



### Trends & Issues—Referees’ report

**Title:** **Mass shootings and firearm control: Comparing Australia and the United States**

**Referee’s Name:** S47F [Redacted]

**Referee’s Affiliation:** S47F [Redacted]

Please check  the appropriate score and provide any other comments or suggestions below

Topic	Not at all				Very	Not applicable (or not able to assess).
New/innovative	1 <input type="checkbox"/>	2√	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	NA <input type="checkbox"/>
Interesting	1 <input type="checkbox"/>	2√	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	NA <input type="checkbox"/>
Policy relevance	1 <input type="checkbox"/>	2√	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	NA <input type="checkbox"/>
Appropriate for a T&I	1 <input type="checkbox"/>	2√	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	NA <input type="checkbox"/>
<b>Relevance</b>	<b>Low</b>				<b>High</b>	
Relevance to Commonwealth	1 <input type="checkbox"/>	2√	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	NA <input type="checkbox"/>
Relevance to states/territories	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3√	4 <input type="checkbox"/>	5 <input type="checkbox"/>	NA <input type="checkbox"/>
Relevance to criminal justice agencies	1 <input type="checkbox"/>	2√	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	NA <input type="checkbox"/>
<b>Substance</b>	<b>Poor</b>				<b>Excellent</b>	
Provides good summary of key issues	1 <input type="checkbox"/>	2√	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	NA <input type="checkbox"/>
Appropriate research design	1√	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	NA <input type="checkbox"/>
Rigorous analysis	1√	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	NA <input type="checkbox"/>
Conclusions supported by evidence	1√	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	NA <input type="checkbox"/>
<b>Style</b>	<b>Poor</b>				<b>Excellent</b>	
Written in plain English	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3√	4 <input type="checkbox"/>	5 <input type="checkbox"/>	NA <input type="checkbox"/>
Logically structured	1 <input type="checkbox"/>	2√	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	NA <input type="checkbox"/>
Appropriate and up-to-date references	1 <input type="checkbox"/>	2√	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	NA <input type="checkbox"/>

**Recommendations (please check box):**

1.  Accept for publication—no revisions
2.  Revisions (please provide details to the authors for revisions)
3. √ Reject



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**OTHER COMMENTS AND SUGGESTIONS FOR IMPROVING THE PAPER, please use pages below for additional comments (these will be sent to the author(s) anonymously)**

**Additional comments:**

This paper presents descriptive information about mass shooting events in Australia and the United States, over the period 1981-2013 (inclusive). It shows the number of incidents and number of deaths in those two countries, with additional information about location, firearm used (longarm, handgun, or a combination of both), and age and gender of the offender. It provides limited information about relationships between victims and offender in each incident, and about the mental health status of the offender, and notes that those data do not allow full comparisons to be made between the two countries. What the data show is that, in terms of raw count data, there have been more mass shooting events and victims in the US than in Australia over the 33 year period studied, and there appear to be some differences between the two countries in terms of incident location and types of firearm used. The paper then draws conclusions about relationships between legislative controls over firearms possession, and mass shootings. It infers that because the US, which has a much more permissive approach to firearms possession than Australia, has continued to experience mass shootings over the time period studied, whereas Australia with its more restrictive legislation has not experienced further mass shootings since 1996, then the difference in occurrence of mass shootings between the two countries in recent years may be attributable to the Australian legislative changes that have occurred.

As the author/s correctly identify, the existing research evidence base around mass shooting events is relatively small. The rarity of these events makes them difficult to study, and poses challenges for data collation and analysis. I have taken these considerations into account in formulating my comments, and have made allowances accordingly. However, with these challenges noted, and although the effort to make a contribution to knowledge in this field is commendable, I have a number of serious concerns about the conceptual framework, design, data and interpretation, and overall quality of this research paper.

The stated purposes of the paper are to compare the incidence and characteristics of mass shootings between Australia and the US and to discern how that relates to the advent (or lack thereof) of strengthened firearms regulations. However, although the focus of the paper is ostensibly on mass shootings, it tends to conflate several different themes and concepts, which are not necessarily empirically or logically connected. Despite its stated goals, it is not clear whether the paper is designed primarily to: (a) undertake overall comparisons of mass shooting events in Australia and the US, (b) compare, within each country, mass shootings pre- and post- various legislative changes, (c) compare, across countries, whether different types of legislative changes may have differentially affected the occurrence of mass shootings, (d) examine whether and how specific different types of legislative change in each country (e.g., Australian changes to licensing requirements, versus changes to types of firearms in private ownership, versus changes to police practices around domestic violence, etc) may have had preventive impacts, or (e) make an argument that legislative strengthening is associated with declines in firearm-related deaths of all types.

