

An investigation into digital alcohol marketing and user-created alcohol promotion, and the association with young adult's alcohol-related knowledge, attitudes, and behaviour

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Abstract

Context: There are two ways that digital media may influence alcohol use. The first is commercial alcohol marketing. The second is user-created alcohol promotion, defined as content distributed through new media that promotes consumption, but independent of commercial marketing. This thesis explores how both types of content promote alcohol, what association there is between exposure and alcohol-related attitudes and behaviour, and the differences between marketing and user-created promotion.

Method: A mixed method design was employed, divided into two studies. The first was a content analysis of the design features, topical references, and messages suggested about alcohol in digital marketing and user-created promotion on Facebook, Twitter, and YouTube. The second was a cross-sectional survey with young adults ($n = 405$). This measured awareness of, and participation with, digital marketing and user-created promotion, and the association with consumption, higher-risk drinking, brand recall, expectancies, and drinking motives.

Results: The content analysis found that digital marketing had personalised designs which contained subtle and positive messages about consumption, whereas user-created promotion had simpler designs, displayed little ethical practice, and contained overt messages about higher-risk drinking. The cross-sectional survey found that young adults were aware of, and participating with, both digital marketing and user-created promotion, with exposure greater for the latter. Exposure to both types of content was positively associated with alcohol use, higher-risk consumption, and drinking intentions. User-created promotion had a stronger association with all outcomes than marketing. The association between exposure and consumption, for both types of content, was mediated through drinking motives and expectancies.

Conclusion: Young adults are aware of, and participating with, a range of digital marketing and user-created promotion. That such exposure is associated with alcohol-related attitudes and behaviour highlights the potential of new media to influence alcohol consumption. Further research is required to better understand young people's experience with digital media and the challenges of addressing online health risk messages.

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- S2: Summary of cross-sectional research reviewed into digital alcohol marketing
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Abbreviations

AFS	Alcohol Focus Scotland
Apps	Smartphone Applications
AHA	Alcohol Health Alliance
AOR	Adjusted Odds Ratio
ASA	Advertising Standards Authority
AUDIT-C	Alcohol Use Disorders Identification Test Consumption
B-CEOA	Brief Comprehensive Effects of Alcohol
BCI	Bootstrapped Confidence Interval
CAMY	Center on Alcohol Marketing and Youth
CAP	Committee of Advertising Practitioners
CBI/SP	Cognitive Behavioural Impairment and Self-Perception
CEOA	Comprehensive Effects of Alcohol
CFA	Confirmatory Factor Analysis
DMQ-R SF	Drinking Motives Questionnaire Revised - Short Form
EFA	Exploratory Factor Analysis
HSCIC	Health and Social Care Information Centre
IAS	Institute for Alcohol Studies
MIP	Message Interpretation Process Model
MMAU	Motivational Model of Alcohol Use
NGO	Non-Governmental Organisation
OFCOM	Office of Communications
ONS	Office for National Statistics
PCA	Principal Component Analysis
R/LC/Social	Risk, Liquid Confidence and Social
WHO	World Health Organisation

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List of outputs

Journal articles

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Critchlow, N., Moodie, C., Bauld, L., Bonner, A., & Hastings, G. (2017). Awareness of, and participation with, user-created alcohol promotion, and the association with risky drinking in young adults. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 11(2), article 4.

Book chapter

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Conferences and symposia

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Critchlow, N. (2015, October 8). *Young people's awareness of, and involvement with, branded and non-branded digital alcohol promotion, and the association with increased alcohol use: Implications for harm reduction*. Paper presented at the Global Alcohol Policy Conference, Edinburgh.

Critchlow, N. (2016, March 16). *Digital alcohol marketing, user-created alcohol promotion and consumption in young people: The role of drinking motives and outcome expectancies*. Poster presented at Alcohol Research UK Annual Conference, Birmingham.

Critchlow, N. (2016, March 23). *Awareness of, and participation with, digital alcohol marketing, and the association with frequency of high episodic drinking among young adults*. Paper presented at the School of Health Sciences Postgraduate Conference, University of Stirling.

Critchlow, N. (2016, April 18). *Digital alcohol marketing, user-created alcohol promotion and consumption in young people: The role of drinking motives and outcome expectancies*. Paper presented at the Scottish Health Action on Alcohol Problems Postgraduate Symposium, Edinburgh.

Hastings, G., & Critchlow, N. (2016, September 2). *Alcohol marketing and young people's drinking*. Paper presented at the IOGT and WHO Workshop: From evidence to advocacy, child rights based tools for protecting kids from alcohol marketing, Bratislava.

Teaching and public engagement

Bowes, A., Burns, D., Roberts, J., Critchlow, N., & Ball, L. (2016, February 18). *Drug and alcohol strategy*. Public talk presented at The Gathering, Scottish Exhibition and Conference Centre.

Critchlow, N. (2015, March 20). *Alcohol marketing and young people*. Public talk presented at UKCTAS Public Involvement Group, University of Stirling.

Critchlow, N. (2015, August 5). *Health and wellbeing in the digital society*. Public talk presented at Salvation Army Youth Summer School, Dunblane High School.

Hastings, G., & Critchlow, N. (2016, February 3) and (2017, February 8). *Alcohol marketing: Strategies and policies*. Lecture presented at UKCTAS Alcohol Problems, Policy and Practice MSc module, King's College London.

Hastings, G., & Critchlow, N. (2016, September 7). *Young people, alcohol, and marketing*. Lecture presented at UKCTAS Continued Professional Development Course, University of Stirling.

Part One: Introduction and literature reviews

Chapter 1: General introduction

1.1. Introduction

There are two ways that digital and new media may influence alcohol-related knowledge, attitudes, and behaviour in young adults. The first is commercial digital marketing, using a combination of paid media (e.g. display advertisements), owned media (e.g. branded websites), and earned media (e.g. fan photos). The second is user-created promotion, defined in this thesis as the content distributed through new media that intends to promote alcohol use, but independent of commercial marketing (e.g. photos posted by friends on social media). Despite early research into both forms of content, there remain shared gaps in understanding of digital marketing and user-created promotion. These gaps include a need to consider a broader range of digital media, explore the effect that exposure has on young adults in the United Kingdom (UK), provide greater understanding about which psychological processes help to explain the effect on alcohol use, and to compare digital marketing and user-created promotion.

This thesis presents a mixed method investigation which helps to respond to these gaps in understanding. It is divided into two studies. The first is a content analysis which explores the design features, topical associations, and messages suggested about alcohol use in both digital marketing and user-created promotion on Facebook, Twitter, and YouTube. The second study is an online cross-sectional survey with 18-25 year olds in the UK. It investigates awareness of, and participation with, digital marketing and user-created promotion, and explores what association (if any) this has with alcohol-related knowledge, attitudes, and behaviour. The remainder of this chapter outlines the need to investigate alcohol and internet use by young adults, why alcohol marketing and user-created promotion are topics of interest, the study aim, and the outline of the thesis.

1.2. Context of study: Alcohol use by young adults

1.2.1. Alcohol in the United Kingdom

In the UK, alcohol consumption is a popular cultural activity with a complex history characterised by debates about social order, health determination, economic responsibility, and political control (Greenaway, 2003; Nicholls, 2011a; Thurnell-Read, 2016). In contemporary UK society, alcohol mostly represents a ‘*social lubricant*’ (Monahan and Lanutti, 2000; pg. 198) and accordingly features prominently in subcultures such as watching football (Alcohol Concern, 2014), the Lesbian Gay Bisexual and Transgender community (Emslie, Lennox and Ireland, 2015), stag and hen parties (Thurnell-Read, 2011), university students (Gill, 2002; Penny and Armstrong-Hallam, 2010), and the entertainment industry (Lennox and Forsyth, 2015). Alcohol consumption is also a common feature of relaxing and socialising at home (Ally, Lovatt, Meier, Brennan and Holmes, 2016) and in the night-time economy (Hadfield, 2009; Moore, Shepherd, Perham and Cusens, 2007; Wickham, 2012). It is also frequently portrayed in the media, including in television, films, and magazines (Atkinson, Elliott, Bellis and Sumnall, 2011).

The prominent position of alcohol in UK culture is further underpinned by tolerant attitudes towards social drinking and frequent consumption by the general population. For example, 58% of adults report drinking in the week previous, 85% of males and 79% of females report consuming alcohol at least occasionally, and over a third of parents allow children under 14 years old to drink alcohol at home or use it to encourage good behaviour (Cacciottolo, 2016; Fuller and Simpson, 2016; Health and Social Care Information Centre, 2016). Social surveys, however, are typically found to produce conservative assessments which underestimate consumption, due to either conscious

under-reporting (e.g. response bias) or unconscious errors in recall (e.g. underestimating serving portions at home) (Bellis et al., 2015; Boniface, Kneal and Shelton, 2013; 2014; Institute for Alcohol Studies, 2013; Office for National Statistics, 2016a). Nevertheless, that more reliable sales data shows that the UK alcohol industry is worth £39 billion in sales each year further implies that alcohol is regularly consumed in the UK (Wine Spirit Trade Association, 2015). In addition to attitudes of the general population, the UK Conservative Government, who have held Westminster control since 2010, also state that moderate alcohol consumption has positive benefits for wellbeing (HM Government, 2012). In addition, the Government has also stated that well-run licensed venues, of which there are over 200,000 in England and Wales (Home Office, 2016), represent a key part of communities and a successful economy (HM Government, 2012).

In the UK, the main exception to such tolerant attitudes towards alcohol is higher-risk or excessive consumption, more commonly referred to as binge drinking. For example, the UK Government describe such behaviour as ‘*generating mayhem on our streets and spreading fear in our communities*’ (HM Government, 2012, pg. 2). Furthermore, almost three-quarters of the UK adult population (72%) suggest that they only consume within the recommended ‘safe’ limits, while nearly half (48%) suggest that they never drink to get drunk (Ipsos MORI, 2015). Disapproval towards higher-risk consumption, however, is juxtaposed against suggestions that most of the UK population are poor at naming the health problems associated with drinking above the recommended guidelines (except liver disease), while others are uncertain about the unit content of alcoholic drinks or whether moderate drinking has purported health benefits (e.g. reducing heart disease) (Buykx et al., 2015; Fuller and Simpson, 2016; Ipsos MORI, 2015).

The scope of higher-risk consumption, and the factors which drive such behaviour, remain a subject of debate. On one hand, the alcohol industry and related groups (e.g. retailers) maintain that excessive consumption is a minority issue, restricted to problematic drinkers, and that the majority of the population drink responsibly (Portman Group, 2016a; 2016b). On the other hand, advocates for stronger alcohol policies suggest that higher-risk consumption is a population-level and cultural issue in the UK, driven by a variety of factors, and that alcohol is no ordinary commodity and should therefore be controlled carefully (Alcohol Health Alliance, 2013; Babor et al., 2010; WHO, 2011).

1.2.2. Alcohol use by young adults

Young adults are a focal population for alcohol research because late adolescent consumption is associated with an increased risk of problem drinking and concomitant harm in later adulthood (McCambridge, McAlaney and Rowe, 2011). This age group was of particular interest between 1980 and the turn of the century, where frequency and quantity of consumption by 16–24 year olds reached some of their highest recorded levels (Smith and Foxcroft, 2009a). Although consumption in this age group has steadily declined since 2005, and the proportion that are teetotal has increased from 19% to 27% (ONS, 2016a), the ways that alcohol is consumed by young adults who do drink still is a cause for concern. Specifically, although young adults drink less frequently than the rest of the adult population, they are still more likely to consume over the recommended weekly limit (14 units) in a single drinking session (ONS, 2016a). Furthermore, the proportion of young adults who have both consumed alcohol in the last week and exceeded the thresholds of binge drinking on their heaviest drinking day (eight units for males, six units for females) is greater than across other adult age groups (40% compared to 24%) (ONS, 2016a).

