



SOCIETY OF DECISION
PROFESSIONALS
Clarity & Insight for Decisive Action

NEWSLETTER

Issue 24

March 2022

President's Message by Eyas Raddad

As the pandemic wanes, SDP is springing up with energy and momentum!

I am writing these lines on my way to San Francisco. John Mark Agosta, David Matheson and I are facilitating a small “meeting of the minds” on the Digital Transformation of Decision Analysis. The idea for this topic emerged out of the 2019 DAAG conference in Denver which brought together data scientists and decision analysts (some of whom came from the tech industry with heavy data science applications). Like many SDP members, I left the conference energized, full of ideas, but no clear path for how the two disciplines meld together. The meeting to which I am heading is the beginning of the journey that will get us there.

I wrote in past newsletters about the new vision for SDP, and the growth we seek in numbers and scope, anchored in DA, and creating synergies with adjacent disciplines. The melding of Data Science-DA is one of many pilots we are embarking on. We invited “bridge people” to this meeting of the minds; individuals with depth and accomplishments in data science, DA or both, but with good appreciation and exposure of both disciplines. The meeting will set the agenda for developing solutions to common problems that can benefit from both disciplines. Needless to say, this is an exciting moment!

This meeting will be the first of multiple meetings and workstreams, hoping to continue to grow the circle as we move forward. The upcoming SDP Conference in April has a session on this topic. We are looking forward to engaging those with similar interests in the coming few months.

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SDP continues to grow, with new chapters added regularly. Most recently, Vienna and Australasia chapters have been added. In addition, European SDP chapters are organizing a Decision Quality Conference in the fall. Finally, a new interest group focusing on the Environmental, Social and Governance issues (ESG).

I hope to see many of you virtually in the upcoming SDP Conference and Workshops in late April!

Upcoming Events



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Conferences:

- **[SDP Annual Conference & Workshops](#)**
27- 29 April 2022
On-line Event
www.sdpevents.com
- **[European DQ conference Norway](#)**
(Co-sponsored with SDP)
5 – 6 Sep 2022
<https://dqnorway.com/>

Call for Presentations

[PDMA Annual Conference](#)

12-15 November 2022

Orlando, Florida.

**[https://www.pdma.org/page/conferenc
e-central](https://www.pdma.org/page/conferenc
e-central)**

[Advances in Decision Analysis Conference \(ADA 2022\)](#)

22-24 June 2022

Washington DC.

**[https://connect.informs.org/das/event
s/ada2022](https://connect.informs.org/das/event
s/ada2022)**

Useful Links

The SDP Board has posted the Society's Bylaws and Policy and Procedure Manual, which can be found at:
<http://www.decisionprofessionals.com/about/governance>

A listing of courses in decision analysis available to SDP members is at:
<http://www.decisionprofessionals.com/courses/training-program>



Member Spotlight: Victoria Hemming



As DAs, we often have to draw on the opinions of subject matter experts (SMEs). We elicit the expert views of others and aim to create models that reflect the actions and reactions of external stimuli or interventions with enough detail and accuracy (we hope) to lead to informed decisions. But who ARE the experts? And does their expertise in a technical field translate into a useful input for decision making? [Victoria Hemming](#) can help with that.

Originally from Australia, Victoria moved to Vancouver, Canada in 2019 where she is now a permanent resident and post-doc in the [Martin Conservation Decisions Lab](#) at the University of British Columbia (UBC). In her undergraduate degree at the University of Melbourne she developed an interest in ecological and environmental subjects. In her final year she took an environmental risk assessment class. It was the first time she saw the role of values and uncertainty in environmental problems. She was hooked, and knew immediately that she wanted to apply decision science and risk analysis to environmental problems. Since then, her career has [spanned](#) conservation, defense procurement, wildfire, and meta-sciences.

Her first foray into decision sciences was through an honors project on Gabo Island in Australia, home to what was one of the largest little-penguin colonies globally. The problem was whether to remove cattle from the island. Cattle were becoming a nuisance to care for, but a [narrative had developed](#) that they were required to help minimize non-native grasses, penguin entanglement, and wildfire. Victoria, along with her supervisors and local Parks staff designed an experiment to understand the effect of removing cattle from the island on grass biomass and penguin densities. The result? Areas where cattle were excluded appeared to have a higher penguin density, so cattle could be removed with no effect to penguins. The punchline? The decision context has changed, with new threats to the penguin population emerging which appear to be having a far greater impact on their population, including increased New Zealand fur seals.