At present, all of these objectives are implied at different points throughout the paper, whether via the data presented or the text narrative more generally. However, for reasons that will be explained below, none of these objectives is actually met in a robust fashion. The data presented are insufficient to enable sound inferences to be drawn on any point other than point (a).

With regard to incidence, it is perplexing that data about the number of mass shooting incidents (Figure 1) are not expressed in text as a rate per 100 000 population, in the same way as the victimisation rate has been expressed, with accompanying basic statistical tests to show whether the two countries differ from one another in the standardised rate of those events. Without this comparative metric and analysis, it is premature to make any assertions that the paper has provided meaningful comparisons of mass shooting events between the two countries. The US has a population of around 300 million, relative to Australia's population of less than one tenth of that. This disparity must be taken into account, if the objective of the paper is to provide a meaningful comparison of the relative occurrence of mass shooting events in the two countries.

The characteristics of shooting events and offenders are then presented, using basic descriptive summaries.



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It is at this point that significant data concerns start to emerge. It is stated that a combination of NHMP data, as well as published data from McPhedran & Baker and unpublished data from Alpers were used, however it is not clear what methods were used to combine those data (in instances where the non-NHMP data included years that were also covered by the NHMP, for example), and which data were given primacy in the instance of any discrepancies. If only 5 cases came from NHMP data, this implies that a considerable amount of information came from other sources. However, McPhedran & Baker 2011 did not include mental health status data or victims-offender relationship data. The use of unpublished data from Alpers – which is not referenced or properly described - does not allow a reader to evaluate those data. This raises further concerns: why is secondary unpublished information used, when there are alternate – and primary - sources such as coronial files available? How was the unpublished information originally obtained (i.e., what sources did it use)? Is it reliable – what collation and quality control methods did it use? How can a reader possibly assess this, given the lack of detail provided?

This also makes it difficult to assess why NHMP data and unpublished data seem to give a different impression about the licensing status of post-1990 versus pre-1990 offenders, respectively. Police records are, arguably, the most reliable available source of information about whether an offender held a valid firearms licence. If those records returned an ‘unknown’ report on the licensing status of the 5 post-1990 offenders contained in the NHMP, this seems to suggest a need for caution in accepting licensing status information from undisclosed sources, in regards to the other eight cases provided by Alpers.

Also – 8 + 5 comes to a total of 13 offenders, which is one more case than the 12 that the present study includes – what has caused this discrepancy?

Or, did one of the 8 cases in the Alpers data overlap with a case held in the NHMP data, but contain different information? If so, it would suggest that licensing information held by the different sources, concerning the same case, is not consistent.

If those other data come from media reports and the like, those reports are not necessarily reliable on details such as license status. It seems very unlikely that most or all pre-1990 offenders would be licensed and/or have information available about their licensing status, while post-1990 offenders would not be licensed and/or would not have any information available.

This raises a more general methodological question. In the NYPD report (see below), for example, it is noted that multiple sources related to a single event can present conflicting information, and that when the NYPD identified discrepancies between (for example) a government source and a news outlet, the NYPD included the information presented in the government source. What quality control processes were used in the present study to deal with possible discrepancies between the various different Australian (and, for that matter, US) sources used?

For instance, on p.6 it is noted that ‘additional narrative’ from Australian cases were used to better understand relationships between victims and offenders, and media reports were used to supplement other US data – but what processes were applied to this information gathering, to maximise reliability?

Regarding US data, other concerns emerge. The FBI reference given in the reference list is to an ‘active shooter event – quick reference guide’ which does not contain data. The Kelly (2012) reference is not listed, however I believe it refers to ‘Active Shooter Recommendations and Analysis for Risk Mitigation 2012 Edition’ – which contains incidents from 1966-2012. Those incident summaries contain limited material about mental health status, which is drawn mainly from linked media reports.

Also, the definition of ‘active shooter events’ adopted in that report (and others) is: “The NYPD included only those incidents carried out by attackers that met the DHS definition of an active shooter: an individual actively engaged in killing or attempting to kill people **in a confined and populated area**. The NYPD further restricted this definition to exclude: gang-related shootings, **shootings that solely occurred in domestic settings**, robberies, drive-by shootings, attacks that did not involve a firearm, and attacks categorized primarily as hostage-taking incidents.” (emphasis added). This definition therefore excludes mass shooting events that would be classified as ‘private’ (for example, occurring in a residential setting, unless the event started in such a setting before moving to a public setting).



