

Analogy and Missing Premises*

TRUDY GOVIER *University of Calgary*

I have in several different treatments of analogy claimed that analogies are a distinct type of argument and should not be regarded as a species of either induction or deduction. I've distinguished between inductive analogies and *a priori* analogies, but have resisted interpretations of analogy arguments which would render them either as requiring generalizing inductions or as presuming an implicit premise which, when added, would render them deductively valid.¹

My views on analogy have been influenced by those of John Wisdom who, in his unpublished Virginia Lectures, maintained that what he called arguments by case, or case-by-case reasoning, is the most basic type of reasoning.² But Wisdom's views are neither standard nor well-known. Many people are hesitant about accepting analogy as a distinct type of argument. Some go even further, not wishing to accept arguments based on analogy as being arguments at all. Susan Stebbing, for instance, once claimed that so-called arguments by analogy were merely rhetorical devices.³

Few today are likely to adopt the view that arguments by analogy are not arguments at all. But the idea that analogies are not a distinct type of argument does seem plausible to many people. There are several variations on this theme. Analogies can be regarded as all being inductive arguments, as all being implicitly deductive arguments, or as either implicitly inductive or implicitly deductive, depending on the case. It is the third view which is addressed here.

Some analogies give empirical evidence about an analogue instance, claim a primary

subject instance is similar to the analogue in various respects, and then reach a conclusion predicting further similarities. Such arguments strike many people as having an inductive generalization as an unstated premise, and as thereby embodying an implicit enumerative induction. Thus they might wish to model an inductive analogy as:

1. A has features x,y,z.
2. B has features x,y,z.
3. A has feature f.
- 4*. Most things which have features x,y,z, have feature f.
5. Thus, probably, B has feature f.

The fourth premise is starred because, the way most arguments by analogy are worded, it would not be explicit in the argument. It would be unstated. It could be regarded as something inferred from premises (1) and (3)—in what would amount to a weak inductive generalization. Or it might be regarded as a premise known on independent grounds.

Following Wisdom and Barker, I use the term "inductive analogy" for those arguments by analogy in which the analogue used is a real (that is, non-hypothetical) instance, and the features it is said to have are attributed to it on the basis of observation or other empirical means.⁴ Inductive analogy can be deemed to require an inductive generalization, one which will be implicit. An objection to this approach to inductive analogy is that typically when analogies are used such inductive generalization are not known or even reasonably established. If we regard the inductive generalization as something which

is supposed to be established on the basis of the analogue, we uncharitably interpret the inductive analogy as an argument incorporating a hasty generalization—typically a generalization from a single case.

S.F. Barker has argued quite convincingly that there is no good reason to interpret inductive analogies in this way. He said:

...this interpretation misleadingly suggests that the singular conclusion is no more probable than the inductive generalization, whereas actually, the singular conclusion would be more probable than the corresponding generalization.⁵

The present paper does not treat the subject of inductive analogy in any detail—except indirectly and by implication.

My present concern is with another type of analogy which we can call logical or *a priori* analogy.⁶ The difference between a *priori* analogy and inductive analogy, as I'm employing the terms here, is that in an *a priori* analogy, the analogue need not be a real case. It can be entirely hypothetical and may, in fact, be positively fanciful. What features the analogue is observed to have are not the issue, nor is it an issue how the primary case in actual fact might compare and contrast with the analogue. The analogue is constructed; the issue is whether, as constructed, it has features which show the correctness of a certain decision with regard to the primary case.

Philosophers seem especially fond of *a priori* analogies. Remember Judith Jarvis Thompson's desperate violinist hooked to another human body for life support? Thompson invented this analogy to try to establish that people do not in general have an obligation to make extensive personal sacrifices to save the lives of others who suddenly become dependent on them—even granting the assumption that these others are full-fledged, deserving persons. Thompson sought to apply the same conclusion to the moral dilemma of abortion, arguing that even if the fetus is a human being, the pregnant woman is not morally obligated to in-

convenience herself to keep it alive.⁷ That the violinist dilemma is entirely hypothetical does not undermine the argument. There would be no sense in any claim that the hypothetical case is as a matter of fact like an abortion dilemma, for there is no matter of fact about it. The point is that if there were such a case, there would be no obligation to support the other life; if the abortion situation is relevantly similar to this violinist case, then there is no obligation to support the life of the fetus either.

