

Analogical Arguments, International Encyclopedia of Ethics, Oxford, Blackwell, 2013, 232-237.

Analogical reasoning works by a process of comparison between two cases that appear to be similar, and where some particular proposition appears to be true in the one case, called the source case. A proposition is an entity that can be true or false, and is expressed in an affirmative sentence in a language. The conclusion drawn in analogical reasoning is that the same proposition that appears to be true in the source case is also true in the other case, called the target case. Because of the analogy between the two cases there is a transfer between the two cases so that some proposition that appears to be true in the source case is drawn as a conclusion in the target case. Analogical reasoning is vitally important in ethics, even though traditionally it was for a long time held in disrepute after being discredited by Pascal (*see CASUISTRY*). However, the new casuistry of Jonsen and Toulmin (Jonsen and Toulmin, 1988) has been employed successfully in bioethics. Reasoning from one case to another is also centrally important in Anglo-American law, where reasoning by precedent from one case to another depends on analogical reasoning (Ashley, 1988). It is closely related to a field of artificial intelligence called case-based reasoning (Ashley, 2006), known as CBR in computer science.

Analogical reasoning takes two basic forms. The first form has a structure represented by the following argumentation scheme (Walton, Reed and Macagno, 2008, 315), where the variable *A* is a placeholder for a proposition.

Similarity Premise: Generally, case *C1* is similar to case *C2*.

Base Premise: *A* is true (false) in case *C1*.

Conclusion: *A* is true (false) in case *C2*.

Where there is a similarity between two cases, *A* holding in the one case can shift a weight of evidence to make plausible the claim that *A* also holds in the other case (*see REASONS*). In such a case, then argument from analogy can be reasonable, and can hold tentatively, subject to critical questioning and further evaluation. However, argument from analogy is defeasible, and can in some instances it can be misleading and even fallacious, as the tradition of informal fallacies warns us (Hamblin, 1970). One problem is that the similarity between the source case and target case can be so striking in some instances, at least on first impression, that it may make the respondents to the argument jump directly to the conclusion while ignoring other relevant evidence.

One of the most famous cases of argument from analogy in ethics is the hypothetical violinist case, used by Thomson (1971, 48-49) to argue that abortion (*see ABORTION*) is permissible.

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.”

How the argument from analogy works in this case can be explained by reference to the argumentation scheme. When the case is initially presented to a respondent, he or she is invited to draw the conclusion that the person in the source case has the right to unplug himself from the violinist. This statement fits the base premise of the argumentation scheme for argument from analogy. Thomson uses the example of the violinist to try to persuade a respondent to accept the conclusion in the source case that anyone in the position of the person attached the violinist may permissibly pull the plug, even though the violinist will die as a result. Let’s assume that the respondent takes this premise as plausible in the source case. This premise then fits together with the similarity premise to enable the conclusion to be drawn in the target case that a pregnant woman has the right to terminate her pregnancy. This conclusion now has some evidential weight behind it, whether the respondent accepts it or not. It can be rejected, but not without offering some reason. So by the transfer process of the argument from analogy, the conclusion recommended in the target case to the respondent is that a pregnant woman may terminate her pregnancy, even though the fetus will die as a result. Generalizations are implicitly involved in the reasoning as shown in figure 1.