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If the author/s meant to refer to the FBI's 'A Study of Active Shooter Incidents in the United States Between 2000 and 2013', which contains data on a number of mass shootings (along with events where fewer fatalities occurred), that report contains only limited descriptive information, including limited information about types of firearm/s used (handgun/rifle/shotgun) and does not provide detail about mental health status of offenders. Again, its focus is on public settings. The Mayors Against Illegal Guns report covers 2009-2014, but with very limited verifiable data about mental status.

The Mother Jones data is from an online journalism-style source. While the full data set they provide is helpful in assessing incidence and basic demographic/situational features, it is not sufficiently detailed to allow inferences to be drawn beyond those basic descriptive features. Also, the mental health status data are drawn primarily from media reports – with a 'yes' designation including anything from clinically diagnosed psychosis, through to ADHD, through to anecdotal reports of 'acting strangely'.

Most concerning, in the instance of the Mother Jones dataset, just as with the NYPD report, those data specifically seek to exclude 'private' mass shooting events (for example, occurring within a private home) and deliberately focus on 'public' mass shootings, with the data owners stating: "Our focus is on public mass shootings in which the motive appeared to be indiscriminate killing."

One of the criteria used in selecting the cases was:

**"The shootings occurred in a public place.** (Except in the case of a party on private property in Crandon, Wisconsin, and another in Seattle, where crowds of strangers had gathered.) Crimes primarily related to gang activity, armed robbery, or domestic violence in homes are not included." (emphasis added)

This appears to explain the apparently striking disparity between Australia and the US in terms of the percentage of private versus public shootings! It is simply an artefact of the data selected for inclusion in each dataset.

What this implies is that in terms of its design, the current paper is not actually looking at Australian and US shootings using 'comparable' datasets, but instead is comparing a dataset about Australian private and public place shootings ('all shootings'), with a dataset that is primarily dealing with US public place shootings ('a very specific subset of shootings'). This is not a comparison of 'apples with apples', and undermines the paper's claim to compare characteristics of mass shootings between the two countries. This is a very significant design flaw.

This also highlights a difficulty in the paper's use and interpretation of the Australian data. While the discussion places considerable weight on the public place/private place mass shooting distinction, and postulates different ways in which legislation may have affected public vs private mass shootings in Australia, no data are provided to support those inferences.

To achieve that, it would be necessary to compare (in as much detail as possible) the characteristics of public and private mass shootings in Australia, to establish whether there were any features (other than the 'setting' of the event and relationship between victims and offender) that clearly distinguished between the two, and to present further cross-tabulated information. For example: Were the 5 instances where perpetrators had a history of/active presence of psychiatric illness solely confined to private shooting events? Or did public shooting event perpetrators also include persons with psychiatric illness? How many private shooting event perpetrators had some history of domestic violence?

This lack of evidence, along with the previously noted limitations in reliable data about mental health, undermines the paper's proposals that amendments to DVO and mental health reporting may have had a preventive effect in terms of Australian private mass shooting events. They may very well have (particularly in the case of DVO procedures, which seem intuitively appealing as preventive measure, given the relationships between parties involved in private shootings...but estranged relationships should not be equated with evidence of domestic violence) – but the data presented are not sufficient to support that conclusion.

It is unclear why mental health status is given such prominence as a possible explanatory factor in Australian private mass shootings, when there is no evidence tendered to support this. Also, this links with some of the data questions raised above



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– it is noted that 5 offenders were known to have a mental illness, 4 had unknown status/no information, and nothing is said about the remaining 3 (no mental illness?). In terms of understanding the reliability of the reports about the 5 offenders with a mental illness, it is necessary to answer the question: how many of those were cases contained in the NHMP which had police and coronial reports verifying the presence of a mental illness, how many were cases contained in the NHMP which had mental illness information drawn from newspaper clippings rather than from police/coronial reports, and how many were cases where the information drawn from other, non-NHMP data sources?

The paper notes that the health reporting provisions, which on p.8 it suggests may have prevented private place mass shootings, came about following the 2002 handgun agreement. While those provisions may well have had a preventive effect, the provisions cannot operate retrospectively – so, they cannot reasonably be applied in an explanatory fashion to observations for the period 1997-2001 (as well as most of 2002 given the timing of the agreement late in that year).