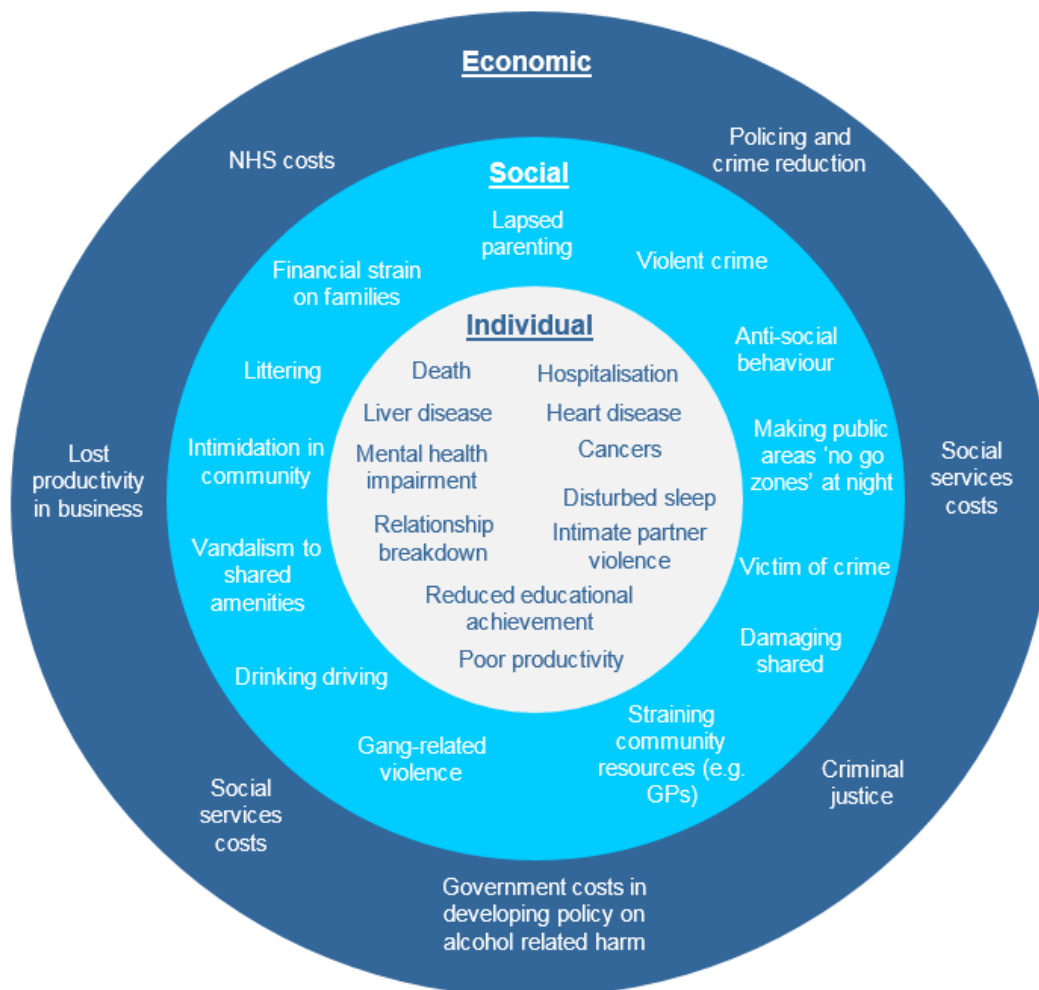
The general downward trend of consumption by young adults in the UK would suggest that higher-risk alcohol use in this age group has improved. Global estimates of consumption, however, indicate that both Europe and the UK still have higher rates of drinking than many other territories. For example, the World Health Organization (WHO) report that young adults in the European region (aged 15-19 years old) have a higher proportion of current drinkers (69.5%), and lower proportion of lifetime abstainers (15.9%), compared to the other five global regions (WHO, 2014). Furthermore, the prevalence of heavy episodic drinking among 15-19 year olds in the European region is also almost double that of the rest of the adult population in Europe (31.2% and 16.5%, respectively) (WHO, 2014). Finally, the proportion of 15-19 year olds in the UK who report heavy episodic drinking (40.5%) is higher than 46 of the other 52 European countries profiled, placing the UK in the top 15% for binge drinking.

1.2.3. Alcohol-related harms and outcomes

The harms which can be caused by alcohol consumption, particularly higher-risk drinking, permeate all levels of society (Figure 1.1). At an individual level, alcohol is identified as a component cause for more than 200 health conditions, including liver cirrhosis (Leon and McCambridge, 2006; Rehm and Sheild, 2013), cancers (WHO, 2014), neuropsychiatric conditions (Stavro, Pelletier and Potvin, 2013), gastrointestinal problems (Rocco, Compare, Angrisani, Sanduzzi-Zamparelli and Nardone, 2014), cardiovascular disease (WHO, 2014), sexually transmitted illnesses (Royal College of Physicians, 2011), fetal or birth complications (Schölin, 2016), and injury (MacDonald et al., 2013). Higher-risk consumption is also associated with increased mortality, with 6,831 deaths in the UK either wholly or partly attributable to alcohol in 2014, a rise of 4% compared to the year previous (HSCIC, 2016). Alcohol use is also associated with

negative lifestyle outcomes, including disruptive sleep (Chan, Trinder, Andrewes, Colrain and Nicholas, 2012), poor academic achievement (El Ansari, Stock, and Mills 2013), poor diet (Breslow, Guenther, Juan and Grubard, 2010), vulnerability to crime (Monk and Jones, 2014), breakdown of relationships (Boden, Fergusson and Horwood, 2013), and social isolation (Bonner, Luscombe, van den Bree and Taylor, 2008).

Figure 1.1. Examples of alcohol-related harm in the United Kingdom



Higher-risk alcohol consumption can also produce social consequences that negatively affect others and their communities (Figure 1.1). Criminal outcomes include violent crime (ONS, 2015), drink-driving (Department for Transport, 2016), sexual assaults (IAS, 2014), and public disorder offences (Gell, Ally, Buykx Hope and Meier, 2015).

Importantly, not all social consequences result in a reported criminal offence. Other negative consequences that can affect community or family cohesion include feared safety, creation of ‘no go zones’, financial strain on families, damage to shared amenities or personal property, excessive noise, unwanted sexual attention, stress from colleague absenteeism, antisocial behaviour, littering, lapsed parenting, and a strain on local services (Campbell, Craig, Malcolm and Murray, 2007; Gell et al., 2015; Laslett et al., 2015; WHO, 2014).

Higher-risk and excessive consumption also places a sizeable burden on the economy. In Scotland, the accumulated social and economic costs of alcohol-related harm are estimated to be £3.6 billion per year (Alcohol Focus Scotland, 2016), a figure that rises to between £21-52 billion in England (IAS, 2017; Public Health England, 2014), €125 billion in the European Union (Anderson and Baumberg, 2006a), and \$233.5 billion in the US (Bouchery, Harwood, Sacks, Simon and Brewer, 2011). These include costs for healthcare, hospitalisation and social work, costs to the criminal justice system and emergency services, and the economic impact of absenteeism, reduced output, and unemployment (AFS, 2016; IAS, 2016a; WHO, 2014). Importantly, most of these estimates are based on dated information and therefore are likely to underestimate the total economic cost that higher-risk and excessive alcohol consumption can produce.

1.3. Context of study: Internet use by young adults

The last 30 years have been characterised by a digital revolution, driven by advances in technology (e.g. smartphones and tablets) and increased accessibility to online spaces (e.g. 4G mobile internet and availability of Wi-Fi) (Halfpenny and Procter, 2015). It is now estimated that there are more than three billion internet users globally, which is

nearly half of the world's population (Internet Society, 2015). In the UK, internet use is negatively correlated with age, thus making younger people a focal population for research which explores what influence new media has on behaviour (Oxford Internet Institute, 2016). Specifically, almost all 16-24 year olds in the UK have used the internet in the last three months (99%) and the average amount of time they spend online per week is greater than the average across the rest of the adult population (31.2 vs. 21.6 hours) (Office for Communications, 2016; ONS, 2016b). Young adults are also more likely than older users to access the internet through a greater range of devices and report uptake of new technology such as games consoles and smart-watches (OFCOM, 2016). Because of greater device uptake, such as smartphones and handheld tablets, the proportion of young adults who access the internet 'on the go' (97%) is also greater than the rest of the adult population (75%) (ONS, 2016c).

Young people also report greater use and uptake of a range of websites and have a greater likelihood than older users to undertake many online activities on a weekly basis. These include communicating (e.g. instant messaging), general browsing, use of social media, entertainment (e.g. gaming or listening to music), searching for information, content creation (e.g. sharing photos or videos), and shopping for goods or services (OFCOM, 2015a; 2016; ONS, 2016c). Widespread internet use by young adults is also underpinned by positive attitudes in this age group. This includes beliefs that technology has made many aspects of living easier, made information easier to find, enabled better connectedness, and helped to save time (Dutton, Blank and Groselj, 2013). Such is the importance that the internet has on everyday lives, a third of respondents in a recent survey intimated that they would save their mobile phone from a house fire, compared to only 16% who would save jewellery or valuables (Association of British Insurers, 2016).

1.4. Context of study: The influence of digital media on alcohol consumption

Decades of research using theories of observational learning and planned behaviour have established links between the content that young people see in the media and their knowledge, attitudes, and behaviour (Bryant and Oliver, 2009; Wimmer and Dominick, 2010). Although research has shown that media narratives can be used to promote safe health practices (e.g. Atkinson, Sumnall and Measham, 2010), it has also been suggested that engagement with digital media can be associated with, or indicative of, health risk behaviours (Escobar-Chaves and Anderson, 2008; Moreno, Parks, and Richardson, 2007). Examples include drug use (Norman, Grace, and Lloyd, 2014), smoking (van Hoof, Bekkers and van Vuuren, 2014), sexually risky behaviour (Kletteke, Hallford and Mellor, 2014), violence (APA Taskforce on Violent Media, 2015; Zonfrillo, Arbogast and Fien, 2014), and self-harm (Avery, Rae, Summit, and Kahn, 2016). One relationship which has received particular attention is the role that digital media may play in influencing alcohol-related knowledge, attitudes, and behaviour in young adults (Gupta, Pettigrew, Lam, and Tait, 2016). Research of this nature can be divided into two categories: (1) studies exploring commercial digital marketing (Lobstein, Landon, Thornton, and Jernigan, 2017), and (2) studies exploring the content created by internet users (Moreno, D'Angelo and Whitehill, 2016). A brief overview of the importance and the need for further investigation into digital marketing (1.4.1) and user-created promotion (1.4.2) is now discussed. Detailed literature reviews are provided in Chapter Two and Chapter Three.

1.4.1. Digital alcohol marketing

The association between commercial marketing and young people's consumption has been a topic of debate for over four decades. Reviews of research into traditional media

favour the conclusion that exposure to marketing communications does influence alcohol use in young people (Anderson, de Bruijn, Angus, Gordon, and Hastings, 2009; Gordon, Hastings and Moodie, 2010a; Jernigan, Noel, Landon, Thornton and Lobstein, 2017; Scott, Muirhead, Shucksmith, Tyrrell and Kaner, 2016; Smith and Foxcroft, 2009b; Stautz, Brown, King, Shemilt and Marteau, 2016). The alcohol and marketing industry, however, have embraced the opportunities provided by digital media to offer new ways to reach, influence, and maintain two-way interactions with consumers (AFS, 2017; Brooks, 2010; Chester, Montgomery and Dorfman, 2010; Dobson, 2012). This is achieved through a combination of paid media (e.g. display adverts), owned media (e.g. branded websites and social media pages), and the ability to co-create content with internet users (e.g. fan photos). That marketing through new media can be targeted at specific audiences, virally spread, accessed in almost any context, and can be used to actively recruit users into the marketing process, has led some to claim that digital marketing may be more powerful and less controllable than traditional marketing (AFS, 2017; Bonner and Gilmore, 2012; Chester et al., 2010; Dunlop, Freeman and Jones, 2016; Hastings and Sheron, 2013;). As such, marketing through convergent forms of digital media remains an important area for on-going investigation (Mart, 2011).

Concerns about the new challenges of digital alcohol marketing are further supplemented by debates about the merits and efficacy of current marketing control policies. Criticisms of industry led self-regulatory approaches, as employed in the UK, include regulations having inadequate restrictions, not being adequately enforced, being retrospective and slow to react to compliants, lacking meaningful sanctions for non-compliance, and being out of touch with public opinion or the design of new media (AFS, 2017; Noel and Babor, 2016; Noel, Babor and Robaina, 2016). Criticisms of statutory regulations include limited

application to new marketing channels, particularly unregulated digital media, and not being adequately enforced (Farrell and Lecat, 2014; Landon, Graff and Westerman, 2016; Purves, Critchlow, Stead, Adams and Brown, 2017). Consequently, there remains an agenda to explore ways to refine the design, efficacy, and effectiveness of alcohol marketing control policies.

1.4.2. User-created alcohol promotion

Compared to traditional media (e.g. television and print), advances in new media technology and website design have created many opportunities for internet users to participate in the creation of media content, predominantly through social networking and media sharing websites designed for this purpose. Research suggests that the content created by internet users, independent of any commercial marketing input, may also be associated with higher-risk drinking in young people (Moreno et al., 2016a; Ridout, 2016 Westgate and Holliday, 2016). NekNominate provides a high-profile example of this association. This was an online viral drinking game in which an individual posted a video of themselves consuming an alcoholic drink to social media, often doing so in a challenging or daring manner. They then nominated a peer, by tagging them on social media (e.g. copying them into the content so that they would receive a notification), to continue the practice within the next 24 hours (Wombacher, Reno and Veil, 2016; Zonfrillo and Osterhoudt, 2014). This viral game generated considerable media interest, and was cited as being responsible for several deaths in the UK and the Republic of Ireland (Cullen, Ellis, Kennedy, and O'Connor, 2014; Knapton, 2014; Wilkinson and Soares, 2014). This type of user-created promotion is important as, distinct from commercial marketing, it is not bound to adhere to regulations for responsible promotion (e.g. Committee of Advertising Practitioners, 2015), and because young people consider

such peer messages to be an influential and accurate reflection of offline behaviour (Atkinson, Ross-Houle, Begley and Sumnall, 2014; 2016; Moreno, Briner, Williams, Walker and Christakis, 2009). Given the relatively recent emergence of such content, and continued changes in how young people use the internet, user-created promotion therefore also remains an important area for investigation (Westgate and Holliday, 2016).

