

Gender, intoxication and the developing brain: Problematisations of drinking among young adults in Australian alcohol policy

Elizabeth Manton¹ & David Moore^{1*}

*** Corresponding author**

E: d.moore@curtin.edu.au

T: +613 9079 2203

1. National Drug Research Institute

Faculty of Health Sciences

Curtin University

NDRI Melbourne Office

6/19-35 Gertrude St

Fitzroy VIC 3065

Australia

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Keywords

Gender, intoxication, brain development, youth, critical analysis, Australian alcohol policy

Abstract

In this article, we draw on recent scholarly work in the poststructuralist analysis of policy to consider how policy itself functions as a key site in the constitution of alcohol ‘problems’, and the political implications of these problematisations. We do this by examining Australian alcohol policy as it relates to young adults (18-24 years old). Our critical analysis focuses on three national alcohol policies (1990, 2001 and 2006) and two Victorian state alcohol policies (2008 and 2013), which together span a 25-year period. We argue that Australian alcohol policies have conspicuously ignored young adult men, despite their ongoing over-representation in the statistical ‘evidence base’ on alcohol-related harm, while increasingly problematising alcohol consumption amongst other population subgroups. We also identify the development of a new problem representation in Australian alcohol policy, that of ‘intoxication’ as the leading cause of alcohol-related harm and rising hospital admissions, and argue that changes in the classification and diagnosis of intoxication may have contributed to its prioritisation and problematisation in alcohol policy at the expense of other forms of harm. Finally, we draw attention to how preliminary and inconclusive research on the purported association between binge drinking and brain development in those under 25 years old has been mobilised prematurely to support calls to increase the legal purchasing age from 18 to 21 years. Our critical analysis of the treatment of these three issues – gender, intoxication,

and brain development – is intended to highlight the ways in which policy functions as a key site in the constitution of alcohol ‘problems’.

Introduction

The use of alcohol by young adults, particularly heavy sessional or ‘binge drinking’, has generated considerable research and policy attention in recent years. This interest has driven, and been driven by, a large body of epidemiological research on patterns of sessional drinking and their acute consequences (Courtney & Polich, 2009; Michael Livingston, 2008), as well as qualitative research on the cultures and social relations of drinking (Hernandez, Leontini, & Harley, 2013; McCreanor et al., 2013). It has also led to research examining the evidence for a range of policy measures, including those targeting young adults, and the degree to which alcohol policy is, or should be, guided by the existing evidence base (Gilmore, Chikritzhs, & Gilmore, 2013; Howard, Gordon, & Jones, 2014). In the existing analyses, policy is frequently understood as a response to alcohol problems already established by research and/or public debate. In this article, we set out in a different direction by drawing on recent scholarly work in the poststructuralist analysis of policy to consider how policy itself functions as a key site in the constitution of alcohol ‘problems’ and the political implications of these problematisations. We pursue this general argument about the ways in which policy constitutes problems with reference to a range of Australian alcohol policy documents that specifically address drinking amongst young adults, but some of the problematisations we identify may also be relevant to alcohol policy in other locations.

Background

Australian alcohol policy has generated an extensive research literature. A key focus of such work has been the analysis of policy processes and the identification of political interests

shaping the introduction of specific policy recommendations. For example, Hawks (1990; 1993) provided a detailed analysis of the development of the first national alcohol policy in 1990, in which he argued that the policy had been ‘watered down’ in response to wine industry interests. Approaching this issue from a very different perspective, Stockley (2004:202), an employee of the Australian Wine Research Institute, also criticised the 1990 policy because it sought to reduce alcohol consumption across the whole population and omitted any consideration of the claimed health benefits of light-to-moderate alcohol consumption, such as a reduction in the levels and risk of cardiovascular disease and in overall mortality. She noted that in the 2001 national alcohol strategy a primary aim was to achieve a balance between reducing the burden of alcohol-related harm and maximising the social and health benefits of low risk alcohol consumption (Stockley, 2004:205). Other researchers have argued that the alcohol industry works to deter the introduction of effective alcohol control policy initiatives while promoting interventions that maintain profits (Mathews, Thorn, & Giorgi, 2013; P. G. Miller, de Groot, McKenzie, & Droste, 2011; Munro, 2012).

Research on Australian alcohol policy has also focused on policy recommendations such as pricing and taxation (Sharma, Vandenburg, & Hollingsworth, 2014) and limiting availability (Michael Livingston, 2011), including restrictions on late-night trading (Manton, Room, & Livingston, 2014). Other work has focused on gauging public support for a variety of alcohol policy initiatives without which their introduction is perceived to be more challenging (Callinan, Room, & Livingston, 2014; Fogarty & Chapman, 2013a). A recent comprehensive analysis of Australian alcohol policy from 2001-2013 concluded that there was a huge range of different alcohol initiatives across Australia, many of which did not reflect evidence-based best practice to reduce harm (Howard et al., 2014). This concern with whether alcohol policy

is guided by the evidence base is a recurring theme together with recommendations for future policy options (Gilmore et al., 2013; Loxley et al., 2005; Stockwell, 2004), including those assessed on the basis of their cost-effectiveness (Doran, Hall, Shakeshaft, Vos, & Cobiac, 2010) and/or recommended by alcohol policy experts (Fogarty & Chapman, 2013b). In their review of evidence for the efficacy and effectiveness of alcohol, tobacco and illicit drug harm reduction interventions in Australia, Ritter and Cameron (2006) found that only harm reduction interventions to reduce alcohol-related road trauma were well founded in evidence.

