



Affirming and denying

I. Sherlock Holmes

In *The Boscombe Valley Mystery*, Sherlock Holmes develops the following argument. Explain what's wrong with it.

It was about ten minutes before we regained our cab...Holmes still carrying with him the stone which he had picked up in the wood.

'This may interest you, Lestrade,' he remarked, holding it out. 'The murder was done with it.'

'I see no marks.'

'There are none.'

'How do you know, then?'

'The grass was growing under it. It had only lain there a few days. There was no sign of a place whence it had been taken. It corresponds with the injuries.'¹

Answer:

The reasoning appears to have been as follows,

If the murder weapon was a heavy object, then we will find it with grass growing beneath it.

This stone was found with grass growing beneath it.

Therefore, this stone is the murder weapon

As you can see, like the previous argument, Holmes has affirmed the consequent. He has assumed there is only one reason why the stone was lying there, recently discarded, with grass growing beneath it: the murderer had thrown it away as he escaped from the scene. In other words, he assumes

If, and only if, it was the murder weapon, then it would be found with

¹ Arthur Conan Doyle. 'The Boscombe Valley Mystery' in *The Adventures of Sherlock Holmes* (Harmondsworth: Penguin, 1988), p. 92.



grass growing beneath it.

But, although this is a *necessary* reason for thinking the stone is the murder weapon, it is not a *sufficient* reason: we can think of a number of other reasons which would explain its discovery just as well. A boy returning from school might have picked it up to see how far he could throw it, or it may have been dropped by a gardener who was collecting stones to build a wall or a rockery in his garden.

2. Management and employees

Read the following argument and explain what you think is wrong with it.

If the employees of a business are involved in its management, then the business will flourish. But, since the employees in this business have no share in its management, it's not surprising that it hasn't flourished.

Answer:

In contrast to the other argument, this commits the fallacy of denying the antecedent. The argument can be summarised as follows:

- 1 If the employees of a business are involved in its management, then the business will flourish.
- 2 The employees in this business have no share in its management.
- 3 Therefore it's not surprising that it hasn't flourished.

But, like Stephen's disqualification in *How to Write Your Undergraduate Dissertation*, although the employees have no share in the management of the business, this may be only one of a number of factors that have prevented it from flourishing. So, even if they had been involved, it might still not have flourished.

Still, you can see how tempting it is to accept the argument. What makes it superficially appealing is that we assume the involvement of the employees is both necessary and sufficient for the business to flourish. It is the only thing needed to ensure that the business flourishes. If this had been the case, then the argument would, indeed, have been valid. However, for this we would have had to argue instead, 'If, and only if, the employees of a business are involved in its management, then the business will flourish.'