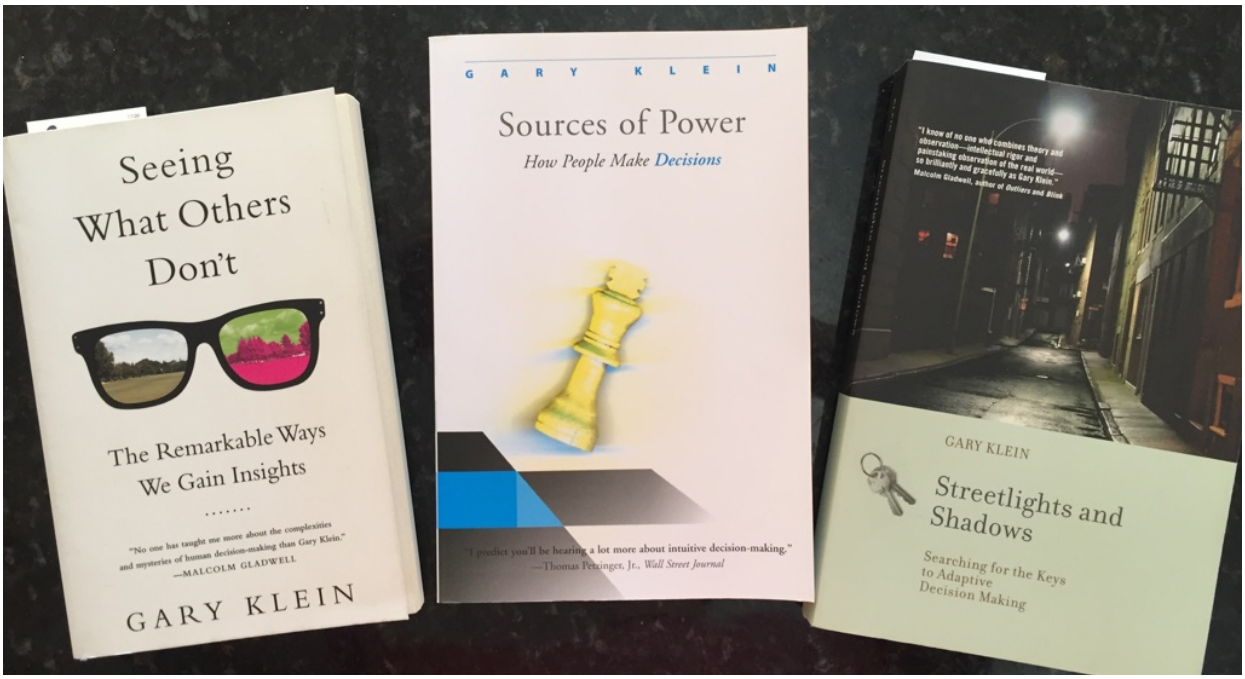
How people make decisions and see insights

Interviewer: Gareth Byatt – Director, Satarla Australia

Interviewee: Gary Klein – Senior Scientist at Macrocognition LLC

Gary,

Thank you for taking the time to talk with us about how people make decisions, and how we see insights – which, amongst other things, can help us to take and manage risk. There is lots to discuss in this field, and I am a keen follower of your work.



Gareth: I'd like to start, if I may, with a general question. You have researched and written a lot about decision-making and how people think in your books, research papers, and articles for the Harvard Business Review, McKinsey and other publications.
What, in general, have you seen evolve over the past decade or so in terms of our understanding of how we make decisions, and what do you think this means in general terms for how we think about and manage risk?

Gary: *I have been pleased to see a general acceptance of the importance of intuition – of experience-based judgments based on tacit knowledge. I think this has been a big change in the past decade.*

And with regard to managing risk, I see two communities that do not interact. One community develops more and more powerful analytical tools.
The second community is fairly sceptical about the chances of taming risk through analysis and instead seeks ways of building resilience.

Gareth: I'd like to dive into some of your material now.
Your book, Sources of Power, focuses on how people make decisions, and provides many examples you have seen of how people act and make decisions under pressure and in challenging situations and circumstances. In the book, you write about "naturalistic decision-making" and the key concepts that people can apply to making good decisions in all sorts of environments.
In the context of this body of work, what would you say are some of the key learnings that we can all take away and apply to how we take and manage risk, for both immediate-term decisions and decisions that have an impact over the long-term.

