The Game of Logic
by Lewis Carroll

Chapter 1: Part Three - *Fallacies*

And so you think, do you, that the chief use of Logic, in real life, is to deduce Conclusions from workable Premisses, and to satisfy yourself that the Conclusions, deduced by other people, are correct? I only wish it were! Society would be much less liable to panics and other delusions, and POLITICAL life, especially, would be a totally different thing, if even a majority of the arguments, that scattered broadcast over the world, were correct! But it is all the other way, I fear. For ONE workable Pair of Premisses (I mean a Pair that lead to a logical Conclusion) that you meet with in reading your newspaper or magazine, you will probably find FIVE that lead to no Conclusion at all: and, even when the Premisses ARE workable, for ONE instance, where the writer draws a correct Conclusion, there are probably TEN where he draws an incorrect one.

In the first case, you may say "the PREMISSES are fallacious": in the second, "the CONCLUSION is fallacious."

The chief use you will find, in such Logical skill as this Game may teach you, will be in detecting 'FALLACIES' of these two kinds.

The first kind of Fallacy--'Fallacious Premisses'--you will detect when, after marking them on the larger Diagram, you try to transfer the marks to the smaller. You will take its four compartments, one by one, and ask, for each in turn, "What mark can I place HERE?"; and in EVERY one the answer will be "No information!", showing that there is NO CONCLUSION AT ALL. For instance,

"All soldiers are brave;
Some Englishmen are brave.
∴ Some Englishmen are soldiers."

looks uncommonly LIKE a Syllogism, and might easily take in a less experienced Logician. But YOU are not to be caught by such a trick! You would simply set out the Premisses,

and would then calmly remark "Fallacious PREMISSES!": you wouldn't condescend to ask what CONCLUSION the writer professed to draw--knowing that, WHATEVER it is, it MUST be wrong. You would be just as safe as that wise mother was, who said "Mary, just go up to the nursery, and see what Baby's doing, AND TELL HIM NOT TO DO IT!"

The other kind of Fallacy--'Fallacious Conclusion'--you will not detect till you have marked BOTH Diagrams, and have read off the correct Conclusion, and have compared it with the Conclusion which the writer has drawn.

But mind, you mustn't say "FALLACIOUS Conclusion," simply because it is not IDENTICAL with the correct one: it may be a PART of the correct Conclusion, and so be quite correct, AS FAR AS IT GOES. In this case you would merely remark, with a pitying smile, "DEFECTIVE Conclusion!" Suppose, of example, you were to meet with this Syllogism:--

"All unselfish people are generous;
No misers are generous.
∴ *No misers are unselfish."*

the Premisses of which might be thus expressed in letters:--

"All x' are m;
No y are m."

Here the correct Conclusion would be "All x' are y'" (that is, "All unselfish people are not misers"), while the Conclusion, drawn by the writer, is "No y are x'," (which is the same as "No x' are y," and so is PART of "All x' are y'.") Here you would simply say "DEFECTIVE Conclusion!" The same thing would happen, if you were in a confectioner's shop, and if a little boy were to come in, put down twopence, and march off triumphantly with a single penny-bun. You would shake your head mournfully, and would remark "Defective Conclusion! Poor little chap!" And perhaps you would ask the young lady behind the counter whether she would let YOU eat the bun, which the little boy had paid for and left behind him: and perhaps SHE would reply "Sha'n't!"

But if, in the above example, the writer had drawn the Conclusion "All misers are selfish" (that is, "All y are x"), this would be going BEYOND his legitimate rights (since it would assert the EXISTENCE of y, which is not contained in the Premisses), and you would very properly say "Fallacious Conclusion!"

Now, when you read other treatises on Logic, you will meet with various kinds of (so-called) 'Fallacies' which are by no means ALWAYS so. For example, if you were to put before one of these Logicians the Pair of Premisses

"No honest men cheat;
No dishonest men are trustworthy."

and were to ask him what Conclusion followed, he would probably say "None at all! Your Premisses offend against TWO distinct Rules, and are as fallacious as they can well be!" Then suppose you were bold enough to say "The Conclusion is 'No men who cheat are trustworthy'," I fear your Logical friend would turn away hastily--perhaps angry, perhaps only scornful: in any case, the result would be unpleasant. I ADVISE YOU NOT TO TRY THE EXPERIMENT!

"But why is this?" you will say. "Do you mean to tell us that all these Logicians are wrong?" Far from it, dear Reader! From THEIR point of view, they are perfectly right. But they do not include, in their system, anything like ALL the possible forms of Syllogisms.

They have a sort of nervous dread of Attributes beginning with a negative particle. For example, such Propositions as "All not-x are y," "No x are not-y," are quite outside their system. And thus, having (from sheer nervousness) excluded a quantity of very useful forms, they have made rules which, though quite applicable to the few forms which they allow of, are no use at all when you consider all possible forms.

Let us not quarrel with them, dear Reader! There is room enough in the world for both of us. Let us quietly take our broader system: and, if they choose to shut their eyes to all these useful forms, and to say "They are not Syllogisms at all!" we can but stand aside, and let them Rush upon their Fate! There is scarcely anything of yours, upon which it is so dangerous to Rush, as your Fate. You may Rush upon your Potato-beds, or your Strawberry-beds, without doing much harm: you may even Rush upon your Balcony (unless it is a new house, built by contract, and with no clerk of the works) and may survive the foolhardy enterprise: but if you once Rush upon your FATE--why, you must take the consequences!