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FOR DEBATE

Alcohol Marketing Research: The Need for a New Agenda

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Declaration of interest

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Abstract

Given the large body of literature on alcohol advertising, it is astonishingly difficult to find evidence that can inform policy appraisals. The identified evidence requirements can be categorised as follows: 1) Effect sizes: Evidence of the size of marketing effects on the whole population and for policy-relevant population subgroups including heavy and binge drinkers, 2) Timing of effects: the balance between immediate and long-term effects, information on time lag, duration and cumulative build-up of longer-term effects and 3) Policy effectiveness: Effect sizes for a range of comprehensive and partial (eg bans on specific promotions, channels or watersheds) marketing restrictions on consumption and harm, including effect estimates for population sub-groups. This paper suggests that these knowledge gaps impede the evaluation and appraisal of existing and new interventions, because without understanding the size and timing of expected effects, researchers may choose inadequate time frames, samples or sample sizes. It also argues that to date, studies have tended to rely on oversimplified and sometimes untested models of marketing and have focused disproportionately on youth populations. Complexities such as the cumulative effect of exposure across multiple marketing channels, targeting of messages at certain population groups and indirect effects of advertising on consumption have rarely been considered. It is essential that future research into marketing effects are strongly anchored in theory, that measures of effect are well-justified and that the complexities of alcohol marketing efforts are fully recognised.

The need for a new research agenda

Marketing is the process by which business brings its offerings and its customers' needs into alignment to maximise the satisfaction of the latter and profits of the former. Classically it uses four tools to do this: product design, pricing, place (or distribution) and promotion. The latter covers a wide variety of communications with the consumer, including mass media advertising; sponsorship; packaging; public relations; point of sale display; new media and many others[1]. Unlike some other elements of marketing, alcohol advertising has been heavily researched over the last few decades, including, in recent years, a rapid growth in contributions from developing countries. Well over a thousand studies are available. High-quality longitudinal studies and systematic reviews now contribute strong support for the causality of linkages [eg 2-5]. These have been instrumental in generating a growing scientific consensus that advertising in the traditional media influences drinking initiation, levels of alcohol consumption and patterns of drinking in young people. This is an important step refuting the regularly deployed industry argument that marketing influences brand share but not total consumption.

However, a wide range of additional evidence would help policy makers decide on intelligent measures to tackle the problem. This was brought home to the author when her team was tasked with conducting a modelling study to appraise pricing and marketing policies for the UK Government in 2008. As so often in public health, there is an obvious tension between economic and libertarian interests versus the need to protect citizens from harm; and thus a need to find an appropriate balance between the two. To translate the recognition that advertising is causally linked to consumption, at least in young people, into policy action, we needed quantitative estimates of the likely effectiveness of the range of possible counter-measures.

Specifically, we were trying to identify evidence on:

- Marketing effect: Baseline quantification of the effect sizes of marketing on the whole population, and on policy-relevant population subgroups including young binge drinkers, adult hazardous drinkers, adult harmful drinkers, and dependent drinkers trying to reduce their consumption

- Timing of effects: The balance between immediate and long-term effects, as well as information on time lag, duration and cumulative build-up of longer-term effects
- Policy effectiveness: Effect sizes for a range of comprehensive and partial (eg bans on specific promotions, channels or watersheds) marketing restrictions on consumption and harm, including effect estimates for population sub-groups

This information could then have been used in the Sheffield Alcohol Policy Model, making it possible to provide policy makers with detailed estimates of how alternative policy options might impact health and social harms. Astonishingly, given the large body of literature on alcohol marketing, none of this evidence was available.

This paper discusses current research gaps in more detail, presents first ideas for future research directions, and calls on researchers to develop the necessary methods and research programmes to take the field forward.