Gary: *The financial community is quite clear that risk is not a negative factor, to be avoided, but is an opportunity for making large gains. One of the diagrams I have been using shows that to improve performance, we need to do two things. We need to reduce errors, and essentially cut back on the negative potential of risk. But we also need to gain insights and to encourage exploration even though the exploration entails risk. I have done some work with one company that used to be innovative, and still thinks of itself as innovative, but has not followed up on its early successes. Instead, it is coasting on these successes. One of the top executives confided in me that the company has received over 50 proposals from internal teams for starting new and innovative programs in the past 7 years — and hasn't funded a single one of them. In each case, the evaluation team was able to find some potential problem and that was enough to scuttle the proposal. I think that companies are starting to realize that this kind of risk-averse behaviour is in fact very risky for long-term success.*

Gareth: I remember being drawn to another of your books, Streetlights and Shadows, which focuses on adaptive decision-making, after reading an extract of it – chapter 15 – about "the risks of risk management". In chapter 15, you talk about how traditional steps of risk management are fine in theory, but they do not always align to how we think and act. That is to say, in broad-brush terms, the processes we set up to systematically identify relevant risks and then develop and implement risk management plans and monitor how they are working is fine in principle, but you have to be ready to anticipate and adapt – you can't expect to "follow a script".
This need to anticipate and adapt runs through the core of the book as a theme, to work out how to make sense of situations and how to cognitively grasp the nettle and respond to challenges that we face.
Given your research into adaptive decision-making, what, in summary, do you think are some tips for when we should trust our gut and when we should be more analytical of our options?

Gary*: We should NEVER 'trust our gut.' Wonderful as it is, our intuition can mislead us. We have to consciously examine our intuitions to see if they make sense. That said, we should never trust rational analysis either because it can also mislead us. There are no easy roads to infallible decisions.*

Gareth: This brings me onto a McKinsey article from 2010, in which you were interviewed with Nobel prize winner Daniel Kahneman on "when to trust your gut" – an article that continues to resonate with me.
We know we often trust our gut, but there is an increasing amount of focus on "big data" as we move towards a digital economy. We are being told that we need to improve our ability to analyse data in order to make good decisions, including how to best take and manage risk.
Do you think we are currently finding the right balance between using data and our intuition, and will it change over time? Are there any examples you can give on how to find a good balance? I know this is something that I struggle with.

Gary: *Recently some colleagues and I have been examining the judgments and decision making of physicians. The safe strategy is to engage in Evidence-Based Medicine — to rely on the official or the current best practices. However, we don't think it is very practical to depend on best practices and the use of data from carefully controlled research studies. The studies may yield clear results, but physicians have to treat individual patients who may have several different diseases and the research studies only look at one disease at a time. The studies don't take context into account. Physicians have to know their patients and have to make experience-based judgments about whether the treatment is working. Is the patient improving or not, and if there is an improvement is it as great as should be expected. So, physicians have to use their gut — their experience-based intuition — to move beyond the data. Of course, this is a struggle. It's a struggle because it is hard. It is a struggle because specialists are working in ambiguous situations.*

If people don't want to wrestle with these challenges, they should find a line of work that allows them to succeed by following mechanistic procedures. The people who are going to make important progress are those who have prepared themselves to take informed risks and to venture into unknown areas.

Gareth: I enjoyed reading your book, Seeing What Others Don't, which focuses on ways that people see insights. In this book, one of the things you talk about is how we could see more insights if we spent less time focusing on reducing errors, and more time being curious, looking for interesting connections between things and spotting contradictions and coincidences, and learning how to deal with "creative desperation" (for example, when we have an urgent problem to solve).
Do you think we spend enough time focusing on insights, or do we spend too much time looking at and reacting to things we already know about? This has relevance to risk management for me, in that I believe we should be using risk management to focus more on future possibilities and less on "reporting against things we already know about".
Also, have you uncovered any fresh research since the publication of this book into how we can gain insights to "see what others don't"?