Victoria became interested in expertise, and how to select experts, when she worked as an environmental consultant undertaking large environmental impacts assessments. Despite spending weeks in the field collecting field data, it soon became apparent that expert judgement was often required to inform many large imminent impact assessments. Her job was often to collate these assessments. Problematically, she would often find that two experts with similar credentials could have completely different opinions on the expected impact. This made it difficult to know what to put in the impact box (the average, the optimistic, or the pessimistic estimate?). She knew researchers at the University of Melbourne were advancing methods to improve expert judgement, but there was no consolidated advice, nor evidence that the protocols could be practically applied in environmental impact assessment while improving judgements. This meant these methods weren't being routinely applied. She decided to leave here career to pursue PhD studies on the topic of expert judgment.

Expert judgment should be about estimating facts, and cannot be judged merely by credentials. Victoria's research advanced, applied and tested the [IDEA protocol](#) ("Investigate", "Discuss", "Estimate", and "Aggregate"), and the Classical Model. She found that steps within these protocols were practical to apply and could help to improve the quality of judgements, for example eliciting the judgments of a diverse group,

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Member Spotlight: Victoria Hemming

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providing opportunities for feedback and discussion, and aggregating judgements. A more recent project she was involved in has been exploring alternative forms of weighted aggregation. A novel approach being explored is whether weighting experts by the quality and the diversity of their reasoning can improve the final aggregation, preliminary data suggests the method could be promising. Despite being told more than once that she was researching the lowest form of empirical data, Victoria's work received an [editor's recommendation](#) and she was awarded the [Melbourne University Chancellor's prize](#) for her PhD thesis.

During her postdoc, her work has expanded in scope to the application of structured decision making (aka Decision Analysis) in conservation and the environment. She recently led a [paper](#) that described how decision science is applied to conservation decisions (a short thread [here](#)). While decision science is not new to conservation, there was confusion over where to start, about common terminology, and an impression that applying decision science needed to be complex, time-consuming, and expensive. The paper aims to address these barriers, while diversifying who can access and apply decision science. She also helped to develop and co-teaches a course in decision science and policy. She is now exploring how to consider co-benefits (or ecosystem services) within decision analysis, for example, how biodiversity can be considered alongside carbon sequestration. Her future career will ideally include a mix of applied decision analysis, research, and teaching.

She lives for the "aha moments" when experts are surprised by the insights of an overlooked member of the group. For example, one effort by her colleagues regarded the reproductive rate of koalas. All experts except for one individual had uncannily similar estimates. This person also happened to be the only person who was not a zoologist. While initially brushed off as a naïve estimate, when queried, this individual admitted they didn't know as much as the zoologists, but had found the study that cited the same reproductive rates as estimated by the group. Further reading revealed the rate related to Koalas in captivity, not in the wild, so the surprised zoologists adjusted their estimates accordingly. Victoria cites this as an example of "untrue truths". She is collecting a list of untrue truths if you want to send one on to her.

There is a strong and growing contingent of DAs in environmental science. However, Victoria notes that many training programs and applications are focused in three locations: UK, North America and Australia, and unless offered at a university level can be prohibitively expensive to attend. She's on a mission to make DA more accessible, including developing low cost and free training courses and knowledge sharing exercises with those in her field. She's gained a lot support and insight from SDP, and would like others to be able to benefit from this too. She'd like to see the SDP take more steps to increase global diversity of who can participate in decision science, including reaching out to fields that are currently less well represented. While her own experience suggests that achieving this objective could be achieved through funding initiatives, and EDI committee, and restructuring the annual conference, she think the best approach would be for the society to apply decision analysis to articulate these values and design strategies to help meet them alongside other objectives.

She loves the Vancouver chapter of the SDP to meet kindred spirits and hear about what others are doing.

Recently Certified Decision Professionals

Lindsay Oyola New Certification as Lead Practitioner

Economics Excellence and Decision Consultant, Shell

B.S and M.S in Mineral and Energy Economics from the Colorado School of Mines

Lindsay has been working in the Energy and Mining industry for almost 15 years. Currently she consults across Shell, where she guides teams to frame opportunities and ensure good decision analysis and decision quality, driving value for Shell and the communities they operate.

Her career has spanned across three large companies in the areas of downstream refining and trading, mining, exploration and production of hydrocarbons, and most recently focused on Shells contribution to the Energy Transition. She has focused her career on driving quality business decisions through strategy development, decision analysis and sound economics. Lindsay has a passion for asking questions, driving alignment, leading courses and teaching others, and learning about new fields.

Outside her job, Lindsay serves as a community volunteer through the Junior League of Houston, a mentor in Women's Energy Network, and as the President for Shell Women's employee resource group.

Lindsay serves as a non-executive board member for SDP, where she is helping to redefine the vision for the society and recruit others to SDP.



