

Enhancing people's critical thinking skills

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This paper draws lessons from newDemocracy's experiences operating various citizens' juries in Australia including, the South Australia Nuclear Fuel Cycle, Democracy in Geelong, and Infrastructure Victoria's 30-Year Plan.

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** newDemocracy is an independent, non-partisan research and development organisation. We aim to discover, develop, demonstrate, and promote complementary alternatives which will restore trust in public decision-making. These R&D notes are discoveries and reflections that we are documenting to share what we learn and stimulate further research and development.*

Enhancing people's critical thinking skills

What is the question?

How can we enhance the ability of randomly selected citizens in deliberative mini-publics (such as citizens' juries) to understand and evaluate expert evidence?

What is the usual answer, and why is it inadequate?

It is sometimes assumed that we have an innate capacity to think critically. Some people have it, some people have not. A common assumption by decision-makers is that a randomly-selected group will be unable to understand or evaluate expert evidence. To do this takes a combination of natural ability and years of experience. Experts and politicians, have it, but everyday citizens do not.

It's true that citizens only rarely encounter the practice of critical thinking or even the term critical thinking unless they have studied in an institute of higher learning. Even then it is likely designed to enhance the critical thinking capacities of individuals, doing solitary thinking, and learning to think for themselves, whereas, in a mini-public, participants are part of a collective consideration of expert knowledge.

Decisions are being made that lack citizen appraisal and approval. Consequently, the gap continues to widen between those who govern and those who are governed. Decision makers not only miss out on the views and judgement of their constituents but also miss original or creative solutions to intractable policy problems. Of course, the training and experience of experts and politicians are no guarantee that they have acquired the necessary thinking skills. Experts and politicians need to learn, too, but this R&D Note is focused on citizens.

Citizens in mini-publics must make a transition from "how to think for themselves" to "how to think well with others." This is extending the practice of individual "critical thinking" to a "collaborative inquiry", or "critical engagement". It is useful to think of a mini-public as having a "collective mind" that is more than the sum of the minds of its members. Therefore, the training or practice of critical thinking must be embedded in mini-publics.

What alternative is there, and why is it better?

Critical thinking among participants is a relatively under-explored area yet crucial to achieving genuine deliberation. Piggott et al (unpublished) have argued that critical thinking is best done in the company of others and use the term 'critical engagement' which is relevant to the type of collaborative decision-making that occurs in deliberative forums.

Some attention has been paid by researchers to the existence and effect of bias. However, it could be argued that neutrality and objectivity are difficult to achieve and that exposure to bias may be a more realistic path to take when deliberating (see Carson 2013). For that reason, newDemocracy is currently experimenting with two strategies: introducing unconscious cognitive or personal biases, and having participants work with various critical thinking approaches.

newDemocracy is keen to ensure that citizens are critical thinkers when deliberating on important matters. newDemocracy has been collaborating with MosaicLab and

experimenting with various critical thinking exercises to enhance citizens' critical thinking capacity, especially when interrogating experts.

These exercises were first trialled by MosaicLab in Hobsons Bay, Victoria in 2016, and were designed by Lyn Carson from newDemocracy. These were modified and used for the [Nuclear Citizens Jury in South Australia later in 2016](#) and the [Geelong Citizens' Jury](#) also in 2016/7.

At Hobsons Bay, 30 citizens experienced the critical thinking exercise; in South Australia over 300 citizens repeated that experience. The latter employed a slightly abbreviated version of the original seven approaches which are considered essential for the practice of critical thinking: clarity, accuracy, precision, relevance, depth, breadth, and logic. In South Australia, 'precision' was deleted because of the overlap with 'accuracy'.

Here's how it worked. Participants in both Hobsons Bay and South Australia were allocated a card displaying a single approach, watched a short film on [critical thinking](#), worked in small groups with people who had the same approach, and together developed potential, specific questions to ask experts. Then, back in the plenary, participants shared those questions – and many questions were thoughtful and probing.

Participants then participated in a 'speed dialogue' session with multiple experts. In South Australia, the expert speakers were drawn from a Nuclear Stakeholder Reference Group or its nominees. Speakers were instructed to speak for only a few minutes and then allow the participants to fire questions.

Participants were in small groups of five to six and in most cases a range of approaches were represented; experts rotated through the groups and were interrogated by all participants. Participants were told that the combination of all six approaches needed to be used and satisfied to ensure that critical thinking occurs.

We learnt that it is useful to have a 'pause group' – where there is no expert – so that participants could discuss what they had heard so far and evaluate how effective their questioning had been.

To supplement these sessions in the South Australia Jury, there was a wall that became populated with facts for checking. In a later session, there was an opportunity to alert facilitators to gaps in information or knowledge and how the juror considered this gap could best be addressed (e.g., via a witness or a written response).

After the 'speed dialogue' session, expert speakers and participants commented favourably on the quality of questioning.

Back in the plenary, participants again worked with people who were using the same card/ approach to debrief about the questions that worked well and the facts that still needed to be checked. Later, they shared examples of effective questions, i.e., those that extracted clear and accurate information, or exposed flaws in reasoning. It was seen as good preparation for the next weekend when more experts, of participants' choosing, would appear as witnesses.

If we know a great deal about something the following happens: (1) we close our minds to alternative pathways, (2) we share our knowledge with people who support our opinion and this, in turn, limits our thinking, (3) our creativity is

constricted because we think we know what's possible, and dismiss anything which sounds unrealistic (Carson 2009).

Participants rarely claim to know a great deal and that means their minds are available for critical thinking. The combination of explanation and instruction about the use of critical thinking, along with opportunities to identify questionable facts or missing information, provided excellent preparation for a selection of further speakers.

What is still unknown or untested?

This exercise has only been trialled among diverse citizens in citizens' juries so far, not in sector deliberations. newDemocracy wants to keep trialling different exercises to see what works best for participants. Additionally, more research with cognitive biases may strengthen the exercises outlined above.

newDemocracy is currently working with personal biases as the first step in a public deliberation, during the first briefing session and on day one, then using the critical thinking approaches on day two. In other words, promote awareness of participants' own biases before demonstrating how to interrogate expert knowledge. The seven biases currently being used are: *anchoring/recency bias, bandwagon effect, blind-spot bias, confirmation bias, information bias and stereotyping.*

Where can I find more information?

The activity was designed to foreground the importance of interrogating expert knowledge and to enhance the critical thinking capacities of everyday citizens. For that reason, MosaicLab and newDemocracy wish to make this material available for all to use.

The newDemocracy Foundation has commissioned its own [short critical thinking film](#) that connects specifically with the six approaches to be used, and the use of critical thinking in collective decision making.

MosaicLab has an Activity Kit which [can be accessed here](#).

A leaflet was produced for the South Australia Nuclear Jury because of the presence of Indigenous expert witnesses: [Being Culturally Aware – Using Critical Thinking](#). The jury was overseen by Democracy Co. The leaflet was developed by Joel Levin, Aha! Consulting was revised by several Indigenous community members and elders.

References

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