

[SQUEAKING]

[RUSTLING]

[CLICKING]

RICHARD DE NEUFVILLE: So just imagine that instead of-- this is for two choices, two outcomes, two stages. Just imagine extension of three of each, and you're now talking about a really, really complicated, just to set up. And deliberately I haven't tried to show you the way to calculate the revisions of the prior probability as we learn about the future.

Bottom line here is, there's a good chance of a messy bush. So it's something to warn you about. And there's a reason, however, to show you this, one of which is because other people use it, as Chevron's decision analysis manual. But it also allows you at least to have some insights into something important, which is the value of information, which would be the topic of next time.

So let's now step back a little bit from it, but to realize that with the end, as a result of decision analysis, we don't have a simple plan. So instead of saying, all right, our best approach is to listen to the weather forecast and then to take the raincoat-- no, it's to listen to the weather forecast. If one thing happens, then maybe we take the raincoat. If another thing happens, then we don't take the raincoat.

So it is not, OK, step one, phase one, phase two, phase three, here is the right choice. It is, OK, here is the right start, and then we should do something else later on. So for example, you might say the first stage is to build your plant.

In the second phase, if there is growth, expand it. If there's no particular growth, don't do anything. If it's failing, then close it, for example. So you don't have one plan. You have a strategy, a dynamic plan that lasts through time.

Now, coming back to the decision analysis consequences, is it going through this kind of process of showing the complexity of it, is an education for the client or the person you're trying to do. And it also shows a strategy, a dynamic plan, is better than having a step one, step two, step three, a phase. This is what we're going to do through time. Just generally, they don't work out that way anyway.

Moreover, often it's a second best strategy that is optimal for any one outcome. For example, it's best to buy insurance. So thinking about you can choose to have a car or not, if it's within your means, and then if you have an accident, and you're really hurt and everything, you'll look back and say, driving was not a good idea. And it would have been better not to drive at all.

If you have no accident, you might say, gee, my best choice would have been to not have insurance. Insurance was a bad idea to have because I didn't use it. So the optimal choice might be to drive with insurance, which is never the best, which would not be the best choice, your first choice, in terms of the outcomes.

If the outcome is where you didn't have any accident, you spend all that money that you didn't need to. That would have been the better choice. If you did have a bad accident, then maybe you shouldn't have been doing that kind of activity anyway. So it's the idea that the better choice, like to buy insurance, is not necessarily the best choice for all the possible outcomes.

So let me now, step back and put this decision analysis versus flexibility analysis. So the decision analysis assumes you can define the choices to take in any stages. That's essential to building your decision trees, to say at stage two, here's what I can do, at stage three, here's what I can do.

Contrarily, flexibility encourages you to explore what decisions to take and when to take them. It doesn't tell you what you have to do and it doesn't tell you when to do it. So the simulation analysis allows you to look at those easily.

Secondly, the decision analysis focuses on a few distinct choices. We do this, that, or the other, whereas the flexibility analysis allows you, via Excel, to be as granular as desired. You can look through 2,000 simulations and it's easy to do, does it in seconds. But this is not really possible with decision analysis.

So having said that, well, it emphasizes the reasons why decision analysis, which was popular, and was a breakthrough, frankly speaking, into thinking a long time ago-- for me a long time ago, before you were born, even, possibly-- it is really not so relevant today, although it does exist, and is used, and has some insights, which I'll be sharing with you in terms of value of information.