Influences on the drinking of heavier drinkers: interactional realities in seeking to "change drinking cultures"

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Abstract

Introduction and aims: "Changing drinking culture" is a prominent goal in the Australian State of Victoria's current alcohol strategy – seeking a shift so that "excessive drinking isn't seen as the norm".   As a very social activity, there is a strong collective aspect to drinking and associated behaviour: customs within the drinking group and at the level of social worlds of drinking operate both to increase and to control drinking patterns and associated behaviours. The paper considers how risky drinkers and those in social worlds of heavy drinking experience others' expectations about drinking. **Design and methods:** Using Victorian population survey responses (N = 2092 adults who had consumed alcohol in previous year) to identify those in a social world of group drinking, and a subcategory who are also risky drinkers, the paper explores pressures on those in these categories both to drink more and to drink less, whether from family members, from work colleagues, or from friends. **Results:** Those who are both risky drinkers and in a social world of drinking are much more likely than other drinkers to report pressures to drink more from friends and workmates, and even from family members, although they more often report pressures from family members to drink less than to drink more. **Discussion and conclusions:** Efforts to change a drinking culture, it is argued, must take account of the collective nature of drinking and of the interplay of influences at interpersonal and sub-cultural levels if they are to be effective in reducing rates of heavy drinking and alcohol problems.

Key words: social worlds, drinking culture, risky drinker, pressures concerning drinking

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Introduction

A popular theme in public discourse on alcohol problems is the need to change the culture of drinking. In this paper we consider what this might mean and involve, in the light of the social nature of most drinking. As an empirical contribution, we examine in a population survey in the state of Victoria interpersonal influences on the drinking of those whose way of drinking might well be the target of change.

"Changing the drinking culture" as a recurrent goal

Governments in a number of countries have set a societal goal of "changing the drinking culture". When the New Labour government in the UK pushed through a licensing law which removed restrictions on opening hours for alcohol sales, among other changes, the Home Office Minister presented the new law as "part of an ambitious policy to 'change the culture for the long term'". Longer licensing hours, it was believed, would result in "a more relaxed southern European drinking culture of moderate daily alcohol consumption" [1]. In the U.S., a Task Force report to the National Institute on Alcohol Abuse and Alcoholism called for action to "change the culture" of drinking on college campuses, remarking that "environmental and peer influences combine to create a culture of drinking ... as a rite of passage" [2].

In Victoria, as elsewhere in Australia, official inquiries and policies have recurrently pointed to persuading heavy drinkers to change their patterns of consumption as a primary strategy for reducing rates of alcohol problems. For instance, the Davies inquiry in 1977 concluded that "education directed at over-consumption should be more effective in changing the pattern of drinking of heavy consumers" than "restrictions on hours and on the number of outlets" [3]. A decade later, the next official Victorian inquiry defined goals for the alcohol market in terms of creating a "European-style" drinking culture [4,5]. In a similar vein, the current Victorian state alcohol and drug policy strategy document has as the third point in its 15-point plan "changing drinking culture", and in pursuit of this VicHealth, the state's quasi-governmental health promotion agency, has been commissioned to implement "a long-term cultural change program ... to turn around our drinking culture and support Victorians to make informed drinking choices" [6]. The Minister for Mental Health described the aim as

"to try and move towards a culture in Victoria where excessive drinking isn't seen as the norm" [7]. As a first step, VicHealth widely advertised a competition aimed at 16-29-year-olds to "name that point" at which "most of us agree, we've had enough to drink" (the winning name was "the 'Chill' point") [8].

Nongovernmental organisations have also taken changing the drinking culture as a goal. The alcohol industry's social aspects organisation (SAO) in Australia, DrinkWise, won an award from a market research industry group in 2010 for "Communications Strategy Effectiveness" for a media campaign which was part of their continuing effort, initiated in 2007, to "change the Australian drinking culture" [9]. In 2014, DrinkWise launched another campaign on "how to drink properly", which emphasised "that drinking done 'properly' is just fine" [10] -- though to public health researchers this came across as a "cynical campaign" which was essentially "a positive message about alcohol consumption" [11].