With inductive analogies, on the other hand, the reality and empirical detail of the analogue matter. The conclusion predicts a result for the primary subject. Consider, for instance, the oft-cited inductive analogy between the abolition of slavery and the abolition of war.⁸ Many who believe that the abolition of war is possible and can be achieved by citizen action and widespread reform use the analogy of the abolition of slavery to support their case. It is crucial to such an argument to claim that slavery has, indeed, been abolished and that its abolition was in large part the result of citizen action in reforming social movements. In addition, it matters how similar slavery and war are, as social institutions, in those regards relevant to the nature and power of the citizen groups which work for change and reform and type and strength of institutional resistance to reforming efforts. The analogy between abolishing slavery and abolishing war is put forward as an inductive analogy. In such arguments the exact empirical features of cases matter, because the argument, in effect, asks us to accept the likelihood or possibility of a phenomenon in virtue of its similarities to another situation. An inductive analogy is basically predictive in form.

If we accept the conclusion of an *a priori* analogy we do not, in effect, *predict* that a feature will or may belong to the primary subject. Rather we *decide* to describe or treat the primary subject in some way. The basis of *a priori* analogies is an appeal to handle relevantly similar cases in relevantly

similar ways. The merits of such arguments don't depend on the truth of empirical observations about the analogue case and the conclusion isn't one which could someday be conclusively verified or falsified by empirical observation. Hence the term "*a priori* analogy". Wisdom said the sort of reasoning used in such arguments was "from cases" or "case by case". Jerome Bickenbach, in a doctoral thesis on the subject, called it "reflective reasoning".⁹

Consider the following general model of an *a priori* analogy. Here, as above "A" is used to refer to the analogue and "B" to the primary subject. The small letters x,y,z are used to refer to specific features which A and B share. In this model, these features are explicitly mentioned and represented in a primitive formal schema—a feature which I now explicitly mention, because its presence or absence may turn out to be important. In many real arguments it is said, or, more typically, implied, only that B is just like A—the specific details of the comparison aren't articulated. Note that the conclusion is represented slightly differently in this modelling than it is in the inductive analogy. The slight difference is intended to reflect the fact that it is not a prediction or empirical estimation which is at issue but a decision—typically one about what to do or what to say.

Articulated Model

1. A has x,y,z.
2. B has x,y,z,
3. A is W.
4. Therefore, B is W.

The simpler model, leaving features in which A and B are deemed relevantly similar implicit, would be

Non-specific Model

1. A is W.
2. B is 'just like' A.
3. Therefore, B is W.

The latter sort of argument is often used in

logic itself; if argument A is invalid and argument B is "just like" it, then B is invalid too. The point would seem to be established entirely conclusively. But of course no two argument or cases are ever *just* alike. What is meant, in effect, is 'alike in all relevant respects'. And whether two cases are alike in all relevant respects is something that is always open to further discussion.

Lest this whole discussion become too hopelessly abstract, let's look at some examples of analogy. Sample deductivist reconstructions of these examples are appended.

Example 1.

"Smokers should be allowed to smoke only in private where it does not offend anyone else. Would any smoker walk into a restaurant and start eating half-chewed food on someone's plate, or drink a glass of water that previously held someone's teeth? Probably not, yet they expect non-smokers to inhale smoke from the recesses of their lungs. My privilege and right is to choose a clean and healthy life without interference." (P.T.B., *Cape Town Argus*, quoted in *World Press Review*, January 1988, p. 12.)

Example 2.

"In seeking protection from Eastern's creditors in bankruptcy court, Lorenzo (Chairman of financially troubled Eastern Airlines) is like the young man who killed his parents and then begged the judge for mercy because he was an orphan. During the last three years, Lorenzo has stripped Eastern of its most valuable assets and then pleaded poverty because the shrunken structure was losing money." (Letter to *Time Magazine*, April 10, 1989.)

Example 3.