The Frontiers of Decision Making:

Innovations & Applications at the Leading Edge

(Formerly Known as DAAG Annual Conference & Workshops)

SDP Annual Conference + Workshops

THE
SHOW
MUST
GO ONLINE!

8:00am – 2:30pm (PT)
JOIN US VIRTUALLY
APRIL 27-29, 2022

REGISTER TODAY at WWW.SDPEVENTS.COM



Council Focus

Chapter/Outreach Council:

Newly formed Australia chapter beginning to meet virtually

Interest has been expressed in starting a Nigeria chapter

Most chapters are meeting virtually but are anxious to get back to meeting in person

Some chapters have had joint chapter meetings

Anyone interested in learning more about chapters should contact Jeremy at

jeremywalker@decisionframeworks.com

Membership & Communication Council:

The Membership and Communication Council has kicked off two initiatives for 2022.

SDP Mentoring

More than three dozen members have expressed interest in participating in the newly launched mentoring program exclusively for SDP members. We are now going through the responses, and we will be in touch with all respondents within a couple of weeks.

Internal Group of DA Leaders

We have identified a small group of esteemed decision professionals to help us provide DA professionals with new insights into managing the challenges faced when looking for new ways to help lead their companies through difficult decisions. We look forward to sharing more throughout the year.

Interest Group News

Scenario Planning:

The activities of the interest group scenario planning have been suspended until further notice.

Chapter News

Houston Chapter:

The Houston Chapter has 2 upcoming Meetings:

- *March 24, 2022 | 11:30am-1:00pm (virtual): **Management flight simulators:** using computer model replicas of a company (Digital Twin) with a game-like interface to role play and practice business scenarios FEATURING George Danner, Business Laboratory*
- *May 19, 2022 | 4:00pm-6:00pm: **SPRING SOCIAL**, Details coming soon*

The Houston Chapter Executive committee is planning a 3rd Annual Houston DQ Summit. The date has not yet been determined and will be discussed at the next Chapter Executive meeting.

Vancouver Chapter:

The Vancouver Chapter has continued to meet monthly via Zoom. In December, one of our chapter members, Victoria Hemming, presented highlights from a paper she and colleagues recently published in the journal Conservation Biology which provides an introduction to decision science for those who work in biodiversity conservation (the paper can be accessed at <https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/cobi.13868>; see also the [summary Twitter thread](#); it's full with excellent resources and well worth reading). In January, Christine Stoneman's presentation about decision making in a regulatory environment - informed by Christine's career in senior roles in Fisheries and Oceans Canada - prompted lots of interesting discussion. Looking ahead, we'll hold our first annual book club in April.

Newsletter Feature Announcement

The newsletter team is starting a new feature. Every newsletter we will publish one- to two-pages of content from members of SDP or external sources of interest. It can be an essay, a case study, a tutorial, an editorial, or a war story. We welcome material from consultants and firms as well, but please no blatant commercialization.

The idea is to learn or teach a technique or perspective. This would be the length of a blog post. The plan is to simultaneously publish the article in the newsletter and a link to a blog or other interactive platform to facilitate discussion and feedback.

If you have the writing bug and have something you want to say, if you are an author and have an excerpt or summary you would like to share, or if you just want to share a professional insight, please consider a contribution to the newsletter.