1.5. Research aim and questions

Despite emerging research into both digital alcohol marketing and user-created promotion, there remain gaps in understanding for both types of content. These gaps include a narrow focus on marketing and user-created promotion on social media (particularly Facebook), a lack of research exploring the effect that such content has on young adults in the UK, and limited understanding of the psychological processes which may help to explain the relationship between exposure and consumption. There is also no research that has directly compared digital marketing and user-created promotion, the relationship between the two, or the combined association they have with alcohol-related knowledge, attitudes, and behaviour. To help respond to these gaps in knowledge, the main aim of this thesis is to explore how alcohol is promoted online through digital alcohol marketing and user-created promotion, and what association (if any) exposure has with the alcohol-related knowledge (e.g. brand name recall), attitudes, and behaviour of young adults. This overall aim is divided into seven specific research questions (RQ):

RQ1: How is alcohol marketed online by the alcohol industry and what messages does such marketing suggest about consumption? (Chapter 5 – Content analysis).

RQ2: How is alcohol use encouraged by user-created promotion and what messages does such content suggest about consumption? (Chapter 5 – Content analysis).

RQ3: What are the similarities and differences between digital marketing and user-created promotion and the messages suggested about consumption? (Chapter 5 – Content analysis).

RQ4: What is the extent of young adult's awareness of, and participation with, digital marketing and user-created promotion? (Chapter 6 – Cross-sectional survey).

RQ5: What association (if any) does awareness of, and participation with, digital marketing and user-created promotion have with alcohol consumption and alcohol brand name recall? (Chapter 6 – Cross-sectional survey).

RQ6: What association (if any) does awareness of, and participation with, digital marketing and user-created promotion have with drinking motives and outcome expectancies, and how do these social cognitions contribute to understanding of the relationship between exposure and consumption? (Chapter 7 – Cross-sectional survey).

RQ7: What are the similarities and differences in young adult's awareness of, and participation with, digital marketing and user-created promotion, and the subsequent association with alcohol consumption, alcohol brand name recall, drinking motives, and outcome expectancies? (Chapters 6 and 7 – Cross-sectional survey).

1.6. Structure of the thesis

Beyond this general introduction, the thesis is divided into four sections: (1) Introduction and literature reviews, (2) Methods, (3) Findings, and (4) Discussion and conclusions.

The first section continues with Chapter Two, a literature review of digital marketing and the association with alcohol consumption in young people. This chapter reviews the importance and role of marketing communications for the alcohol industry, lessons learnt from research into traditional marketing, and the recent growth of digital marketing. It then considers findings from two research paradigms: (1) content research, which focuses on the marketing output as the unit of analysis, and (2) consumer research, which views the individual as the unit of analysis and evaluates the behavioural changes that occur following exposure. It concludes by identifying areas for future exploration which set the research agenda for this thesis.

The first section ends with Chapter Three, a literature review of user-created promotion and the association with alcohol consumption in young people. This chapter outlines the characteristics of user-created content and adapts them to create a definition of user-created alcohol promotion for use in this thesis. It then considers findings from two research paradigms: (1) content research, which considers the user-created promotion as the unit of analysis, and (2) audience research, which views the individual as the unit of analysis and evaluates the behavioural changes that occur following exposure. Next the chapter describes the relationship between digital marketing and user-created promotion, and uses the findings of existing research to outline the similarities and differences between the two. It concludes by identifying gaps in the current evidence base, which set the research agenda for this thesis.

The second section is presented in Chapter Four, which outlines the research methods used. This chapter begins by outlining the research aims, questions, and hypotheses, before then describing the research framework (critical social marketing) and the overall study design. Next it provides an overview of the content analysis (study one), including details of the sampling strategy, development and design of the coding protocol, and ethical considerations. The final part provides an overview of the cross-sectional survey (study two), including details of study design, sampling strategy, justification of measures, ethical considerations, and pre-analysis data treatment.

The third section (research findings) begins with Chapter Five, which presents the results of the content analysis into digital marketing and user-created promotion on Facebook, Twitter, and YouTube. The chapter explores audience size and participation, design features, topical references, ethical practice, and what messages are suggested about alcohol use. It concludes by discussing how the findings relate to previous content research into digital marketing and user-created promotion, how the results help to inform understanding of the relationship between marketing and user-created promotion, and limitations of the study.

The third section continues with Chapter Six, the first set of findings from the cross-sectional survey. The results begin by presenting the sample characteristics and internet use behaviour. The chapter then considers awareness of, and participation with, digital marketing and user-created promotion, and the differences between the two. The results then explore what association (if any) awareness and participation has with alcohol use, higher-risk consumption, future drinking intentions, and recall of alcohol brand names.

The chapter concludes by discussing how the findings relate to previous research, how they enhance understanding of the relationship between marketing and user-created promotion, and limitations of the study.

The third section ends with Chapter Seven, the remaining findings from the cross-sectional survey. This chapter first outlines why expectancies and drinking motives may represent important mediating factors in the association between exposure and alcohol use. The results present eight mediation models which review the interactions between exposure to digital marketing and user-created promotion, drinking motives, outcome expectancies, and alcohol use. The chapter concludes with a discussion of how the findings relate to previous research, how they enhance understanding of the relationship between marketing and user-created promotion, and limitations of the method.

The fourth section is presented in Chapter Eight, which provides a general discussion of the research findings. The chapter begins by reviewing how the findings relate to the research questions and hypotheses, and how they enhance understanding of digital marketing, user-created promotion, the relationship between the two, and the use of critical social marketing as a framework. The chapter then discusses the implications for stakeholders and evaluates the regulatory options and challenges associated with responding to alcohol-related content through digital media. The chapter then discusses the challenges and limitations of the study, the agenda for future research, and reflections on the research process. It concludes by summarising the main findings of the thesis.

Chapter 2: Digital marketing communications and young people's drinking

2.1. Introduction

Reviews of research into traditional alcohol marketing communications suggest there is an association between exposure and alcohol consumption in young people (Anderson et al., 2009; Gordon, et al., 2010a; Jernigan et al., 2017; Koordeman, Anschutz and Engels, 2012; Smith and Foxcroft, 2009b; Stautz et al., 2016). The alcohol industry, however, have embraced the opportunities provided by digital media to find new ways to promote their products and reach consumers (AFS, 2017; Chester et al., 2010; Dobson, 2012). In response to these developments, this chapter presents a narrative review of research into digital alcohol marketing communications and the association with knowledge, attitudes, and behaviour in young people. It begins by defining the importance of marketing communications to the alcohol industry (2.2) and the conclusions drawn from research into traditional media (2.3). The chapter then defines and describes digital alcohol marketing communications (2.4) and reviews evidence from the two research paradigms which have explored the association that it has with consumption: content analyses (2.5) and consumer research (2.6). The chapter concludes with a review of the agenda for continued research, thus setting the context for this thesis (2.7).

2.2. The alcohol industry and marketing communications

Marketing is fundamentally important to the fast-moving consumer goods industry (e.g. alcohol, tobacco, fast-food, and soft-drink beverage producers). It represents the primary method of communicating with new and existing consumers, can directly encourage sales, and can raise the profile of a brand over competitors (Armstrong and Kotler, 2005; Jobber, 2004). Marketing refers to all the techniques that are required to effectively manage the needs and wants of a consumer to ensure that a profitable relationship is

maintained (Armstrong and Kotler, 2005). These include mass-media communications (e.g. television), other forms of marketing communications (e.g. sponsorship), consumer marketing (e.g. price), and stakeholder management (e.g. corporate social responsibility). When combined, these strategies are commonly referred to as the marketing mix (Borden, 1984; Kotler and Keller, 2016) or multiple layered marketing (British Medical Association, 2009) (Figure 2.1). This review is primarily focused on marketing communications through digital media. The systematic review by Scott and colleagues (2016) is recommended for a broader analysis that includes other marketing strategies such as product, place, price, and promotion.

Figure 2.1. The multiple layers of alcohol marketing (BMA, 2009)



Newer design of figure from AFS (2017)

The alcohol industry has used highly visible marketing communications for over 100 years (Dade, 2008; Gunter et al., 2010; Wilson, Munro, Hedwards and Cameron, 2012). Reviews of current practice suggest that the contemporary landscape is characterised by

a complex and interacting network of marketing communication channels which are used to create positive attitudes to brands and instil ideas that consumption is fun and sociable (AFS, 2017; Centre for Social and Health Outcomes Research and Evaluation, 2006; de Bruijn, 2011; de Bruijn, Wildenberg and Broeck, 2012; Dobson, 2012; Federal Trade Commission, 2014; Gordon, 2011a) (Figure 2.2). The importance of marketing to the alcohol industry is reflected in the amount that they invest each year and the growth in expenditure over time. Over the last five years, Diageo have increased their global marketing spend by 15%, from £1.42 billion in 2010 to £1.63 billion in 2015 (Diageo 2010; 2016a). Continued consolidation over the last two decades, particularly for beer and spirit brands, has also seen the alcohol industry become dominated by a small number of large transnational producers. These economies of scale create the opportunity for even bigger marketing budgets and more intense competition (AFS, 2017; Babor et al., 2010; Collins, Hill and Smith, 2015; Hanefeld, Hawkins, Knai, Hofman and Petticrew, 2016; IAS, 2016b; Jernigan, 2009).

2.3. Traditional alcohol marketing and consumption in young people

Research which has explored whether traditional marketing influences consumption, particularly in young people, is often grouped into three categories: (1) econometric studies, (2) consumer research, and (3) content research. Econometric studies use industry data to evaluate the association between volume of marketing (e.g. expenditure) and consumption (e.g. sales data) and mostly find, at best, only a minor relationship between advertising and alcohol use (Gordon et al., 2010a; Hastings, Anderson, Cooke and Gordon, 2005; Meier et al., 2008; Nelson, 2010; 2012; Saffer, Dave and Grossman, 2015). The alcohol industry therefore use selected econometric findings to support their position that marketing does not increase demand for alcohol but instead only facilitates

Figure 2.2. Examples of traditional alcohol marketing



Sport sponsorship



Mobile/SMS



Price offers



Merchandise



Posters and billboards



Event sponsorship



Free samples



Competitions



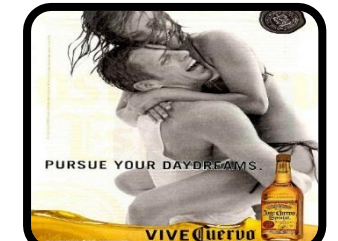
In-store posters



TV



Endorsement



Print media



Cinema



Product placement



Product design



Guerrilla



Packaging



Point of sale

brand switching (Fogarty and Chapman, 2012; International Center for Alcohol Policies, 2009; Martino, Miller, Coomber, Hancock and Kypri, 2016; Spirits Europe, 2012; Wilcox, Kang and Chilek, 2015). Econometric methods, however, are beset with limitations, including (1) the lack of accurate expenditure data; (2) the failure to account for marketing creativity; (3) the failure to consider marketing appeal to different demographic groups; (4) the failure to control for cumulative exposure to the overall marketing mix; (5) not analysing longitudinal effects of marketing; (6) failure to account for the differences between marketing awareness and participation; (7) being inflexible when analysing channels with limited costs (e.g. digital media); (8) failure to consider groups with no sales data (e.g. young people); and (9) assuming exposure to equal audience attention (Anderson and Baumberg, 2006b; Gordon et al., 2010a; Hastings et al., 2005; Kenny, 2014).