The goal of changing the drinking culture for the better – the "dream of a better order", as Olsson [12] termed it in discussing a parallel impulse in Sweden -- has been a recurrent theme in English-speaking and Nordic "temperance cultures" [13] – that is, societies with strong histories on the one hand of drinking to intoxication and on the other hand of temperance movements. It tends to surface most pointedly as a political goal in the context of deregulation of alcohol control systems, as in the UK in 2003, or when, as currently in Australia, there has been an increase in media concern about problems from intoxication [14]. When alcohol-related problems have become a steady item in the press, and there is a demand to do something, but tightening alcohol controls is opposed by strong political pressure from alcohol producers and sellers, a program to change the drinking culture becomes an attractive political response. Mostly because of this political dynamic, changing the culture is thus often defined as an alternative rather than as a complement to policies to tighten alcohol controls, for instance on closing hours or on numbers of alcohol sales points.

In an earlier article, the available historical evidence concerning changing drinking cultures was examined [15]. There are clear historical instances where the total consumption level in a society changed quite radically up and down, but it is hard to find examples of substantial change in the drinking culture – that is, where the style of drinking changed, so that, for instance, the trends in amount of drinking diverged substantially over time from the trends in problems from drinking. One conclusion from that paper was that "a realistic discussion of how to attain the 'dream of a better society' [i.e., a change in drinking culture] needs to address ... the social locations and meanings of intoxication" [15]. This paper aims to open up the issue of the influences on the drinking of heavier drinkers, and particularly those who may be considered members of a social world of heavy drinking, from those with whom they interact in their daily life. It is argued that any serious effort to change drinking cultures must take account of, and where possible build on, these influences. To chart some of these influences, the paper draws on empirical data from a 2007 Victorian population survey.

Social worlds of heavy drinking

While the public discourse is often stated in general terms of "changing the drinking culture", the attention is primarily on patterns of drinking in particular social groups and circumstances. In complex societies, there are often subgroups of the population with injunctive norms encouraging heavy drinking in particular circumstances. These may be referred to as drinking subcultures or heavy drinking subcultures [16] or, if their boundaries are less marked, social worlds [17.18]. In these subcultures or social worlds, an individual member's drinking is heavily influenced by the relevant norms of the group which govern drinking and associated behaviours [19]. For instance, in cultural groups where "standing rounds" or "shouting" are customary, the individual will be expected to drink at least as many drinks as the number of persons drinking together. Drinking norms often vary from one group to another. For instance, it is clear that in complex multicultural societies such as Australia there are substantial variations in drinking practices and norms between ethnic and other population subgroups (e.g., [20], [21:99-101, 202-206]). In multicultural situations, a particular ethnic pattern of drinking may indeed become a performance before those who are outside the group [22]. Drinking practices and norms vary considerably also by other social differentiations, including by gender, by age level, and often by such differentiations as occupational group [23,24]. Although the subcultures and social worlds of drinking in such societies are not well mapped, it is clear that the diverse subcultures and social worlds of drinking often overlap. There has been little systematic study of what happens in the overlaps, for instance when norms are in conflict.

The influences of these cultural and subcultural norms on drinking and associated behaviour play out at the level of face-to-face and other direct social interactions. The behaviour of a particular set of drinkers who meet, for instance, for a regular poker game, will be influenced by cultural and subcultural norms they have in common, but may also develop idiosyncratically over time in ways that go beyond or depart from the norms at the general societal level.

Patterns of interpersonal influence on the individual drinker

At the interactional level, there are other social connections and influences besides those in the drinking social world which will affect an individual's patterns and level of drinking -- sometimes in the direction of increasing consumption and sometimes in the direction of decreasing it. These influences often come in the course of interactions in the major social roles of daily life -- from family members, from workmates, and from friends. Stereotypically, we might expect pressures on someone who drinks quite heavily to drink more to be coming particularly from co-drinking friends, while family members might be pressing for the person to drink less. Cross-cultural studies have shown that pressures to drink less are indeed widely reported by drinkers, whether the respondent is reporting on his or her pressures on others [25.26] or on being pressured by others [27]. However, there are substantial variations by country in whether heavier drinkers are more likely than other drinkers to be pressured to drink less [27], and having pressed others to drink less is not significantly more likely to be reported by those who are themselves abstainers than by

drinkers [25]. In the latter analysis, Australian respondents were fairly close to the mean result for the 14 societies studied in pressing those in various relationships to drink less, although more likely than respondents elsewhere to have pressed a son or daughter and less likely to have pressed a male friend [25]. Reports on pressures to drink more based on adult general population surveys are less common; an analysis of Nigerian data found that such pressures were most likely to be reported by current drinkers as coming from friends or acquaintances, rather than from those in any family or work relationship [28].

