

GEQ1000 Asking Questions Economics (Social Science) Segment

Video 2-5

Multiple models

Here's a quick recap of what we've done in this week's videos. We have argued that models are used to simplify reality so that we can understand it. We can either keep them in our heads, or bring them out and make them explicit. Models are also used as thought experiments, particularly in cases where real experiments cannot be done. We used the example of the Prisoner's Dilemma model to illustrate how economists build, use, apply and test models.

Thinking through models is what we do as humans, but it takes practice and experience to do it well. You will encounter a variety of models in your time at NUS. Ask of each model, what are the underlying assumptions, what are the insights, how well do the implications apply to the world. Let these explicit models percolate into your own thinking, to help you build up your mental models, so that you can become a more systematic thinker.

Above all, you will need to have multiple models. Not every social situation is captured by Prisoner's Dilemma. Always remember that models are not reality, but are simplifications of reality. They can be applied inappropriately, out of their proper context. With only a few models at your disposal, you may end up seeing reality only through the wrong model. Your perspective will be too limited.

We economists have sometimes been guilty of this. We have tended to model humans as rational actors, able to make purposeful decisions to maximize our objectives. This **rationality assumption** is often criticized for being unrealistic, but it captures enough of human behavior for economists to build models with wide applicability. But the assumption has in some cases prevented us from incorporating useful insights. Work by psychologists such as 2002 Nobel prizewinner Daniel Kahneman show that we make systematic and predictable errors in judgment, due to cognitive biases. In recent decades, economists have begun to relax the rationality assumption in some investigations. **Behavioural economics**, once a fringe area in the discipline, is now becoming part of the mainstream.

In short, keep an open mind and learn from the models of different disciplines. Sometimes insights from models in one discipline can be applied fruitfully in

others. General Education modules such as this one provide a good opportunity to do just that.

To sum up, in this brief series of lectures we have looked at how economists use data to make inferences about the world, and use models to think about the world. We cannot hope to have the predictive power of the natural sciences, because we are dealing with people, who can change their behavior by will. And perhaps we should be glad about that, for if we are totally predictable, we would be little different from machines. And a world of machines would be a dull world to live in.