The second category, consumer research, provides an alternative to industry data by considering the individual as the unit of analysis and measuring how exposure to marketing influences knowledge, attitudes, and behaviour (Gordon et al., 2010a; Hastings et al., 2005). Reviews of consumer research consistently suggest that exposure to traditional alcohol marketing communications is associated with consumption in young people (BMA, 2009; de Bruijn, Johansen, van den Broeck, 2010; Gordon et al., 2010a; Hastings et al., 2005; Koordeman et al., 2012; Stautz et al., 2016). Consumer research further suggests that alcohol marketing also influences social cognitions which predispose consumption. This expands on media effect theories, such as the message interpretation process model (Austin and Knaus, 2000; Austin, Pinkleton and Fujioka, 2000) and social learning theory (Bandura, 1982), by demonstrating which psychological processes underpin the link between marketing and consumption. Examples identified in

research include automatic processes (Goodall and Slater, 2010), expectancies and attitudes (Fleming, Thorson and Atkin, 2004; Lipsitz, Brake, Vincent and Winters, 1993; Kulick and Rosenberg, 2001), identity and brand allegiance (McClure, Stoolmiller, Tanski, Engels and Sargent, 2013; McCreanor, Greenaway, Moewaka-Barnes, Borell and Gregory, 2005), desirability (Austin, Chen and Grube, 2006; Scull, Kupersmidt and Erausquin, 2014), drinking beliefs (Grube and Waiters, 2005; Pinkleton, Austin and Fujioka, 2001), and social norms (Kenny, 2014).

Systematic reviews of longitudinal consumer research provide further evidence that exposure to traditional marketing communications has a causal influence on consumption. This includes drinking onset and progression, drinking amongst peers, and a dose-response relationship between exposure and frequency of use (Anderson et al., 2009; Jernigan et al., 2017; Smith and Foxcroft, 2009b). Recent longitudinal research further suggests that it is cumulative exposure to the overall marketing mix which produces the strongest influence on behaviour (de Bruijn et al., 2016a; Gordon, MacKintosh and Moodie, 2010b; Harris, Gordon, MacKintosh and Hastings, 2015). There are criticisms of longitudinal evidence including inconsistent reporting of an effect on drinking behaviour, publication bias, omitted variable bias and dissemination bias (Nelson, 2011). These limitations, however, are already acknowledged in both the original research and systematic reviews and have only latterly been highlighted by an author who has received alcohol industry funding (Nelson, 2016).

Consumer studies are supported by the third research category, content research. Although omitted from most reviews into traditional marketing (e.g. Gordon et al., 2010a; Hastings et al., 2005), content research provides important insight into marketing

intentions and how alcohol consumption is framed. An analysis of internal alcohol and advertising industry documents, for example, found that marketers identified young people as a key target audience, particularly those around the legal age of consumption (Hastings et al., 2010). The report also suggested that regulations failed to protect young people, did not recognise that sponsorship built powerful emotional connections, and did not prevent marketers associating consumption with sociability, sexual success, or gender (Hastings et al., 2010). Research into the actual marketing output further supports that promotion may appeal to young people through marketing placement, choice of actors or themes, and that narratives mostly associate consumption with positivity, sociability, desirable lifestyles, or sexuality (Cranwell et al., 2015; Cranwell, Whittamore, Britton and Leonardi-Bee, 2016; Garfield, Chung and Rathouz, 2003; Gee, Jackson and Sam, 2013; Graham and Adams, 2014; Kelly, Ireland, Alpert, Mangan, 2015; King et al., 2009; Rhoades and Jernigan, 2013; Thompson et al., 2005). Content research also suggests that while messages of responsible drinking are not absent in alcohol marketing, most appear secondary to the goal of promoting consumption (Smith, Atkin and Rozonowski, 2006).

In response to the link between traditional marketing communications and alcohol consumption, most countries employ regulations to ensure responsible marketing activity and reduce marketing exposure in young people (WHO, 2014). In the UK, for example, marketing is controlled by self- and co-regulatory codes which are overseen by the alcohol industry and independent advertising groups (CAP, 2015; Portman Group, 2015). Other countries employ tighter statutory laws (WHO, 2014). France's Loi Évin, for example, restricts advertising to print media with an adult readership, prohibits television advertising and sponsorship, and mandates that advertising must be based only on factual product information and contain a health warning (Landon et al., 2016). The French Loi

Évin is often cited as an exemplar for regulation, as the default position is to explicitly state what alcohol marketing is allowed and to consider any unmentioned forms to be prohibited (Alcohol Health Alliance, 2013). Conversely, the non-statutory approach employed in the UK, in which the default position is to only state what marketing is not allowed, is criticised for providing inadequate restrictions and being ineffective (AFS, 2017; Noel and Babor, 2016). Recent research, however, has also raised questions about whether statutory regulations, such as the Loi Évin, are being enforced properly or whether they are effective in reducing marketing (Gallopel-Morvan et al., 2016; Hellman, Lindeman and Svensson, 2017; Purves et al., 2017). Consequently, there remains an agenda to explore new ways to refine the design of marketing control policies, and increase their efficacy and effectiveness.

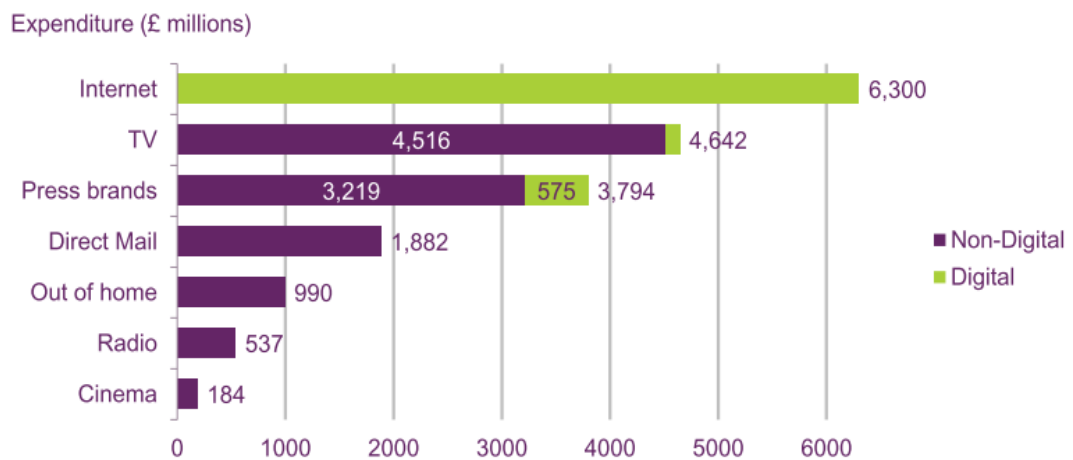
2.4. Digital alcohol marketing

Despite existing research, further investigation is required given the ability of the alcohol industry to innovate marketing beyond traditional media (Casswell, 2011; EuroCare, 2014; Gordon et al., 2010a; Gordon, 2011b; Jernigan, 2009; Mart, 2011; Meier, 2011). Since the turn of the century, rising internet use and developments in technology have fuelled interest in how marketing goals can be fulfilled using digital media (Chaffey and Ellis-Chadwick, 2012). Between 2008-2014, digital advertising spend in the UK increased from £3.6 billion to £7.2 billion, a figure which represented 39% of all recorded expenditure on media advertising (OFCOM, 2015b). In comparison to other media channels, digital advertising is not only the fastest growing but also receives the most expenditure. In 2013, for example, the amount spent on digital advertising, including digitally-based TV and press brands, was £2.49 billion more than the amount spent on television advertising. It was also £189 million more than was spent on press brands,

direct mail, out of home, radio, and cinema advertising combined in the same period (OFCOM, 2014) (Figure 2.3).

The advertising revenue received by websites also suggests that developing innovative marketing platforms is a highly profitable activity. For example, the global advertising revenue received by Facebook in 2015 was \$17.08 billion. This was an increase of nearly 49% on the previous year and represented over 95% of Facebook’s total income (Facebook, 2016). Advertising revenue for Twitter similarly increased by 36% to \$1.99 billion, representing 87% of revenue in 2015 (Twitter, 2016). Alphabet, the parent company of Google and YouTube, reported advertising revenue of \$67.39 billion in 2015 (Alphabet, 2016). Again, this represented an increase of 10% on 2014, and constituted nearly 90% of all revenue. Such profit is not just restricted to social media websites, as music streaming service Spotify has reported advertising revenue upwards of £68 million since 2013 (Music Business Worldwide, 2014), while even social interest websites, like ‘The Lad Bible’, report advertising revenues exceeding £1 million (Smith, 2015).

Figure 2.3. Advertising expenditure in the UK in 2013, by media channel (OFCOM, 2014).



Advertising expenditure, however, is likely to underestimate the volume of digital marketing for various reasons. First, a social media page can be created for little or no expenditure (Facebook, 2017a; Twitter, 2017a; YouTube, 2017a). Second, the lower cost compared to traditional media means that a greater volume of digital marketing can be created for equal, or even less, expenditure. For instance, an early-peak broadcasting slot (17:30-18:30) on a UK terrestrial television channel ranges from £7,000-£60,000 (Television Campaign, 2016), while a full-page colour advert in a national daily newspaper may cost over £36,000 (Metro, 2017). In comparison, a daily spend of just \$100 returns a projected 2,000 views to a targeted audience on YouTube (2017b). Similarly, Facebook and Twitter indicate that adverts can cost as little as \$1 a day, although the auction-style approach means that higher budgets will be more successful (Facebook, 2017b; 2017c; Twitter, 2017b). Furthermore, as the charges only apply when audience interaction occurs (e.g. the video is watched), digital marketing is also relatively low-risk (Facebook, 2017c; Twitter, 2017b). Finally, advertising expenditure also fails to account for user-generated branding (interchangeably referred to as co-created marketing). This is defined as the '*voluntary creation and public distribution of personal brand meaning undertaken by non-marketers outside the branding routines enabled by multimedia technology*' (Arnhold, 2010; pg. 33). Such content includes fan pages, reviews of products, and upcycled content (e.g. consumer photographs).

The alcohol industry has embraced the opportunities provided by digital media to find new ways to reach and influence new consumers. This is highlighted by the redistribution of marketing expenditure (Johnson, 2015a; Mullman, 2009; Schultz, 2015a), anecdotal industry evidence (Baker, 2013; Barnett, 2012; MacLeod, 2013a), and narrative reviews of digital marketing practice (AFS, 2017; Brooks, 2010; Chester et al, 2010; Dobson,

2012). The alcohol industry also appears to be reaping the rewards for doing so. Diageo, for example, reported that sales had increased by 20% because of a strategic partnership with Facebook (Diageo, 2011). Innovation in internet and mobile technology has also enabled digital alcohol marketing to become a multi-platform approach, consisting of a combination of paid media (e.g. display advertisements or videos), owned media (e.g. websites and social media pages), and earned marketing content (e.g. fan pages or photos) (Figures 2.4 and 2.5). As digital marketing can be targeted at specific audiences and locations, virally spread and accessed at any time, and because age restriction gateways to websites are difficult to effectively apply, has led to claims that such digital alcohol marketing communications may be more powerful and less controllable than traditional media (AFS, 2017; Bonner and Gilmore, 2012; Chester et al., 2010; Griffiths and Casswell, 2010; Hastings and Sheron, 2013).

2.5. Digital alcohol marketing and young people's consumption

Research which has explored the influence that digital marketing has on young people's alcohol use is typically grouped into two categories: (1) content research and (2) consumer research. In contrast to traditional marketing, econometric methods are not used to investigate digital media. In addition to the limitations already discussed (see section 2.3), this is because (1) the blunt method of estimating exposure in econometric research - expenditure - does not adequately grasp digital channels which have limited or no costs; (2) models struggle to filter interference from activity bias such as audience attention and browsing preferences; and (3) outcomes can be heavily affected by selection bias when choosing which metrics (e.g. views or clicks) to evaluate marketing exposure and success (Lewis and Rao, 2015; Lewis, Rao and Reily, 2013). This chapter therefore presents a review of only content and consumer research.

Figure 2.4. Examples of digital alcohol marketing



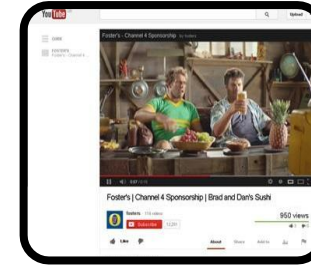
Websites



Facebook



Twitter



YouTube



Games



Apps



Display ads



E-mails



Downloads



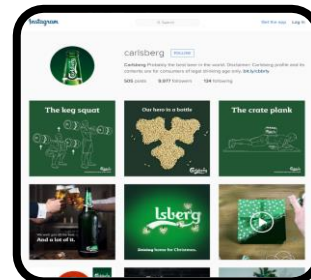
ODTV



Online shop



Augmented reality packaging



Picture sharing



Sponsored content



QR codes

Figure 2.5. Examples of user-generated alcohol branding



Interaction on social media



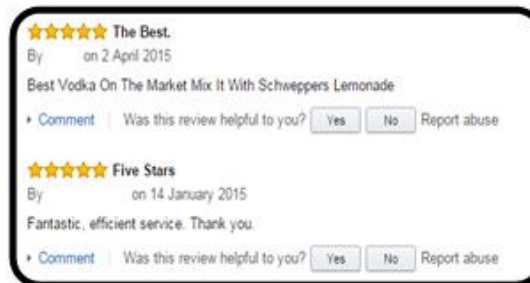
Solicited fan photos



Fan pages



Unsolicited fan photos



Product reviews



Vlogs



Blogs and forum



Re-selling products



Sharing marketing

2.6. Digital alcohol marketing and consumption: Content research

Content research focuses on marketing output and attempts to identify promotion intentions, how consumption is framed, and to whom the marketing may appeal. It typically adopts two approaches. The first, exploratory research, provides descriptive insight into overall digital marketing strategies or specific new media channels for which there is limited research (e.g. Brooks et al., 2010; Chester et al., 2010; Griffiths and Casswell, 2010). The second, inferential studies, attempt to test specific research questions, for example whether content adheres to guidelines for responsible marketing (e.g. Carah, Brodmerkel and Shaul, 2015). Research for both approaches can be either qualitative (e.g. case studies) or quantitative (e.g. scoring against regulatory codes).