Analyses of Australian alcohol policy have also focused on its effects on specific population groups such as pregnant women (McBride, 2014; O'Leary, Heuzenroeder, Elliott, & Bower, 2007) and Indigenous people (Brady, 2007; Weatherburn, 2008). Young people are another target group of policy interest, although 'young people', like 'youth', is a broad and shifting category which, for policy purposes, generally starts at 13 years and continues until the age of 25 (Wyn & White, 1997:1). Thus the target group of interest can be secondary school students (McMorris, Catalano, Kim, Toumbourou, & Hemphill, 2011; Paschall, Grube, & Kypri, 2009), school leavers (Hutton, Cusack, & Zannettino, 2012), adolescents in transition to adulthood (15-22 years) (Pidd, Boeckmann, & Morris, 2006), university students (Hernandez et al., 2013) or young adults (18-25 years) (Moore, 2010).

A smaller body of work has drawn on qualitative research on drinking cultures to critique some of the central assumptions in alcohol policy. For example, Brown (2012) concluded their study of young women's use of Facebook while drinking by questioning the policy assumption that young women inevitably experience shame and regret following drunken sexual encounters. In her analysis of national alcohol policy, Keane (2009) argues that the strict intoxication/moderation and carnal/disciplined binaries underpinning alcohol policy

contrast with the desire for pleasure and controlled intoxication found amongst young drinkers.

Although this literature has contributed many crucial insights, largely absent is a critical analysis of alcohol policy as a key site in the formulation of alcohol ‘problems’, relating in our case to young adults. What kinds of ‘problems’ do alcohol policies aim to address? How are alcohol, its effects and its consumers framed in these problems and on what basis? And what are the political effects of policy problems – that is, what kinds of specific actions are made visible and possible by these problematisations and which are ruled out, rendered unthinkable? In the next two sections, we outline the theoretical approach that informs our analysis, clarify how we selected and analysed the policy documents, and how we identified the three themes that we have chosen for critical scrutiny.

Theoretical Approach

Our analysis is informed by recent scholarly work in poststructuralist policy analysis. This approach explores how realities are constituted in discourse and practice. Poststructuralist policy scholar Carol Bacchi, for example, argues that social problems are ‘endogenous – created within – rather than exogenous – existing outside – the policy-making process’ (Bacchi, 2009:x). Conceptualising policy in this way, she argues, allows us to identify some of the ways in which it constitutes ‘problems’ and to critically assess these problematisations for their assumptions and political implications. As Bacchi herself acknowledges, such an approach is inspired by Foucault’s work on problematisation (Bacchi, 2015; see also Gusfield, 1980) and it has been usefully deployed in critical analyses of Australian policy on amphetamine-type stimulants (Suzanne Fraser & Moore, 2011; Lancaster, Ritter, & Colebatch, 2014) and Australian national drug policy (Lancaster & Ritter, 2014).

Bacchi's (2009:xii) approach to policy analysis involves identifying 'What's the Problem Represented to be' and consists of six questions, three of which are relevant to our analysis:

- What is the problem represented to be in a specific policy?
- What presuppositions or assumptions underlie this representation of the 'problem'?
- What is left unproblematic in this problem representation? Where are the silences?

(see also (Law, 2012:170)).

Taking our cue from this analytical approach, we sought to examine the 'continuities', 'changes' and 'silences' in policy discourse on young people and the 'problem' of alcohol, and the supporting research and assumptions, over time.

Method

Our analysis focuses mainly on three national alcohol policies (1990, 2001 and 2006) and two Victorian state alcohol policies (2008 and 2013), which together span a 25-year period. The five selected documents represent all of the government alcohol policy documents available nationally and for Victoria. We chose national documents for analysis because of their key role in setting policy agendas and the Victorian documents in order to investigate the extent to which the themes present in the national documents also appeared in those produced at the state level. Choosing the Victorian documents also extended the time span to around 25 years, providing us with the opportunity to better examine continuities and changes between policies over time.

The first-ever national alcohol policy, the *National Health Policy on Alcohol in Australia*, was endorsed by the Ministerial Council on Drug Strategy in 1990 (Ministerial Council on Drug Strategy, 1990). Since then, there have been two further national alcohol policies: the

National Alcohol Strategy: A plan for action 2001 to 2003-2004 (Ministerial Council on Drug Strategy, 2001a) and the *National Alcohol Strategy 2006-2009* (which was subsequently extended to 2011) (Ministerial Council on Drug Strategy, 2006). At the time of writing, a fourth Australian national alcohol policy is under development. The two Victorian policies we consider are *Victoria's Alcohol Action Plan 2008-2013* (Ministerial Taskforce on Alcohol and Public Safety, 2008) and *Reducing the alcohol and drug toll, Victoria's plan 2013-2017* (Victorian Department of Health, 2012).

The documents were stored and analysed using NVivo10 (QSR International, 2014), and content and thematic analyses were undertaken to identify themes relating to alcohol and young adults (18-24 years) (Braun & Clarke, 2006). The analysis was carried out at two levels: first, at the level of broad goals, aims, objectives and/or the key strategy areas emphasised by each policy. As Law notes (2012:163), ranking is one of the key processes that informs policy development, as decisions are made about the relative priority and significance of various policy elements. At the second level, the thematic analysis was conducted across the text of entire policy documents. The first author undertook the thematic analysis. Themes that met the desired criteria of 'changes' or 'silences' were identified and the decision about which three to concentrate on was undertaken by both authors.

As noted above, we undertook a thematic analysis of all policy documents to identify the thematic 'continuities', 'changes' and 'silences' over time. We identified alcohol-related harm as the dominant theme. Within this theme, 'continuities' included a focus on traffic crashes, violence and assaults. Despite the earlier identification of the over-representation of young adult males in statistics on harm (National Health and Medical Research Council, 1975:5,7), the 1990 national alcohol policy omitted any reference to the relationship between

male gender and harm. This omission, or ‘silence’, led us to examine representations of gender in other alcohol policy documents, an analytical strategy consistent with recent work identifying the problematic treatment of gender in Australian and Swedish national drug policy (Moore, Fraser, Törrönen, & Eriksson Tinghög, 2015).

