since he violates the principles of relevant similarity. The only way for the proponent to avoid the inconsequence is either to reject the argument altogether or revise his commitment-set and reject passive euthanasia as well as active euthanasia. However, even if a dialectical parallel argument is not reducing the target to a contradiction with itself, it might show that the conclusion of the parallel argument is contrary or contradictory to the conclusion of the target-argument. In

<sup>68</sup> Some qualifications may be needed if one wants the principle to reflect the distinction between same-domains-analogies and different-domains-analogies. If it would concern a different-domain-analogy the principle would state that: If  $x$  and  $y$  are analogous then the *corresponding* moral, epistemic, rational or aesthetic etc. judgement apply to  $x$  as to  $y$  and vice versa.

<sup>69</sup> For example, one definition could be “non-intentionally bringing about a persons death by withholding treatment that could prolong the person’s life with the intention of shorten a patients suffering which makes life not worth living”. Another definition might be: “withholding aggressive treatment that would serve no useful purpose in the situation and might in fact be harmful.” It is only if the proponent and opponent agree on the first definition that the argument would work, otherwise would not the proponent accept the analogy between active and passive euthanasia.

such a case, the agent who advanced the target-argument would be inconsequential if he did *not* accept contrary or contradictory propositions. That would be an untenable position indeed, but is still not the same as pointing out a contradiction. A hypothetical example may explain:

In a reasoned dialogue the proponent argues for the presumption of materialism: Both materialists and non-materialist generally agree on the claims of ordinary experience, while the non-materialist asserts something *more* than the agreed ordinary experience. Thus, the burden of proof is upon anyone who claims that there exists something *more* than the pure matter of ordinary experience, to show that the *further* claim is justified. The opponent rhetorically replies: Both materialists and non-materialist generally agree on the claims of ordinary experience, while the materialist additionally asserts the proposition that there exist nothing more than the agreed ordinary experience. Thus, the burden of proof is upon anyone who claims the further belief that nothing more than the pure matter of ordinary experience exists.

The two arguments are parallel and prove *contrary* propositions; both materialists and the non-materialists should have the burden of proof.<sup>70</sup> If the proponent does not accept the parallel-argument, then he is inconsequential and if he does, then he is contradicting himself! Thus, refutation by parallel argument does not work by pointing out that one must accept a principle on the pain of contradicting oneself in a strict logical sense.

Another important distinction is between *actual* inconsequence and *presumed* inconsequence. Actual inconsequence occurs when only one of two parallel arguments is explicitly accepted as part of the commitment-set, and this is what inconsequence has meant so far. Presumed inconsequence occurs when the Analogue has a conclusion or structure that the proponent considers more certain to be false, than he considers the premises or structure of the target to be true, *upon reflection*.

Because of the limitation of human cognitive powers, a commitment-set of an agent cannot hold all propositions, thus inconsequence may not be explicit before the agent has considered it. Secondly, the participants in a reasoned dialogue rarely have full knowledge of the commitment-sets of the other party. The party who advances the parallel-argument cannot always, with certainty, know whether both the premises and the negation of the conclusion of the Analogue are part of the commitment-set of the other party. Instead, his use of the Analogue is based on what he himself considers unacceptable and/or *assumptions* considering what the other party will consider unacceptable. Therefore parallel argument mostly points out a presumed inconsequence.

A successful dialectical parallel argument then must fulfil the ordinary conditions for arguments given in Sect. 3.1 with the qualification that the conditions are fulfilled from the perspective of the commitment-set of the proponent.

<sup>70</sup> It is assumed that only one of two opposing sides could have the burden of proof. See Cargile (1997) for more on this, especially p. 59.

However, that refutation by parallel argument does not reveal a strict self-contradiction is not a reason against the effectiveness of the method. The principle of relevant similarity *is* a basic principle in rational argumentation; in a sense it is even more necessary than the law of non-contradiction. It is possible to reason without accepting the *universal* law of non-contradiction;  $\forall x \sim (Px \ \& \ \sim Px)$  at least if we are to believe paraconsistent logicians. But this cannot be done without the principle of relevant similarity. Consider a reasoned dialogue where the proponent uses an argument which clearly is analogous (relevantly similar in every relevant aspect) with another argument which both the proponent and opponent agreed was, for example, circular reasoning. The reply of the proponent is: “well you are right that my argument is relevantly similar without any relevant difference with the parallel-argument (which is circular), but that is no reason to judge my argument as unacceptable circular reasoning” and then the proponent just continues to assert his argument. No rational discussion is possible if one accepts that relevantly similar arguments or states of affairs nevertheless can be given different judgements. In that sense, the principle of relevant similarity is more necessary than the *universal* law of non-contradiction.<sup>71</sup>