"Smoking is no more a sin than wearing high heel spike type shoes. These also are dangerous to your health and they destroy

the property of others. Have you seen hardwood floors after a woman has walked over them in spike heels?" (*U.S. Catholic*, June, 1973; quoted in John Hoaglund, *Critical Thinking*, p. 38.)

Example 4.

"That the aggressor, who puts himself into the state of war with another, and unjustly invades another man's right, can, by such an unjust war, never come to have a right over the conquered, will be easily agreed by all men, who will not think that robbers and pirates have a right of empire over whomsoever they have force enough to master, or that men are bound by promises which unlawful force extorts from them. Should a robber break into my house, and, with a dagger at my throat, make me seal a deed to convey my estate to him, would this give him any title? Just such a title by his sword has an unjust conqueror who forces me into submission?" (John Locke, *Of Civil Government*, quoted in S.F. Barker, *Elements of Logic*.)

The issue which I wish to explore for the remainder of this paper is whether *a priori* analogies are implicitly deductive arguments. When recast in a manner somewhat parallel to the above proposal for inductive analogies, they may seem to turn into deductively valid arguments. And it seems to happen in quite a natural way. Consider the following very modest supplementation of the articulated model here:

1. A has x,y,z.
2. B has x,y,z.
3. A is W.
- 4'. It is in virtue of x,y,z, that A is W.
5. Therefore, B is W.

Statement 4' does seem to be presupposed. From 4' it is a very short step to a universal statement 4* of the type:

4* All things which have x,y,z are W.

If we regard the original *a priori* analogy

as being committed in some sense or other to 4', then we might well insist that 4' can be read in as an unstated premise. But in fact, since 4* seems to be presupposed by 4', it then may seem quite sensible to think 4* is an unstated premise in the argument. Being clearer in meaning than 4' and having as well the logically interesting (and to the classically trained logical mind very desirable) property that its addition makes the argument deductively valid, it's a better choice as an extra premise than 4'. So why not put 4* into the argument as a missing or tacit premise? What started out as an *a priori* analogy then turns into a deductively valid argument.

1. A has x,y,z.
2. B has x,y,z.
3. A is W.
- 4*. All things which have x,y,z are W.
5. Therefore, B is W.

Interestingly enough, premises (1) and (3) now become logically redundant. There is a deductively valid argument from (2) and (4) to (5): All things which have x,y,z are W, and B has x,y,z; therefore B is W. The analogy has been recast so successfully that it disappears altogether—and not just by becoming an induction. We may be on our way to the view Susan Stebbing used to hold—there aren't any arguments from analogy at all!

Barker objected to this sort of recasting of *a priori* analogies. He said that it was inappropriate for two reasons.¹⁰ First of all, he said, it is often not possible to state a suitable universal premise which is both known to arguer and audience and sufficient to make the argument deductively valid. Secondly, the universal premise in question is nearly always more dubious than the conclusion the arguer is trying to establish with his argument. The recasting, according to Barker, makes the "argument of no value for proving its conclusion" because it turns the argument into one which begs the question. Yet the original argument from a par-

particular case to a further particular case may have been very compelling. Barker's reasons for wishing to preserve *a priori* analogies as a distinct type are pragmatic and epistemic.

In an earlier discussion of analogy, I argued against this sort of deductivist reconstruction on four different grounds.¹¹ First of all, the recasting of the argument makes two of its explicit premises logically redundant; this seems reason to say that reconstructing has gone too far. Secondly, the recasting is *ad hoc*, appearing to be due only to a desire to look at argument through deductivist goggles and to assume *a priori* that all good arguments are deductively valid. Thirdly, the recasting brings in a universal statement which is often not rationally acceptable, and thus the interpretation is questionable on grounds of charity. (Here my reasons were similar to Barker's, though I did not go so far as to claim that the proposed recasting would actually turn the argument into one which begged the question.) Fourthly, the recasting has things backwards, in its reliance upon the assumption that particular cases have to be known by having universal generalizations applied to them. Rather, rules and generalizations themselves depend upon our knowledge of particulars. This last theme was the one so greatly emphasized by Wisdom who said, "What most plainly presents the data on which the rest is based is the argument from particular to particular."¹² Wisdom thought that the insistence that particular knowledge always comes from general knowledge amounted to a neurosis of thought. He called it Euclid's disease.