The present paper uses the same Australian dataset included in the analysis by Dietze et al. [25] to identify subsets of respondents who may be considered likely to be participants in a social world of heavy drinkers, and to examine the rates of pressures on them from different sources to drink more and to drink less. We hypothesise that pressures to drink less will be generally more likely to come from the family, while pressures to drink more will be more likely to come from friends. Those in a social world of drinking will be more likely than other drinkers to receive pressures to drink less. But, reflecting the influence of others in their social world, they will also be more likely to receive pressures to drink more. Both patterns will be even stronger for those who are also risky drinkers. The implications of the findings for efforts to change drinking cultures are discussed.

Methods

Sample

A sample of 2483 English-speaking adults resident in the state of Victoria was recruited in 2007 with Random Digit Dialling (RDD) of landlines, and interviewed using Computer Assisted Telephone Interviewing (CATI) [29]. The fieldwork was conducted by the Social Research Centre. A modified version of the GENACIS core questionnaire was used to interview a randomly chosen respondent among those aged 18 years and over in the household. A co-operation rate of 38% was achieved. Regional Victoria (outside metropolitan Melbourne) was oversampled to achieve a 50:50 split between Melbourne and regional Victoria. A weighting variable compensates for the oversampling and matches the age, gender and urban/regional location of our sample to the 2006 census of the Victorian population. Results below are reported based on the weighted sample, but the base numbers shown are unweighted.

In this paper, analyses are confined to the 2092 respondents who report drinking at all in the last year (51% male, mean age = 46.2, SD = 18.3). All respondents answered a core set of questions, with additional items being asked only of one of two randomly allocated subsamples. Relevant to this paper, only those in subsample A (N=1044) answered questions on attitudes to drunkenness, and those in subsample B (N=1048) answered questions on being pressured to drink more.

Indicators of inclusion in a social world of heavy drinking. In this analysis, we defined membership in a social world of heavy drinking in behavioural terms, though it is not clear that this is how members of the social world would define membership. One criterion is that the respondent regularly drinks in sociable situations outside the home. In an analysis of

the sociocultural patterning of drinking in a U.S. sample, Clark [18] found that "tavern regulars", who drank in a bar or cocktail lounge at least once a week, were the respondent group most clearly in a social world of heavy drinking. Given that nowadays in Australia almost 80% of alcohol is consumed off licensed premises, we expanded this group to include those who drank at least once a week "at a party or celebration" or "at a friend's home", as well as those drinking that often "in a bar/pub/hotel/club". The number of these occasions was added up and those who had one or more social drinking occasions a week were categorised as social-world drinkers. Altogether, 35.6% of the drinkers in the sample qualified as *Social-world drinkers*.

Amount and patterns of drinking. As a criterion of relatively heavy drinking ("risky drinking"), we used responses to a question about the frequency of drinking 6 or more standard drinks on an occasion (an Australian standard drink has 10 grams of ethanol). Respondents who answered "weekly" or more often to a question on how often they drank 6 or more drinks on one occasion were classed as *Risky drinkers* – a category including 11.1% of the sample.

While further analysis of Social-world drinkers and Risky drinkers uses the dichotomies we have named, we first examine the relationship of the two variables using fuller distributions on them.

A measure of total volume of drinking is also used in Table 2. This is based on quantity frequency measures where respondents are asked how often they consume alcohol and how much they would usually consume on a drinking day.

Attitudes to drunkenness. As measures of normative attitudes concerning heavy drinking, respondents in Subsample A were asked whether they "tend to agree" or "tend to disagree" with a series of four questions:

Getting drunk is just an innocent way of having fun.

It does some people good to get drunk once in a while.

A drunk person is a disgusting sight. *(reverse scored)*

People who get drunk can be very amusing.

A score on attitudes *Favouring intoxication* ranging from 0 to 4 was constructed from these items.

Pressures from different sources to drink more and to drink less. Respondents were asked, concerning seven classes of relationship to the respondent, whether or not each had "attempted to influence your drinking so you would drink less or cut down on your drinking" in the last 12 months. Subsample B were also asked whether they had "felt influenced to drink or drink more" by a person in each class in the same period. *Family pressure more* includes such pressure from a spouse/partner, from a child/children, or from another member of the family;[1] *Family pressure less* includes pressure from any of the same

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[1] Separate questions for males and females were asked concerning other members of the family and friends and acquaintances, but this distinction is not used in this analysis.

relationships. *Work pressure more* and *work pressure less* refer to "someone at your work or where you study". *Friend pressure more* and *Friend pressure less* refer to a "friend or acquaintance" influencing the respondent's drinking in one direction or the other.[1]

Analysis

Sample size changes throughout the paper as some questions were asked only of a random half of the sample. The number of cases involved is made clear below each table. Significant differences between groups on measures such as total alcohol consumed were assessed using the conservative method of checking for non-overlapping confidence intervals. Data presented in this paper are weighted to correct for disproportionate representation on the basis of age, sex and geographic location.