Marketing research should refocus on existing drinkers

The significant majority of research focuses on young people, and this is reflected in concerns of policy makers about advertising effects on children. However, this is indicative of a somewhat unquestioning assumption that alcohol marketing only, or at least predominantly, carries risks for children, presumably because they do not have the logical capacities to distinguish the ideal portrayed in the advert from real experience. This focus needs to be rethought in light of emerging evidence on the heuristic processing of marketing messages and in the knowledge that most marketing is designed to influence existing consumers rather than young people.

Let us address the latter point first. Pre-experience marketing is targeted at those who have never tried alcohol at all, or it targets those who have not tried the type or brand of alcohol in question. The most common reason is age – young cohorts may not have started drinking at all, and older cohorts may mature into a certain market segment, e.g. with lifestyle products such as single malt whisky. The aim of pre-experience marketing is to increase the odds of a first trial of (a type of) alcohol. However, much more common is marketing targeted at existing drinkers, and even existing consumers of the marketed product. In this case, marketing aims to introduce new product versions, show new settings or contexts in which the product can be used,

refamiliarise former users, cognitively frame the next purchasing or consumption experience (telling the consumer to expect to find the product on the shelf or at the next party) or to frame outcome expectations and interpretations.

Current and regular drinkers are frequently targeted *during* the drinking experience with an aim of increasing consumption. Examples are wide-ranging and include happy hours in the on-licensed sector, beer festivals, sponsorship of events that involve heavy drinking such as the first week at university, sports events or music festivals, and well-timed TV advertising, e.g. beer ads during TV sports programming and wine ads during episodes of family sitcoms aimed at female and older viewers. Marketing at the time of consumption and in connection with an activity that the drinker enjoys seeks to increase usage rates and consumer loyalty by enhancing the overall experience of the product. Research shows that during-experience marketing reshapes experiences as the consumer makes them and influences the memory of a consumption experience by framing it positively [6-7]. Memories of drinking experiences are important determinants of future decision making, something that will be further explored below.

The aim of post-experience marketing is to organise the consumer's memory using aural and visual cues. Cognitive psychology research shows that the memory of an advert and a consumption experience are not separate "replays" but are encoded with relevant context information and reconstructed in a personally relevant way. Advertising can trigger memories of previous product exposure, and similarly the product experience can cue the retrieval of advertising memories. Experimental evidence shows that advertising is capable of reshaping "objective" experiences and creating the belief that the product was as advertised rather than as originally experienced [8].

Recent neuroscience and cognitive psychology research gives further cause for concern about the effect of marketing on existing heavy drinkers: For example, heavy drinkers subconsciously take more notice of alcohol-related cues, especially alcohol imagery, compared to light drinkers and abstainers. This phenomenon is called alcohol attention bias and has been confirmed for both dependent and heavy social drinkers [eg 9]. To the author's knowledge, the research has not yet been extended to marketing, but it is plausible that heavier drinkers would show more alcohol attention bias for alcohol cues in marketing. This could explain findings that positive outcomes of drinking are more accessible in the memories of heavy drinkers compared to light

drinkers [10]. Experimental evidence also shows that alcohol portrayals in films and advertisements lead to distinct patterns of brain activation, causing alcohol craving responses and affecting actual consumption decisions in heavy drinkers [11].

Now returning to the first point, that it may not just be children who lack the logical capacities to fully evaluate the marketing they are exposed to. To explore this point, we need to take a brief look at relevant cognitive theories. Information processing and decision making theories in particular provide a useful explanatory framework for both short-term and cumulative influences of marketing on purchasing and consumption decisions. For example, message interpretation process and dual processing models hypothesise how marketing communications are processed, interpreted and internalised by the recipient, whilst decision making theories hypothesise how internalised representations can influence both conscious (analytic) and subconscious (heuristic) decisions about consumption.