However, these reasons are not really conclusive and there is certainly more that can be said about the matter.

Consider first the alleged redundancy of two of the stated premises when the argument is recast into a deductive one. These premises would not have to be deemed entirely redundant on a deductivist reconstruction, because they could be interpreted as premises in a sub-argument. Alternately,

they could be regarded as having the psychological role of reminding us of the universal statement, which we know or believe already. Perhaps this is enough of a role. It's not necessary that a reconstruction preserve all aspects of the original. In fact, by definition it won't.

As for the allegation that a deductivist reconstruction of an analogy amounts to seeing all argument through arbitrarily deductivist goggles, this is too simple. Recasting *a priori* analogies as deductive does not presume that *all* argument is implicitly deductive. Rather, such recasting may be based on an understanding of the relevance of the articulated features of the cases to the conclusion. If these features are articulated and if that aspect of the argument does presume that it is 'in virtue of' them that the analogue is W and primary subject can be concluded to be W, then there are grounds internal to the argument for the deductive recasting.

Derek Allen has alleged that the other two considerations should be rejected, because they confuse epistemology with logic.¹³ What structure an argument has, he says, is a matter of logic. On Allen's view, if a premise is implicit, then it is implicit in virtue of some syntactic or semantic features of the stated argument. Whether such an implicit premise be true or false, known or knowable, more or less credible than stated premises, matters not. These epistemic questions are irrelevant to the issue of which logically universal or general statements are and which are not required for an argument to work. To say, then, that universal statements or (in the case of inductive analogies) empirical generalizations, shouldn't be regarded as implicit premises because they can't be known to be true is to miss the point. On Allen's view, Barker confused epistemology with logic—and so did I. On this view, Wisdom's thesis about knowledge of the universal being dependent upon knowledge of the particular, however interesting it might be in its own right, would be similarly irrelevant to the issue

of whether *a priori* analogies are implicit deductions. Argument reconstruction is a matter of logic and not a matter of epistemology.

Allen's view is superficially plausible, but the issue seems to me less simple than his comments would suggest. The problem is that argument reconstruction is not a matter simply of logic, at least not logic in the pure sense in which Allen seems to understand it.

I regard argument reconstruction as essentially a matter of interpretation.¹⁴ And interpretation does involve some kind of use of some kind of principle of charity. I propose a modest charity according to which we should not interpret others as having made implausible claims or having resorted to faulty inferences unless there is good empirical reason to do so. For modest charity, there is some built-in bias towards interpretation of discourse which makes it 'make sense' in terms of its claims and its inferences, but this bias is not strong enough to overwhelm evidence of implausible claims or disordered inference when the evidence for those things is quite clear. If some principle of charity really is an appropriate tool for interpretation and reconstruction (as most informal logicians seem to agree it is) then the epistemic status of a claim which is a candidate for attribution to an author does matter. Its epistemic status is relevant to whether we should regard it as part of an argument. Implausible claims, weak claims, unacceptable claims, difficult-to-verify claims should, other things being equal, not be attributed on grounds of charity. So which tacit, or missing, premises we take an argument to have will not be entirely a logical issue, as contrasted with an epistemic issue. Thus argument reconstruction is not an entirely logical issue, not as it is commonly understood. Allen's view is implausible and at odds with received ideas on interpretation.

Returning to the issue of supposedly deductive 'analogies', Barker's point stands.

If a claim alleged to be unstated premise is problematic epistemically, more problematic than the stated premises, that does provide some reason for not reading it into the argument.

Let us try to think this matter through again. There is a basis for the deductive approach to analogy, one which is superficially extremely plausible. If I compare B with A, mentioning *x,y,z* as relevantly similar features of these cases, and then say that *because A is W, B is W* as well, haven't I as a matter of logic assumed that all things which are *x,y,z*, are W? If it really is in virtue of *x,y,z* that A is W, then everything which is *x,y,z* must necessarily be W. And if I have as a matter of logic assumed this, then that's that. The argument requires such a claim and if the claim is false or implausible, then the merits of the argument are accordingly affected. To be more blunt, it isn't any good. So isn't there a case to be made for universalist reconstruction? *A priori* analogies can be turned into valid deductive arguments—syllogisms, in fact.