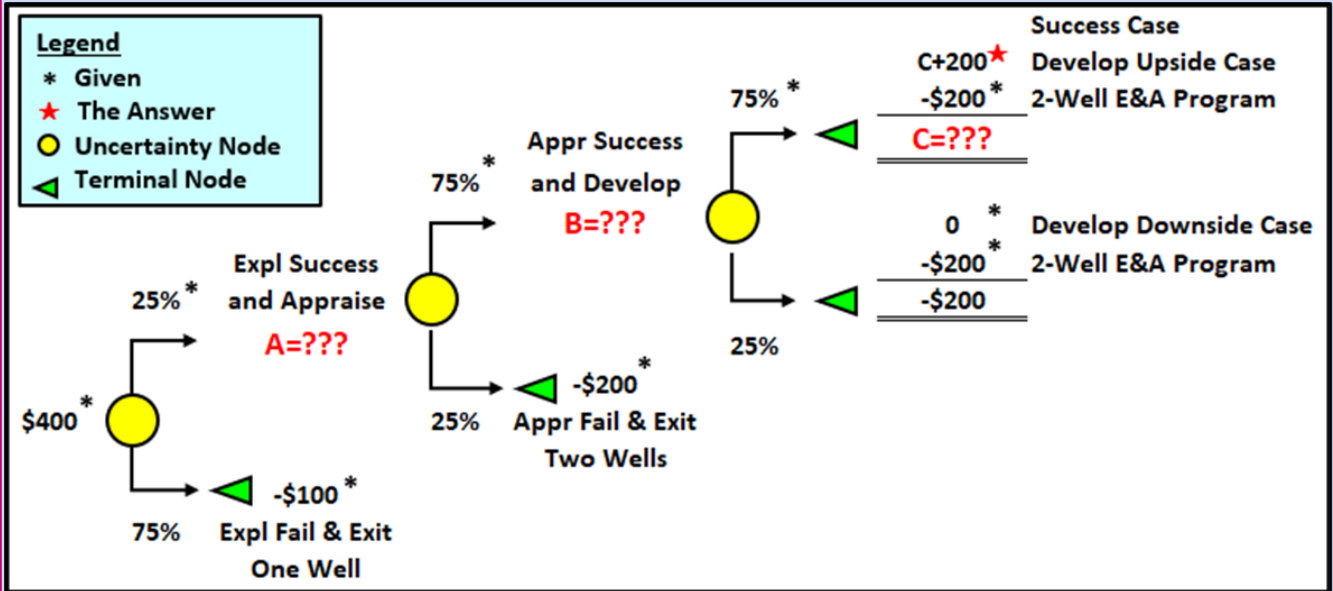
Please contact Tony Kenck tony@practicalportfoliomanagement.com for submittals or suggestions. We would like to have the first article ready to go by May 31.

Brain Teaser

Congratulations to Professor Steve Begg from down under on a perfect solution in one day for the December Brain Teaser. Honorary mention to Tyler Barton who in a couple of days got it 95% right.

The answer to the "Big Exploration" December Brain Teaser

First step is to lay out the tree structure with the given (*) and missing (?) information.



From the root the tree can be "rolled forward" to determine $A = (400 - 0.75 \cdot 100) / 0.25 = 1,900$. Similarly $B = (1,900 - 0.25 \cdot 200) / 0.75 = 2,600$. Finally $C = (2,600 - 0.25 \cdot 200) / 0.75 = 3,533$. The answer is $3,533 + 200 = 3,733$ for the Success Case value excluding the sunk E&A spend. The VP determined that the assessment of the success case greatly exceeded this value and therefore proceeded with the exploration well.

Click [Here](#) to download the September 2021 Brain teaser question and solution.

THE MARCH BRAIN TEASER

Instructions: You can win "bragging rights" by being the first to submit the correct answer of this brain teaser to the newsletter editors ([SDP Newsletter: Brain Teaser](#)). We will announce the winner in the next issue. Our new Brain Teaser Editor is Tony Fernandez.

Disease Testing: From the prior Brain Teaser, the VP was super impressed and needs your guidance. In a large overseas location, the company is going through an epidemic that is highly contagious and largely asymptomatic. Any similarity to Covid-19 is merely coincidental. Most of the employees are working remote, but the company senses the time is coming to bring them back to the office safely, by performing routine disease testing to prevent employees from infecting each other. The general epidemic infection rate for the population segment consistent with the company employees is 10%. You sit down with the VP and have a dialog.

Brain Teaser - Continued

Both recognize that there is no perfect test 100% reliable. If an employee tests positive for the disease the VP is asked if 90% confidence is OK? He says, well that's 1 in 10, what's the downside to a false positive? If the employee is truly healthy, a false positive result would create inefficiency and inconvenience, but ultimately the employee is OK. VP says, we can live with 1 in 10; let's go with 90% confidence for a positive test result. For a negative test result, if the employee is truly infected, that could cause the employee to lose valuable time in the diagnostic and treatment of the disease and pass it on to their family, friends and co-workers. Ah, that is truly a bad situation we need to minimize. We need much more confidence in a negative test result, more like 100%, but that is unrealistic; let's settle for something realistic like 1 in 40, i.e., 97.5% confidence.

Available tests in the market have sensitivity ranging from 75% to 95% and specificity running from 90% to 99%. Question: determine a reasonable combination of sensitivity and specificity for available market tests to approximate as closely as possible the VP's objective (without exceeding or falling below), e.g.: X% sensitivity and Y% specificity?

Note: This teaser can be performed as a pencil and paper exercise, simple Excel with goal seek or a simple decision tree software. More than one solution is possible and each combo answer will be tested to see how close it is to the VP's objective.

Definition of "Sensitivity": the percentage of true positive test results.

Definition of "Specificity": the percentage of true negative test results.

Good luck!

Do you know of upcoming professional events that might be of interest to other SDP members? If so, please email the SDP newsletter at newsletter@decisionprofessionals.com