This highlights the overall paucity of meaningful data presented. For example, changes to the firearms licensing process in Australia in 1996 also included introduction of measures to preclude legal firearms ownership by people who had, for instance, a history of non-domestic assault or other criminal history, or behaviours that could place them in a ‘high risk’ group, and yet the possibility that these measures may have reduced legal firearms access by high risk individuals has not been considered. Given that the NHMP dataset includes variables such as an offender’s criminal history, as well as additional factors such as alcohol and illicit drug use, it is unclear why these types of variables were not considered in the Australian dataset (even if the US data could not provide similar information).

The purported assessment of whether the two countries’ differing approaches to firearms legislation is associated with the occurrence of mass shooting events (and/or differences between the two countries in those events) is highly problematic.

The study does not offer any evidence whatsoever to support its conclusions that Australian reforms to firearms control have impacted on mass shooting events, and that inference is based solely on the observation that Australia did not experience any mass shooting events from 1997-2013 (the problems with relying on this observation are discussed below).

The comparisons the paper presents – which, in terms of the level of reliability of the data, almost exclusively concern incidence, location, gender and age of perpetrator, and firearm types (longarm/handgun/combination) – cannot reasonably be seen to provide “further context to where and how firearm controls and other protective factors may or could be effective”. The statements made by the author/s in the discussion about firearm controls and protective factors are not based on evidence given in the results section; the discussion simply assumes, without any supporting analyses, that there has been an impact of legislation in Australia. The conclusions that are drawn extend far beyond what the data presented can support.

It is not clear why only the US has been selected for inclusion as a comparison with Australia. No convincing rationale is given for why the US (a country often described within criminological literature as ‘exceptional,’ due to its consistent differences to other Western nations in terms of crime and punishment!) was the only country selected for consideration, when experiences from other countries can offer far more insight into effective policies. If the overarching objective of the paper is to make the argument that mass shootings continue to occur in the context of high firearms availability and limited restrictions on ownership, but cease in the context of stringent restrictions on firearms ownership, then focussing only on the US would certainly facilitate that argument. However, although superficially appealing, this comparison lacks scientific rigour and reveals little in the way of policy-relevant information.

Comparing two countries that are very different in their approach to firearms is only one piece of the puzzle, whereas comparing countries that are more similar to one another in their approach to regulating firearms possession is what provides the really crucial pieces of information. Conceptually and methodologically, if the paper genuinely seeks to discern what role Australian legislation may have played in the absence of mass shootings in that country during the years 1997-2013 (inclusive), it would be necessary to examine a wide range of other countries including Canada, New Zealand, the UK, and European nations (or even cast the net wider, to include South America for instance). Such comparisons would provide a ‘test’ of whether the various different approaches to firearms restrictions taken in those countries bears any particular relationship to the continuation or cessation of mass shooting events. This would also allow for identification of



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different features of legislation (or, factors other than legislation, for that matter) that may be most likely to have preventive effects.

Indeed, given the small number of mass shooting events in Australia (and the smaller still sample if the public/private distinction is applied), consideration of more than one comparison country makes perfect sense, and this type of approach is very useful when studying rare events. For example, McPhedran and Baker 2011 note that New Zealand has experienced a similar period of time without mass shootings (both public and private) to Australia, while having a different approach to firearms possession (particularly in terms of the continued possession of types of semi-automatic and other firearms which Australia heavily restricted). This also suggests that factors other than firearm availability and legislative approaches may help to explain the occurrence of mass shooting events; it is a notable oversight that this possibility has not been recognised or acknowledged by the author/s as relevant for their own work, despite their noting it in the introduction.

If the paper wishes to properly consider the Australian situation and make an attempt to understand the impacts of legislation, then it must also examine a longer time series and be able to convincingly refute alternate hypotheses and explanations. For example, in Australia, prior to 1981, the most recent record of a mass shooting was from the early 1970s (a 'private' mass shooting event in South Australia). However, semi-automatic firearms were present in the community at that time, and the 'modern' approach to licensing had not been implemented. The virtual absence of mass shooting events prior to the 1980s has notable implications for any evaluation of legislative changes made in Australia in the 1990s – for instance, it may be hypothesised that, the absence of mass shootings since 1996 (up until 2014) reflects a return to a 'normal' state of affairs, rather than an effect of legislation...so, why did the time series selected for use only commence in 1981 (particularly given the NYPD analysis went back to 1966, which would have enabled scrutiny of a longer US dataset, also)? The period of time commencing in the 1980s, and particularly the Australian cluster of mass shootings in the late 1980s/early to mid 1990s, was clearly not representative of the historical frequency of such events. The failure to contextualise Australian mass shooting events in their historical setting, and to consider that factors outside of legislative change may have played a role in both the sudden increase and equally sudden decline of mass shootings in that country, is a notable oversight.