I've tried to recast the examples cited earlier along universalist lines, and the results are appended below. They have a superficial plausibility, and I want to recognize this. I hope that readers will be moved to study these apparently tidy and convincing results, looking at them, as it were, through two different pairs of eyes. They seem elegant, ordered, clear, and sensible, as is usually the case with reconstructions which make of fluent and sometimes chaotic prose a sensible patterned argument. But this clarity does not, I think, show that the reconstructions are accurate or good interpretations of the original argument. In the interests of brevity, I do not comment on the cases in detail. As with all proposals for reconstruction, something is lost and something gained, and different people will weigh the losses and gains differently. But I do think there is a general, and very important objection, to deductivist reconstruction of *a priori* analogies, and I shall try to explain it.

A distinction can be made between a principle which is presupposed or assumed as a background assumption of an argument and a claim which is assumed as its unstated premise. Deductively valid arguments might be said to presuppose, in the first sense, that the principle of non-contradiction holds, but would not be said to assume that principle as an unstated premise. Similarly, inductive arguments may assume background knowledge of various sorts which is not regarded as an unstated premise of the argument. The distinction is relevant to our current problem about analogies. If *a priori* analogies do 'assume' a universal claim relating features x, y, z to W , this 'assumption' can play various different roles. It might be a background assumption or it might be an unstated premise.

The distinction here may seem trivial, but in terms of typology of argument it is not. For if the universal claim (call it the U-claim) is a background assumption, not a premise, the *a priori* analogy preserves its premise-conclusion structure as a distinct type of argument, whereas if it is an unstated premise, not a background assumption, the argument turns, as we have seen, into a deductively valid one in which the weight of assessment will hinge not on the particulars of cases A and B and their relative similarities and differences, but rather on truth or acceptability of this U-claim. There is another possibility too. The universal claim might be implied by the argument, be something the arguer commits himself to in offering the argument, even though it's not, in either of the previous senses, assumed by it.

So what are we to say about analogy as a distinct type of argument? Do some analogies reduce to inductive arguments and others to deductive ones, so that there is no such thing as argument by analogy as a distinct type? Here are some interesting positions on the matter:

1. Wisdom, and Barker, following him, held that no such statement as U is presup-

posed, assumed, or in any other way required, in reasoning from cases. Their view was that knowledge of cases is epistemically and logically prior to knowledge of universal relationships. We couldn't know that all x, y, z are W unless we knew, for some particular x, y, z that it was W . Cases come first, and we can reason from one case to another without committing ourselves to universal or even general claims along the way.

2. Shaw and Ashley, in an article on analogical inference, say that a U-claim is neither logically or epistemically assumed in order for an argument from analogy to have cogency and persuasive power.¹⁵ However, on their view, the need for, and power of, such arguments reflects our lack of full understanding of the subjects being dealt with. When we have a full theory about A's and B's, this theory will tell us which features of A's and B's are relevant to which others. These principles of relevance will be universal principles. Right now arguments from analogy are a distinct type, not reducible to other types. But this is only because our theories about the things we are using analogies to deal with are incomplete. The universal claims we would try, now, to read into many analogies are not claims we can easily formulate or know to be true. Thus reconstructing analogies so as to insert them makes credible arguments into unsound ones and is not to be recommended. When full theories about our objects of discussion become available, this situation will change and arguments from analogy won't be needed. Right now, they are a distinct and useful type, and they can be used for rational persuasion and conviction even in the absence of U-claims.

3. My position. If A is W and B, being like A, is also W , there must be features in which A and B resemble each other in virtue of which this commonality holds. If we could spell out these features perfectly and precisely, we could specify a universal claim about these features and W . If we knew such a U-claim to be true, we could

obviously apply it directly to B to deduce a conclusion about B, and we wouldn't need to reason from case A to case B. The use of an argument by analogy does commit the arguer to some U-claim in the sense that if what she says in her argument is right, then some U-claim must be true. But I should rather say that the U-claim is implied by the argument than say it is assumed, or presupposed, or an implicit premise. That's because these other relationships suggest a kind of priority—logical or epistemic—and I don't think this priority typically exists. Unlike Ashley and Shaw, I don't believe a situation where all relevant features to the determination of A and B as W have been fully and definitely spelled out will ever obtain. (Recall, here, that A, in an *a priori* analogy, is imagined and hypothetical.), Unlike Wisdom and Barker, however, I would grant that, at least sometimes, we might know the universal better than the particular.