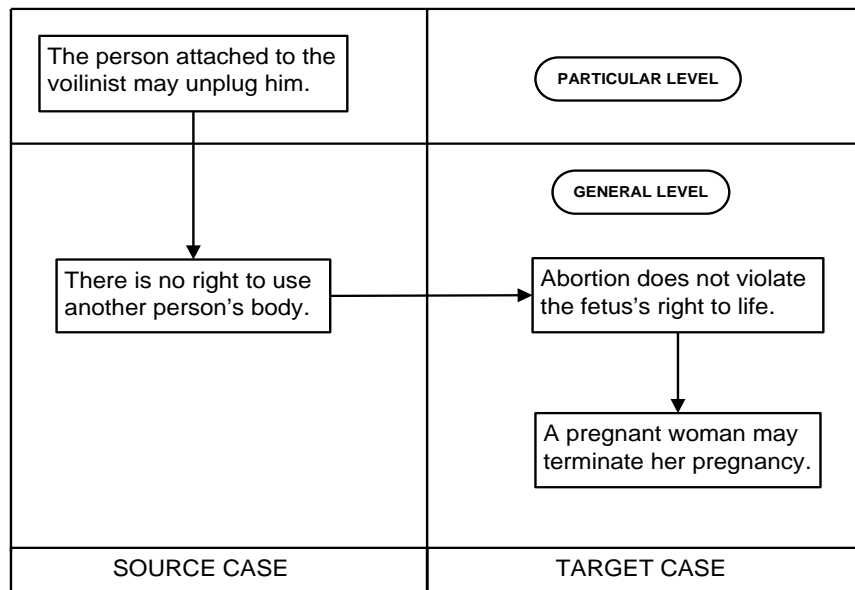


Figure 1: The Transfer Effect from Source Case to Target Case

Thomson’s general claim supported by the source case is that there is no right to use another person's body. The reasoning in the source case is that the person who unplugs the violinist does not violate his right to life, because the violinist has no right to the use of that other person’s body. By analogy, Thomson argues in the target case that abortion does not violate the fetus's right to life but merely deprives the fetus of the use of the pregnant woman's body, something which the fetus has no right to.

This argument meets the requirements of the scheme for argument from analogy, and therefore has some plausibility or tentative standing. The particular example in the source case suggests with some plausibility that one person does not have the right to use another person's body. Also, the violinist case does seem to be similar to the case of a woman considering an abortion. By examining both cases we can pinpoint a number of respects in which they are similar. A person has another person attached to his body in a way that makes the other person an encumbrance that will hinder first person's daily activities. The two persons are attached in such a way that the one will die if removed from the other, and the other can only survive when removed after a period of nine months. Another similarity is that the person bearing the encumbrance can make a choice about whether to have it removed or not. The two cases have these features in common. It would appear then that those who are inclined to reject the argument need to critically question it, or give some grounds for reasonably doubting its acceptability, as opposed to simply rejecting it without finding any weaknesses in it.

Examining these aspects of the argument takes us to a second form of argument from analogy (Guarini, 2004, 161). In this scheme, *a* and *b* are individual objects.

Premise 1: *a* has features  $f_1, f_2, \dots, f_n$ .

Premise 2: *b* has features  $f_1, f_2, \dots, f_n$ .

Conclusion: *a* and *b* should be treated or classified in the same way with respect to  $f_1, f_2, \dots, f_n$ .

This scheme is closely related to case-based reasoning (CBR), a technology used in artificial intelligence to solve the problem posed in a given case by drawing on similar cases retrieved from a database of past cases. The solution to the problem posed in the given case is made possible by matching it to the retrieved cases by analogies to them. CBR matches a pair of cases by isolating specific respects in which one case is similar to or dissimilar to another. These specific respects are called factors, or sometimes dimensions, depending on which CBR technology you are using (Ashley, 2006). As we move to the second stage of dealing with an argument from analogy, such factors come into play.

Respondents to Thomson's argument are typically inclined to concede the base premise, for it generally seems reasonable to people that the individual connected to the violinist is under no obligation to retain the connection. The weakest point of the argument seems elsewhere. It seems more promising to question the argument from analogy by casting doubt on the similarity premise by arguing that there are significant differences between the violinist case and cases of a mother aborting a fetus. An obvious objection is that the argument extends only to cases of abortion with the pregnancy was caused by rape (see RAPE). In the violinist case, the person was kidnapped, and, we are told, did nothing to cause the violinist to be attached to him. The difference resides in the fact that in typical cases of abortion, the pregnant woman had intercourse voluntarily (see FREE WILL). Another specific respect in which the two cases are different is that the fetus is the pregnant woman's child whereas the violinist is a stranger, and not a blood relation (see FAMILY) to the person in the example.

