Professor [Your Name]

August 10, 2018

Committee Secretary
Joint Standing Committee on Electoral Matters
PO Box 6021
Parliament House
Canberra ACT 2600

Dear Senators:

I commend the Senate for its initiative in pursuing the question of lowering the voting age for elections in Australia. While not a subject that commands a high profile, the exclusion of young people from the franchise represents a significant, though unfortunately not unique, departure from our obligations under the United Nations Declaration of Human Rights.

It also contributes to a political bias within our political system towards the generation holding power, and away from the rising generation. In the current political environment, this bias has determined policy and outcomes across a range of issues which because of their long-term ramifications, have a particular impact on the young. For example, people who are not now eligible to vote will have to deal with the consequences of current political decisions about energy, emissions and climate change. The people who are making those decisions will not.

Similarly for immigration and population growth management, housing affordability, and tax relief. The decision-making generation, generally secure in housing purchased before the speculative boom of the last twenty years, prosper from housing inflation driven by speculation and uncontrolled foreign investment in property, and supported by policies on negative gearing and capital gains, while the young are impoverished by the same forces. Taxation policy increasingly shifts the burden of government debt onto future taxpayers, who will already have the responsibility of caring for an ageing population and an increasing health care budget.

This generational shift of liability is well attested in the scientific literature as well as in the quality media. Yet the responsibility for governing in the interests of the rising generation is diminished by the lack of accountability. The Prime Minister's jocular dismissal in March last year of the call to reinstate a Minister for Youth on the grounds that his 'youthful ministry' was 'young at heart' avoids the core of representative democracy: that politicians and governments represent their constituents and are accountable to them.

This is a long-standing issue, and one that resurfaces regularly. This should itself be cause for careful deliberation. The disenfranchisement of citizens who have the capacity for reason, which should be the only criterion for admission to the franchise, is *wrong*. It keeps coming back to us because it is a quiet, but fundamental injustice. We are accustomed to it, but the frequency with which the issue returns should make us cautious about deferring action again this time. That is not only true for us: the issue returns again and again across most Western democracies: there have been active inquiries or trials in the US, Canada, Sweden, the United Kingdom, in the EU and elsewhere. That history also means that the arguments have been well rehearsed, not only in this country but elsewhere, and the empirical evidence in favour of lowering the voting age is solid.

The contribution that I would like to offer therefore is to do with evidence that may not be common or generally available. The first is the experience of living through the Scottish Referendum, in which 16 year olds were allowed to vote for the first time, and the subsequent enfranchisement for Scottish and local government elections. The second addresses a range of arguments from developmental neuroscience, in which I have some expertise, on cognitive capacities of people in their mid-teens.

The Scottish situation emerged in the horsetrading between the Scottish First Minister and the Prime Minister about the terms of the Referendum. It had been long-standing policy for most of the political parties in Scotland, with the exception of the Conservatives and Labour. In the event, voter registration of 16 and 17 year olds was high, and turnout around 75%. What was more remarkable, however, was the way that young people carried themselves in the process of the referendum. I was a keynote speaker at a couple of town hall events staged explicitly for young people, and the attendance, engagement and quality of debate was strong. Young people were present, responsible and active in the process. They clearly wanted to have their say, and to listen to what their leaders had to say also.

This was true across the campaign, in public events and in private conversations. The general cynicism about the political apathy, ignorance or disengagement of the young was profoundly contradicted. Indications are that this momentum, while understandably not quite having the force of a once-in-a-lifetime political revolution, has been maintained. Evidence from Austria, the only European country yet to have brought in votes at 16, is that engagement in the electoral process, including both registration and voting, is higher at 16 than at 18 (Zeglovits and Aicholder 2014). Evidence from Scotland has been that engagement of all forms, from membership of political parties through to voting behavior, has been enhanced.

The political performance in the context of the referendum, and the wholesale disproof of key arguments against the extension of the franchise, led to the permanent inclusion of 16 and 17 year olds in the vote for local government elections and for the Scottish Parliament. This could not be

extended to Westminster elections because of the continued resistance at that level of government to electoral change.