The trick about analogies—and their charm as well, I think—is that we are often able to see or sense important resemblances between cases without being able to spell them out exhaustively in just so many words. Elementary formalizations such as those earlier in this paper are used to represent analogies. However, these formalizations are in an important way extremely misleading. They encourage us to ignore the problem of just which features of the two things in question are relevant to the force of the analogy. *If* we know that it is just in respects x,y,z and no others that cases A and B resemble each other, the door to the universal approach is open. We can readily formulate a U-claim relating x,y,z to W, and given this claim, we can turn the analogy into a deductively valid argument. But the problem is that we often *don't* know that it is in virtue of just these specific aspects that the analogy is to be drawn. By moving from A and B to a U-claim, we presume that we have a pat solution to this problem. It is this problem which is illustrated in the appended examples. We

may not have selected just the right features in constructing the U-claim. When we turn our attention to evaluating the argument we will naturally assess the U-claim as a key premise if we have reconstructed the argument to include it. If the U-claim we select is not the appropriate one because features x,y,z, are not the right ones to focus on, then our evaluation will be beside the point.

My position, then, is that some U-claim is implied when we reason from case to case. But we often do not know exactly what the U-claim is. And very often, we can evaluate the argument without raising the issue, just by sticking to the cases at hand. We can point out relevant differences between A and B and show how they undermine the conclusion without addressing the U-claim as such. The U-claim is, in many cases, hard to formulate, and inserting it as a missing premise of the argument is neither required nor, in many cases, critically useful. (My reasons for saying this can perhaps be inferred from the treatment of examples appended to the paper.)

4. David Hitchcock, so far as I understand his present position, is inclined to say that a universal statement is assumed by an *a priori* analogy, although it is not an unstated premise of such an analogy.¹⁶ It is a kind of background assumption, and a qualified one at that. In fact, it might be more appropriate to call it a generalization than a universal statement. To use an argument by analogy is to assume a complex generalization about things of a type (T) within which both A and B are included. The assumption is something like 'Things of type T are W unless E obtains, and, for A and B, E does not obtain'. Here 'T' would refer to a category in which A and B are placed, based on the similarities in virtue of which the analogy is to hold, and 'E' would refer to the exception-making circumstances in which things of type T fail to be W. The arguer is committed to the general relation between being T and being W, and to the absence of the exception-

making circumstances in this case. On Hitchcock's view, this qualified generalization is a commitment of the arguer and is assumed by the argument but it is not a missing premise. Thus, for Hitchcock, arguments by analogy presumably remain a distinct type, despite their having these commitments which go beyond the two cases compared.

5. Derek Allen has maintained that the U-claim is assumed by the argument as a premise.¹⁷ An *a priori* analogy will then turn into a deductively valid argument. An inductive analogy will turn into a generalizing inductive argument. With due respect to Allen, I submit that the considerations above indicate both that there are powerful objections to this position and that it is one to which there are plausible alternatives.

There are many interesting questions to ask about arguments from analogy and some of these link up to quite basic issues in the theory of argument and epistemology. Using *a priori* analogies does involve us in some universalist commitments, but these should not be regarded as unstated or missing premises of the argument. Of the five positions outlined above only the last denies this claim.

I say this, finally, for the following reasons. The required universal statement is often hard to formulate. The original argument really does go from case to case; the citing of cases asks us to see, or sense,

similarities which we often have trouble articulating completely. We can over-generalize and universalize over the wrong features. If a faultily constructed generalization is regarded as a missing premise in the argument, then its falsity may be taken to show the argument unsound, or not cogent, and in this way, criticism can go wrong. The analogy will be misunderstood and rejected for being founded on something that it wasn't really founded on in the first place.