Dual processing theories suggest that all messages - including marketing messages - are interpreted in two ways, through affect-based automatic processes and through logical processes, and that these separate processes involve different neural structures [12-13]. The balance between the two processes depends on whether situational factors (e.g. motivation as well as cognitive ability and capacity) promote full evaluation or not. Logic-based processes require cognitive effort - they are resource intensive, slower and involve scepticism and testing of the realism and credibility of the message. In contrast, affect-based cognitive processes tend to be largely automatic, they are unconscious (implicit), fast and impulsive, are not controlled by conscious desires or intentions and do not involve extensive cognitive processing of the merits of the arguments presented. Affect-based processes use heuristic cues such as message length, source attractiveness and credibility (e.g. celebrity endorsement). Because our minds are always on standby, we cannot avoid noticing advertising, and once aware, we cannot choose to become “unaware”. Nevertheless, we are unable to invest cognitive resources to attend to and consciously evaluate every advertisement we encounter. Thus, heuristic mechanisms may dominate our processing of marketing messages. This is consistent with advertisers’ own theories of how advertising works, which incorporate a strong belief in the primacy of emotional effects [14].

Message interpretation process models hypothesise that people actively interpret (rather than passively receive) marketing communications. Depth of message interpretation is related to whether the message is perceived as personally relevant, for example through identification (similarity to own life circumstances) or desirability of portrayed situations or protagonists. Personal relevance is a key concept in the population segmentation approach used in marketing, where the focus is often not on product features but on lifestyle advertising. Young people's drink advertising shows drinking in real-life situations involving fun, socialising outside the home, being "cool" and attractive, and hence aims to resonate with social truths. In contrast, marketing targeted at older people often focuses on mature pleasures of a high quality drink. For mature men, signals of fraternity, vitality and prosperity are often used, for example portrayals of leisure activities such as playing golf or fishing. Similarly, beauty, family relations, and romance are used to address female audiences. Message interpretation process models predict that with repeat exposure, perceived relevant alcohol-related messages will become progressively internalised, so that during the actual decision making process the messages are cognitively more available.

In a final step explaining how marketing could lead to consumption changes, decision-making research consistently shows that people tend to choose only between decision options that are easy to retrieve. They do not go through a full analytic process involving conscious calculations of probabilities and values of the benefits and costs of each possible option in terms of a "net benefit" or "expected utility" analysis, unless there are particular situational aspects promoting a thorough analysis. Analytic decision-making is less likely in situations involving repeat or routine behaviours (eg. drinking beer while watching football), peers who behave in a uniform way (eg. "round-buying") or where the decision maker is already intoxicated. Importantly, ease of retrieval of decision options is influenced not only by previous encounters with real objects or events, but also influenced by priming effects, source credibility, repetitions and recency of exposure. Studies that have explicitly applied cognitive models in the context of alcohol advertising report that depth of message interpretation and the degree to which young people identify with protagonists and recall advertisements (possible proxies for personal relevance and ease of retrieval) predict alcohol consumption decisions in young people [15-17]. What is however absent from the evidence base is the crucial reverse demonstration: that advertising not perceived as personally relevant is not recalled as well and does not affect consumption.

Decision-making research also shows that prior decisions strongly influence future decisions, and this is again understood as a mental short-cut. As long as the first decision led to an acceptable outcome, people are much more likely to decide the same way the next time they face a similar situation. As mentioned above, experimental research shows that marketing can successfully reshape experiences as the consumer makes them and influence the memory of a consumption experience to be better than the product alone could support [6-8]. If marketing positively reframes mental representations of previous decision outcomes, then it would promote repeat decisions to consume alcohol and marketing effects might increase in line with the number of drinking experiences someone has made.

To briefly summarise: According to cognitive psychology theories, marketing messages may be processed using faster affect-based processes rather than slower logic-based processes. If perceived as personally relevant, they may be more likely to be internalised and available for retrieval during decision-making. Ease of retrieval predicts decision outcomes in situations where the default position is heuristic rather than analytic decision-making. Because marketing can affect how drinking occasions are remembered, and because memories of positive outcomes promote repeat behaviour, marketing may play a special role in driving repeat consumption in existing adult drinkers.

