



Futures Techniques

From time to time throughout 2018 we have looked at particular futures techniques which are also covered in our training events.

What does Superforecasting do? Not do?

Forecasting is a basic part of business planning in every organisation – forecasts of the external business environment, the market, the competition. Forecasts aim for accuracy. Professor Philip Tetlock is a social scientist now at the University of Pennsylvania who has designed and run major experiments on the characteristics of successful forecasters. A summary of his findings is captured in the acronym CHAMP below, and his latest book is **“Superforecasting: the art and science of prediction”**, written with Dan Gardner, Random House, ISBN 978-1-847-94714-7.

Tetlock’s CHAMP

Comparisons are important: use relevant comparisons as a starting point

Historical trends can help: look at history unless you have a strong reason to expect change

Average out opinions: experts disagree so find out what they think and pick a mid-point

Mathematical models: when model-based predictions are available you should take them into account

Predictable biases exist and can be allowed for. Don’t confuse hopes with forecasts; don’t cling to old forecasts in the face of news.

The book is excellent and should be read by all who have responsibility for making decisions – whether personal or in organisations. It offers practical advice on how to use the methods used by successful forecasters.

We in SAMI have been scenario planning practitioners for all of our 25 years. Does this mean that we are going over to superforecasting?

We recognise and endorse the ingredients of CHAMP:

Absolutely, **comparisons** between industries and between countries are a staple ingredient of building scenarios

Absolutely, **historical trends** can help because then as Eisenhower famously said, **Plans are worthless, but planning is everything**, and planning needs to build on what we carry forward from the past.

Average out opinions – here is the crux of the difference – scenarios aim to explore different possible futures, often based on different current competing philosophies.



Mathematical models – we will explore in later blogs the role of mathematical models in exploring the future – essentially the implications that models are based on assumptions and can mislead unless these assumptions are transparent and explicit to all users of the model. And most models are not constructed to be able to handle fundamental shifts in underlying behaviour.

Absolutely, **predictable biases** exist – yes! This is so important, and we run a training course on this, details on www.samiconsulting.co.uk/training.

It is important to note the scope of the superforecasters in terms of both subject matter and timescale.

Subject matter: the experimental data on successful forecasters is based on global political forecasting (in the original book, Tetlock, P.E. *Expert political judgment: How good is it? How can we know?*. Princeton University Press. **ISBN 9780691128719**.) and in creating his subsequent panel of volunteers. Do the heuristics apply to forecasting of take up of technology and ensuing social change?

Here, for instance, it can be argued that averaging out of opinions may mean that prudent planning is not done, as in the telecoms companies who were late to explore the changes in traffic patterns from mobiles and the internet-driven data flows. Or Steve Ballmer, then CEO of Microsoft, “There is no chance that the iPhone is going to get any significant market share. No chance”

Timescale: judging forecasts is difficult unless they are explicit about the timescale. And most forecasts don’t – like Steve Ballmer’s above. But we note that the experimental data about superforecasters quoted in the book is **that superforecasters looking out 300 days were more accurate than the forecasters looking out 100 days**. So, as our work is often about futures 5 years to 50 out, we learn what we can from Superforecasters and then need to add in the potential paradigm changers and explore these through scenarios – possible different futures.

Written by Gill Ringland, SAMI Fellow Emeritus, [published 28 March 2018](http://www.samiconsulting.co.uk).



“Not all who wander are lost”



Dr John Carney, Principal Scientist in the Systems Thinking and Consulting Group of the Defence Science and Technology Laboratory (Dstl) recently wrote a [blog](#) on the Foresight section of the Government Office for Science website – “*Ten Commandments of Horizon Scanning*”. In this he sought to capture the critical factors for successful Horizon Scanning (HS) in a UK Government Department. I’d say the lessons apply to HS for all organisations and are useful to practitioners and clients alike.

He points out that the term “Horizon Scanning” itself has a range of interpretations, and so a critical first thing to establish between practitioner and client is an actual definition and clarity of scope. In work that SAMI Consulting has done for Government clients, the term has been used to mean anything between “technology watch” and full scenario planning.

Clients need to understand early on that HS is not forecasting or prediction. Sometimes clients ask “what is your track record in getting your scenarios right?” This misses the point: HS is aiming to bring new perceptions, to challenge set world-views and assumptions, and to open up strategy or policy-making to more options. To achieve that you need to be looking in different places from the usual subject-matter sources, trying to find the novel and surprising “unasked questions”. “Not all who wander are lost” (attributed to JRR Tolkien).

In our experience, it’s also necessary to encourage scanning beyond the technology developments of the day. AI, Big Data and the Internet of Things will of course have major impacts on almost every organisation, but they are not the only significant forces around – changing generational values, new economic structures, unstable geo-politics will all have profound impacts on the future.