The discussion of US firearms control is very general, and hypothesised connections between the different pieces of legislation that are discussed, and mass shooting events, are not drawn out– the US has a diverse and heterogeneous set of firearms control measures, with considerable intra- and inter-state variation (which, oddly, is acknowledged on p.3 but the implications of that variation are then ignored). The overview of US laws seems cursory, and appears to select out for mention only a handful of issues on which different states vary, such as concealed carry legislation – why are these examples chosen and what is their relevance to mass shooting events? To draw informed inferences about relationships between mass shootings and firearms control in the US, it would be necessary to adopt a state-by-state focus (see also comments below, regarding the findings of Lemieux).

With regard to the North American (not just US, but also Canadian) studies cited, many of those studies contain evidence about both firearm suicide and firearm homicide. On closer scrutiny, however, it is a typical finding (especially from Canada, and also when one takes into account a wider range of studies than those few that are cited) that legislative strengthening was associated with declines in firearm suicides, but not firearm homicides. Given the purpose of the current paper is to examine a very specific form of homicide, it would be appropriate to present findings relevant to homicide.

The way in which studies of Australian firearms legislation and deaths are treated is troubling. A considerable amount of detail is provided about studies which (it is claimed) show impacts of Australia's law reform on firearm homicide, while studies which do not claim to have found these impacts are dismissed without further consideration. This shows, firstly, an apparent bias within the paper towards the assumption that Australian legislative reform is linked with significant impacts on firearm homicide. Secondly, and most problematically, the author/s do not appear to have understood the studies by Chapman et al, Leigh & Neill, and Ozanne-Smith. None of those studies finds a statistically significant impact of Australia's firearm reforms on firearm homicides (none explicitly address mass shootings), although confusingly some of those studies' abstracts imply otherwise. However, the statistics contained in those studies are entirely consistent with the findings of Baker & McPhedran and Lee & Suardi. See Chapman et al Table 3 (p=0.15), Leigh & Neill Table 4 (p=0.608), and Ozanne-Smith et al p.284 (p=0.108). It is therefore incorrect, and even misleading, to state that the results of the accumulated Australian studies are at variance with one another in regards to firearm homicide.



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It is unclear why the work done by Mouzos, as well as by Mouzos, Carcach & Grabosky on mass homicide in Australia, and also the work of Reuter & Mouzos, has been completely overlooked.

It is unclear why the paper diverges off into considerable discussion of Australian firearm suicides (although, on that topic, it is incorrect to state that Baker & McPhedran found no evidence for declines in firearm suicide; those authors openly state that firearm suicide may have been impacted by the legislative changes), and firearm related deaths overall. Given that most firearm related deaths are suicides, the trends for overall firearm deaths will mirror firearm suicide trends. Trends for firearm suicide will invariably dictate or 'swamp' overall firearm death trends, which can create a misleading impression about the impact of legislation on different types of firearm related death.

This section of the paper, regrettably, gives the impression of 'cherry-picking' rather than just poor understanding. It gives highly selective descriptions of certain percentages, as well as using overall firearm related deaths rather than firearm homicides, with the seeming purpose of creating a very particular impression about legislative impacts. Unfortunately, pages 3-4 of the paper could be interpreted as inviting readers to take away a message about Australia's law reforms which is quite contrary to the message that an objective and wholistic reading of the evidence in full would impart. This apparent bias is damaging to the overall credibility of the work.

The paper relies frequently on unsupported assumptions and statement-based arguments. For example, even if firearms legislation is reliably and causally linked with declines in total firearm homicide, it does not necessarily follow that legislation/legislative change is meaningfully connected with the occurrence of mass shootings, and the present study does not present sufficiently analytic material to demonstrate such a relationship. However, it openly advocates this conclusion, and seeks to explain these "impacts" with reference to the different approach taken to firearms ownership in Australia and the US (this is also quite circular reasoning, rather than explanatory – it is essentially saying that the two countries have a different occurrence of mass shootings because they have different ownership restrictions, and because they have different ownership restrictions, they have a different occurrence of mass shootings). Similarly, broad assertions are made about the use of particular types of 'primary' firearms used in public versus private Australian mass shooting events, without any evidence presented to enable the reader to scrutinise those statements. Strangely, even though it is said that available data were insufficient to discern what types of longarms were used in Australian private mass shootings, it is then asserted (p.8) that those private shootings did not involve highly restricted firearms (presumably, this means the types of firearms that became highly restricted in 1996).