The remaining two themes in this article emerged from identification of ‘changes’. Our interest in the treatment of ‘intoxication’ was sparked by marked changes in policy focus over time: from ‘alcoholics’ and ‘heavy drinkers’ (National Health and Medical Research Council, 1975) and ‘habitual heavy drinkers’ (Ministerial Council on Drug Strategy, 1990) to ‘episodes of drinking to intoxication’ in the 2001 national strategy. By the time of the 2006 national strategy, intoxication had become the top policy priority, perhaps reflecting an increasing neo-liberal preoccupation with ‘disordered’ behaviour amongst young people (Moore, 2010; Room, 2011). New ways of measuring harm entered the alcohol policy discourse in the 2008 and 2013 Victorian alcohol plans, with hospital admissions resulting from a diagnosis of alcohol ‘intoxication’ appearing for the first time in an Australian policy document.

Our third theme is the treatment of binge drinking and its effects on brain development, which first entered the policy discourse in the 2006 national strategy and represented another ‘change’. Although not without its critics (Álvarez, 2011; Slaby, 2010), neuroscientific research was cited to support a major policy recommendation (raising the minimum purchasing age from 18 to 21 years) (Toumbourou, Kypri, Jones, & Hickie, 2014) and our analysis sought to interrogate the research on which this claim was based.

Gender

In the Australian alcohol discourse of the 1970s – that is, prior to the release of the first national alcohol policy in 1990 – young adult males were identified as over-represented in traffic accident and assault statistics, especially where alcohol was present (National Health and Medical Research Council, 1975:4,5,7; Ots, 1972:4). Several Australian masculine norms were discussed in these documents, such as equating masculinity with being able to ‘hold one’s liquor’, and advertising that explicitly linked alcohol consumption with male desirability. In these documents, young women were not understood to be facing the same pressures, although advertising campaigns were seen as potentially encouraging increased drinking amongst young women (National Health and Medical Research Council, 1975:9). Yet if we examine the five policy documents released from 1990 onwards, this identification of the gendering of alcohol-related harm becomes much less visible. How did young adult males move from a position of prominence in alcohol discourse during the 1970s to one of near absence in alcohol policy discourse from 1990 on? We explore whether the available epidemiological research, which is frequently cited in alcohol policy documents and in repeated calls for evidence-based policy, warrants such a change in priority, identify literature that is starting to address this absence, propose possible explanations for the change and discuss some of its implications.

The epidemiological research linking young adult males with acute forms of alcohol-related harm, first identified in the 1970s, did not feature in any of the five alcohol policy documents at the broad policy statement level, that is, at the level of the policy overview, goals, aims, key or priority strategy areas, or action areas. Instead, the focus was ‘individuals’, ‘people’, ‘families’ and ‘communities’, with various sub-populations being singled out for attention, including members of the Aboriginal community, the culturally and linguistically diverse

(CALD) community, ‘young people’ (meaning, in this context, people under 18 years), and ‘women and children’. Despite one of the targeted sub-groups being ‘violent drunks’, references to males were conspicuously absent in the accompanying plan to address the problem (Victorian Department of Health, 2012:3).

In examining the text of entire policy documents, the young adult male identified as a key concern in the 1975 National Health and Medical Research Council document did not appear in the 1990 national alcohol policy, and emerged only tentatively in the 2001 national alcohol strategy. Despite young males being identified in the text of the 2001 strategy as the highest risk group for drink driving, and for engaging in violent behaviours after drinking, they were not identified in the key strategies as one of the ‘higher risk’ groups requiring concerted attention (Ministerial Council on Drug Strategy, 2001a:12). Instead, the specified higher risk groups included Aboriginal and Torres Strait Islanders, pregnant women, prisoners, people with mental health disorders, older people, heavy drinkers and young people, where ‘young people’ referred mainly to underage drinkers (Ministerial Council on Drug Strategy, 2001a:10). Even when outlining a separate key strategy area to address drink driving, young males remained conspicuously absent, with references specifying only ‘people who drink and drive’ (Ministerial Council on Drug Strategy, 2001a:15).

In the body of the 2006 national alcohol strategy document, Section 4.1.1 (‘What is the issue?’) explored the harms arising from intoxication but also noted the lack of a precise definition of the term (Ministerial Council on Drug Strategy, 2006:11). Even while claiming that these harms were ‘felt most by those in the young adult years, and mostly by males’, and that ‘much of this harm [in the vicinity of licensed premises] involves assaults where young men are the victims or perpetrators’, less than 10 per cent of the text in this section was

devoted to males (Ministerial Council on Drug Strategy, 2006:12,14). Furthermore, in the subsequent section devoted to recommendations, males were not identified at all with the recommendations phrased in strictly gender-neutral terms (Ministerial Council on Drug Strategy, 2006:14). By contrast, later in the document, advertising and promotions were identified as being exploitative of women and young people, who were represented as 'impressionable' (Ministerial Council on Drug Strategy, 2006:26).

Turning to the Victorian policy documents, the 2008 Victorian alcohol plan also elides gender in its focus on 'underage drinkers' and its proposal for a blood alcohol concentration limit for 'young drivers'. Only later does the text note briefly that road crash injury was a common cause of death related to intoxication, particularly for males. Yet young female adults were singled out when discussing the rapid increase in hospitalisation rates and the increasing popularity of pre-mixed spirits amongst teenagers. While assaults associated with intoxication were mentioned throughout the policy, including in the section on hospital admissions, there was no mention of gender, and no suggestion that young adult males might be disproportionately associated with the assault 'problem'.

In the 2013 Victorian alcohol plan, despite the plan's first explicit strategy being to reduce alcohol-related violence, antisocial behaviour and drink-driving, the strategy avoids any suggestion that the road toll, whether fatalities or serious injuries, is a problem disproportionately experienced by young adult males. Similarly, it is silent about violence and assaults in which both the victim and the perpetrator were young adult males, with a focus instead on violence against women and children, implicating males only by default (Victorian Department of Health, 2012:12). There was also a focus at the broader policy

statement level on the underage drinker, the Aboriginal community and the CALD communities, again without reference to gender.