Twenty-one studies are reported in this narrative review, with July 2016 the cut-off for inclusion (Supplementary File 1). It includes research from Australia (e.g. Carah et al., 2015), the UK (e.g. Atkinson et al., 2014), and the US (e.g. Mart, Mergendollar and Simon, 2009). It includes research into a range of digital marketing, including Facebook (Carah, Brodmerkel and Hernandez, 2014), Instagram (Barry et al., 2015a), Twitter (Burton, Dadich and Soboleva, 2013), YouTube (Barry et al., 2015b), websites (Gordon, 2011c), smartphone apps (Weaver, Horyniak, Jenkinson, Dietza and Lim, 2013), online television (Siegel et al., 2016), online shops (Williams and Schmidt, 2014), and multiple digital channels (Chester et al., 2010). Some studies only focused on marketing from a small number of alcohol brands that are popular with young people (Atkinson, Rous-Houle, Begly and Sumnall, 2016; Brooks et al. 2010; Carroll and Donovan, 2002), while others considered over 100 brands (Nhean et al., 2014). Three recurrent themes were identified: (1) marketing presence, style, and interactive content; (2) potential reach and influence to young people; and (3) promotion of higher-risk consumption.

2.6.1. Marketing presence, style, and interactive content

Content research consistently suggests that digital marketing appears to be both global and continuous in terms of audience, volume, and frequency, and that it features prominently across a range of new media (Brooks et al., 2010; Carah, 2014; Chester et al., 2010; Gordon, 2011c; Mart et al., 2009; Nicholls, 2012; Purves Stead and Eadie, 2014). Digital promotion, particularly on social media, also appears to be a vital part of 360-degree cross-platform marketing strategies, and has integral links to offline marketing such as packaging, competitions, and offers (Atkinson et al., 2014; Chester et al., 2010; Moraes et al., 2014; Purves et al., 2014). The volume of marketing, particularly on social media, also appears to intensify towards weekends, thus coinciding with peak drinking periods (Barry et al., 2015a; Carah, 2014; Carah et al. 2015; Nicholls, 2012).

Content research also suggests that digital alcohol marketing appears in a variety of styles across new media and uses a range of websites features to appeal to its audience. These include textual and visual posts, topical and themed sections, downloads and apps, event pages, games, widgets, quizzes, celebrity endorsement, humour, competitions, viral videos, and virtual reality (Brooks, 2010; Carah, 2014; Carroll and Donovan, 2002; Center on Alcohol Marketing and Youth, 2004; Chester et al., 2010; Gordon, 2011c, Griffiths and Casswell, 2010; Mart et al., 2009; Nicholls, 2012; Purves et al., 2014; Winpenny, Marteau and Nolte, 2013). On social media, marketers also invest significant resources into creating real-time conversations about alcohol, and routinely attempt to associate marketing with cultures or identities which reflect the desired brand personality. This includes linking to real-world events, seasonal references, and lifestyle associations (Atkinson et al., 2014; 2016; Burton et al. 2013; Carah, 2014; Moraes et al., 2014; Nicholls, 2012; Purves et al., 2014; Winpenny et al., 2013). It is suggested that such

conversations facilitate time specific-references to drink and help to embed consumption into routine behaviours. Several studies also highlight that such audience participation is highly valued by marketers who, in turn, invest significant resources towards generating co-created content which blurs the distinction between marketers and users (Atkinson et al., 2014; Carah, 2014; Moraes et al., 2014; Nicholls, 2012; Purves et al., 2014).

2.6.2. Potential reach and influence to young people

Content research suggests two concerns about how digital marketing may reach and influence young people. First, underage profiles have been found to successfully access alcohol marketing on brand websites, digital television, smartphone apps, and social media (Barry et al., 2015a; 2015b; Brooks, 2010; CAMY, 2004; Jones, Thom, Davoren and Barrie, 2014; Siegel et al., 2016; Weaver et al., 2013; Winpenny et al., 2013). Even when age-verification processes were present, they appeared to be underpinned by weak designs (e.g. tick boxes) or easily bypassed through multiple entry attempts (e.g. specifying a different age) (Jones et al., 2014). There is also evidence that the age-verification processes on some websites where alcohol could be purchased, including those relating to checkout and delivery, were unlikely to be effective in stopping young people buying (Williams and Schmidt, 2014). The only exception was Facebook, where age verification appeared to be successful (Winpenny et al., 2013). This, however, is reliant on young people using their correct age when registering, which is a pertinent issue given that the Advertising Standards Authority suggest that as many as 80% of young people in the UK fabricate their age when using social media (ASA, 2013).

Second, content research suggests that digital marketing may also appeal to those under the legal purchasing age. Several studies have reported direct appeal through marketing

protagonists who appear to be in their late teens, funny fictional images, cartoons, games, apps, downloads, youth-orientated language, and graphics (CAMY, 2004; Carah et al., 2015; Carroll and Donovan, 2002; Gordon, 2011c; Griffiths and Casswell, 2010; Mart et al., 2009). Research in the UK has also suggested that the potential appeal to young people may be subtle and indirect, such as using valued cultural associations and endorsements which may be popular in both those above and below the legal purchasing age (Atkinson et al., 2014). Examples include associations with contexts associated with youth drinking (e.g. house parties), creating associations with popular culture (e.g. television), curating desirable brand identities, and drawing associations with popular real-world events (e.g. football) (Atkinson et al., 2014; 2016; Carah, 2014; Nicholls, 2012; Purves et al., 2014). It is further suggested that marketers may also allow user-generated branding (e.g. user comments) to feature messages or content that may appeal to young people (Brooks, 2010; Carah et al., 2014; Mart, 2009; Purves et al., 2014).

2.6.3. Promoting higher-risk consumption

Content research suggests three ways that digital marketing may promote higher-risk consumption. First, promotion may not always adhere to the regulations about responsible marketing. Carah and colleagues (2015), for example, reported 76 breaches of regulations across just 40 marketing posts on social media. Reported breaches, both in this study and others, included associating alcohol with sexual success, excessive consumption, mood enhancement, dangerous situations, and enhanced social success (Brooks, 2010; Carah et al., 2015; Carroll and Donovan, 2002). Evidence from the UK also suggests that marketers can bypass regulations by ensuring that prohibited references are either indirect or only by association (Hastings et al., 2010). Atkinson and colleagues (2014), for example, reported that while content did not promote excessive consumption

in a way which would contravene regulations, marketing was often set in contexts which are synonymous with heavier alcohol consumption (e.g. nightclubs). Nicholls (2012) similarly reported that the presence of Smirnoff in photos documenting their 'Nightlife Exchange Project' implied that the product was intrinsic to the success of the social event.

Second, content research has also suggested that marketing contains inadequate promotion of responsible or lower-risk drinking. Atkinson and colleagues (2014), for example, reported that less than 25% of Facebook marketing posts in the UK, and only 2% of Twitter posts, had a responsible drinking message. Carah (2014) similarly indicated that only 7% of Facebook marketing posts in New Zealand, and 14% of Facebook adverts, had a responsible consumption message. Even when responsible drinking messages were present, content research suggests that they often featured in parts of the marketing where they might not be easily seen (e.g. within a separate 'House Rules' section) (Nicholls, 2012), were significantly less prominent than messages promoting consumption (Atkinson et al., 2014; Burton et al., 2013; Nicholls, 2012), or were contrasted against user comments that dismissed the notion of lower-risk consumption (Carah, 2014).

Third, concerns have also been raised over the role of user-generated branding in promoting higher-risk consumption. This is important as such content is likely to be created by individuals who do not have knowledge of, and are not bound to adhere by, marketing regulations (Griffiths and Casswell, 2010). Although content should be reactively moderated if posted onto an official marketing space (Portman Group, 2009), research suggests that promotion of higher-risk consumption through user-generated branding does still feature on both official pages (e.g. comments on marketing posts) and

non-official channels where, importantly, the marketers are not obligated to exercise control (e.g. fan pages) (Brodmerkel and Carah, 2013; Brooks, 2010; Carah et al., 2015; Griffiths and Casswell, 2010; Nicholls, 2012; Mart et al., 2009; Purves et al. 2014).

2.6.4. Content research: Summary

In summary, content research suggests that the alcohol industry has embraced new media and is using various techniques to ensure that digital marketing is a key component of 360-degree promotion strategies. Marketing tactics, particularly on social media, include creating real-time associations which extend the contexts paired with drinking and fostering two-way interactions and conversations with consumers. Findings also suggest that age-restriction gateways are limited in both presence and effectiveness, while promotional messages may appeal to young people. The findings also suggest that content may sometimes contravene regulations for responsible marketing, promote higher-risk consumption through indirect associations or user-generated content, and not adequately promote lower risk drinking.

2.7. Digital marketing and consumption: Consumer and audience research

Consumer studies, building on the potential influence suggested by content research, focus on the audience as the unit of the analysis and explore how marketing exposure influences attitudes and behaviour (Gordon et al., 2010a; Hastings et al., 2005). This research typically falls into three quantitative categories: (1) experiments; (2) cross-sectional surveys; and (3) longitudinal surveys (Koordeman et al., 2012). Although excluded from previous reviews, qualitative research has also made important contributions to understanding how consumers respond to digital marketing. The following review therefore considers both quantitative and qualitative studies.

2.7.1. Experimental research

Although experimental research is limited to just two studies, they still provide four important findings. First, Alhabash and colleagues (2015) found that favourable attitudes towards alcohol marketing on Facebook, and greater intentions to interact with such marketing, was positively associated with increased drinking intentions. This suggests that marketing which is successful in creating a positive consumer attitude, and therefore is more likely to generate participation, may have a stronger influence on drinking outcomes. Second, Alhabash and colleagues (2015) found that the effect was strongest when marketing appeared to have been positively received by others (e.g. number of likes and shares). This suggests that perceived social norms also play a significant role in mediating the effect of digital marketing. Third, the association between willingness to interact with marketing and drinking intentions remained even when the stimuli was paired alongside an anti-binge drinking message. This implies that commercial marketing may supersede the effect of co-presented social marketing. Fourth, Alhabash and colleagues (2016), found that digital alcohol advertising was still associated with intentions to consume even when the participants were presented with an explicit alternative outcome (e.g. choice of a gift card for either a bar or coffee shop).

There are, however, limitations of these two experimental studies. First, they only provide evidence of a short-term and controlled effect on drinking intentions, and therefore do not provide insight into actual alcohol consumption. Second, the artificial environment does not reflect the natural viewing conditions for marketing, nor is it likely that consciously reporting attitudes and intended behaviour reflects the cognitive processes which underpin exposure to marketing. Third, as the brand stimuli were chosen specifically to be unfamiliar to participants (e.g. Bundaberg Rum, from Australia but not

readily available in the US), and because the stimuli had been deliberately manipulated for the experiments, the studies fail to reflect actual marketing behaviour (e.g. target audiences). Fourth, as both studies focused on young adult undergraduates, who were already enrolled on an advertising and communications course in the US, the findings have restricted generalisability.

2.7.2. Cross-sectional surveys

Cross-sectional surveys compare the association between exposure to digital marketing and consumption at a single time point. No repeat cross-sectional studies for digital alcohol marketing were identified. Compared to experimental designs, cross-sectional surveys have several benefits. First, they are based on reported exposure to real marketing and alcohol consumption. Second, they can be quick to conduct (although not always) and are ideal for responding to emergent digital marketing. Third, they allow for comparisons within samples (e.g. between drinkers and non-drinkers) and between studies (e.g. cross-cultural) (French and Gordon, 2015).

