If a person dislikes someone else it's likely that he will want to have nothing to do, not only with him, but also with the sorts of things that the other person likes. For example if Jones dislikes Smith and Smith sports a moustache and likes to wear tweed jackets, chances are that Jones will avoid tweed jackets and moustaches. Not only will people distance themselves from the sorts of things their enemies like they will also distance themselves from their thoughts and ideas. If Smith is in favour of capital punishment for murder and a champion of free enterprise, chances are that Jones will be opposed to capital punishment and to free enterprise.

The same is also true of groups. Fascists were inclined to wear black shirts and cut their hair short while Communists were inclined to wear red shirts, or at least red ties, and grow their hair long. And again, not only will members of one group want to disassociate themselves from the accoutrements and trappings of the group they dislike, they will also want to disassociate themselves from thoughts and ideas of the group they dislike.

It's here, I think, that we find the legitimate source of the ad hominem fallacy. A says to B, "Don't buy a Lada because that's the sort of car the Communists produce and drive". But he also says, "Don't accept that fluoridation of the drinking water reduces tooth decay because that is a belief the Communists hold". That is to say, A treats beliefs as though they were like clothes and instead of saying something like, "Don't wear X because that's what the Communists wear" he says, "Don't hold Y because that's what the Communists hold". But this is of course clearly fallacious. Beliefs should be held or dismissed not on the basis of whether we like the people who hold them or not but on the grounds of whether they are true or false. If there is overwhelming statistical evidence to show that fluoridation of the drinking water reduces tooth decay then we have grounds for accepting such a belief.

The same point can be made about the ad verecundiam fallacy. As well as there being people in this world whom others dislike there are also people whom they admire. Not only do they want to be close to these people but they also want to wear the sorts of clothes that they wear, eat the sorts of food that they eat and do the sorts of things that they do. As well as all this they also want to hold the beliefs that they hold. For example if A is a great admirer of George Bernard Shaw he might decide to accept the belief that meat is injurious to the health because he believes that Shaw held that meat was injurious to the health. And again such reasoning (in so far as there is any) is clearly fallacious. A could only legitimately, in this context, accept that meat is injurious to human health if he is prepared to accept that G. B. Shaw was an authority on dietary matters.

To conclude, many people have unwittingly felt what makes, or could make, ad hominem and ad verecundiam arguments fallacious is that they involve a move from statements about statements to statements about things. However, there is no room for fallacy here since statements about statements can entail statements about things. The source of the fallaciousness that may be involved in such arguments is to be found in the fact that people are inclined to consider thoughts and ideas as being like personal possessions. And since many people want to distance themselves from the personal possessions of those they dislike and surround themselves with possessions similar to the possessions of those that they admire, they also want to distance themselves from the beliefs (any belief) of those they dislike and accept the beliefs of those they admire. And of course if anyone were to ignore or accept a belief for this sort of reason he would be reasoning (to the extent that he could be said to be reasoning) fallaciously.

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FOOTNOTE

[1] I.M. Copi, Introduction to Logic (5th ed.), Macmillan, p. 90.

Part/Whole Fallacies

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Composition/Division are the best known of the part/whole fallacies but there is a growing list of others which deserve special attention. A few years ago Howard Kahane noted that most examples of composition/division found in texts were contrived. He went on to suspect that people did not in fact commit such fallacies. I took him to task in private communication and he conceded only to the point of including one of my examples, the salesman's fallacy, in the third edition of his book Logic and Philosophy. The purpose of this study is to make the case for there being a virtual epidemic of part/whole fallacies being perpetrated upon an unsuspecting public. In what follows I will catalog a variety of arguments which, like the salesman's fallacy, are special applications of the more general category: composition/division. In addition, I will argue for a third kind of part/whole fallacy which is neither a species of composition nor one of division.