Results

The distribution of social-world and risky drinking is shown in Table 1. As can be seen, many more respondents reported social-world than reported risky drinking in this survey. The two variables are rather strongly related, but the relationship is quite conditional: there were very few respondents who regularly drank riskily who did not also often drink socially. Although much drinking by risky as well as other drinkers is at home, those who drink riskily tend to do at least some of their drinking at other locations. Analyses in this paper will accordingly be based on membership in one of three groups – those who drink both socially (weekly or more) and riskily (weekly or more), those who drink socially but not riskily, and those who do not drink socially or riskily. With only 2.9% of respondents considered to be risky but not social drinkers, this category will not be the focus of any further analyses.

Table 1. Distribution of social and risky drinking (excludes abstainers): corner percentaged (N=2092)

		Risky Drinking					
		Never	Less than monthly	monthly	weekly	daily or nearly daily	Total
Social-world Drinking	Never	4.7	0.2	*	0.0	*	5.1
	Less than monthly	24.2	4.6	0.8	0.5	*	30.2
	Less than weekly	17.1	6.5	3.4	1.8	0.5	29.2
	Weekly	7.5	5.7	4.3	2.0	*	19.6
	Twice weekly or more	3.3	2.7	3.9	5.6	0.6	16.0
	Total	56.8	19.6	12.5	9.9	1.3	100.0

*n < 5

Attitudes toward drunkenness: favouring intoxication.

At the heart of a policy goal of "changing drinking culture" is the aim of reducing the acceptability of intoxication, particularly among those who are regular drinkers. Table 2 shows the mean scores on the Favouring Intoxication scale among drinkers in Subsample A, according to whether the respondent was a Risky drinker and a Social-world drinker. Social-world drinkers, as well as Social-world and Risky drinkers, had significantly more favourable attitudes towards drunkenness than those who fit neither of these categories. This is not just a reflection of the general level of consumption (right-hand column), with the total consumption of social-world-only drinkers quite similar to the total consumption of those who are neither risky nor social.

Table 2.
Mean scores on Favouring intoxication score, by type of drinker (Attitudes favouring intoxication (2007 GENACIS study, Victoria, Australia; current drinkers in Subsample A)

Type of Drinker	N[a]	Mean FIS score (95% CI)	N	Mean Total Volume (95% CI)
not social-world or risky	655	1.1 (1.0-1.2)	1271	46.4 (39.0-53.9)
social-world only	287	1.7 (1.5-1.9)	546	49.2 (39.6-58.7)
social-world and risky	78	2.2 (1.8-2.5)	149	222.4 (159.1-285.7)
Total	1044	1.4 (1.3-1.5)	2020	68.6 (59.1-78.2)

[a]Subsample A only. FIS: Favouring Intoxication Scale. The total includes the Risky-only drinkers whose results are not shown.

Pressures to drink more and less: their sources.

Table 3 shows the pressures that drinkers reported to drink more or less during the last year, according to the source of the pressures: from family members, from someone at work or where they studied (labelled "work colleague") , and from a friend or acquaintance (labelled "friend"). Overall, pressures to drink less were more likely to be received from family members than from other sources, and pressures to drink more were more likely to come from friends or acquaintances. In all categories of drinkers, a higher proportion reported receiving pressure to drink less than to drink more from family members, although the difference is not significant for any category and is slight for those who are neither Social-world nor Risky drinkers. As might be expected, those who are both Social and Risky drinkers are especially likely to receive family pressure to drink less, although, interestingly, they are quite likely also to receive pressure from someone in the family to drink more.