Fourteen cross-sectional surveys are included in this review, representing an aggregate sample of 30,348 (Supplementary File 2). The cut-off for inclusion was December 2016. The studies include research from the UK, mainland European countries, the US, Australia, and New Zealand. Almost all the studies had samples which contained participants who were under the legal purchase age in their respective countries, while only one study focused solely on young adults who could legally purchase alcohol products (Kenny, 2014). Although the measures varied, all 14 studies were based on self-reported exposure to specified digital marketing channels, including: overall exposure (Collins et al., 2016; Gallopel-Morvan et al., 2016; Jones and Magee, 2011), social media

marketing (Carrotte, Dietze, Wright and Lim, 2016; Jones, Robinson, Barrie, Francis and Lee, 2015; Weaver, Wright, Dietze and Lim, 2016), and cumulative exposure to a range of digital marketing (de Bruijn et al., 2016b; Fox, Kelly and Molcho, 2015; Gordon, Harris, MacKintosh and Moodie, 2011; Hoffman, Pinkleton, Austin and Reyes-Velazquez, 2014; Jernigan, Padon and Borzekowski, 2017; Lin, Casswell, You and Huckle, 2012; Kenny, 2014; McClure, Tanski, Jackson and Sargent, 2013).

All fourteen studies suggested that young people are exposed to digital marketing across new media, with awareness ranging from 5% for e-mail marketing (Gordon et al., 2011) to 88% for marketing on social media (Jones et al., 2015). This also included exposure in young people in France, a country whose strict Loi Évin law provides tight controls on alcohol marketing (Gallopel-Morvan et al., 2016). The findings also suggested that young people are willing to participate, with the proportion doing so ranging from 4% for accessing brand websites (Lin et al., 2012) to 32% interacting with marketing on social media (de Bruijn et al., 2016b). Young people also reported cumulative exposure to a range of digital marketing (Gordon et al., 2011; Lin et al., 2012; Kenny, 2014) and experienced more frequent exposure to some forms of marketing than others (Jones et al., 2015). In Europe, for example, although only 5% of adolescents visited brand websites frequently, 21% reported frequent exposure to display advertising (de Bruijn et al., 2016b). Awareness of, and participation with, digital marketing was greater in those who had consumed alcohol in comparison to those who had not (Gordon et al., 2011; Lin et al., 2012), and was also as likely in those under the legal drinking age compared to those above (Carrotte et al., 2016; Jernigan and Padon, 2014; Jernigan et al. 2017b). Finally, young people reported greater exposure to traditional marketing channels than newer forms of digital media (Fox et al. 2015; Gallopel-Morvan et al., 2016; Gordon et al., 2011;

Jones et al., 2011). This indicates the continued importance of traditional marketing communications, despite increased industry investment in digital media.

Twelve studies also measured the association that exposure had with alcohol-related knowledge, attitudes, and behaviour. The results consistently indicated that exposure was associated with drinking initiation, frequency of use, volume consumed in a typical drinking occasion, binge drinking, drinking intentions, problematic drinking, brand recall, and alcohol-related problems (Supplementary File 2). Research that measured different levels of exposure (i.e. awareness and participation), and exposure to different marketing formats (i.e. traditional and digital), also suggested that participation with digital marketing had a stronger association with alcohol outcomes, despite a greater awareness of traditional marketing (de Bruijn et al., 2016b; Gordon et al., 2011; Jones et al., 2015; Lin et al., 2012). Kenny (2014) also found that the association between digital marketing and consumption was mediated through an initial indirect effect on social norms, therefore highlighting the importance of considering the messages interpreted from marketing and not just the effect of exposure (Austin et al., 2000). In support, Weaver and colleagues (2016) also found that young adults reported the main messages suggested in marketing were feeling relaxed, improving mood, being social and outgoing, and confidence about oneself.

The findings supplied by cross-sectional surveys do have limitations. First, the results do not demonstrate a causal influence between exposure and consumption, and are open to the possibility that existing drinking may fuel interest in alcohol marketing (Jones and Jernigan, 2010). Second, most studies have only focused on a small number of digital marketing channels, particularly social networking websites. Consequently, identifying

the channels that are most likely to reach young people and encourage participation can only be achieved by comparing across studies with different exposure measures and samples. As research suggests that it is cumulative exposure which has the strongest association with consumption (Gordon et al., 2010a), the lack of comprehensive assessment in any one study also means that current cross-sectional research is likely to underestimate the association between digital marketing and consumption.

2.7.3. Longitudinal surveys

Longitudinal surveys measure individuals at two or more time points and therefore provide insight into whether the association between exposure to digital marketing and consumption is causal (French and Gordon, 2015). Four longitudinal studies are reported in this review, representing an aggregate sample of 11,530 young people (Supplementary File 3). Three of these studies reported on follow-ups from cross-sectional research (see 2.7.2), specifically young people in Scotland (Gordon et al., 2011; Gordon et al., 2010b), four mainland European countries (de Bruijn et al., 2016a; de Bruijn et al., 2016b) and the US (McClure et al., 2013b; McClure et al., 2016). The other study reported on young people in Taiwan (Chang et al., 2015). As with cross-sectional survey, each study was based on self-reported exposure and consumption. All four studies sampled those under the legal purchase age in their respective country, both at baseline and at follow-up.

In two of the studies it was not possible to isolate the effect of digital marketing, as the online channels were grouped with traditional marketing communications in the analysis to form a composite score for awareness and participation across all channels (Chang et al., 2014; Gordon et al., 2010b). Nevertheless, Gordon and colleagues (2010b) did report that awareness of, and participation with, digital marketing on social media had almost

doubled by follow-up. This suggests that either young people's exposure to digital marketing had generally increased between measurements, or that those closer to the legal purchase age were more exposed than younger adolescents. The remaining two studies did analyse digital marketing separately and demonstrated that exposure at baseline was positively associated with alcohol consumption in the previous 30 days (de Bruijn et al., 2016a) and binge drinking initiation at follow-up (McClure et al., 2016). De Bruijn and colleagues (2012) also demonstrated that exposure was associated with positive, arousal and sedation expectancies at follow-up, and that this mediated the association between exposure and consumption. Akin to Kenny (2014), in which social norms mediated the association between exposure and consumption, this finding is important as it helps to identify which psychological processes may underpin the effect of digital marketing.

There are several limitations of longitudinal research. Only a limited number of digital channels were measured, meaning that the findings lack specificity to the current digital marketing landscape (Figure 2.4 and 2.5) and are likely to underestimate the impact on consumption. All four studies also exclusively focused on those under the legal purchasing age for alcohol. While this does best fit the narrative which underpins the marketing debate (Gordon et al., 2010a; Gunter et al., 2010), it fails to provide insight into young adults who are a key target group for both public health and alcohol companies (Hastings et al. 2010). It is also possible that the follow-up questionnaires elicited response bias, not all relevant control variables were included in the analysis, or that changes in drinking behaviour between measurement points may have brought individuals into contact with more marketing rather than the other way around.

2.7.4. Qualitative research

Qualitative research is important as it provides rich insight into the social and cultural significance of digital marketing and young people's understanding of the influence it has on behaviour. Six studies, based on focus groups and interviews, are included in this review, representing an aggregate sample of 357 (Supplementary File 4). The cut-off for inclusion was July 2016. The studies mostly included samples of young adults around the legal purchasing age (16-24 years). One study, however, also included interviews with both marketing and communication professionals related to the alcohol industry and young adolescents aged 13-14 years old (Gordon et al., 2010c). Four studies were conducted in the UK (Atkinson et al., 2014; 2016; Gordon et al., 2010c; Moraes et al., 2012; Purves et al., 2014) with the others from New Zealand (Lyons et al., 2014) and Australia (Weaver et al., 2016). Five focused only on social networking websites, while the other focused more broadly on digital marketing (Gordon et al., 2010c).

Six key themes emerge from qualitative research. First, all the studies suggested that young people were aware of, and willing to participate with, digital marketing. This was particularly true for social media, with as young people suggested that marketing on social networking websites was '*everywhere*', '*inevitable*', '*common place*', and appeared '*all of the time*' (Purves et al., 2014; pgs. 65-66). Even though young people suggested that they were indifferent to marketing, or believed that only immature individuals engaged with it, further probing found that they still exhibited considerable knowledge about content that they had been exposed to and that they carefully chose brands based on the lifestyle messages presented (Atkinson et al., 2014; 2016; Purves et al., 2014). Although the studies mostly focused on social media, young adults were also aware of subtle digital marketing activity such as geo-location software (Lyons et al.,

2014), mobile downloads (Gordon et al., 2010c), and augmented reality packaging (Purves et al., 2014). Exposure mostly subscribed to two forms. The first was passive exposure, whereby young people saw either an unsolicited display advertisement or marketing shared by peers (Purves et al., 2014). The second type was involvement, whereby young people participated with marketing, appropriated content into their profiles, or created user-generated branding that presented tastes, facilitated interactions, narrated identities, and developed cultural or social capital (Atkinson et al., 2014; Lyons et al., 2014).

Second, although young people disliked being exposed to explicit advertising (e.g. display banners) they were more receptive to immersive marketing such as pages, events, geo-location, downloads, and virtual reality (Gordon et al., 2010c; Lyons et al., 2014; Moraes et al., 2014; Purves et al., 2014). Within such marketing, participants considered themselves empowered and active agents who picked the promotion they wished to be involved in (Atkinson et al., 2014) and could relate and contribute to the real-world associations and conversations (Moraes et al., 2014). Branded pages were also favoured due to the intertwined co-created content, thus blurring the distinction between marketing and users. Participants suggested that the ‘*casual*’ and ‘*subtle*’ appearance gave the impression that such marketing was ‘*credible*’ and had been created by ‘*a real person*’ (Weaver et al., 2016; pg. 3), while the pro-alcohol messages created by users reinforced suggestions that consumption was fun and enjoyable (Gordon et al., 2010c; Lyons et al., 2014). Preference towards immersive and participatory content is important as the integral designs mean that young people may find it difficult to differentiate or determine what represents marketing (Lyons et al., 2014).

Third, young people suggested that marketing for local events or drinking contexts (e.g. nightclubs) was as important as the product marketing of large beverage producers. Local content was highly valued and played an important role in providing information on price offers or events around which to construct drinking occasions (Atkinson et al., 2014). It was also suggested that such content was more influential, as young people perceived being associated with alcohol in a local context to be more socially desirable and reinforcing of their drinking identity than generic product marketing (Moraes et al., 2014). It was further suggested that the co-creation of marketing content with local venues, particularly professional photos uploaded the day after an event, was more likely to perpetuate audience engagement (e.g. sharing with friends) (Atkinson et al., 2014).

Fourth, participants suggested that the power of perceived self-gain fuelled their decision to participate with marketing or co-produce content (e.g. submit fan photos), and that reward had a strong influence on behaviour. For example, participants suggested that they would take part in competitions to try and win monetary, material or experiential prizes (Atkinson et al., 2014; Purves et al., 2014). This effect was further exacerbated when marketing posted about previous winners, therefore reinforcing the concept of '*lucky winners hope*' (Moraes et al., 2014; pg. 1391). Others suggested that they engaged with local marketing to receive information on up-and-coming events or price offers. Some young people even cited social rewards, instead indicating that they found engaging with marketing to be a fun activity or that they would enter competitions to help win prizes for friends (Moraes et al., 2014).

Fifth, young adults considered themselves to be media savvy and not the direct targets of marketing (Lyons et al., 2014). They also considered that greater knowledge of alcohol

marketing practice reduced its influence on behaviour (Atkinson et al., 2014). Instead it was intimated that younger adolescents, who were naive and unknowledgeable to the intentions of marketing, were most vulnerable to its influence (Atkinson et al., 2014; 2016; Weaver et al., 2016). While the suggested influence on adolescents is supported by survey research (Gordon et al., 2011; Lin et al., 2012), the perceived lack of vulnerability in young adults is at odds with research which has shown that digital marketing is still associated with consumption and higher-risk drinking in this age group (Hoffman et al., 2014; Kenny, 2014; McClure et al., 2016). It is possible that this lack of acknowledged risk may be a result of young adults failing to recognise subtle or immersive digital marketing activities (Lyons et al., 2014).

Sixth, the ambiguous mix of commercial marketing alongside messages of lower-risk drinking created confusion about the attraction and dangers of alcohol in young people (Lyons et al., 2014; Purves et al. 2014). This supports the experimental research of Alhabash and colleagues (2015), which suggested that the co-presentation of marketing and health messages reduces the effect of the latter. It also supports the content findings of Atkinson and colleagues (2014), which suggested that health messages were virtually invisible, received far less engagement from users, and failed to adequately target young people. Viewed in the context of wider societal concern, young people questioned the fairness of what they saw online and what was being done to control the normalising effect of alcohol marketing on social media (Purves et al., 2014).

2.7.5. Consumer research: Summary

Cross-sectional surveys consistently find that young people are exposed to digital alcohol marketing, while longitudinal surveys favour the conclusion that this exposure has a

causal influence on consumption. Consumer research also provides tentative evidence of the social cognitive pathways which help to explain how digital marketing influences consumption, such as perceived social norms and outcome expectancies. There is also experimental evidence to suggest that digital marketing may supersede the effect of co-presented messages about lower-risk drinking. Further insight from qualitative research suggests that young people are willing to participate with local and global digital marketing, particularly on social media where content is blurred with the activity of other users. These findings also suggest that the relationship young adults have with digital marketing is more complex than the exposure-equals-consumption hypothesis that underpins quantitative research. Alcohol marketing is seen to be a ubiquitous and normal part of social networking, young people are content to use global and local marketing discourses as a means of narrating their social and cultural identity, and the power of self-reward is a strong influence. Young people also see themselves as shrewd media users who are not the targets of, or vulnerable to, the effects of marketing, a finding which contrasts with research which suggests that exposure is associated with alcohol use.