The fallacy of composition occurs when properties which do belong to the parts of a whole are illicitly attributed to the whole. A classroom example occurs in the inference that since each person on an elevator weighs less than 500 pounds that the total weight of the elevator load is less than 500 pounds. (Here Kahane is correct--no one in their right mind would make this inference.) A more convincing example, at least to the unwary, is this: since I like each ingredient in a dish then I

will like the dish itself. I may like both sardines and ice cream but readily refuse a sardine sundae! The fallacy of division commits the inverse error. Here a property which does belong to the whole is mistakenly attributed to each part of the whole. The classical example is that since buffalo are growing extinct so are the ones in the zoo. What is true of the whole, the species of buffalo, is thereby true of the parts, each individual buffalo. A more convincing example occurs in this inference: since I want to study with the best philosophers in North America, I am going to attend the best university in North America. Of course the most sound academic university may not have the most sound philosophy department. The contrapositive inference occurs widely. Since I do not wish to study with second rate scholars I am not going to attend a second rate university--only one of the finest schools will do. Of course, scholars of the first rank may be found at schools not in the first rank; for example, the Nobel prize winning economist Herbert Simon teaches at Carnegie Mellon University.

In both of these aforementioned cases the illicit move is made to or from the whole and all of its parts. A third type of part/whole fallacy occurs when the move is to or from the whole and one of its parts. I have dubbed this general class the CAMEL'S BACK FALLACY (CBF) after the well known fable of the straw that broke the camel's back. In the story it was the last straw added to the load that was blamed rather than the whole load itself. Another appropriate name for the fallacy would be the last straw fallacy but I have rejected this option for fear that students would confuse it with the straw man fallacy. It is important to see that the mistake in the CBF is not one of composition. To commit a composition it is necessary to infer from the fact that each part has a property to the conclusion that the whole has that property. In the CBF it is one part which is the center of attention. Nor is the mistake one of division, for similar reasons. Yet it is a mistake about parts and wholes since a property of a whole, the load of straw, is mistakenly attributed to a part, the last piece that is added.

Why not just call this an example of post hoc, propter hoc and not worry about having to invent a new category of fallacy? The problem here is not that we have put the blame on the wrong event at the level of event where placing a piece of straw is an event. At that level we will never find the proper cause, for the cause occurs at an entirely different level. The cause occurs at the level where placing a load of straw is an event rather than at the level where placing a piece of straw is an event. The cause occurs at the level of wholes rather than at the level of parts, thus we do have a part/whole fallacy. Since the fallacy is part/whole but neither composition nor division we have need of a third category. This is the camel's back fallacy.

Let us start with a species of the CBF. It is the FLUNKING STUDENT'S FALLACY. This occurs on the part of the student who argues for a better grade on the ground that if he (or she) does not get it then he will flunk out of school (bringing even further dire consequences upon himself). The cause of flunking out of school is not the last grade received but rather the whole collection of grades which the student has received. The last grade, like the last straw, is merely taking the blame for what is rather the responsibility of the whole of which it is but a single part. The instructor, by changing the part, the last grade, can change the whole and thereby keep the student from flunking out, just as the camel driver can protect the camel by not placing the last straw. But still it is the total academic record and not the last grade which is the cause.

Shifting perspective between parts and wholes is a common way of seeming to avoid responsibility, as we shall see below. For now let us examine another version of the CBF. It is in the well known slippery slope ploy. Consider another classroom example. Normally you arrive at 8 a.m. It is no particular hardship to come 5 minutes early. So you can come at 7:55. Since it is never a hardship to come 5 minutes early, you can come at 7:50. (We are off on the slippery slope 5 minutes at a time.) Coming at 6 a.m. is a hardship yet you got there through a series of events no one of which was a hardship. As the whole builds by degrees none of which have the collective property, we have here a part/whole fallacy. Which one though? It is the CBF because the slippery slope ploy attempts to focus our attention just on the last member of a whole and its contribution rather than on allowing us to take the proper logical perspective of examining the responsibility of the whole of which it is but a part. Such too is the insight behind the remark that liberty is lost by degrees rather than at once and the reason that otherwise insignificant acts may come to symbolize a whole process and hence receive an extraordinary response.