Table 3. Proportion reporting pressures to drink more and to drink less in the last year from three sources -- family, work colleagues and friends -- by type of drinker (2007 GENACIS study, Victoria, Australia; all current drinkers and those in Subsample B)

	N [a]	Pressure to drink more			N	Pressure to drink less		
		Family %	Work %	Friend %		Family %	Work %	Friend %
Not social or risky	671	5.7 (3.7-7.7)	2.8 (1.3-4.2)	7.9 (5.4-10.5)	1326	6.2 (4.6-7.9)	0.4 (-0.0-0.8)	0.8 (0.3-1.4)
social only	269	8.6 (4.6-12.6)	11.8 (7.1-16.5)	22.3 (16.2-28.4)	556	16.5 (12.5-20.4)	0.7 (-0.2-1.7)	3.8 (1.8-5.8)
social & risky	77	24.1 (11.1-37.2)	23.1 (10.0-36.1)	44.4 (30.1-58.7)	155	36.1 (26.6-45.7)	4.7 (0.4-8.9)	14.7 (6.8-22.6)
Total	1048	8.1 (6.1-10.2)	6.9 (4.9-9.0)	15.3 (12.5-18.1)	2092	12.3 (10.5-14.1)	0.9 (0.3-1.4)	3.2 (2.2-4.2)

[a] Respondents in Subsample B who were asked the questions on pressure to drink more
The total includes the Risky-only drinkers whose results are not shown.

In all drinking categories, also, friends are more likely to have pressed the drinker to drink more than to drink less, but this is particularly true for those who are both Social-world and Risky drinkers – almost half of these respondents report such pressure to drink more. From work colleagues, too, the balance of pressures is on the side of drinking more rather than less, though only those who are both Social-world and Risky drinkers report a substantial rate of pressure from this source to drink more.

Pressures to drink more and less: the balance for each type of drinker.

In Table 4, pressures from the different sources are cumulated to show the proportion of each type of drinker which has received pressures from any of the three sources to drink more and to drink less, and the ratio of these proportions. Those who receive pressure to drink less were three and a half times more likely to also receive pressure to drink more than those who did not receive pressure to drink less (OR = 3.5, CI: 2.2-5.6). Drinkers who are neither Social-world nor Risky drinkers are the least likely to receive pressures in either direction; if they do receive pressures, they are almost twice as likely to be pressures to drink more. Those who are Social-world but not Risky drinkers also receive more pressures to drink more than to drink less. And, while almost half of those who are both Social-world and Risky drinkers have received pressures to drink less, they are even more likely to have received pressures to drink more. This pattern of results suggests that being in a social world of heavy drinking is likely to be associated with being pressured to drinking more.

Table 4. Proportion reporting pressures to drink more and to drink less from any source in the last year, by type of drinker (2007 GENACIS study, Victoria, Australia; all current drinkers and those in Subsample B)

	N^a	Pressure to drink more (%)	N	Pressure to drink less (%)	Ratio: More/Less
not social-world or risky	671	13.2 (10.1-16.4)	1326	6.8 (5.1-8.5)	1.94
social-world only	269	30.0 (23.3-36.6)	556	18.8 (14.7-23.0)	1.60
social-world and risky	77	46.6 (32.3-60.9)	155	44.0 (34.0-54.0)	1.06
Total	1048	21.1 (18.0-24.2)	2092	14.3 (12.3-16.2)	1.48

[a] Subsample B only. Total N includes the Risky-only group whose results are not shown here

Discussion and conclusion

This paper addresses issues raised by the repeated political calls for "changing drinking culture" – pleas which are repeatedly made despite the lack of evidence of effectiveness in top-down efforts to change styles of drinking. We start from the observations that most drinking is in the presence of others, and potentially affects others. As a social activity, in most cultures drinking is very much a part of the expectations of reciprocity in social relations. Such reciprocity norms are the underpinning of Skog's theory [30] of the "collectivity of drinking cultures": individual levels of drinking in a society tend

to go up and down together because of these normatively-structured links between individuals in their drinking behaviour.

So the individual's choices about drinking and associated behaviour are subject to influences from others. An important consideration in any effort to "change drinking culture" is what pressures, whether to drink more or to drink less, are being exerted on drinkers. The paper has addressed these issues empirically at the level of interpersonal pressures as they are experienced with Victorian population survey data. We have used a relatively crude measure of whether the drinker belongs to a social world of drinking: essentially, whether the drinker at least once a week has drinks with others in a social situation outside his or her home. This is a minimum definition of a social world of regular drinking, one that includes over 30% of Victorian drinkers, almost certainly gathering into the group some who are fairly peripheral to such a world. Stepping back from the data, it seems likely that a majority of drinkers in Victoria are not currently regular participants in a social world of regular drinking.