Gary: *You have stated my views very well. Yes, people love to compile checklists of things that have gone wrong in the past and then keep reviewing these checklists rather than examining what is happening in a current situation. In this way, they become prisoners of the past. I think organizations would be better off discarding these checklists and scrutinizing what is happening now, looking for anomalies.*

After I published Seeing What Others Don't I went back to my database – the set of examples of insights I had compiled — and pulled out the cases involving the creative desperation path. I renamed this the "correction" path because it involved correcting an erroneous or limited assumption that is blinding one. This path to the insight depends on giving up the flawed assumption. I found that in the great majority of cases, people did not simply "will themselves" to spot and discard the flawed assumption. Instead, they noticed hints, subtle signs, that pointed the way to the assumption that was causing the problem. The people who gained the insight resisted the temptation to explain away these hints and signs. Instead, they became curious and investigated what was behind the hints, and that's how they escaped the flawed assumption.

Gareth: Onto a more specific technique you have written about to assist decision-making which I find very useful to help people think through risk, called PreMortems.

Back in 2007, you wrote an Insight column for the Harvard Business Review on PreMortems (*see this link – note: access restrictions may apply*) as a tool to aide decision-making (and to assess risks). The essence of a PreMortem is to focus on the beginning of a project / initiative, and to "project yourself" into the future. Unlike a typical critiquing session, in which team members are asked what *might* go wrong, a PreMortem puts you in the position where "the patient has died", and asks what *did* go wrong. The team members' task is to generate plausible reasons for the failure of the project / initiative in a methodical way and to use these during their project / initiative as "watch items" to spot problems early.

I have personally found the PreMortem to be an extremely useful technique for business and project risk management, and I know that it continues to receive coverage in various journals around the world.
One of the things that I have done is to adapt it slightly, so that people can use the technique to imagine a really good outcome, as well as a really bad one.
Is there anything that your recent work has uncovered that I and others may want to consider adding to how we approach PreMortems?

Gary: *The PreMortem method continues to gain traction and attract adherents. It is getting used in a variety of settings, from Wall Street to wildland firefighting and to military Red Teams. I recently put on some PreMortem seminars at Columbia Business School, and found that some of the applications of the PreMortem on Wall Street had gotten the methodology somewhat wrong.*

At any rate, I have developed a parallel method along the lines you have created yourself. It is called a "ProMortem." Here, you use a crystal ball to look into the future, just as with the PreMortem, except that this future is positive.

For example, if I am teaching a method like ShadowBox, I might start with a ProMortem and have the group "see" a future in, say, 5 years in which its organization has adopted the ShadowBox approach.

Then I ask the group members to imagine what happened as a result — What are they doing differently in this future state? How is the group's or the organization's performance changed? Then we compile the futures that people imagined. The ProMortem turns out to be very energizing.

Gareth: I'd like to discuss briefly the topic of culture with you, and the impact it has on how people take and manage risk in their everyday activities.

Given your work in decision-making and also organisational training, including through your company, Shadowbox Training, I wondered if you could talk a little about the key elements of a positive culture and how this can have a significant impact on taking and managing risk.

Gary: *I am finding more ways that culture affects decision making. One example, discussed earlier in this conversation, is that many organizations over-emphasize the down-arrow, the reduction of mistakes, and ignore the up-arrow, the generation of discoveries and insights. These organizations have a risk-averse culture, excessively risk averse. Risk averse to the point where they are incurring risks by being paralyzed and unwilling to adapt and innovate.*

Another cultural difference involves organizations that become slaves to procedures and wind up with workers who think that all that matters is to follow procedures regardless of the outcome. Their mindset is that "if I follow procedures, then no one can blame me if things turn out poorly." Other organizations don't fall into this trap and instead of becoming fixated on procedures they encourage workers to improvise when necessary and appropriate. Their workers are on the lookout for potential problems and opportunities instead of merely responding to official notifications of problems. We find this second type of mindset in what Karl Weick and others have described as "high reliability organizations," organizations whose workers don't need to be guided every step of the way. In these organizations, the workers, even the lowest level workers, are reporting risks and potential safety hazards that they encounter, and are suggesting improvements.

We have found that scenario-based training, such as with ShadowBox, has the potential to shift mindsets in the positive direction at the individual and the organizational level.

Gareth: Lastly, I'd like to finish this interview by asking if you are following any particular thought leaders on cognitive psychology at the moment, whose work people reading this interview may find of interest.

Gary: *The one thought leader who comes to mind is actually a team: Phil Tetlock and Barbara Mellers at the University of Pennsylvania. Their work on superforecasters really impressed me (see Tetlock and Gardner Superforecasting). More recently, they have been identifying ways of improving teamwork by, in their terms, Making Conversations Smarter Faster (MCSF).*

Thank you very much for your time, Gary.