Also, we’d argue that one needs to consider second- and third-order effects. A tool called “[Futures Wheel](#)” can be used to systematically explore these effects by explicitly identifying each effect and its further consequences. For example, climate change will have many effects, but if it leads to more efficient non-fossil fuel energy sources, what impact will that have on the economics and stability of oil-rich states?



And then on migration and energy demand? Especially if at the same time there is increased competition for scarce natural resources like water.

Dr Carney makes several very good points about the organisation and processes of HS. You need a champion or sponsor; the need to retain scientific credibility (some, but not too many, wacky ideas); the difficulties of being in a “challenge” function, conveying unpalatable views; sustaining the team.

We saw this last point ourselves when we worked with the Futures Council of Conference Board Europe. This was a group of futurists set up with over 30 members from companies across Europe. Five years later only six were still in the role – half the others had gone back to a line role; the rest became consultants focusing on foresight and futures. Sitting in the middle is hard.

Have a read of Dr Carney’s **“Ten Commandments”** – and let us know what you think.

Written by Huw Williams, SAMI Principal, [published 18 April 2018](#).



Building and Testing Business Models – the role of scenarios and modelling



One of the most interesting recent advances in the art of business model innovation and testing has been the creation of the Business Model Canvas, a language capable of describing and manipulating business models to create new strategic alternatives ([Business Model Generation: Osterwalder and Pigneur Wiley 2010](#)).

There are nine basic building blocks in this structure covering the four areas of customer, offer, infrastructure and financial viability. The design process itself is broken out into five phases – mobilize, understand, design, implement, and manage. Within that, design is the place where prototype models are developed, options are generated, and the best selected. This is where techniques such as scenarios and simulation are proving to be increasingly valued.

Although these were once seen as the province of two distinct (and rarely overlapping) communities, advances in simulation modelling have significantly increased the potential of an integrated approach. In fact, we see their integration as vital to the development of a modern strategy capability in any enterprise of scale. But just how might a more integrated approach be made to work and what would be the benefits?

Business simulation modelling has been applied to every possible complex decision in every conceivable industry, and featured in the popular movie *Moneyball*. In practice, simulations seek to create replicas of businesses or operating assets that allow the users of those models to experiment with them under a wide variety of real or imagined conditions. Scenario planning, on the other hand, is the well-ordered, systematic discussion and development of a range of plausible futures facing that business based on analysis of the key drivers of future change. Putting these pieces together, we see that a business simulation that faithfully captures the essence of the business and the way it will develop in response to the many challenges it faces, could be placed in the hands of a scenario planning team as the centrepiece of the strategy dialogue. Doing so would offer the following advantages:



1. The simulation ensures that the scenarios and their implications are also data-rich, not simply qualitative.
2. A simulation model can very quickly calculate the implications of a scenario – that allows the team to consider a wider range of scenarios, even those at the “tails” of the distribution (extreme conditions).
3. A simulation model can provide dynamic imagery that can ‘bring the scenarios to life.’
4. Running many more scenarios would show the teams where there are “inflection points” in circumstances – i.e. a small change in the market may double (or half) the value of an asset.
5. A more complex set of interventions/insurance against “perfect storm” scenarios might be developed, given the speed at which a model may identify and assess such conditions.
6. Combining simulation with scenario planning respects the bare economic fact that computing power is cheap and human talent is expensive. An integrated approach provides the maximum leverage of expensive human talent.
7. By codifying the scenario information in the form of a model, more stakeholders – suppliers, regulators, the public – can be both participants in its design as well as consumers of the final result.

Decisions about the future are naturally fraught with uncertainty. Some aspects can be modelled because the underlying assumptions and ‘rules’ remain valid. There is also increasing uncertainty as one moves further into the future. Therefore, for some aspects, data driven approaches provide rapid and powerful explorations of some possible futures. For others, uncertainty cannot be reduced to quantitative values; judgement is needed based on experience and a host of unquantifiable elements. But bringing these two capabilities together in a mutually reinforcing way will help both today’s decision makers and provide a powerful learning environment in which decision making steadily improves over time to the benefit of all stakeholders.

Scenario analysis can help determine the variable to be explored in the models. The model can be used to test, visualize and quantify a range of futures. It is not possible to remove the uncertainty of the future but a combination of scenarios and modeling will enable these uncertainties to be better understood and managed. This will lead to more robust decisions, lower risk and potential competitive advantage.

It is also important to recognize that to varying degrees we can influence the future. Those that have a better understanding of the future are better placed to influence it and be leading events, rather than reacting to them.