Could the relative silence about male gender be related to changing levels or patterns of harm recorded in the available epidemiological research? In other words, were males in general and young adult males in particular no longer disproportionately represented in the statistics on alcohol-attributable harms so often cited in policy and associated documents? Using 1990-2001 data from Chikritzhs et al. (2003:16), the 2006 national alcohol strategy noted that deaths from acute conditions due to risky and high risk drinking were experienced more by males than females across all conditions considered, with the gendered difference being most pronounced for road crash injury (Ministerial Council on Drug Strategy, 2006:12). Another epidemiological source, the most recent study of alcohol's burden of disease, also suggested that males were over-represented in all categories of alcohol-attributable deaths or hospitalisations (Gao, Ogeil, & Lloyd, 2014:52). However, Gao et al.'s study did not consider age. The most recent Australian burden of disease study that considers age is that by Begg et al. (2007), which used 2003 data. Unfortunately, the two age groups used in this study were 15-24 years and 25-64 years which prevents direct comparison because one is a ten year span and the other is 40 years. All that can be crudely concluded is that disability-adjusted life years (DALY) and deaths from 'road traffic accidents' and from 'homicide and violence' appear to be proportionately higher for males in the 15-24 age group compared to males in the 25-64 age group, and higher than females of either age group (Begg et al., 2007:222,233). When looking at DALYs attributable to alcohol by age and by sex, there is a marked peak for males at around 20 years, with alcohol dependence, road traffic accidents, suicide and a category of 'other' contributing most to this peak (Begg et al., 2007:86). Using data as recent as 2010, Jiang et al. (2015) found that traffic crash deaths were higher in the four states

studied (NSW, Victoria, Queensland and Western Australia) in the 20-29 age group than in the 30-39 age group, although these data did not differentiate by gender. Thus, viewed from within the rhetorical arena of ‘evidence-based policy’, the available epidemiological research suggests that young adult males should continue to demand concerted attention in alcohol policy documents.

How can we explain this near silence surrounding the young adult male and alcohol-related harms in the Australian policy context? One possibility is that the influence of feminist structuralist critiques of masculinity and patriarchy, which shaped policy development in several areas (e.g. domestic violence) during the 1970s and 1980s, declined from the 1990s onwards (Phillips, 2006). Another related possibility is that there has been a kind of ‘policy fatigue’ in responding to the endemic issue of gender. The definition of young adult males as an enduring problem over many years, at least since before the 1975 National Health and Medical Research Council report, may have led to a research and policy focus on novel social trends such as increasing alcohol consumption amongst younger age groups and women. While a robust tradition of research on youth drinking cultures has endured (Griffin, Bengry-Howell, Hackley, Mistral, & Szmigin, 2009; Hernandez et al., 2013; McCreanor et al., 2013), there has also been increasing interest in the drinking practices of young women, both in Australia (Brown & Gregg, 2012) and internationally (Lyons & Willott, 2008; Measham & Østergaard, 2009; Montemurro & McClure, 2005). Simonen (2011) has argued that since the end of the 1990s, qualitative studies have focused largely on young women’s changing alcohol consumption and young men have been sidelined as a research topic. There are, however, signs of an emerging interest in research on masculinity and alcohol-related violence which identifies the need for alcohol policy to reflect this connection (de Visser & Smith, 2007a, 2007b; Lindsay, 2012; P. Miller et al., 2014).

In summary, since the first national alcohol policy in 1990, the ‘problem’ being addressed by alcohol policy has been, to varying degrees, located within de-gendered ‘individuals’, ‘people’, ‘families’, and ‘communities’ or in population subgroups: the Aboriginal community, the CALD community, ‘young people’ (meaning those underage), ‘hospital admissions’, ‘pregnant women’ and ‘women and children’. What has been ignored in this problematisation is the over-representation of young men (as well as adult men) in alcohol-related harms, including traffic-related incidents and violence. In the alcohol policy arena, various subgroups have been unfairly responsabilised and encouraged to moderate their drinking when the available research, including some of that cited in the policies, points strongly to another group requiring concerted policy attention: young men.

‘Intoxication’

The second theme we identify and analyse in the five policy documents concerns the handling of ‘intoxication’. We explore the emergence of intoxication as a policy priority, the increasing use of ‘intoxication’ diagnoses in accounting for alcohol-related hospitalisations, and the multiple meanings of ‘intoxication’ deployed in policy and related research documents, which cover a remarkably wide range of drinking patterns and associated harms. We conclude by considering some of the implications of this handling of intoxication.

The term ‘intoxication’ did not appear in the 1990 national alcohol policy and ‘drinking to intoxication’ was mentioned only briefly in the 2001 national alcohol strategy (Ministerial Council on Drug Strategy, 2001a:27). The 2006 national alcohol strategy treats intoxication very differently. Despite acknowledging that there was no consistent or agreed definition of ‘intoxication’, the plan ranked drinking to intoxication above alcoholism or alcohol

dependence as the most harmful of the behaviours that led to alcohol-related harm (Ministerial Council on Drug Strategy, 2006:11). The document attempts to justify this move by pointing to the high prevalence of intoxication and because so much of the harm associated with it, whether through injury or lives lost, was experienced by young adults.

The increased priority given to intoxication in the 2006 national strategy may have been influenced by an authoritative international review of the evidence base (Babor et al., 2003). The review by Babor and a list of distinguished international alcohol researchers, which was widely referenced in the 2006 strategy, argued that ‘the main cause of alcohol-related harm in the general population is alcohol intoxication’(2003:22). The authors then identified the major alcohol-related health conditions contributing to morbidity and mortality (Babor et al., 2003:64). As well as chronic conditions such as liver cirrhosis and pancreatitis, they listed neuropsychiatric conditions (including alcohol dependence syndrome, alcohol abuse, depression), acute toxic effects (alcohol poisoning), accidents (road and other transport injuries, falls, drowning and burning injuries, occupational and machine injuries), self-inflicted injuries (suicide) and violent deaths (assault injuries). ‘Intoxication’ was not identified as a contributing condition.

