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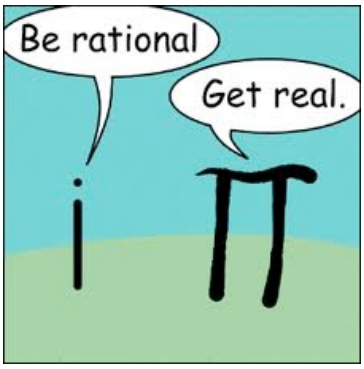

Credible And Effective: Using Models for Communication

There are models for developing concepts and models for communicating them. **And they are not the same!**

Development requires a model that can hold all the very many elements that impact the outcome and might need to be extremely detailed in order to solve the problem. (see p.3) **They are models that you put information into.**

A communication model is very different. When you use a model to convey information to others, the idea is for the audience **to take information out.** If the model is too complicated, the audience is compelled to *put information in* to try to understand it - and you have lost the game!

In this issue we look at

Please consider - and enjoy!
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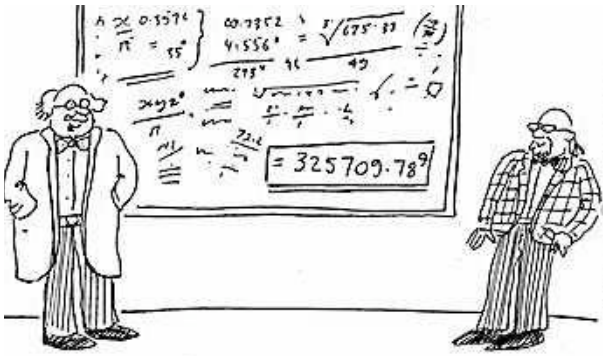


"Wow! Amazingly that's my lucky number!"

"Everybody finds it difficult to understand the models that others present. It is only our own models - ones that we have spent a great deal of time with - that we really understand."

Back when I was just beginning my career in economics - actually on the day I took my honours oral exam - a visiting famous senior economist told me that I would make an excellent economist. I confessed my doubts, saying that the field was becoming increasingly mathematical and that I had a great deal of difficulty in understanding some of the models presented in the papers of the day.

The Noble prize winning economist smiled encouragingly and said "Everybody finds it difficult to understand the models that others present. It is only our own models, ones that we have spent a great deal of time with, that we really understand."

He went on to tell me that each specialist learned only a few mathematical techniques that were relevant to the problems at hand and if I did the same, I would be fine. He was right.

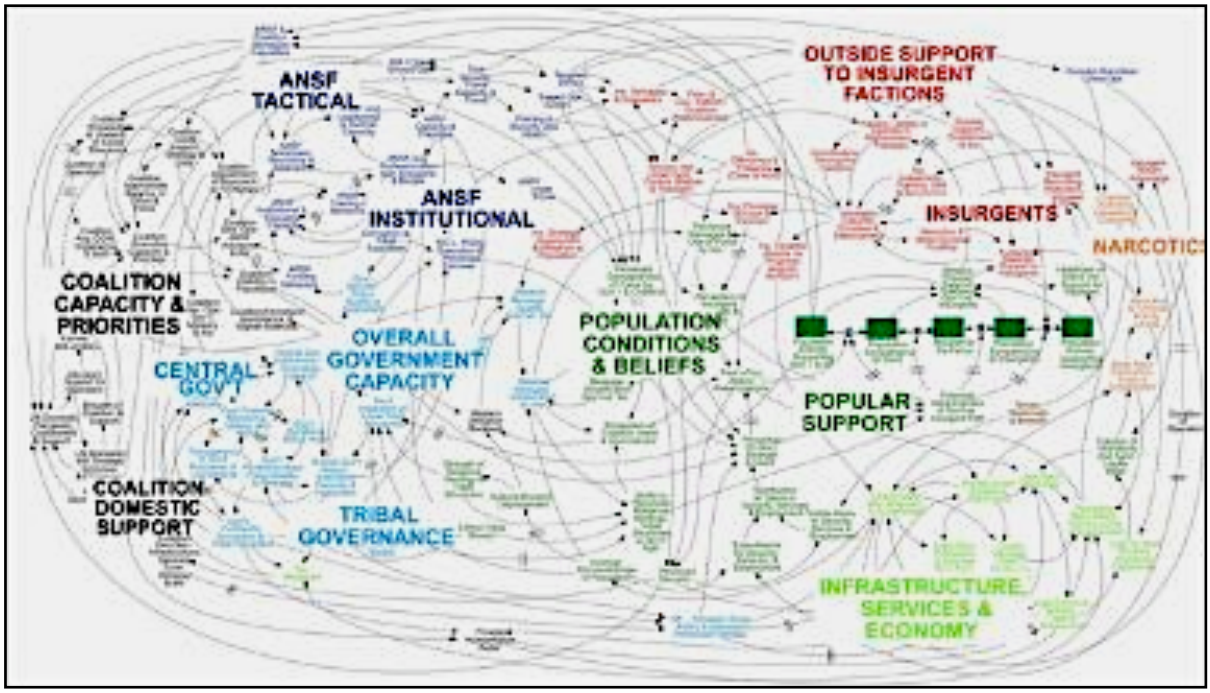
But looking back now on that comment that we only understand models that we have personally put much time into rings very true - and it is as true for conceptual models as it is for mathematical ones.