When the argument is first put forward it has the structure of the first version of the scheme for argument from analogy. But later during the sequence, as critical questions are posed and counter-

arguments are put forward, and as specific respects of comparison come into play, the second version of the scheme is the structure that the argumentation fits. CBR is built on a sequence that is comparable. HYPO is a case-based system that uses a method called three-ply argumentation (Ashley, 1988, 206). In the first step, an argument for one side is put forward that matches the past case with the desired outcome and that also matches the case at issue. In the absence of a response, this argument implies that the side putting forward this move should win the dispute. The justification takes the form of an analogy. At the second step, the other side can reply by finding a counterexample, a case that has as many dimensions as the opposite outcome, or by distinguishing a case. Distinguishing a case means citing dimensions, specific respects present in the case at issue that are absent in the case it is compared to. This move is a rebuttal to the argument of the first move. In the third step, the first party has an opportunity to rebut the distinction.

Now we can see how the two schemes for argument from analogy are connected to each other during the process of argument and counter-argument. At the first stage, when the argument is put forward by its proponent, if the similarity between the two cases appears to fit them together, the argument has an initial standing, and cannot be refuted without offering a reason. At this stage the first scheme is applicable. However at the next stage, critical questioning can raise doubts or counter-arguments that can be brought forward. During this part of the sequence, the proponent and the opponent go into a dialogue sequence making detailed claims and counter-claims about the specific respects in which the two cases are similar or different. At this stage the second scheme is applicable.

This process of argument and counterargument gives us insight into the ways in which our confidence in any particular analogical argument can be attenuated but not entirely rebutted. The first point to be made is that there are critical questions attached to the argumentation scheme for argument from analogy (Walton, Reed and Macagno, 2008, 315).

CQ<sub>1</sub>: Are there differences between C<sub>1</sub> and C<sub>2</sub> that would tend to undermine the force of the similarity cited?

CQ<sub>2</sub>: Is A true (false) in C<sub>1</sub>?

CQ<sub>3</sub>: Is there some other case C<sub>3</sub> that is also similar to C<sub>1</sub>, but in which A is false (true)?

Asking any one of these critical questions shifts a burden of proof onto the arguer who has put forward an argument from analogy to respond appropriately to the question. If no such response is forthcoming, the argument may default. However the asking of any one of these critical questions can be supported by evidence that backs it up, making the critical question into a counter-argument. The third critical question can in this way be extended into a counter-argument for attacking an argument from analogy by the strategy of producing a counter-analogy, an opposed argument from analogy that supports a conclusion that is the opposite of the conclusion of the original argument. For example, then-President Ronald Reagan made a speech in Congress to try to get funds for the Contra rebels in Nicaragua by comparing them to American patriots who fought in the war of Independence. The speaker opposed to funding the Contras compared the situation in Nicaragua to the war in Vietnam. In this instance, the speaker supported his asking of critical questions CQ<sub>3</sub> by offering evidence to back it up. This offering of

additional evidence in effect amounts to the offering of a counter-argument of the type called argument from counter-analogy. This kind of ethical argumentation can go back and forth in the format of three-ply argumentation Ashley (1988, 206) holds to be characteristic of case-based reasoning in law.

Argument from analogy plays some role in just about every imaginable approach to moral reasoning, for example in applying ethical principles to particular cases and arguing back the other way from cases to general principles. Use of analogical reasoning is clearly more central however in the contemporary version of casuistry advocated by Jonsen and Toulmin. Questions about the adequacy of this approach have been raised by critics who claim that reasoning by analogy in the casuistry model ignores more forward-looking considerations of taking the consequences of actions into account. In this spirit, Richard Posner has criticized the common law on the grounds that it is an approach driven largely by analogy, and for that reason tends to ignore pragmatic results. The response to this criticism is to point out that argument from analogy is only one of many defeasible forms of argument used in ethical reasoning. Another form is represented by the following two argumentation schemes for argument from consequences (Walton Reed and Macagno, 2008, 332).

#### Argument from Positive Consequences

Premise: If A is brought about, good consequences will (may) occur.

Conclusion: A should be brought about.

#### Argument from Negative Consequences

Premise: If A is brought about, then bad consequences will (may) occur.

Conclusion: A should not be brought about.

The general issue requiring comment is whether and to what extent analogical reasoning on its own can or should drive moral argumentation. The observation that other forms of argument also need to play important roles in many of the most common instances of cases of ethical deliberation suggests that analogical reasoning needs to be counterbalanced against these other forms of reasoning, for example arguments from positive and negative consequences.

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#### Cross-References

Abortion; Casuistry; Family; Free Will; Rape; Reasons

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#### Readings

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