

Arguments, Soundness and Validity

1. Identify Sherlock Holmes's argument in the passage from the *Blue Carbuncle* (cf. back page). How does Holmes argue for the man's intelligence? You may try to find out how he argues for the other features (e.g., the decline in fortunes, self-respect).
2. Analyse Hume's argument: "Since morals [...] have an influence on the actions and affectations, it follows, that they cannot be deriv'd from reason; and that because reason alone [...] can never have any such influence. Morals excite passions, and produce or prevent actions. Reason of itself is utterly impotent in this particular. The rules of morality, therefore, are not conclusions of our reason." (*A Treatise of Human Nature*, 3.1.1.6)
3. Beliefs are consistent if they can be true together. Which of these sets of beliefs are consistent?¹
 - (a) Jack says: I have invented an amazing new sedative which makes people faster and more attentive.
 - (b) Jackie says: I have never drawn anything in my life. But if I only sat down for a minute or so and tried, I could a drawing as good as anything by Picasso.
 - (c) Fred says: For pudding tonight, we should use either fresh raspberries or strawberries. Raspberries are not available in January. Strawberries are unaffordable this time of year.

The last exercises are about validity and soundness. For background, you can consult the resources available from the course website:

<http://open.conted.ox.ac.uk/series/first-steps-formal-logic>.

4. Construct a valid argument. Alternative: scan the news for an *invalid* argument.
5. Could all the premises of a valid argument be false? Explain your answer.
6. Could an invalid argument have a true conclusion? Explain your answer.
7. Could there be invalid but sound argument? Explain your answer.

¹ After Hodges, W. (2001). *Logic*. London: Penguin (pp. 1–3).

"Then, what clue could you have as to his identity?"

"Only as much as we can deduce."

"From his hat?"

"Precisely."

"But you are joking. What can you gather from this old battered felt?"

"Here is my lens. You know my methods. What can you gather yourself as to the individuality of the man who has worn this article?"

I took the tattered object in my hands, and turned it over rather ruefully. It was a very ordinary black hat of the usual round shape, hard, and much the worse for wear. The lining had been of red silk, but was a good deal discoloured. There was no maker's name; but, as Holmes had remarked, the initials "H. B." were scrawled upon one side. It was pierced in the brim for a hat-securer, but the elastic was missing. For the rest, it was cracked, exceedingly dusty, and spotted in several places, although there seemed to have been some attempt to hide the discoloured patches by smearing them with ink.

"I can see nothing," said I, handing it back to my friend.

"On the contrary, Watson, you can see everything. You fail, however, to reason from what you see. You are too timid in drawing your inferences."

"Then, pray tell me what it is that you can infer from this hat?"

He picked it up, and gazed at it in the peculiar introspective fashion which was characteristic of him. "It is perhaps less suggestive than it might have been," he remarked, "and yet there are a few inferences which are very distinct, and a few others which represent at least a strong balance of probability. That the man was highly intellectual is of course obvious upon the face of it, and also that he was fairly well-to-do within the last three years, although he has now fallen upon evil days. He had foresight, but has less now than formerly, pointing to a moral retrogression, which, when taken with the decline of his fortunes, seems to indicate

some evil influence, probably drink, at work upon him. This may account also for the obvious fact that his wife has ceased to love him."

"My dear Holmes!"

"He has, however, retained some degree of self-respect," he continued, disregarding my remonstrance. "He is a man who leads a sedentary life, goes out little, is out of training entirely, is middle-aged, has grizzled hair which he has had cut within the last few days, and which he anoints with lime-cream. These are the more patent facts which are to be deduced from his hat. Also, by the way, that it is extremely improbable that he has gas laid on in his house."

"You are certainly joking, Holmes."

"Not in the least. Is it possible that even now when I give you these results you are unable to see how they are attained?"

"I have no doubt that I am very stupid; but I must confess that I am unable to follow you. For example, how did you deduce that this man was intellectual?"

Conan Doyle, A. (1892). *Adventures of Sherlock Holmes: The Adventure of the Blue Carbuncle*. *The Strand Magazine*, 3, 73–85 (p. 75).



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