The second issue relates to argument which may arise in the context of developmental neuroscience, and specifically whether the teenage brain particularly lends itself to impulsivity, addiction, risk-taking and reward-seeking, all of which have consequences for the responsible engagement of young people in electoral processes. I have published extensively on this matter (Sercombe 2018, 2014a. 2014b, 2010a, 2010b, 2009), and presented keynote addresses in London, Glasgow, Edinburgh, Cadiz, Lausanne, Rhode Island, Toronto, Yokahama, Copenhagen and elsewhere.

There has been a conventional narrative that developed in adolescent neuroscience literature which derives from the different rates at which different parts of the brain undergo specific developmental processes. Chief among these are the processes of myelination, in which certain brain circuits are selected for enhancement by insulating their axons with myelin – and hence making electrical transmission many times faster; the processes of synaptic pruning, in which the ratio of grey matter to white matter declines, perhaps by eliminating under-used or ineffective circuitry; and the apparent greater focus and containment of activity, measured by oxygen consumption levels, in particular regions of the brain.

One feature of this process is that these changes occur progressively through time from the base of the brain to the frontal lobes. In other words the areas at the rear of the brain and in the limbic system at the core of the brain which are responsible for unconscious or instinctual responses 'mature' before the areas at the front of the brain, which are responsible for conscious thought and executive function. In particular, in general, the reward systems of the nucleus accumbens 'mature' before the prefrontal cortex, which is associated with executive control. This has been represented as an 'all gas and no brakes' profile for teenagers, and has been reproduced endlesslessly in commentary and in the literature, particularly in early renditions and popularisations of the theory.

There is now very significant doubt about the adequacy of this framework. First the theory did not come from understanding the actual cognitive processes involved in risk decision-making, but was projected from a general perception about the frequency of adolescent risk taking, and data about the sequence of changes to the nucleus accumbens(NAcc) vis a vis the prefrontal cortex(PFC). It was always suppositional, speculative. In more recent research:

1. There is a significant move away from the idea that specific regions of the brain are solely responsible for particular cognitive processes. Many areas of the brain are involved in any cognitive process, and any one area is implicated in many different processes also. Current research is much more focused on connectivity in understanding brain function, rather than the location of particular functions.

2. The evidence does not support universal risk-taking behaviour in the teenage years, which is what would be expected from a common delay in the maturation of the PFC. Most young people are not heavy risk takers, take measured risks within rational parameters, or take few risks at all. Where this is not the case, social and psychological drivers like poverty, exclusion or abuse provide better explanations.
3. Empirically, there is no correlation between these developmental processes and self-reported risk-taking behavior. There is a wide range of variance in the delay between the maturation of the nucleus accumbens and the prefrontal cortex, with many young people experience no delay at all. Experiments that attempted to correlate a larger gap in these developmental events with actual risk taking behavior found that there was no correlation between risk taking behavior and early NAcc/late PFC maturation (Mills et al 2014).

There is some evidence to support declining plasticity through the myelination process. Interestingly, this presents us with the scenario that the organism presents its greatest learning and computational power combined with its greatest flexibility in the mid teens. There is some cost in terms of efficiency and reliability, but the cognitive capacity of people in their mid teens is not in question. Older adults are much better at doing things they know how to do, but young people are much better at getting across new situations and new data.

The consequences for this debate are significant. Based on the older theory of the NAcc/PFC nexus, it could be argued that teenagers are too impulsive, too prone to risk taking to be trusted with the franchise. This popular, but early and crude analysis is not supported by contemporary science or by empirical data from outside the neuroscience. Rather, the evidence points to strong cognitive capacity, with flexible response and peak learning capabilities. There are no grounds for denying the franchised based on cognitive capacity or inference of risk based on developmental brain function.

I hope this contribution has been useful, and wish the proponents of this overdue change every good fortune. It is a reform which, while inevitable eventually, is well overdue. Australia has always been a world leader in the recognition of excluded persons in the franchise. Perhaps also on this occasion, while not the first, we may be among the vanguard in extending electoral justice to the young people of this country.

Sincerely,

[Your Name]
Honorary Professor of Education
Lecturer in Criminology
Lecturer in Youth Studies

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