When the argument is faulty, as arguments from analogy often are, faults can often be seen very directly—as when features alleged for the analogue and primary subject just don't hold or when other features of B, not mentioned in the argument, are negatively relevant to its being W. Although some U-claim is implied by the argument, and must be true if the argument is correct, it's often hard to say just which U-claim is required. For this reason, criticizing such a statement is often not the most efficient or convincing way of criticizing the argument. It's usually better, I'd suggest, to stick to the cases we start from. Simple formalisms to represent analogy are very useful in some ways. But they encourage us to ignore the difficulties we may find in articulating just those respects in which A and B are similar and their bearing on the conclusion drawn.

Are arguments by analogy a distinct type? I still think they are.

Appendix

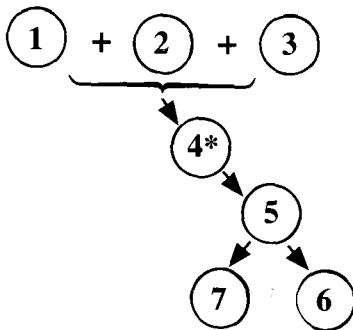
Attempted Reconstructions, with U-claims as added premise (4*) of examples cited earlier on pages 143-44.

Example 1.

1. Eating food which had been half-chewed by someone else or drinking water that had had someone else's teeth in it would be repugnant.
2. Breathing smoke which has been in someone else's lungs would be repugnant.
3. Smokers would not be willing to eat half-chewed food or drink water that had held someone else's teeth.
- 4*. No one should expect anybody else to take into his body substances which have been partly used and contaminated by someone else.
5. So, smokers should not expect others to breathe air which has been in the lungs of smokers.
6. So, it is a person's privilege and right

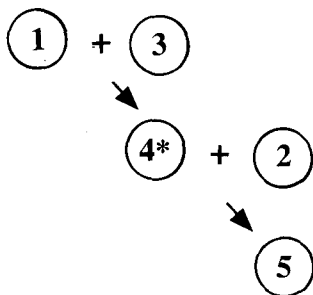
to choose a clean and healthy life without interference.

- 7. And, smokers should be allowed to smoke only in private where it does not offend anyone else.



Example 2.

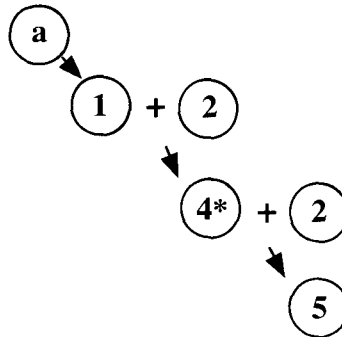
- 1. A young man might kill his parents and then beg the court for mercy because he was an orphan.
- 2. The head of Eastern Airlines (Lorenz) stripped Eastern of its most valuable assets and then pleaded poverty in bankruptcy court because the shrunken structure was losing money.
- 3. The young man would not deserve mercy.
- 4*. No one who creates his own bad situation deserves mercy or protection in that situation.
- 5. Lorenz does not deserve mercy or protection from the court.



Example 3.

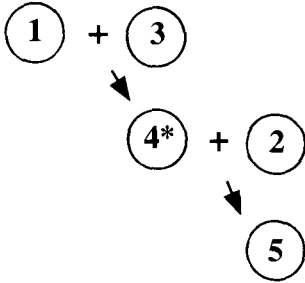
- (a) Hardwood floors are damaged by women walking over them in spike heels.
- 1. Spike heels damage the property of others and are dangerous to health.
- 2. Smoking damages others and is dangerous to health.
- 3. Wearing high heels is not a sin.
- 4*. Things which damage others and are dangerous to your health are not sins.
- 5. Therefore, smoking is not a sin.

Note: It would seem more plausible to qualify 4* as 'Things which damage others and are dangerous to your health are not necessarily sins'. But then we would also have to qualify the conclusion, as 'Smoking is not necessarily a sin', and the argument clearly asserts more than that. (a) here is to be regarded as a premise in a small sub-argument for (1).



Example 4.