The 2006 national strategy also identified the alcohol-related acute conditions contributing to rising hospitalisation rates (Ministerial Council on Drug Strategy, 2006:12). The document draws on Australian data covering the period 1993-94 to 2000-01 and lists the acute conditions causing hospitalisation as: road crash injury, attempted suicide, assault, other injury, alcohol overdose, alcohol abuse and psychosis, and ‘other acute medical’ (Chikritzhs et al., 2003:21). Again, ‘intoxication’ is absent from the list of contributing conditions.

Underlying the formulation of ‘intoxication’ as a harm in its own right and the top priority in Australian alcohol policy is a specific assumption: that intoxication is the generic cause of the harm associated with drinking. Yet, as extensive anthropological, sociological and historical research makes clear, the cultural meanings and practices associated with intoxication are contingent on the historical, social and political contexts in which drinking is embedded (Cameron et al., 2000; Douglas, 1987; Gefou-Madianou, 1992; Heath, 1958, 1986; Kelly, Advocat, Harrison, & Hickey, 2011:xiv; Levine, 1978; MacAndrew & Edgerton, 1969; Mandelbaum, 1965; Marshall, 1979; Pittman & Snyder, 1962). The prioritising of intoxication in the 2006 policy ignores the complex interactions between the myriad forces assembled in drinking contexts substance, biography, subjectivity, gender, class, sexuality and ethnicity.

If we turn to the Victorian alcohol plans, we see a different enactment of ‘intoxication’. In the 2008 Victorian alcohol plan, a ‘substantial’ increase in the ‘rate of alcohol-caused hospital admissions for Victorians aged 15-24 years’ had been ‘driven by an increase in young people being admitted with a diagnosis of “intoxication”’ (Ministerial Taskforce on Alcohol and Public Safety, 2008:12). Here, intoxication is linked specifically to rising hospital admissions amongst young people rather than being enacted as a generic cause of alcohol-related harm. The 2013 Victorian alcohol plan also noted that admission rates for alcohol-related conditions – mainly ‘alcohol dependence, acute intoxication and liver disease’ – had been climbing for more than a decade across all age groups (Victorian Department of Health, 2012:7). However, perhaps because this plan had been expanded to include a range of other drug issues, such as the misuse of pharmaceutical drugs and illegal drugs such as cannabis and stimulants, there was a decreased focus on the issue of intoxication compared to the 2008

Victorian alcohol plan. What background assumptions might underlie the problematisation of ‘intoxication’ as a main cause of hospitalisation amongst young people?

The first point we make concerns classification systems. One authoritative source for classifying alcohol-related conditions affecting morbidity and mortality is the International Classification of Diseases and Related Health Problems (ICD). The ICD terminology and codes have changed over time as demonstrated by the changes in the treatment of ‘intoxication’. In ICD-9, intoxication was either associated with alcohol dependence syndrome and categorised as a chronic condition with its own code (303.0) or was subsumed under ‘nondependent alcohol abuse’ as an acute condition lacking its own distinct code. In ICD-10, ‘nondependent alcohol abuse’ had been replaced with ‘acute intoxication’ and ‘harmful use’, each with its own dedicated code (F10.0 and F10.1, respectively) (Table 1). Through the allocation of a dedicated code, ‘intoxication’ is reconstituted as a distinctive ‘acute condition’ that can be measured in diagnoses that use ICD-10 criteria.

Table 1 here

The 2008 Victorian alcohol policy document introduces a different definition of ‘intoxication’. According to data presented in this plan, the rate of hospitalisations attributable to alcohol in 2005-06 increased by six per cent compared to the previous year and was dominated by ‘Alcohol-related mental or behavioural problems (dependence, intoxication, harmful use, withdrawal state, psychotic disorder)’ (Ministerial Taskforce on Alcohol and Public Safety, 2008:10), followed in decreasing incidence by fall injuries, motor vehicle accidents, and assaults. These data are drawn from the *Victorian Drug Statistics Handbook* (Victorian Department of Human Services, 2007) but the terminology used is not

that of the ICD-10. Rather, it suggests adherence to a different diagnostic category, the Mental Health Diagnostic Group, 021: Alcohol intoxication, harmful use, dependence and withdrawal (Department of Health, 2000). This category combines three of the four previous ICD groupings (Table 1) – alcohol abuse, alcohol dependence and alcohol psychosis but not alcohol poisoning – and it straddles both acute and chronic conditions. Furthermore, this series of statistical handbooks has not always presented data on hospitalisations in the same way. The 2001 *Handbook* (Victorian Department of Human Services, 2001:29) identified alcohol-related hospitalisations in ‘injury’ (i.e. acute) and ‘medical conditions’ (i.e. chronic) categories, and it was not until the following year that the *Handbook* identified ‘alcohol-related mental and behavioural problems’ (the terminology used in the 2008 Victorian alcohol plan) as a category (Victorian Department of Human Services, 2002:30).

As we have already noted, following Law (2012:163), ranking is a key process informing policy development. One of the ways in which ranking operates to increase the priority accorded to a policy issue is to group it with a number of other conditions, thus potentially inflating the scale of the issue. In our example, although intoxication is only one contributor in a grouping of multiple codes under the umbrella term ‘alcohol-related mental or behavioural problems’, the grouping has the collective effect of increasing the scale and in turn the priority of intoxication. If, however, the five items grouped together (dependence, intoxication, harmful use, withdrawal state, psychotic disorder) had been listed separately, the lower ranked harms – fall injuries, motor vehicle accidents, and assaults – might conceivably have been ranked more highly, and hence become the focus of policy attention. Thus intoxication’s policy priority has in part been shaped by changes in diagnostic practices and the decision to group certain conditions together. Had this grouping been done differently, or not at all, an alternative set of priorities may have emerged. As we noted in the previous

section, given their disproportionate involvement in acute harms such as injuries, motor vehicle accidents and assaults, this may have meant a greater emphasis on addressing drinking amongst young men.