Thus, whilst it is important that young people remain a research focus, it is important that research also establishes to what degree marketing reinforces consumption among existing drinkers, and whether it hampers attempts to drink in moderation or to cut down drinking.

Research designs need to reflect marketing complexity

Millions are spent on market research to inform highly effective, coherent, multi-component campaigns that are expertly targeted at relevant population segments using a host of information on demographic/lifestyle characteristics and drinking preferences. For example, a brewer will take great efforts to understand young men and everything about their drinking culture. This know-how will then feed into the design of bespoke marketing efforts that will harness all the levers mentioned above. One UK brewer memorably put it like this: "*They (young men) think about 4 things, we brew 1 and sponsor 2 of them*". [(cited in 1)]

The great majority of the research has focused on communications, with little attention being paid to other aspects of marketing, such as the impact of point of sale price promotions. Even within communications, most effort has been focused on broadcast and print media, with less evidence on sport and cultural event sponsorships, product placements or the effects of digital marketing (including internet advertising, social networking sites, file-sharing websites such as YouTube). And yet these are areas of great importance: evidence reported in the recent UK Health Select Committee Report [18] shows that drinks companies account for 12% of all UK sports sponsorship income, including prominent deals with the Football League and Premier League. UK expenditure on alcohol promotion through internet and digital platforms is about to overtake that on conventional advertising for the first time. Mass targeting of young people is becoming more difficult due to media fragmentation, thus advertisers have started to also target the trend-setters and opinion formers, and encourage them to disseminate the message themselves through interactive, often internet-based promotional material. Digital marketing presents alcohol researchers with particular difficulties: it is often hidden (for example it can take the form of one to one communications), confidential (accessing platforms like Facebook pages presents obvious ethical problems) and obscure (when does a text about T in the Park become an alcohol ad?). With the increasing harnessing of 'user generated content' it is not even clear when something qualifies as a commercial communication: are the kids who upload clips of their friends "doing the Lambrini" promoting the product or entertaining themselves?

Academic research has struggled to design measures of marketing effects taking full account of the diversity of marketing behaviour and much of the complexity is so far missing from the (quantitative) research evidence base. For example, the most common measures of advertising effects are broad indicators such as estimates of the volume of overall exposure to media (e.g. total hours of television viewing per year), the volume of advertising exposure (e.g. number of TV adverts broadcast during popular shows), or changes in marketing expenditure over time. These are then related to (often equally aggregated) per capita consumption or alcohol sales. Such models of advertising work from the central tenet that if advertising influences demand, then more advertising should create more demand. Aggregate-level studies of this type tend to report very small effect sizes. However, if we assume that targeting of messages plays a role and that exposure to a message that is not pertinent to us does not affect us (or not as much), then such small effects are likely to be due to inadequate study designs.

Consider a hypothetical and rather simplistic example: advertisers start marketing a new type of product to young women and this explains a significant share of the growth in marketing expenditure for a given period. In practice, segmentation is of course a lot more fine-grained than that, taking into account issues such as social status, ethnic background, drinking preferences and so on. However, for this easy illustration, say this is very successful and the alcohol consumption of young women increased quite dramatically as a result. Such effects would hardly be discernible in aggregate-level analyses, as young women aged 18-29 only make up around 10% of the total UK adult population. Studies that do not differentiate between targeted and non-targeted populations would thus be expected to produce patterns of small, inconsistent and misleading effects.

In summary, there are two problems with common measures of marketing: Firstly, they tend to disregard the effects of population segmentation and targeting of messages; and secondly, they tend not to measure the combined effect of all that is marketing and thus, to account for the diversity of marketing efforts. However, arguably marketing is all about cumulative impact, as companies deliberately design the constituent elements to work coherently together to produce something greater than the individual components. The “big picture” remains elusive.