Those who are Social-world drinkers, as thus defined, are more likely than other drinkers to be Risky drinkers, that is, drink 6 or more drinks on an occasion at least once a week – although only a minority of them do this. Both Risky drinkers and Social-world drinkers are more likely than other drinkers to have positive attitudes to drunkenness. Those who are both Social-world and Risky drinkers are the most likely to have been pressed by others to cut down, while Social-world drinkers are also much more likely to have been pressed by others to drink more – whether or not they are Risky drinkers. Particularly for non-Risky Social-world drinkers, pressures to drink more are substantially more prevalent than the pressures to drink less. Presumably reflecting the influence of the drinking group, Social-world drinkers are more likely to have been pressed to drink more by friends and acquaintances, and this is particularly true if they are also Risky drinkers. The co-occurrence of pressure to drink more and pressure to drink less is interesting; while it may be in part a reflection of those who in general more often discuss their drinking with others, it also means that there are quite a few people receiving conflicting messages from their family and friends about their drinking.

The extensive qualitative literature on drinking groups in taverns and elsewhere [31], although mostly not from Australia, would lead us to expect that the pressures to drink more from friends and acquaintances will often find their expression right in the drinking situation, when someone hesitates over going for a drink after work or is seen in the drinking situation glancing at a watch or asking for the bill as a prelude to leaving. In such a situation, it does not seem likely that individualistic health promotion messages about low-risk drinking limits or drinking "properly" will hold much sway. An example from anti-drink-driving campaigns may point in a more promising direction: towards influencing patterns of interpersonal interaction and influence. This is the slogan, "Friends don't let friends drive drunk", launched in the US in the course of a campaign that had begun in 1983 [32]. The slogan has made its way into general popular culture to the extent of becoming a meme drawn on in a wide range of circumstances [33]. While any such approach has its own limits [34], it does have the advantage of addressing the social nature of drinking and of the influences on the drinker in a drinking situation.

An effort to "change drinking culture" by a government or other actor coming from outside the levels of individual interactions and of social worlds of drinking would be well advised to understand the ways in which individual behaviour and attitudes are located in and influenced by interactions at these levels. Addressing – and where possible complementing – these interpersonal and subcultural influences is the most likely path to the effort succeeding. Designing an effort which might make a difference will require careful study of norms and the functioning of social worlds of drinking and heavy drinking, in qualitative as well as quantitative studies. For instance, it would be relevant in preparing for such an effort to explore in an Australian context whether and what the equivalent in an Australian context may be of the injunctive norm found by Gusfield [35] and his students in social worlds of heavy drinking in southern California of being a "competent drinker", i.e., one who avoids trouble from the police or otherwise. How and under what circumstances such a norm might be invoked to serve public health and welfare purposes would then need to be explored.

There will also be a need for studies of how informal interpersonal influences respond as the effort is implemented. This is not only needed as part of evaluating the success of the effort, but also for understanding how the informal drinking groups and social worlds of heavy drinking interact – supportively or antagonistically -- with such an official or semi-official campaign.

An effort to change drinking culture also needs to move beyond the political assumptions within which such efforts have tended to be framed. Such efforts need to take into account the effect of shifts in the market and alcohol promotion and how they affect circumstances and social worlds of drinking. Observational and event-level studies of drinking practices are now filled with terms in common use – "predrinking" or "preloading", "side-drinking" and "post-drinking" [36,37] – which were not used a couple of decades ago. The terms reflect changes in drinking behaviour, particularly of young and cash-poor drinkers, in response to the increased discrepancy between the on-premise and off-premise price of a drink, and the increase in off-premise availability, at least in the UK and Australia. Changes in the alcohol market, impelled both by commercial interests and wage policies and by changes in alcohol licensing laws, thus also affect behaviour in social worlds of heavy drinking. Efforts to change drinking culture thus need to consider in their field of action not only the individual drinker, and not just interpersonal and subcultural influences, but also the actions of commercial interests and alcohol control laws and agencies.

The most successful efforts to change behaviour in areas related to problematic drinking in recent decades have been the campaigns against tobacco smoking and against drink-driving. Both of these have involved not only efforts at public persuasion, but also a series of policy nudges which imposed restrictions channelling behaviour in more healthy directions – for tobacco smoking, bans in workplaces and in restaurants and taverns, and for drink-driving, per-se laws and intensive random breath-testing enforcement. Beyond the nudging of individual users and their social worlds, these efforts have involved also changes in regulation of the market and in enforcement. These examples are evidence that changing deeply-rooted behaviours in societies like Australia requires that campaigns of public

persuasion, if they are to be effective, be accompanied by regulatory changes and enforcement.

Acknowledgments and declaration of interests

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