## 5 Summary and Conclusion

Refutation by parallel argument is a method of refuting arguments which refutes an argument by presenting a parallel argument which is clearly flawed. Since the arguments are parallel and analogous they must be accepted or rejected together. In general the parallel argument usually has obviously true or plausible premises but an obviously untrue or implausible conclusion. However, this does not need always to be the case; a parallel argument may show that a premise is unacceptable or untrue. Sometimes the parallel argument can refute the target-argument even when it has a valid structure and its overt premises are true. In such cases the parallel argument shows that some implicit premise must be false even if one cannot make the false premise explicit. Sometimes the flaw of both the target argument and the parallel argument is revealed only when they are taken in juxtaposition. Refutation by parallel argument is based upon argument by analogy and assumes an analogical relation between the target-argument and the parallel-argument. Refutation by parallel argument has both advantages and disadvantages compared to the other methods of refuting arguments. It can have both pedagogical, epistemological as well as dialectical advantages. The method works both in a dialectical context and in an undialectical context. In the dialectical context the concept of inconsequence and

<sup>71</sup> The acceptance of the *minimal* law of non-contradiction “not every statement is true” is however, more basic than the principle of relevant similarity, since it is necessary in order to even understand the principle of relevant similarity. What is further notable is that the principle of relevant similarity *cannot* be given a counterexample. Levvis (1991, 1992) argues that the principle of relevant similarity is impossible to counterexample because it is a biconditional. This claim presupposes value realism and could not be used against non-cognitivists. However, if we discuss the principle in the context of reasoning in general, cognitivism seems to be a basic presupposition and any objection to that would be self-refuting.

reasoned dialogue is important. If a participant of a reasoned dialogue only accepts the target-argument as a good argument, while rejecting the parallel-argument then he is inconsequent. That is, one violates the principle of relevant similarity, a principle more basic than the *universal* law of non-contradiction in rational argumentation.<sup>72</sup>

## References

- Barker, S.F. 1989. Analogy in Hume's DIALOGUES. *Informal Logic* XI(3): 173–184.
- Blair, J.A. 1992. Premissary relevance. *Argumentation* 6(2): 203–217.
- Blair, J.A., and R.H. Johnson. 1987. Argumentation as dialectical. *Argumentation* 1(1): 41–456.
- Brown, W.R. 1995. The domain constraint on analogy and analogical argument. *Informal Logic* 17(1): 89–100.
- Cargile, J. 1997. On the burden of proof. *Philosophy* 72: 59–83.
- Castaneda, H.-N. 1984. Philosophical refutations. In *Principles of philosophical reasoning*, ed. J.H. Fetzer. New Jersey: Rowman & Allanheld.
- Cohen, J.L. 1986. *The dialogue of reason—an analysis of analytical philosophy*. Oxford: Clarendon Press.
- Copi, I.M. 1990. *Introduction to logic*, 8th ed. New York: Macmillian Publishing Company.
- Copi, I., and K. Burgess-Jackson. 1992. *Informal logic*, 2nd ed. New York: Macmillian Publishing Company.
- Damer, E.T. 2001. *Attacking faulty reasoning—a practical guide to fallacy-free arguments*. Wadsworth: Thomson Learning.
- Davies, T.R. 1988. Determination, uniformity, and relevance: Normative criteria for generalization and reasoning by analogy. In *Analogical reasoning—perspectives of artificial intelligence, cognitive science, and philosophy*, ed. D.H. Helman, 227–259. Dordrecht: Kluwer.
- Facione, P. 1976. Counterexamples and where they lead. *Philosophy and Phenomenological Research* 36: 523–530.
- Fieser, James. 2006. *The probability argument for the existence of God and Alien Pyramid Builders*. <http://www.utm.edu/staff/jfieser/vita/research/alien.htm> (published 9/14/2006, viewed 080519).
- Govier, T. 1985. Logical analogies. *Informal Logic* VII(1): 26–33.
- Govier, T. 1989. Analogies and missing premises. *Informal Logic* 11(3): 141–152.
- Guarini, M. 2004. A defence of non-deductive reconstructions of analogical arguments. *Informal Logic* 24(2): 153–168.
- Hitchcock, D. 1992. Reasoning by analogy: A general theory. In *The generalizability of critical thinking: Multiple perspectives of an educational ideal*, ed. S.P. Norris. New York: Teachers College press.
- Huemer, Michael. 1998. *A direct realist account of perceptual awareness*. New Brunswick, New Jersey: State University of New Jersey.
- Hugon, P. 2008. Arguments by Parallels in the Epistemological Works of Phya pa Chos kyi seng ge. *Argumentation* 22: 93–114.
- Juthe, A. 2005. Arguments by analogy. *Argumentation* 19: 1–27.
- Kilhbom, U. 2002. *Ethical particularism, an essay on moral reasons*. Acta Universitatis Stockholmiensis, Stockholm Studies in Philosophy 23, Almqvist & Wiksell International Stockholm.
- Krabbe, Erik. 1996. Can we ever pin one down to a formal fallacy? In *Logic and argumentation*, ed. Johan van Benthem, Frans H. van Eemeren, Rob Grootendorst, and Frank Veltman, 129–141. North-Holland, Amsterdam, etc. (Koninklijke Nederlandse Akademie van Wetenschappen, Verhandelingen, Afd. Letterkunde, Nieuwe Reeks, deel 170).
- Levvis, G.W. 1991. The principle of relevant similarity. *Journal of Value Inquiry* 25: 81–87.
- Levvis, M.A. 1992. The roots of relevant similarity. *Journal of Value Inquiry* 26: 289–291.
- Mackie, J.L. 1983. *The miracle of theism*. Oxford: Oxford University Press.
- McGe, V. 1985. A counterexample to Modus Ponens. *The Journal of Philosophy* 82(9): 462–471.