Research needs to clarify the timing of effects

A major uncertainty concerns the timing of marketing effects, again an important parameter when considering the likely effects of a policy: What would happen if, say, a complete alcohol marketing ban were to be implemented today? Would alcohol consumption drop immediately? Or would we have to wait to see a new generation grow up who had never been exposed to alcohol marketing? So far, we have only limited data to go on.

There are reasons to believe that there are direct, immediate effects of marketing on consumption. Here we mean the increased likelihood of opening a beer from the fridge in response to watching a beer ad, or the degree to which seeing a wine promotion in the local newspaper leads to purchases that otherwise would not have been made. Suggested mechanisms for immediate effects are that alcohol portrayals in films and commercials may act as cues for imitative behaviour and/or they may affect craving responses in drinkers that lead to unintended consumption [19-20]. For example, a Dutch team showed in an experiment that young

men watching movies in which protagonists drank frequently, or commercial breaks with alcohol advertising, drank substantially more alcohol during and immediately after a TV watching episode than young men watching movies with infrequent drinking or non-alcohol advertisements [19]. Thus, marketing showing portrayals of actual drinking behaviours, whether via product placements or advertisements, appears to directly influence drinking levels. This study should now be replicated with other population groups and using other marketing channels. Future studies could vary (or at least control for) the level of liking/identification with the drinking protagonists, and attempt quantification of the effect size by using different levels of exposure.

As previously discussed, there are likely to be longer-term influences enacted through individuals' drinking-related affective and/or cognitive responses (eg decision making propensities, approach-avoidance behaviours, social norms) that we need to explain and quantify. Longitudinal studies have recently begun to provide first estimates of longer-term advertising effect sizes for young people, following children and young adults for up to 8 years [2-5]. The effects of overall exposure seem cumulative and, in markets with greater overall availability of alcohol advertising, young people are more likely to continue to increase their drinking well into their twenties than in markets with less exposure to alcohol advertisements [2]. It is important that these cohorts are followed into adulthood, and that there is meticulous recording of changes in marketing and other contextual factors (e.g. policy changes). We should also explore whether the generated data can be used to learn more about individual subgroups of youngsters. An interesting group would be advertising "non-responders", i.e. those who despite high exposure to marketing have not started to drink heavily, as this might allow the generation of hypotheses about the relevance of marketing messages to different groups.

Where to from here?

A key argument of this paper is that it is unreasonable to expect observable marketing effects in people who are neither targeted nor otherwise perceive marketing messages as relevant and so traditional quantitative marketing measures (media exposure, advertising exposure or advertising expenditure) are unlikely to give us the answers we need. Thus, we need to find ways to design studies that, whilst ideally covering the whole population and the breadth of

marketing communications, allow levels of disaggregation of exposure and measured effects similar to that used by marketing industries.

1. Theory-driven research

A range of academic disciplines, including marketing research, health psychology, economics, behavioural economics, the neurosciences and cognitive psychology have contributed separate and sometimes incompatible conceptual models of how advertising might affect consumption. The field should develop ways to formalise and test competing hypotheses, possibly starting with a multidisciplinary synthesis of theoretical models.

2. Better measures of marketing effects

New indicators are needed that combine measures of marketing volume and receptivity, i.e. individual-level measures of exposure to *relevant* adverts. However, this currently poses a challenge: We cannot rely on consumer ratings of perceived relevance because this assumes conscious information processing which is probably not required for adverts to affect alcohol consumption.