The SALESMAN'S FALLACY is a species of composition. It is fundamental to economic misunderstanding. When we make a complicated purchase such as that of an automobile, the salesman attempts to focus our attention on the basic cost and that of each accessory. Each item on the list is affordable, well within our budget. Yet, the total may be way over our budget. The same thing happens in the supermarket. Suppose we have $100 to spend for groceries for a two-week period. No one item in the shopping basket costs anywhere near that amount. Probably no one item in the market costs that much. In this sense we can afford any item in the store. But, if we are not careful, or if our budget is limited, we will not be able to afford the collection of items that we have selected. The same economic consideration is reflected in US Congressional budgeting practices. Formerly, Congress would appropriate funds for each program as it came up for consideration. No one kept an eye on the total. Since each program was well within the amount available for spending, so would be the total. A few years ago Congress realized its error. Now, no funds become available until the end of the year when programs which have been passed are adjusted or even eliminated so that the

total is within the federal budget. The other way in which salespersons take advantage of this fallacy is in stressing the monthly payments associated with a purchase rather than the total amount. Anybody can afford pennies a week; unless, of course, the total number of pennies from all payments is more than the weekly income.

The central thread of discussion in ethics during the past two decades has also been through part/whole relationships. What I have in mind are the examples, arguments, and principles which have led to the dominance of rule utilitarian theories. Whether we examine generalization arguments in ethics, the distinction between acts and practices, or Garret Hardin's notion of the tragedy of the commons we find the same territory being surveyed. Consider the problem of air pollution from automobiles. The amount of pollutant coming from my car is well within the ability of the atmosphere to absorb. Yet the amount coming from all of our automobiles is not. Why should I have to drive a (relatively) nonpolluting vehicle when the one that I now drive has no significant impact on the environment? As an individual act, driving my kind of car is not harmful But, considered as a social practice, considerable harm must arise. It is right for me to drive my car if and only if it is right for everyone to drive automobiles in similar condition But it is wrong for everyone to do so Thus it is wrong for me to do so. Attempting to justify my activity by reference to its consequences in isolation is irrelevant, at least according to the now dominant way of thinking among moralists. Individual actions derive their moral value from the wholes of which they are parts. If the whole is wrong so are the parts.

This last move is not the fallacy of division This is because to say that an act is wrong is just to say that the whole of which it is a part is wrong. There is no way, in general, to evaluate the morality of acts apart from the wholes which they constitute. This is what leads to the tragedy of the commons. We each perform acts (parts) rather than practices (wholes). No individual person performs the practice (the whole) and so no one person is responsible. What is done in common or held in common leads to tragedy for no one person is available to take responsibility. When responsibility is held in common it is easy for each of us to ignore it. Only by seeing ourselves as entities who are people only by being part of a whole can we begin to comprehend that we do have responsibility even though no act that we perform has serious consequences.

Let me conclude on this high note. There are other areas of modern argumentation or philosophy which also demand an analysis in terms of part/whole relationships. To name only a few: frequency theory of probability; the relationship between the high degree of accuracy of mortuary tables and the indeterminacy of our individual deaths; the reconciliation of the use of determinism in the social sciences and the concept of free will; the way in which each item in a collection of data may be explained away, has a low probability of confirmation, and yet the collection may provide strong evidence as a whole; and finally, Berkeley's astounding claim that objects are mind-dependent since each part of them, their various attributes, are mind-dependent. The last example brings forth a very important point on which to end. Some of our most significant disagreements are really ones over whether a series should be analyzed in terms of its parts or whether it can only be understood as a whole. Berkeley assumed that objects are mere concatenations of their parts; contemporary moralists argue that morality is a phenomenon of the whole; and we still debate these issues. ✻

critical reviews

Toulmin's Bold Experiment

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EDITORS' NOTE

This is the second part of Professor Johnson's critical review of An Introduction to Reasoning by Stephen Toulmin, Richard Rieke and Allan Janik. The first part appeared in ILN, iii.2 (March 1981), pp. 16-27. Section I of Johnson's review was his Introduction; Section II reviewed Toulmin's (et al.) theory of argument in Parts One and Two of the book. In Section III, below, Johnson focuses on Toulmin's theory of criticism as set forth in Part Three of the text; in Section IV he presents his answers to the questions he proposed in Section I as the appropriate matrix for this review.

Footnotes for both parts of Johnson's review are found at the end of this second part. We apologize for the inconvenience; the omission of the footnotes for the first part from the last issue was an oversight.

III. TOULMIN'S THEORY OF CRITICISM (PART III)

The purpose of Part III, says Toulmin, is to shift the focus from the abstract, general level of Parts I and II to consider how rea-