How many times have you gone to a conference and been confronted with charts that show an amazing array of different colours, shapes, lines and arrows. Did you quickly grasp the issues being described? Of course not!

> Consider the picture on the top of the next page. Even on a large whiteboard, would you understand it? No? Well, nobody else did, either!

This was the model presented to the Pentagon last year that caused such mirth - but no enlightenment.

Why the Pentagon failed to understand the Afghanistan Problem - and why your chiefs may not understand you!



"When we understand that slide, we'll have won the war!"

Indeed! This was said to be the reaction of General Stanley McChrystal, the top US military commander in Afghanistan when the above power point slide was shown to a roomful of army chiefs in Kabul last year. The comment brought laughter from the room and much critical amusement in the press. As one blog site commented "This particular flow-chart slide with its arrows seemingly pointing everywhere and nowhere like a bowl of spaghetti has become so popular that it is now a favourite circulating on the internet."

The Analysts had made the mistake of confusing developmental with communication models.

The slide was intended as a serious attempt by military analysts to explain the task for allied forces in confronting the Taliban and winning support among the local population.
One commentator protested the general rubbishing that this diagram got and said - correctly - "This document is an **influence diagram**, which is a normal first step in conceptualising any complex system. I would be most disappointed if the situation in Afghanistan were to be treated as anything but a complex system!"

And so it should be - by analysts. But a different method is needed for communication.

But every conference you attend will have these impossible to understand diagrams thrown up on the screen and you are expected to absorb

Why do we do this?

It could be that we want to show others how clever we are, or at the very least, to show how much effort has gone into the development. It could be that we now think it is expected of us, since every other presentation we have ever seen does the same. But this is not helpful. Even when used in a written presentation where we presumably have the time to pore over the details, few will bother. I read an article to get information - not to give it!

How can you *give* information?

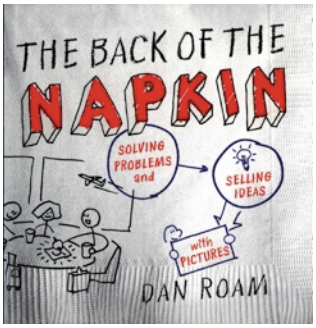
The first rule should be to make it easy on your audience. So simplify, simplify, simplify. Just as a power point slide should only have a few **words** - in a very large font size! - so a power point diagram should have only a few **elements**, that can be instantly comprehended. In other words, **one message per powerpoint** and as many as you have messages - or until you have reached the saturation point of your audience, whichever comes first. Even better,

Create your model before their very eyes!

Rather than presenting the end result of your deliberations in a model, start from step 1 and build up the picture as you go along, explaining the steps along the way. Yes, you could do this in a series of powerpoint slides, but it is far more compelling if you use a flipchart or whiteboard and talk your audience through the process.