This note was originally produced by [Torus Business Web](#) for the [Government Operational Research Service](#) (GORS).

Written by John Reynolds, SAMI Fellow and Director, [published 13 June 2018](#).



Taking the bias out of decisions

This blog piece is a highly edited version of “Debiasing political decision-making through “Value-Free” scenario models”, a paper presented by SAMI Fellow Jonathan Blanchard Smith at the European Union’s 6th International Conference on Future-Oriented Technology Analysis (FTA) – Future in the Making, held in Brussels, 4-5 June 2018.



Our recent work on Brexit, and in particular the creation and use of the SAMI futures model in client work and presentations, has thrown up an unexpected outcome. Client feedback has shown that one of the benefits of using the model is in being able to consider a politically contentious matter such as Brexit in what we are calling a ‘value-free’ state: in other words, that the model enables people to think about a complex, highly emotionally charged problem rationally.

Alongside our existing work on decision bias, and how it complicates making “robust decisions in uncertain times”, we have been developing this thinking, and recently presented it at the main European foresight conference to gain feedback and further advance our thinking. This remains very much a work in progress, but it is one which seems to have real benefits.

Brexit as an example of contested thinking

It is a feature of Brexit that people find it very difficult to engage with without having a preference for one or other side of the argument. We have seen in for instance the largely unsupported claims of the Leave side (Aaron Banks’ recent statement to the House of Commons Culture Media and Sports Committee: “Banks and Wigmore happily admitted lying to journalists during the EU referendum to gain publicity for their cause” (The Guardian, 12 June 2018)) or the much derided “Project Fear” from the Remain side that both sides exaggerated and exaggerate their positions for effect. The binary nature of the choice inevitably intensifies the split between the two sides. The marginal nature of the referendum result gave neither side an argument that the electorate was with them.

Populism

The rise in populism raises a number of issues including:



- Youth vs age. Whilst the people behind populist movements are of all ages, those who vote for them are predominantly older.
- Distrust of experts. The reaction against expertise complicates decision making by introducing what is essentially an unanswerable opposition (“I don’t believe you”) to fact. There is no easy resolution of this issue.
- Emotional investment. The oppositional, binary nature of many of the issues results in people gaining entrenched positions where it is emotionally easier to pick a side and defend it than it is to see that the other side has valid opinions or, even more difficult, may in fact be right.

The combination of these two last points has been compounded in what is generally known as the “backfire effect”.

The Backfire effect

Essentially, the backfire effect holds that “A man with a conviction is a hard man to change. Tell him you disagree and he turns away. Show him facts or figures and he questions your sources. Appeal to logic and he fails to see your point.”

The issue: and its solution

The essential problem our clients found was that their thinking was clouded not only by the normal issues which affect one’s thinking about the future – lack of precise information, compromised or conflicting reasons for doing the work, unconscious or conscious desire for a particular outcome and so on – but by the fact that they were too embedded in a view about the decision that formed the start point of the scenarios in the first place. This emotional investment in one side or other prevented them from thinking clearly about the future.

By developing a futures model which does not include the problem but includes the consequences of the problem, in such a context that it is the potential future outcomes that matter, the model seems to allow a freedom of thought which is genuinely productive.

We have described [the model in detail in past blog posts](#). Our paper described the results we gained from the model.

Feedback from clients has been overwhelmingly positive. They appreciated:

- “the space to think about this without worrying about Brexit”
- “the clear air it gives us to think about the future”
- “the fact that I can think about the opportunities not just how bad it’s going to be”

This implies that the ability to communicate is by itself improved by the removal of potential biases, by providing a “safe space” for clients to think about complex and divisive issues without actually having to explicitly engage with the issue itself. We draw a number of other conclusions, specifically designed for scenario creators, around the requirement for conscious debiasing at the outset, the need for independent checking and a real sense of integrity throughout the model development process. The backfire effect is only one of many potential biases that can influence both scenario set creation and use. However, it is also one of the most evident. Whilst



scenarios are generally understood as providing a space within which one can think about the future and its implications, the underlying assumptions and methodologies are poorly recognised in the client base, and there is a question about how far one can engage clients with the engineering as opposed to the result.

Conclusions

Conscious debiasing at the outset of the scenario construction process is a multi-step process and is dependent not only on the quality of the scenario set but upon the determination of the development team.

We believe that this model provides a potential route to thinking about the implications of contentious political topics in a way that provides clarity for clients, whether they be in politics directly or in the impact of those politics through their involvement in business or the third sector. Communication, comprehension, and results all seem to be improved through this model.

Copies of the paper are available directly from the author at jbs@samiconsulting.co.uk

Written by Jonathan Blanchard Smith, SAMI Fellow, [published 27 June 2018](#).