<sup>72</sup> The anonymous reviewers are thanked for their comments on this paper.

- Schlesinger, G. 1984. The method of counterexample. In *Principles of philosophical reasoning*, ed. J.H. Fetzer. New Jersey: Rowman & Allanheld.
- Sider, Ted. 2008. *Metaphysics*. [http://tedsider.org/teaching/415/HO\\_dualism.pdf](http://tedsider.org/teaching/415/HO_dualism.pdf) (viewed 080519).
- Smith, J.W. 1986. *Reason, science and paradox*. New Hampshire: Croom Helm Ltd., Provident House.
- Smith, J.W. 1988. *Essays on ultimate questions: Critical discussions of the limits of contemporary philosophical inquiry* (Avebury Series in Philosophy).
- Theron, S. 1997. Argument forms and argument from analogy. *Acta Philosophica* 6(2): 303–326.
- Thomson, J.J. 1971. A defense of abortion. *Philosophy and Public Affairs* 1: 47–66.
- Waller, B.N. 2001. Classifying and analyzing analogies. *Informal Logic* 21(3): 199–218.
- Walton, D.N. 1988. Burden of proof. *Argumentation* 2: 233–254.
- Walton, D.N. 1989. *Informal logic—a handbook for critical argumentation*. Cambridge: Cambridge University Press.
- Walton, D.N. 1992. Types of dialogue, dialectical shifts and fallacies. In *Argumentation illuminated*, ed. F.H. van Eemeren, R. Grootendorst, J.A. Blair, and C.A. Willard, 133–147. Amsterdam: SICSAT.
- Walton, D. 1993. Commitment, types of dialogue, and fallacies. *Informal Logic* XIV(2&3): 93–103.
- Walton, D.N. 1996a. *Argumentation schemes for presumptive reasoning*. New Jersey, Mahwah: Lawrence Erlbaum Associates, Publishers.
- Walton, D. 1996b. *Arguments from ignorance*. Pennsylvania State: University Press.
- Walton, D.N., and E.C.W. Krabbe. 1995. *Commitment in dialogue—basic concepts of interpersonal reasoning*. New York: State University of New York Press.
- Whaley, B. 1998. Evaluations of rebuttal analogy users: Ethical and competence considerations. *Argumentation* 12: 351–365.
- Wilson, Bryan. 1988. On a Kantian argument against abortion. *Philosophical Studies* 53(1): 119–130.
- Woods, J., and B. Hudak. 1989. By parity of reasoning. *Informal Logic* XI(3): 125–139.