There are a number of logical flaws present in the paper. For example, it is implied (p.7) that the assault weapon ban (characterised as an enactment of 'restrictive legislation') in the US was associated with a noticeable decline in mass shootings (oddly, that statement is then contradicted on p.8!). It is also acknowledged that a large (and unknown) number of those 18 firearms listed as banned remained in circulation. From this, if those banned firearms are assumed to have remained in wide circulation, it cannot be logically inferred that the ban was causally connected with fewer mass shootings; to show that, it would (as the first part of a series of steps) be necessary to demonstrate a decline in ownership of those firearms, as well as an absence of shootings using those firearms (and, to consider that in the context of the presence of shootings involving those firearms at other times). Also, this assumption is further undermined by the absence of pre-post comparative analyses, the high percentage of non-longarm mass shootings, and the continued widespread access to other forms of longarm that were not classified as being among the 'banned assault weapons' but which shared many characteristics in common with those prohibited firearms.

It is unclear why the paper draws connections between the 2002 handgun agreement at COAG and mass shootings in Australia – it appears to imply that the 2002 agreement should be considered along with the 1996 APMC agreement, in terms of considering relationships between Australian firearms legislation and mass shootings. However, there were no handgun mass shootings before the 2002 agreement and no handgun mass shootings after – how can a comparison of zero and zero offer any meaningful information? And if the issue of interest is longarm restrictions, which seems to be the case, then why include shootings in the US where handguns have been used? Again, this reveals problems with the conceptual framework for the paper, as well as problems with selecting appropriate comparisons between 'apples and apples'.



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The paper relies quite heavily on Lemieux's recent publication. On p.6, data from the current study are given in 10-year periods, with each period commencing at the turn of a decade – 1980-1989, 1990-1999, etc, rather than looking comparatively at periods pre- during- and post- when the assault weapon ban was in place. Those 'decade-based' data are then linked, by implication, with Lemieux's study, and it is insinuated that Lemieux found certain trends in mass shooting events in the US and differences pre-during- and post- gun ban. This is taken to support the current paper's arguments about relationships between legislation and mass shooting occurrence in the US. However, that study is somewhat misrepresented. Those differences were in fact not tested by Lemieux, who explicitly commented that no statistical validation was performed.

Interestingly that study also notes "... correlation analysis shows that states having restrictive gun laws also experienced more mass shootings ( $r=0.45$ ;  $p<0.01$ ) and more victims of mass shootings ( $r=0.35$ ;  $p<0.01$ )" – a finding which suggests that any inferred relationship between legislation and mass shootings should be viewed with caution!

Lemieux's study is the only piece of support given for the proposition that the US assault weapon ban influenced mass shootings, which in turn is taken in the discussion to demonstrate that "restrictive firearms regulations coincided with a noticeable decline" in mass shootings. Nothing in the current paper's approach actually directly addresses that question using a data-based approach.

A strange aspect of the paper is that it (rightly!) applies caveats to its data, scope, and analytic rigour, but then seemingly disregards those caveats when interpreting the data. For example, on p. 5 it notes that it can perform only very limited comparisons between the two countries, yet the entire premise of the paper is that the US and Australia can be validly compared. On p. 6, the disproportionality of mass shooting events between the two countries is flagged, with an accompanying caveat that – as a consequence of this disproportionality – any patterns should be treated as illustrative only. However, strong conclusions are then drawn about differences between the countries and reasons for those differences. Aside from casting into doubt the general reliability of the paper, these caveats beg the question, again, of why the US was chosen as the comparison country when this choice is acknowledged as bringing with it such significant limitations in the comparisons that can be made.

Collectively, the extent and magnitude of flaws with conceptualisation, design and data handling, analytic strategy, and interpretation in this paper mean that I cannot reasonably recommend this work for publication. Even if those flaws were not present, a basic comparison of incidence, location, firearm type, and age/gender of the offender (and possibly victims-offender relationships and offender mental health status, if the data could be better verified), between two clearly very disparate countries, offers little new information about the phenomenon of mass shootings, and less still about pathways to prevention.

I recommend rejection, with encouragement to the author/s that they reconsider their approach in line with the comments I have made above. I wish the author/s success in producing an improved paper in future, as this is an important topic which deserves serious treatment.