



Hammond Pearce, Ph.D.
Lecturer

+61 492 916 040
hammond.pearce@unsw.edu.au

UNSW School of Computer Science and Engineering
Building K17
Engineering Road
Kensington Sydney
New South Wales 2052
Australia

April 7, 2025

**RE: Proposals to increase voter engagement, participation and confidence
Supplementary questions for witnesses – 17 March 2025**

Author: Hammond Pearce

To whom it may concern,

I attach my answers to the supplementary questions as follows:

1. You suggest more stringent safeguards or the reconsideration of voice-based voting as a secure method. Can you provide more information on this?

Voice-based voting will have increasing challenges when it comes to current advances in machine learning and artificial intelligence technology. Specifically, ML/AI can now be used to clone voices from just short recorded snippets of speech. As the quality of the cloned voices improve, the difficulty in detecting rises, and cloned voices can now overcome security checks such as the Voice IDs used by banks¹. Such voices are also increasingly used for scams, where a fake caller asks a trusted friend or family member to send money². In other words, pure-voice ID technology is not enough to authenticate a user.

2. Is there a way to ensure the security of phone voting, particularly considering emerging threats such as voice recognition vulnerabilities (e.g. deep-fakes)?

Even given my answer to Question 1, phone voting is not itself inherently insecure as long as the voter is asked for second-factor authentication for phone voters, such as asking them for Medicare and Drivers License numbers and other information the government already holds. Doing this while on the call reduces the chance that an attacker would be able to answer correctly and thus increases the difficulty of a successful attack (though it would not make it impossible).

A further benefit to phone voting technology is that it is inherently limited by the speed of the vote recorders on the receiving end, and millions of fraudulent phone votes would likely be easily detected.

3. We have heard that the voting age should be lowered to 16 (sub 6, p 1). What is your view on lowering the voting age?

I do not hold a professional opinion regarding this question as I do not conduct research or surveys in this area. However, I hold the personal view that lowering the voting age would be a net benefit to Australia. Sixteen year olds can work and are taxed, and they can have strong views regarding the future of Australia. Their perspectives are valid and should be heard. I believe that their enfranchisement while still in school would be valuable, as teachers can provide further input into how the electoral system works in Australia and provide more emphasis on why voting and participating in civic duties are so important for the success of the country as a whole. Such classes could also include information on the policies put out by major political parties, the history of democracies around the world, discussion of how to verify information presented online, and presentations of historical (and current!) political propaganda and smear pieces. Having an opportunity to link this knowledge with an actual, real election would be interesting and engaging for students compared with learning it but being unable to use that knowledge until they are after 18.

¹ BBC, "Cloned customer voice beats bank security checks", Nov. 2024,
<https://www.bbc.com/news/articles/c1lq3ded6j9o>

² CNN, "This bank says 'millions' of people could be targeted by AI voice-cloning scams", Sep 2024,
<https://edition.cnn.com/2024/09/18/tech/ai-voice-cloning-scam-warning/index.html>