Another example of the way in which ranking or classificatory decisions shape the allocation of priority to intoxication is also provided by the 2008 Victorian alcohol plan. In order to highlight the concerns regarding drinking amongst young adults, this plan used unpublished data provided by statistician Michael Livingston (and later published) to demonstrate that the rate of ‘alcohol-caused hospital admissions’ had increased for Victorians aged 15-24 years for both males and females (Michael Livingston, 2008:269). Significantly, as we noted above, the policy document also claimed that the ‘increase in hospital admissions has been driven by an increase in young people being admitted with a diagnosis of “intoxication”’ (Ministerial Taskforce on Alcohol and Public Safety, 2008:12). However, in his 2008 publication, Livingston reported that ‘more than half of the alcohol caused admissions were for “Acute Intoxication” (F10.0) or “Dependence Syndrome” (F10.2), with the increase in admissions driven mainly by increases in these two diagnoses’ (Michael Livingston, 2008:269). This lack of disaggregation undermines the confident claims made in the policy document regarding the precise contribution of intoxication to increased hospital admissions, emphasising the way policy may mis-represent available research. This merging and selective use of data also raises questions about the thesis that intoxication is the leading cause of harm.

The policy documents are also silent on the potential impact of changes in the recording practices relating to alcohol-related hospitalisations for intoxication over time. Both Chikritzhs et al. (2003) and Livingston (2008) discussed how changes in the hospital

admittance practices that arose as a result of the introduction of case mix funding may have influenced the recording of hospitalisation rates, but they also noted that the major changes took place well before the recorded increases. That hospitalisation practices vary over time and place was also noted in an earlier Western Australia study which suggested that the higher alcohol-related hospitalisation rates in country areas compared to metropolitan areas could be explained by greater pressure on hospital beds in the metropolitan area, and conversely greater capacity and readiness to admit injured people to hospital in country areas (Unwin, Swensen, Moroz, & Thomson, 1994:3). In a timely recognition of this significant issue, a recently funded Australian Research Council Discovery Project seeks to investigate whether ‘apparent increases in rates of alcohol-related harm are driven by operational or administrative practices rather than by increases in actual harm’ (Livingston, Room, Chikritzhs, Lloyd, & Dietze, 2014).

In this section, we have examined the problematisation of intoxication as the leading cause of alcohol-related harm or as chiefly responsible for increases in hospital admissions. In the 2006 national alcohol strategy, intoxication is understood to give rise to all alcohol-related harms, whether acute or chronic. In relation to hospital admissions, the measurement of ‘intoxication’ varies according to the classification system used. There is the ICD-10 coding of ‘acute intoxication’ (F10.0), which, by definition, is not poisoning, dependence or psychosis. This reconstituted intoxication as a distinctive ‘acute condition’ in ICD-10 compared to ICD-9, in which it was subsumed under ‘nondependent alcohol abuse’, and it is the ICD-10 classification that is employed in review articles on acute alcohol intoxication such as that provided by Vonghia et al. (2008). Second, the reporting of the impact of acute intoxication incidence on hospitalisation rates is very imprecise, and possibly inflationary, because of the tendency to aggregate it with other conditions. Taken together, the multiple

classifications of intoxication and changes in diagnostic and measurement practices may have served to prioritise intoxication while simultaneously diverting attention from injuries, traffic accidents and assaults, which may yet be major causes of alcohol-related harms for young people, especially young men.

Binge drinking and brain development

The third theme we analyse in the five policy documents concerns their treatment of the relationship between ‘binge drinking’ and brain development amongst young adults. Some of the earliest concerns about binge drinking in Australian public health discourse identified ‘excessive or explosive drinking by young men’ as a marker for the later development of ‘established alcoholism’ (National Health and Medical Research Council, 1975:7-8). The 1990 national alcohol policy identified binge drinking as an area of ‘particular concern to both governments and the general public’ along with underage drinking and drink-driving (Ministerial Council on Drug Strategy, 1990:3). This document defines ‘binge drinking’ as occurring when ‘young people consume more than five drinks in a row and as a consequence reach the stage of being drunk, sick, or even passing out’ (Ministerial Council on Drug Strategy, 1990:3). However, the 1990 policy’s main focus remained ‘habitual heavy drinkers’.

The 2001 national alcohol strategy identified ‘a shift in [policy] emphasis away from average consumption levels to a focus on patterns of drinking’ by which they meant:

when and where the drinking takes place, the number and characteristics of heavy drinking occasions, activities associated with drinking, personal characteristics of the drinker and drinking companions, the types of drinks consumed, and the drinking

norms and behaviours that comprise a ‘drinking culture’. (Ministerial Council on Drug Strategy, 2001a:3)

Although binge drinking was not specifically mentioned here, one of the 11 key strategy areas was ‘Preventing alcohol-related harm in young people’ with the objective being a ‘Reduction in onset of high risk patterns of alcohol during adolescence’ (Ministerial Council on Drug Strategy, 2001a:11). The background paper to the 2001 national alcohol strategy defined ‘binge drinking’ as ‘deliberate drinking to intoxication’, and further identified it as being ‘most common among young people’ (in both the 14-19 and 20-34 year old age groups) at levels which were identified as ‘a problem’ (Ministerial Council on Drug Strategy, 2001b:3).

