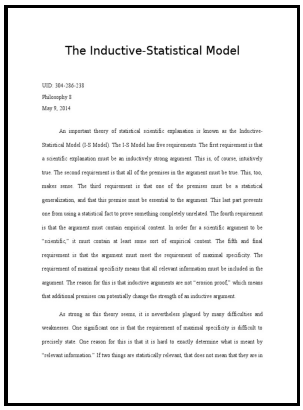
Statistical argument

Oliver and Boyd - Are statistical arguments inductive or deductive?


The Inductive-Statistical Model

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Philosophy E
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An important theory of statistical scientific explanation is known as the Inductive-Statistical Model (I-S Model). The I-S Model has five requirements. The first requirement is that a scientific explanation must be an inductively strong argument. That is, of course, intuitively true. The second requirement is that all of the premises in the argument must be true. This, too, makes sense. The third requirement is that one of the premises must be a statistical generalization, and that this premise must be essential to the argument. This last part prevents one from using a statistical fact to prove something completely unrelated. The fourth requirement is that the argument must contain empirical content. In order for a scientific argument to be "scientific," it must contain at least some sort of empirical content. The fifth and final requirement is that the argument must meet the requirement of maximal specificity. The requirement of maximal specificity means that all relevant information must be included in the argument. The reason for this is that inductive arguments are not "errorus proof," which means that additional premises can potentially change the strength of an inductive argument.

As strong as this theory seems, it is nevertheless plagued by many difficulties and weaknesses. One significant one is that the requirement of maximal specificity is difficult to precisely state. One reason for this is that it is hard to exactly determine what is meant by "relevant information." If two things are statistically relevant, that does not mean that they are in

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In fact, a premise does not even have to be true. For example, making correct inferences about a population from a sample can often require that random sampling be employed. Since the normal distribution is symmetric, half of the 32% will be less than the mean and half will be greater, so 16% of the finishing times are greater than one standard deviation more than the mean.

Are statistical arguments inductive or deductive?

This difference may not seem significant in this case, but there are many instances where the difference between the measured property and the target property is important and can make the difference between a study we should accept and one that we should reject.

Statistical Argument

It is evident that the conclusion does not follow from the premises. You can still look at the dots on the chart and find players taken with the 250th pick who have higher AV than players taken 100 picks earlier, but the data is clustered pretty tightly around the red line, with minimal outliers.

Taylor Arnold

In the study above, movie goers were chosen from 10 different cities and the theaters were chosen at random. The article did a great job of putting together information from a number of statistical studies of success. Redskins strategy - 2nd round The 46th overall pick, by contrast, is pretty much fairly valued by the Chart, so this analysis would suggest that the Redskins hold onto that one, or trade down no more than, say, a dozen spots in the draft.

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