To make it easier, use pictures for concepts

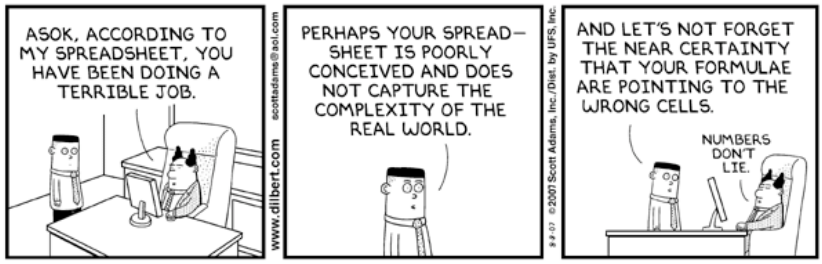
Can't draw? **Read "The Back of the Napkin'**



Imagine this situation: A colleague has to leave the office on a medical emergency and pleads with you to cover for a speech he has to deliver the following day. You say yes. Then discover that the the speech is to take place in Sheffield, England and you are in New York, to a panel of educational experts appointed by the new Prime Minister - but nobody has told you what the topic is (something about the internet) and if there were any presentation materials, you can't find them. So you arrive jet lagged from a transatlantic flight and catch a train for Sheffield surrounded by colleagues you have never met before, all thanking you profusely for coming to 'save the pitch'. Save the pitch? You don't even know what time it is!

This is Dan Roam's introduction to "The Back of the Napkin" where he does, indeed, 'save the pitch', and wins an important contract - by using really simple pictures to build up a story, so that the complex world of internet learning was understood by educators who had not previously been exposed to e-learning.

This is an excellent book that will help the way you think AND the way you present. I can't recommend it highly enough. And it's fun!



Questions to ask

When your reputation is on the line!

We all love building models,

It is the way that we understand our complex world. But how credible and convincing are they for others *who have not had a hand in building them*?

When your Executive fail to act on your recommendations

It may not be out of wilfulness but because, deep down, they do not understand the model that produced them well enough to stake their reputations on. And who can blame them?

What would you want to know to be confident?

Before you start castigating them for stupidity or worse, ask yourself what you would need in order to be confident enough to take actions on the model projections of others, preferably actions that would cost you a lot of money or affect your reputation.

Here is what I would need to know

(at a minimum)

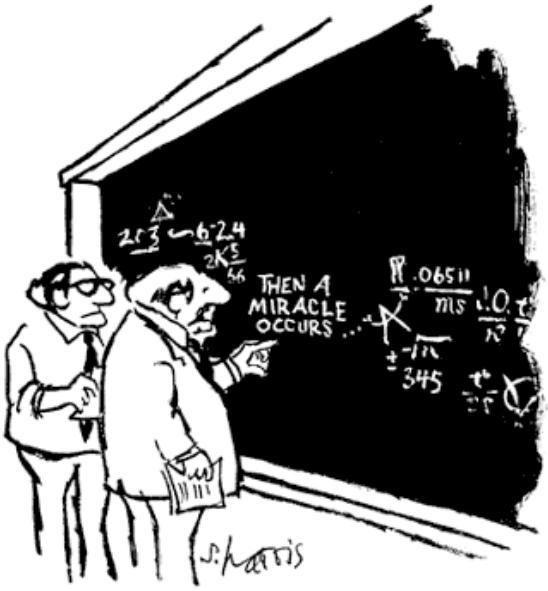
- What the underlying logical structure is to the model.
- Where the inputs came from
- What testing (sensitivity and other) has been carried out
- How knowledgeable are the modellers about their own model

(and preferably)

- I want to be able to 'operate' the model myself

- that is I want to be able to change an input and observe what change it makes to the outputs. I want to see if this change gels with my gut feel. But if sensitivity analysis has been carried out on what I consider to be the key inputs and the results are presented along with the model, I will be satisfied with this, provided it is clear how the tests were carried out.

The importance of transparency



"I think you should be more explicit here in step two."

When advising a Minister some 20 years ago I was presented by his energy authority with the output of a model that told me that their debt situation was well in hand. Although this debt situation was looking pretty shaky now and would get worse for a few years, I was assured that the model 'proved' that within ten years the authority would be debt free. (Australian readers will recognise the familiar 'J' curve arguments here).