As we discussed above, the transition from targeting ‘alcoholism’ and ‘habitual heavy drinking’ to targeting ‘intoxication’ was made explicit for the first time in the 2006 national alcohol strategy. The strategy cites an unpublished submission by health psychologist John Toumbourou (2005) in its discussion on raising the legal purchasing age of alcohol from 18 to 21 years, and states that: ‘Prior to the mid-20s, the human brain is still developing and emerging evidence associates the prevalent patterns of youth binge drinking with brain damage’ (Ministerial Council on Drug Strategy, 2006:27). The 2008 Victorian alcohol plan also noted that ‘While this type of damage [alcohol-related brain impairment or ARBI] is most likely for those who drink heavily over a long period of time, ARBI can develop over a short period through episodes of heavy drinking’ (Ministerial Taskforce on Alcohol and Public Safety, 2008:9). Although the 2008 Victorian alcohol plan did not cite any neuroscientific research to support its claim about brain impairment, a state government report into strategies to reduce harmful alcohol consumption, which was published in 2006 and which presumably set out some of the research and policy grounds for the 2008 plan,

cited a research report by Toumbourou and several colleagues that summarises some of the neuroscientific studies on the topic (Drugs and Crime Prevention Committee, 2006:145-146; Toumbourou, Rowland, & Jeffreys, 2005). Thus in these two policy documents, published in 2006 and 2008, explicit connections are made between binge drinking, brain development and brain damage in young people on the basis of neuroscientific research.

We can see that this specific formulation of the problem – binge drinking by young people being associated with brain damage – is new. What ‘presuppositions or assumptions’ might underlie this representation of the problem? (Bacchi, 2009:2). Toumbourou’s unpublished 2005 submission and co-authored 2005 report appear to have played a key role in influencing both policy documents. Yet the 2005 report focused on adolescents and cites only one article in support of the notion that youth vulnerability to alcohol’s effects on the brain is still evident into the early 20s (Toumbourou et al., 2005:8). To recommend raising the legal purchasing age from 18 to 21 on the basis of one journal article seems, at the very least, premature.

Could the ‘emerging’ neuroscientific research available in 2005, and readily taken up in the 2006 national and 2008 Victorian alcohol policies, have been further strengthened and reinforced by research conducted since then? To investigate this question, we analysed a more recent article in which Toumbourou again addresses the issue of raising the legal purchasing age by drawing on more recent neuroscientific research (Toumbourou et al., 2014). In it, he and his co-authors argue that:

Frequent or episodic binge drinking (consuming five or more standard drinks on a single occasion) is of specific concern among youth because of their neurobiological vulnerability to the effects of alcohol. (Toumbourou et al., 2014:568)

Toumbourou et al. also refer to ‘emerging neuropsychological and brain-imaging evidence associating binge drinking or persistent high levels of alcohol use with adverse impacts on brain development ... in young people’ (Toumbourou et al., 2014:568). The research cited for this significant claim is a single non-systematic review designed to answer the question ‘Are young alcohol misusers on the same pathway as those who eventually develop alcohol-related brain damage?’, which focuses on neuroimaging studies of the neuropsychological and/or neurobiological effects of alcohol misuse in young people between 13 and 24 years of age (Hermens et al., 2013:4). Our intention in the following paragraphs is to examine Hermens et al. (2013) closely to ascertain whether their findings have been appropriately represented in their own summaries, as well as by Toumbourou et al. (2014).

According to Hermens et al. ‘disorders associated with “alcohol-related brain damage” occur as a result of chronic excessive alcohol misuse’ (2013:3). In their review, the authors seek to identify biomarkers that will allow the detection of those alcohol misusers (including binge drinkers) who are most at risk of developing brain damage. In other words, they suggest the possibility of a causal pathway from ‘excessive alcohol use’ (including binge drinking) through ‘neurobiological markers of brain change’ and ‘alcohol-induced brain impairment’ to ‘alcohol-related brain damage’ (Hermens et al., 2013). However the authors also argue that brain changes that result from excessive alcohol use are, in young alcohol misusers, ‘preventable and potentially reversible deficits [which] may be progressive but if left unresolved such deficits eventually become major contributors to poor outcome long term’ (Hermens et al., 2013:3). Here, brain changes that result from excessive alcohol use are seen as potentially reversible, which sits uncomfortably with the connotations of certainty and permanence implied in the term ‘biomarker’ and ‘brain damage’.

Reviewing the evidence, Hermens et al. (2013) concede that there is a ‘paucity of studies investigating the effects of short-term excessive drinking in young people’ with respect to their neuropsychological functioning (Hermens et al., 2013). However, this important caveat appears to have been ignored by Toumbourou et al. and the ‘paucity of studies’ has been translated into ‘available evidence’ and ‘emerging evidence’ in Toumbourou et al.’s 2014 article. As we have noted, the ‘emerging evidence’ in the 2006 national alcohol strategy was based on even sketchier research. We draw attention to the subtle yet powerful distinction between the negativity implied by the use of ‘paucity’ and the optimism implied in the use of ‘emerging’. ‘Emerging evidence’ is but a short step to unqualified (and incontrovertible) ‘evidence’.

There are further problems with the use made of Hermens et al.’s (2013) review. The authors reviewed 20 studies of ‘alcohol use disorders’ (AUD), alcohol abuse and alcohol dependence as well as binge drinking. However, if we consider only those studies specifically addressing ‘binge drinking’ and young people, the number of reviewed studies falls to eight. Drawing firm conclusions from the findings of the eight studies is further hampered by the lack of an accepted definition of ‘binge drinking’, with each study defining binge drinking very differently, making any conclusions regarding a purported link between binge drinking and neuropsychological or neurobiological changes inherently problematic.

One of Hermens et al.’s cited studies focused on adolescents with a history of binge drinking (Schweinsburg, McQueeney, Nagel, Eyler, & Tapert, 2010). Schweinsburg et al. claim that binge-drinking adolescents demonstrated ‘different patterns of brain functioning and *somewhat poorer* performance during verbal encoding compared with non-drinkers’, without

making clear whether the ‘different patterns of brain functioning’ were necessarily associated with brain impairment (Schweinsburg et al., 2010:114) (emphasis added). Their paper is also peppered with caveats and qualifications about their findings, which ‘could suggest’ and ‘could indicate’ impaired function. They also conclude by reporting that the performance differences they identify were ‘*only trends*, likely because of limited power’, ‘*may point to important implications for academic achievement*’, and that the ‘preliminary results *suggest the possibility* of altered neural processing of novel verbal information’ (emphasis added), qualifications that are not carried over into the Hermens et al. (2013) review. These rather cautious terms all suggest very preliminary and incomplete findings but they are represented in the Toumbourou et al. article as ‘emerging evidence’, a subtly more robust terminology.

