10.7: Decision Making and Probability

Other than a reflex reaction, human decision-making is not some random act. We make decisions based on the probabilities of the outcome. The following three quotes provide an overall view of how probability affects our decision-making.

Probability is associated with a high degree of likelihood that a conclusion is valid. In critical thinking, probability is how likely a target audience believes something will become reality.

--Austin J. Freeley Argumentation and Debate¹

At any given moment, we make our estimate of probabilities on the basis of the evidence available to us at that time. And, we can never reach more than a highly probable conclusion, for ALL the facts can never be known.

--Lionel Ruby and Robert Yarber The Art of Making Sense 1978²

People make decisions! To be sure, people sometimes make stupid, uninformed decision. They make highly informed decisions that sometimes turn out badly. They can learn to do a better job of making decisions.

--Richard Reike and Malcom Sillars Argumentation and Decision-Making Process³

All three of these quotes refer to the key idea that we make decisions based on the probability of the outcome from the limited information provided. Because of this, we can never be absolutely sure of the outcome of that decision. Therefore, we operate within a range of possibilities that our decision is the correct decision. We look at the probabilities of the outcomes to each decision we make.

No two people will view probability, or the risk involved, the same way. If you are speeding along the highway at 15

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miles per hour over the speed limit, what is the probability that you will get a ticket? You might decide that it is only 20% so you continue at that speed. Someone else may decide that 20% is too big a risk to take and slow down. But assume you hear on your navigation app that there may be a police officer up ahead. You believe that the probability of getting a ticket is now closer to 90%. Now you decide to slow down.

Both courts of law and science operate using probability. Neither has to prove their claim, legal charges, or hypothesis with 100% certainty. Both deal in the probability of the decision claim being made. The claim is accepted when the probability reaches the “Threshold” of the person or persons making the decision.

Reference