3. Measuring baseline marketing exposure

It is necessary to attempt a quantification of the baseline level of exposure to the full range of alcohol marketing, against which future post-policy levels can then be compared. Questionnaire methods are unlikely to result in convincing estimates, as it would be difficult for most people to remember just how many internet advertisements for alcohol they have come across or how many times they may have noticed a promotional banner during the sport event they watched on television yesterday. Field study approaches using direct observation may be more fruitful: For example, researchers could follow volunteer participants throughout a typical day and systematically record (e.g. using video cameras or Dictaphones for visual and audio footage, supplemented by written field notes) any exposure to alcohol related marketing communications, whether seen whilst commuting by bus, browsing the internet, watching television or passing by a pub, listened to on the radio or talked about with friends. Initially this research would have to be very inclusive, with a decision about whether or not a communication was truly “marketing” made at a later stage. Such data could provide information about the marketing mix that different population groups are exposed to, possibly providing a quantitative breakdown of intensity of exposure to different channels, brands, and allow detailed analysis of

the types of messages targeted at different population segments. If it was possible to undertake such observations longer-term or with large samples and to record concurrent purchasing behaviours, such research could provide a powerful tool for understanding how marketing mix influences purchasing in different people.

4. Marketing effects on different populations

Apart from quantifying the baseline exposure to marketing by population subgroups, it would be interesting to explore options for comparative research with samples of people for whom marketing messages are likely to feel less relevant. This could be because they do not fall into the targeted age group or their social lives contrasts with that portrayed in adverts. The question is whether it is possible to design studies that can control for possible confounders (for example, similar baseline drinking levels and equal exposure to marketing) to the extent that we can demonstrate that their drinking levels are less responsive to variations in marketing exposure compared to those at whom marketing messages are targeted. Alternatively, as suggested above, we can use retrospective cohort designs to investigate differential responses to marketing, comparing those with similar levels of marketing exposure but different drinking outcomes. Of course, this assumes that it is possible to adequately capture past exposure (see previous paragraph).

We may also be able to examine historical changes in advertising portrayals and target markets, for example to test whether increased targeting of young well-to-do women by marketing are matched by consumption changes in this group that are not observed in other groups. Where good quality, fine-grained consumption and advertising data is available or can be constructed from media archives, time series analyses to derive effect size estimates may be an option.

5. Examination of whether alcohol attention bias applies to marketing messages

If those who drink heavily show cognitive changes that promote attention to alcohol-related stimuli, then marketing exposure may have a disproportionate effect on their consumption and interfere with attempts to cut down. Whilst research on alcohol attention bias has been carried out mainly from a clinical experimental perspective – for example, to understand how alcohol-related stimuli influence clinical outcomes and relapse rates in dependent drinkers – it appears that an application to marketing effects would be important. This should also explore whether

there are thresholds for alcohol attention bias, or whether there is a linear dose-response function such that alcohol attention bias increases proportionately with level of drinking.

6. Marketing attributable fractions

It could be very helpful for policy appraisals if, borrowing the concept of attribution from epidemiological research, there were attempts to estimate marketing-attributable fractions of alcohol consumption, i.e. a quantification of the proportion of consumption that would not occur in the absence of marketing.

7. Maximising on policy changes that occur

Truly radical policy changes in advertising are rare, thus it is crucial that we are ready to conduct appropriate evaluations when they do occur. For example, when the French loi evin was introduced two decades ago, no appropriate baseline measure for advertising pre-policy appears to have been available. Such a baseline would have allowed researchers to evaluate the effects on advertising and consumption, to investigate possible counter-veiling industry responses and to better understand the timing of effects over the longer term.

Conclusion

To date, studies have tended to rely on oversimplified and sometimes untested models of marketing and have focused disproportionately on youth populations. Complexities such as the cumulative effect of exposure across multiple marketing channels, targeting of messages at certain population groups and indirect effects of advertising on consumption have rarely been considered.

The identified knowledge gaps impede the evaluation and appraisal of existing and new interventions, because without understanding the size and timing of expected effects, researchers may choose inadequate time frames or sample sizes for evaluations. The lack of understanding of how different population groups respond to marketing and to marketing restrictions prevents us from devising targeted interventions and hampers policy decision making.

It is essential that future research into marketing effects are strongly anchored in theory, that measures of effect are well-justified and that the complexities of alcohol marketing efforts are fully recognised.

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