Furthermore, Schweinsburg et al. (2010) make a crucial methodological point when they note that:

Longitudinal investigations will begin to determine whether binge drinkers pre-existing differences may contribute to these findings [of impaired performance], as well as the neurocognitive implications of continued drinking or cessation. (Schweinsburg et al., 2010:116)

It is worth noting that only two of the articles reviewed by Hermens et al. (2013) used the longitudinal methodology advocated by Schweinsburg et al. (which is acknowledged by Hermens et al. (2013:11)).

In closing this section, we return to Bacchi’s question about the assumptions underlying representations of ‘problems’ in policy – in this case, that binge drinking by young people leads to brain damage. This representation privileges neuroscientific method and overlooks numerous methodological and analytical weaknesses in the source materials. The widespread

use of qualifiers, the tentativeness of reported findings, the methodological limitations and the many caveats evident in the source research articles are all ignored in the rush to claim certainty. These qualifications are repackaged as ‘neurobiological vulnerability’ which now has the gravitas of an alcohol-related ‘condition’. A ‘biomarker’, although potentially reversible and only one factor among many, has become a pathology, ‘emerging evidence’ has (nearly and quietly) become solidified as ‘evidence’. Important definitional problems, such as those relating to ‘binge drinking’, are also overlooked. Moreover, even if we accept, as Schweinsburg et al. argue, that differences in neurocognitive functioning exist, what is their significance? In a recent critical review of neuroscientific research on methamphetamine use, Hart et al. (2012) argue that there was a ‘propensity to interpret any cognitive and/or brain difference(s) as a clinically significant abnormality’. These significant limitations in the neuroscientific literature suggest that the 2006 national alcohol policy and the 2008 Victorian alcohol policy acted prematurely in accepting the links between binge drinking and brain damage, and that the neuroscientific research conducted since then has done little to provide greater certainty on this important policy issue.

Conclusion

In this article, we have critically analysed Australian and Victorian state government alcohol policy documents as they relate to drinking amongst young adults. Drawing mainly on Bacchi’s policy analysis approach, we identified and examined the assumptions, research and silences underpinning the treatment of three themes in alcohol policy problematisations: gender, intoxication and brain development. In relation to gender, we argued that alcohol policy has tended to ignore the over-representation of young men (as well as adult men) in alcohol-related harms, including injuries, traffic incidents and violence. Instead, a range of de-gendered subgroups have been unfairly responsabilised and encouraged to moderate their

drinking when the available research, including some of that cited in the policies, points strongly to the need to prioritise young men in alcohol policy.

We also examined the problematisation of 'intoxication' as (1) the leading cause of alcohol-related harm and (2) as chiefly responsible for increases in hospital admissions. The first of these problematisations relies on the assumption that intoxication is the generic cause of the harm associated with drinking and ignores the complex interactions between substance, biography, subjectivity, gender, class, sexuality and ethnicity. The second problematisation of intoxication emerges from unexamined changes in classification systems that reconstitute intoxication as a distinctive 'acute condition', or from the possibly inflationary effects of aggregating intoxication with other alcohol-related 'conditions'. Taken together, changes in classification and diagnostic practices may have served to prioritise intoxication, and responsabilised a broad range of population groups, while simultaneously diverting attention from injuries, traffic accidents and assaults, which may yet be major causes of alcohol-related harms for young people, especially young men.

Our final theme concerned the assumptions and research underlying the problematisation of 'binge drinking' and brain damage. Here we argued that confident causal claims are undermined by the privileging of neuroscience and overlooking of numerous methodological and analytical weaknesses in the existing research base. These significant limitations suggest that the early acceptance in alcohol policy of the link between binge drinking and brain damage was premature, and that the neuroscientific research conducted since has done little to provide greater certainty.

Accounts of alcohol policy usually focus on policy processes and the identification of strategic interests; policy recommendations; the extent of public support for specific alcohol policy initiatives; the degree to which alcohol policy is, or should be, 'evidence-based'; its effects on specific population groups; or the contrast between alcohol policy and cultures of drinking. In this article, we have pursued another, complementary, perspective: alcohol policy as a key site in the formulation of alcohol 'problems' relating to young adults. Identifying how problems are represented in alcohol policy, the assumptions and silences underlying such problematisations, and the solutions made either possible or unthinkable by them, should be central to the future analysis of alcohol policy and its effects.

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Table 1: Selection of alcohol-related conditions by sub-category for ICD-9 and ICD-10 codes

	ICD-9 (1975)	ICD-10 (1992 – present)
Acute conditions		
<i>Alcohol abuse</i>	305 Nondependent abuse of drugs 305.0 Nondependent alcohol abuse (including acute intoxication, drunkenness, excessive drinking of alcohol, hangover, inebriety...)	F10.0 Acute intoxication F10.1 Harmful use
<i>Alcohol psychosis</i>	291 Alcoholic psychoses	F10.3-F10.9, e.g. F10.3 Withdrawal state F10.4 Withdrawal state with delirium
<i>Alcohol poisoning</i>	980.9, 980.1, E860.0, E860.2, E860.9	X45, Y15, T51.0, T51.1, T51.9
Chronic conditions		
<i>Alcohol dependence</i>	303 Alcohol dependence syndrome 303.0 Alcohol intoxication 303.9 Alcohol dependence	F10.2 Dependence syndrome

Sources: Adapted from Chikritzhs et al. (2003:48-49), ICD-9, ICD-10.