- 1. Robbers and pirates might force others to hand over deeds or property or to make promises.
- 2. An aggressor can by unjust invasion take over another's land by force.
- 3. Promises made to a robber or pirate, or deeds handed over to them, have no moral force in imposing moral obligation on the victim.
- 4*. Promises made under force give no rights.
- 5. So, an aggressor never has a right over the conquered people whose land he takes by force.



If you feel that 4* is incorrectly specified in some or all of these cases, that will corroborate the thesis of this paper—it is not easy to say just which features of the

analogue and primary subject are intended as the base for the conclusion. A major problem I see is that in some cases (e.g. example 4) the starred premise would be easy to refute by counter-example, but the relevance of the refuting counter-example to the original argument, unsupplemented by 4*, would be questionable, because 4* might not be the right U-claim to consider. Maybe, for instance, we need something less sweeping than ‘promises made under force’. Note that the reconstructions produce, in effect, a two-stage argument: the first stage is an inductive argument from one case to a universal statement; the second is a deductive argument subsuming the subject case under that universal statement.

Notes

- * An earlier version of this paper was presented at the Third International Symposium on Informal Logic held at the University of Windsor in June, 1989. I would like to thank David Hitchcock for correspondence pertinent to some of the issues raised in the paper and Tony Blair for his role in facilitating its revision.
- ¹ Trudy Govier, *A Practical Study of Argument* (Second edition; Belmont, CA: Wadsworth, 1988), Chapter 10; and Trudy Govier, *Problems in Argument Analysis and Evaluation* (Dordrecht, Nthlds. and Providence, Rhode Island: Foris, 1987), Chapter 4.
- ² John Wisdom, “Explanation and Proof”, Lectures presented at the University of Virginia in 1957. Unpublished manuscript. I am grateful to Prof. Wisdom for generously giving me permission to study and cite his material.
- ³ Susan Stebbing, *Thinking to Some Purpose*. (London: Pelican Books, 1938).
- ⁴ Compare S.F. Barker, *The Elements of Logic* (New York: McGraw-Hill, 1965), Chapter Seven, and my own *A Practical Study of Argument* Chapters 10 and 11.
- ⁵ Barker, op. cit., pp. 286-90.
- ⁶ Cf. my “Logical Analogies”, in *Informal Logic* VII, no. 1 (Winter 1985), pp. 27-33.
- ⁷ Judith Jarvis Thompson, “In Defense of Abortion”, *Philosophy and Public Affairs*, Vol. 1, no. 1 (Fall, 1971), pp. 47-66.
- ⁸ For an example of this line of thought, see Duane L. Cady, *From Warism to Pacifism: A Moral Continuum* (Philadelphia: Temple University Press, 1989).
- ⁹ Jerome Bickenbach, “The Nature and Scope of Reflective Reasoning”, Ph.D. Dissertation, University of Alberta, 1977. See also Bickenbach’s “Justifying Deduction”, in *Dialogue* Vol. XVIII no. 4 (December 1989, pp. 500-516 and “Diversity of Proof”, in *Informal Logic Newsletter* Vol. IV no. 2 (May, 1982), pp. 7-12.
- ¹⁰ Barker, op. cit., pp. 280-290.
- ¹¹ Govier, *Problems in Argument Analysis and Evaluation*, Chapter 4.
- ¹² “Explanation and Proof”.
- ¹³ Derek Allen, presentation at AILACT in conjunction with the Mid-West session of the American Philosophical Association, Chicago, April, 1989.
- ¹⁴ Compare, for instance, Jonathan Berg, “Interpreting Arguments”, *Informal Logic* IX, no. 1 (Winter 1987), pp. 13-21.

¹⁵ W.H. Shaw and L.R. Ashley, "Analogy and Inference", *Dialogue* XXII, no. 3 (September, 1983), pp. 415-432.

¹⁶ Based on comments in correspondence in 1988-89. Hitchcock is still in the process of developing his views on types of arguments; however he confirmed this version as accurate in conversation at the Third International Symposium on

Informal Logic in Windsor in June, 1989.

¹⁷ Allen, AILACT presentation, Chicago, 1989.

TRUDY GOVIER
3207 CANMORE ROAD, N.W.
CALGARY, ALBERTA
T2M 4J8

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