2.8. Digital alcohol marketing and consumption: The research agenda

Despite recent research developments, there remain several gaps in understanding that would benefit from further investigation, including: (1) exploration of marketing through a broader range of digital media channels; (2) more detailed consideration of the trends which underpin how digital marketing influences knowledge, attitudes, and behaviour; (3) further consideration of the psychological processes which underpin the influence of digital marketing; and (4) greater research into young adults in the UK who are legal and legitimate targets for digital marketing. These issues are now reviewed, thus providing an agenda for this thesis.

2.8.1. Exploring marketing through convergent new media

Understanding of how marketing influences alcohol consumption consistently falls behind new media and marketing innovation (Jernigan, 2009; Westgate and Holliday, 2016). This provides a key opportunity for further investigation (Gordon et al., 2010a). Qualitative research and content analyses, for example, have mostly focused only on marketing through standalone websites and social networking websites. Although some studies have considered other new media (e.g. apps or videos), this part of the evidence base still lacks the detail that characterises research into marketing on Facebook (e.g. adherence to regulations). Despite broader coverage of digital marketing in consumer surveys, several channels have still been overlooked (e.g. on-demand television, online shops, competitions, and user-generated branding). Research which has measured cumulative exposure is also dated, with most studies only including four or five digital channels. As such, it is likely that consumer research underestimates young people's current awareness of, and participation with, digital marketing, and the association with attitudes, knowledge, and behaviour.

2.8.2. Trends in digital marketing exposure and influence

The specific relationship between exposure to digital marketing and alcohol consumption remains poorly understood, meaning that further research exploring how awareness and participation influences knowledge, attitudes, and behaviour is warranted. Research suggests that participation with digital marketing has a stronger influence on behaviour than awareness (Gordon et al., 2011). However, as this effect has only been explored for a small number of channels, there is still limited understanding of which forms of digital marketing are more successful in encouraging participation and which have a stronger influence on behaviour. To date, there is also no research which has investigated which

digital marketing channels young people experience co-occurring awareness of, and participation with, and whether different combinations of marketing exposure are associated with different consumption behaviour or attitudes.

2.8.3. Understanding the psychological processes

The psychological processes which help to explain the relationship between exposure to digital marketing and consumption are also poorly understood (Meier, 2011). Although exposure represents a critical first step, research suggests that the latter information processing stages should be considered just as important (Austin et al., 2006; Austin and Meli, 1994). This approach, based on the message interpretation process model (Austin and Knaus, 2000; Austin et al., 2000), suggests that the effect marketing narratives have on emotional and cognitive processes play an important role in informing decisions to drink. Research exploring traditional marketing communications provides evidence of many social and marketing-specific cognitions which may help explain the effect on consumption (see 2.3). To date, however, only outcome expectancies (de Bruijn et al., 2012) and perceived social norms (Kenny, 2014) have been explored in the context of digital marketing. Addressing this gap is important given that qualitative research suggests that digital alcohol marketing holds deep cultural, social, and symbolic meaning for young people.

2.8.4. Influence on young adults

There is also a need to further investigate how digital marketing influences existing and legal drinkers, particularly young adults aged 18-25 years old in the UK (Meier, 2011). Only two experimental, one cross-sectional, and two qualitative studies have focused solely on young adults, and only two of these studies have done so in the UK. Continued

investigation is important for five reasons: (1) over-consumption in this age group is still associated with negative outcomes for the drinker and others (AFS, 2016; Gell et al, 2015; Newbury-Birch et al., 2009); (2) young adults represent legitimate and desirable targets for alcohol marketers and have a newly acquired ability to legally purchase alcohol (Hastings et al., 2010); (3) they are at increased risk of exposure to digital marketing due to high levels of internet use (OFCOM, 2015a; 2016); (4) globally, the prevalence of heavy episodic drinking is higher among young people than the rest of the adult population, and is particularly high in the UK compared to the rest of Europe and the world (WHO, 2014); and (5) marketing towards existing drinkers is more common and is therefore likely to have a more frequent influence (Meier, 2011).

2.9. Conclusions

Four key conclusions underpin this narrative review of research into digital alcohol marketing. First, the alcohol industry has embraced new media and are positioning it as a focal part of their marketing communications. Second, content research suggests that digital marketing appears frequently on new media, employs sophisticated designs, has the potential to promote consumption or higher-risk behaviour, and may appeal directly or indirectly to young people (including those under the legal purchase age). Third, consumer research suggests that young people are aware of, and participating with, a range of digital marketing, and that exposure to such content is associated with alcohol-related knowledge, attitudes, and behaviour. Fourth, qualitative research suggests that young people consider marketing to be a ubiquitous and normal part of online behaviour and that such content has important symbolic and cultural meaning. Despite these recent research developments, however, there remain important gaps in literature which underpin the research agenda for this thesis. Another recurrent finding in digital

marketing research is that the content created by internet users also appears to be an important and influential determinant of alcohol use. Chapter Three therefore considers user-created promotion, and what influence this has on knowledge, attitudes, and behaviour.

Rejoinder to Chapter Two: A recent narrative review of digital alcohol marketing has been published since this chapter was written (Lobstein et al., 2016). While there are similarities between this chapter and the review, for example a focus on content and consumer research, this chapter differs as it: (1) provides an overview of the importance of marketing communications to the alcohol industry; (2) reviews the emergence of digital marketing and the channels used by the alcohol industry; (3) provides more detailed reviews of content and consumer research, and includes more up-to date studies (e.g. from 2016); and (4) sets an agenda for future research.

Chapter 3: User-created alcohol promotion and young people's drinking

3.1. Introduction

Reviews of research which have explored user depictions of alcohol on social media consistently suggest there is an association between exposure and consumption in young people (Gupta et al., 2016; Lyons, McCreanor, Goodwin and Moewaka-Barnes, 2017; Moreno et al., 2016a; Westgate and Holliday, 2016). Media reporting of, and research exploring, the viral 'NekNominate' drinking game provides a high-profile example of this association (BBC, 2014a; Wombacher et al., 2014; Zonfrillo and Osterhoudt, 2014). Current understanding, however, is compounded by the lack of a clear definition, narrow syntheses of research, and a predominant focus on social media. In response, this chapter presents a narrative review of research which explores a broader range of user-created promotion, and the association with knowledge, attitudes, and behaviours in young people. It begins by outlining what represents user-created content (3.2) and the definition of user-created alcohol promotion (3.3). The chapter then reviews theoretical support for an association between user-created promotion and consumption (3.4), and evidence from the two main research paradigms: content analyses (3.5) and audience research (3.6). The chapter then outlines the relationship between user-created promotion and commercial digital marketing (3.7), and concludes with a review of the agenda for continued research, thus setting the context for this thesis (3.8).

3.2. User-created content: Definitions and characteristics

Throughout the 20th century the design of traditional media, such as television and print, meant that audiences were passive observers who had little power to influence content (Jenkins, 2006). Contemporary digital media, however, has instead created a culture where internet users can participate in how content is created, predominantly through

social media websites designed for this purpose (Kaplan and Haenlein, 2010; Livingstone, 2003; McKenzie et al., 2012; McNally et al., 2012; van Dijck, 2009, 2012). This content-creation revolution is characterised by the many not the few, with half of the estimated three billion internet users worldwide (Internet Society, 2015) members of social networking website Facebook (Statista, 2017). Further highlighting the growth of user involvement, approximately 500 million Tweets are sent every day (Oreskovic, 2015), over 300 hours of footage are uploaded to YouTube every minute (Statistics Brain, 2015), over 410 million messages are sent daily via SnapChat (Statistics Brain, 2016), and 80 million photos are uploaded to Instagram every day (Instagram, 2015).

One of the most cited definitions of user-created content, provided by the Organisation for Economic Co-operation and Development (OECD), suggests that three characteristics underpin such content (Wunsch-Vincent and Vickery, 2007). The first is that the content must be shared with others, be it only a select group (e.g. private message) or the general internet public (e.g. YouTube videos). The second characteristic is that creative effort, either by an individual or collective group, is required so that the finished article reflects user-added value. As such, uploading clips of a television show does not count, yet adding a humorous caption to a photo to create a meme¹ does. The third characteristic is that content should be created outside of professional routines, and should not have a commercial context. It should instead be produced by non-professionals whose motivations are social or not-for-profit. Albeit dated, these principals have formed the basis for most of the theoretical literature that has explored user-created content (Kaplan and Haenlien, 2010; McKenzie et al., 2012; McNally et al., 2012; van Dijck, 2009).

¹ An image, video, piece of text, etc., typically humorous in nature, which is copied and spread rapidly by internet users, often with slight variations (Oxford English Dictionary, n.d).

The participatory nature of many websites, however, has blurred the boundaries between professional and amateur content (Arnhold, 2010). This is supported by research which suggests that alcohol marketers interact with internet users to co-produce content and create real time conversations (Atkinson et al., 2014; 2016; Lyons et al., 2014; Nicholls, 2012). This blurring presents two scenarios which undermine the legitimacy of the third OECD characteristic, that content should not have commercial or professional market input (McKenzie et al., 2012; McNally et al., 2012). First, it is feasible that users whose employment provides them with the skillset of a professional may participate in creating content, even though the end product does not actually contribute to commercial goals (e.g. a media producer having a personal Twitter account or blog) (Arnhold, 2010). Second, it is feasible that an individual whose motives for creating content started as a hobby may become remunerated for their contribution (van Dijck, 2009). An example of this is the rise of professional vloggers on YouTube (Foster-Pret, 2015; Robinson, 2015). Although most began creating content without the intention of commercial gain, many now generate income through merchandise, sponsorship, and product endorsement (BBC, 2014b; Vlog Nation, n.d). As such, van Dijck (2009) suggests that contemporary user-created content exists on a sliding scale that includes both amateur and professional content, without compromising on understanding that it is still user-created.

3.3. User-created alcohol promotion

3.3.1. Definition

Research suggests that some content created by internet users may promote or reflect health risk behaviours offline, including drug use (Norman et al., 2014), smoking (van Hoof et al., 2014), sexual risk (Kletteke et al., 2014), violence (Zonfrillo et al., 2014), self-harm (Avery et al., 2016), and multiple health risk behaviours (Moreno et al., 2007).

One relationship that is frequently discussed is the association between user-generated content on social media and alcohol use (Gupta et al., 2016; Moreno and Whitehill 2014; Moreno et al., 2016a; Ridout, 2016; Westgate and Holliday, 2016). Such user-created promotion is important as, distinct from commercial marketing, it is not bound to adhere to regulations for responsible promotion (e.g. CAP, 2015) and because young people consider such peer messages to be an influential and accurate reflection of offline behaviour (Atkinson et al., 2014; Moreno et al., 2009). Despite recent research interest, neither theoretical literature nor reviews of research have provided a consistent definition about what constitutes user-created promotion, its characteristics, or how it differs from and interacts with other online content (e.g. commercial marketing). Therefore, building on existing definitions of user-created content (see 3.2), in this thesis user-created alcohol promotion is defined as:

'new media content which (1) has the intended purpose to promote alcohol consumption, or the culture of drinking; (2) is shared with others online; and (3) is formed independent of, and does not directly contribute to, commercial alcohol marketing'.

There are two assumptions to this definition which warrant discussion. The first assumption is that user-created promotion and user-generated branding are different. There are similarities between the two constructs, including user-led creation, requirement for publication, and need for creative effort (Arnhold, 2010). User-created alcohol promotion, however, does not consider personal representation of a brand to be an underlying motive for creation, whereas user-generated branding does. A Facebook group which focuses on promoting drunkenness, for example, would meet the definition

even if an alcohol brand is featured (e.g. in a photo). A fan page which pays homage to a specific alcohol brand, however, would not (Appendix 1). The second assumption is that the definition does not exclude content created by users who have professional skills or receive a commercial or monetary return, providing the content does not directly contribute to alcohol marketing. As such, a general quiz about alcohol on a social entertainment website would be allowed, however articles sponsored by an alcohol brand on the same website would not (Appendix 2). Further description of the relationship between commercial marketing and user-created promotion is provided in section 3.7.