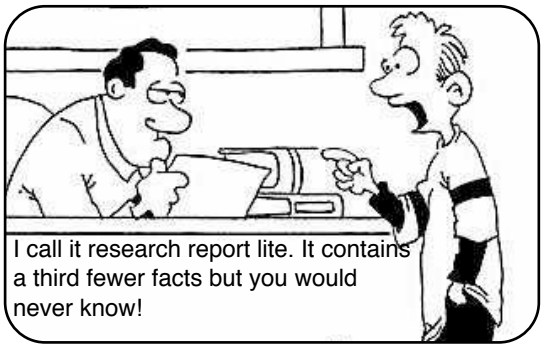
When I asked for a sensitivity test to be run on the interest rates (market rates were running at about 17.5% at the time, although not in the model) I was told that the model was a very complicated one and it would take a lot of time to re-run it and they did not have the computer availability.

With an answer like that how confident would you feel with the model's predictions? What would you have advised the Minister?

Similarly in pre-feasibility tests for an under-sea electricity connection using innovative technology that had been untested over the long distances and deep and rough waters that would apply in this instance, I was struck by optimistic forecasts despite the complete absence of any sensitivity analysis on the projected load growth. Since load growth is the key factor determining profitability this would have been the first piece of analysis carried out. Why was it not published? My suspicions were thus immediately aroused, leading me to carry out many tests of my own on the results, tests which failed to support the report's contentions.

Your audience may not go to the same lengths as I went to in each of these instances, but I was an advisor and it was my job. My audience was the Minister, and as a result of my concerns with the model outputs in both of these cases, he felt that he **was unable to move favourably on the recommendations. Which, of course, is what will happen to your model's recommendations if you fail to establish its credibility.**

So how do you establish credibility?
In "Trust Me, I'm an Asset Manager" (SAM Issue 205) Ruth Wallsgrove addresses this topic head on. Worth a re-read!



I have been a researcher for 50 years, and these are some of the things I have learned in that time that I wish I had known a lot earlier than I actually did.

On Reading a Report

1. Conclusions do not always accurately reflect the content of a report.

In an episode of "Yes Minister" the Minister is concerned with the damaging effects of a consultants' report. "don't withhold it", he is advised, "release it but change the conclusions - they're the only bit that anyone reads anyway". On TV this is funny, but when it happens for real, it is not. Read the Federal Government's Langford Report into Australian Infrastructure, for example, and you will look long and hard to find support in the text for any of the recorded 'conclusions'.

Protection? Use the search function on an electronic copy to see what evidence there is for the conclusions recorded. Especially for government reports that are used as support for policy change.

2. Reports written by the collaboration of a large number of people are particularly prone to conclusions that represent the voice of the loudest player.

Such reports are often light on real facts and heavy on unsubstantiated opinion.

Protection? Before taking a conclusion at its face value, check the content and assess its credibility.

3. Who commissioned the report?

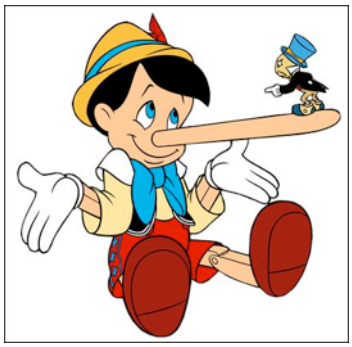
Think Tanks come in different colours. It is pretty easy to tell which ones are more conservative and which are more progressive - and to interpret the results in this light. Reports prepared by Universities are not necessarily independent. They tend to support the values of the body commissioning the research.

Protection? If you can't find out who commissioned the research, check the evidence supporting the results that you wish to quote, and read it carefully.

4. Be wary of international conference reports.

We tend to be impressed by reports presented at international conferences and to take the information presented to be true, but it is even harder for international referees to check the facts and figures presented than it would be for local referees.

Many years ago I was given a report on the costs and benefits of building handicap ramp access to public buildings. I was surprised by the researcher's access to data for the purpose of analysis as I had not seen much data around and I asked him - a number of times - where he had obtained his figures. Eventually he said "Look, I made the figures up, but it doesn't matter, I am presenting this paper at an international conference and so people will quote them and other people will quote those people - and pretty soon *it will be fact*".



Protection? Check that the author has provided the source of the data - and if it is something that you really need to rely on, *go check the source*!

5. Be wary of any graph presented with unlabelled axis and without citation!

The chances are that this is something that the author half remembers from a conference presentation or his reading. The real story may be far from the one presented.

Protection? Don't use any information that comes from an unlabelled graph!

What Tips?

What have you learnt in your many years of Asset Management that you wish you had known earlier? What tips would you pass on to someone you were mentoring?