3.3.2. Types of user-created alcohol promotion: An overview

While the specific design features and messages presented in user-created alcohol promotion are discussed in the review of content research (see 3.5) an overview of promotion examples is provided here for context. Like digital marketing, user-created alcohol promotion appears in a variety of styles and across many websites. Documented examples include: textual and visual references on social networking profiles (Egan and Moreno, 2011; Fournier and Clarke, 2011; Lyons et al., 2014; Moreno et al., 2010), groups and pages on social media (Mart et al., 2009), smartphone apps (Weaver et al., 2013), viral and shared videos (Cranwell et al., 2015; Morgan, Snelson, & Elison-Bowers, 2010; Primack, Colditz, Pang and Jackson, 2015; Rolando, Taddeo and Beccaria, 2016), Twitter content (Cavazos-Rehg, Krauss, Sowles and Bierut, 2015), discussion forums (Parder and Vihalemm, 2015), multimedia messages (Boyle, LaBrie, Foidevaux and Witkovic, 2016), Instagram photos (Boyle, Earle, LaBrie and Ballou, 2017; Wombacher et al., 2016), and quizzes (Griffiths and Casswell, 2010; Ridout, Campbell and Ellis, 2012) (Figure 3.1).

Figure 3.1. Examples of user-created alcohol promotion



Groups or pages on social media



Non-fictional images posted to social media



Fictional images posted to social media (e.g. memes)



Smartphone applications



Games



Blogs and microblogs



Videos (including viral)



Instant messages



Statuses posted to social media websites



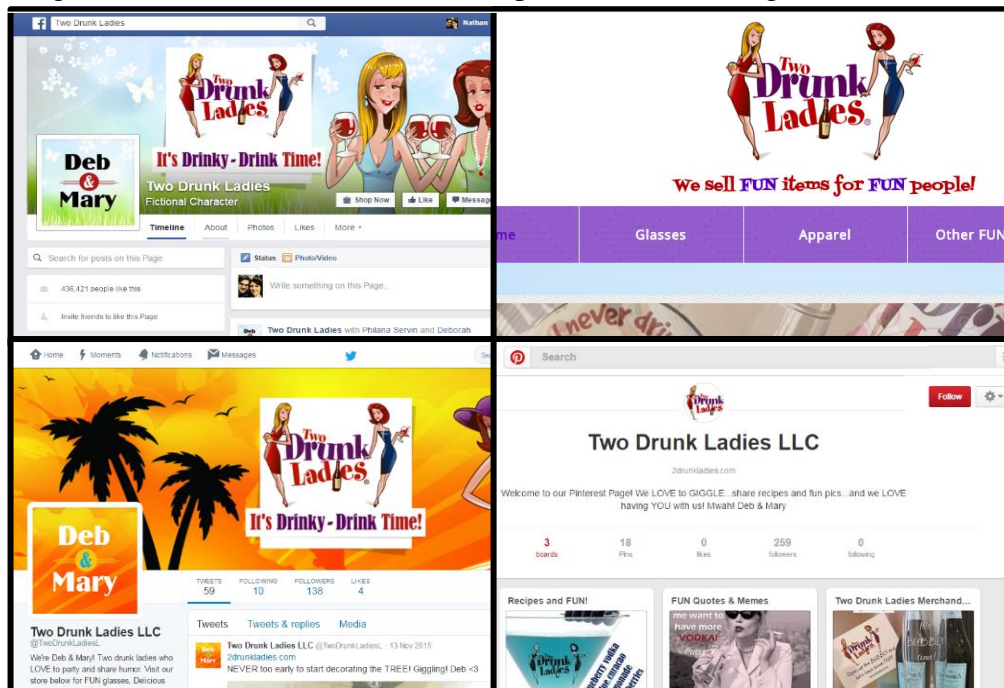
Quizzes and social interest/buzz websites



Forums

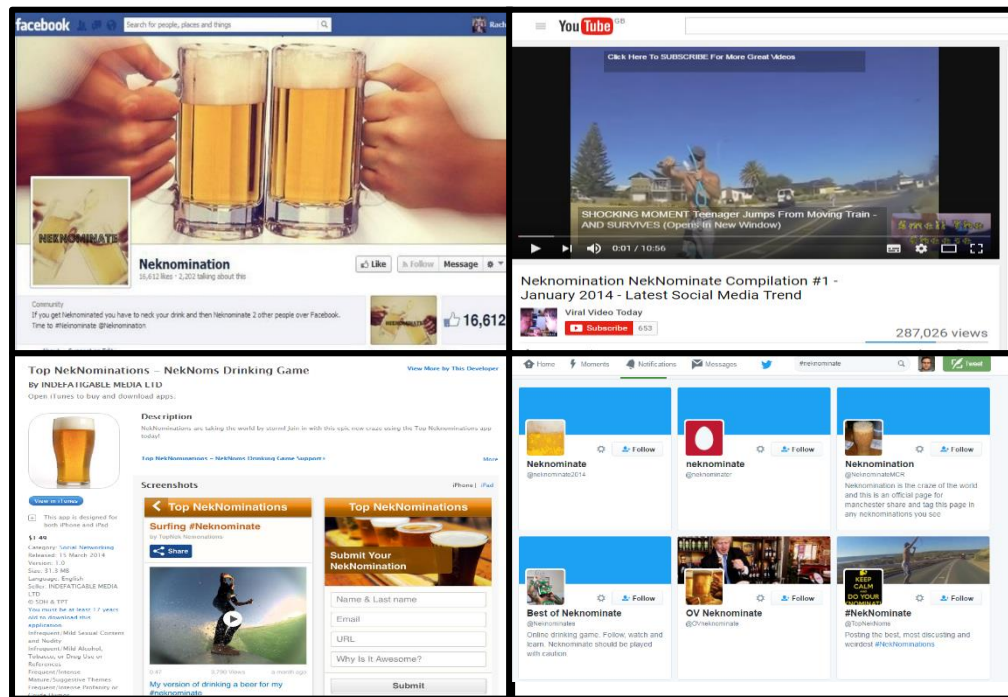
Real-world examples suggest that user-created promotion, like commercial marketing, can also appear across multiple channels. This can be achieved in two ways. First, individuals or groups may actively post the same user-created promotion, or at least similarly themed content, across multiple websites. The bloggers ‘Two Drunk Ladies’, for example, have content on Facebook, Twitter, Pinterest, and a standalone website (Figure 3.2). Second, promotion may also be produced and shared as part of viral movements where multiple users contribute content to an overall theme. NekNominate provides a high-profile example (Figure 3.3). This was a viral drinking game in which an individual posted a video of themselves consuming an alcoholic drink to social media, often doing so in a daring manner. They then nominated a peer, by tagging them in the content, to continue the practice within the next 24 hours (Wombacher et al., 2016; Zonfrillo and Osterhoudt, 2014). Not only did the game generate content from individuals, it also generated public fan pages, video compilations, and even an app.

Figure 3.2. Multichannel user-created promotion from single source



Clockwise from top left; Facebook (TL), website (TR), Pinterest (BR), Twitter (BL).

Figure 3.3. Examples of NekNominate content from multiple sources



Clockwise from top left; Facebook (TL), YouTube (TR), Twitter (BR), App (BL)

3.4. User-created promotion and alcohol use: Theories and research paradigms

Decades of research into observational learning and media influence provide several theories which could explain an association between user-created promotion and alcohol consumption. These include cultivation theory, priming theory, theory of planned behaviour, social-cognitive learning theory, and the elaborate likelihood model of persuasion (Bryant and Oliver, 2009). Given the social nature of many contemporary websites, an effect is also supported by research into interpersonal determinants of drinking, such as peer influence and normative beliefs (Ali and Dwyer, 2010; Bot, Engels, Knibbe and Meeus, 2005; Niland, Lyons, Goodwin, and Hutton, 2013; Prestwich et al., 2016). The message interpretation process model is also relevant, as it suggests that exposure to media depictions of alcohol can influence social cognitions that predispose consumption (Austin and Knaus, 2000). Reported cognitive mechanisms include drinking prototypes (Dal Cin et al., 2009), motivations and expectancies (Fleming et al.,

2004; Grube and Waiters. 2005), desirability (Austin et al., 2006), and social norms (Kenny, 2014). Synthesising these perspectives, Westgate and Holliday (2016) suggest that the influence of user-created promotion is best understood as the result of a range of interconnected theories and behavioural frameworks. The Facebook Influence Model provides an example of this combined thinking, and suggests that the effect of user-created promotion is exercised through mechanisms of connectivity, identification, comparison, and experience (Moreno et al., 2016a).

There are two questions which underpin research into user-created alcohol promotion. The first concerns how exposure to promotion may increase the likelihood of alcohol consumption or higher-risk drinking? The second question concerns whether exposure reflects or influences alcohol-related knowledge, attitudes, and behaviour? (Moreno et al., 2016a; Ridout, 2016; Westgate and Holliday, 2016). To answer these questions, reviews of research have typically grouped studies into two paradigms: (1) content research and (2) audience research. Content research considers the user-created promotion output as the unit of analysis and seeks to identify promotion intentions, how alcohol consumption is framed, and to whom the content may appeal, thus helping to inform the first question. Audience research instead considers those exposed to user-created promotion as the unit of analysis and attempts to examine how their attitudes and behaviours vary because of exposure, thus helping to inform the second question. There are already three narrative reviews that consider both content and audience research (Moreno et al., 2016a; Ridout, 2016; Westgate and Holliday, 2016) and one systematic review focusing only on audience research (Gupta et al., 2016). All four reviews, however, have focused mainly on social networking sites, particularly personal profiles of students in the US. Given the broader definition of user-created alcohol promotion

which underpins this thesis (see 3.3.1), and to extend the scope of existing literature, the following review also considers research on user-created promotion beyond social networking (e.g. apps, video-sharing, and forums).

3.5. User-created alcohol promotion and consumption: Content research

Most content research has been exploratory in nature, given the recent emergence of user-created promotion as a subject of investigation. Despite this, content research has still developed sufficiently to include a range of qualitative (e.g. cyberethnography) and quantitative studies (e.g. volume of alcohol-related posts). Twenty-seven studies are reported in this review, with a cut-off of July 2016 for inclusion (Supplementary File 5). The review mostly includes research conducted in the US (e.g. Egan and Moreno, 2011; Kolek and Saunders, 2008; Moreno, Kacvinsky, Pumper, Wachowski and Whitehill, 2013), but also includes studies from Australia and New Zealand (e.g. Griffiths and Casswell, 2011; Ridout et al., 2012; Weaver et al., 2013), and several European countries (e.g. Atkinson et al., 2014; Beullens and Schepers, 2013; Rolando et al., 2016). It also includes studies where a geographical focus was not specified, thus representing investigation on a quasi-global level (Cavazos-Rehg et al., 2014; Primack et al., 2015). Although most content research has focused on social networking websites (e.g. Fournier and Clarke, 2011; Griffiths and Casswell, 2010; Moreno, Parks, Zimmerman, Brito and Christakis, 2009; Mart et al., 2009), more recent studies have also considered Twitter (e.g. Cavazos-Rehg et al., 2014; West et al., 2012), YouTube (e.g. Primack et al., 2015; Rolando et al., 2016), smartphone apps (Eagle, Dahl, Low and Mahoney, 2014; Weaver et al., 2013), and forums (Parder and Vilhalemm, 2015). Across content research, the two main strategies for selecting content were either to recruit participants who were willing to provide access to personal profiles (e.g. Fournier and Clarke, 2011; Moreno et al.,

2013), or to gather public content by searching for alcohol-related keywords on website search engines (e.g. Mart et al., 2009; Primack et al., 2015). From the studies reviewed the main themes to emerge concerned: (1) style, presence, and reception; (2) framing alcohol use and drinking cultures; and (3) promoting higher-risk consumption and influence to young people. Each theme is now reviewed.

3.5.1. Style, presence, and reception

Content research suggests that user-created promotion appears through a variety of new media channels. This includes social networking websites (e.g. Facebook), microblogs (e.g. Twitter), discussion forums, smartphone apps, media sharing websites (e.g. YouTube and Instagram), and multimedia messaging services (e.g. SnapChat) (Supplementary File 5). Even within specific websites, user-created promotion further appears in a variety of styles and formats. On social networking websites, for example, promotion has been reported on personal profiles (e.g. Beullens and Schepers, 2013; Egan and Moreno, 2011; Fournier and Clarke, 2011; Moreno, Arseniev-Koehler, Litt and Christakis, 2016), event pages (Mart et al., 2009), groups (Posner and Wollersheim, 2011), and interactive apps (Mart et al., 2009). On personal profiles, specifically, promotion can include visual and textual content posted on walls (by both the self and peers), profile and cover photos, group membership, and directed-identity claims such as declared personal interests (Atkinson et al., 2014; Griffiths and Casswell, 2010; Kolek and Saunders, 2008; Ridout et al., 2012). Such diversity is also not isolated to social networking websites. Research into smartphone apps, for example, suggests that promotion can be based on drinking games (e.g. *'Let's Get Wasted'*), bar-locating apps, drink recipe guides, or diet applications (e.g. *'Drink Thin'*) (Eagle et al., 2014; Weaver et al., 2013). Studies also suggest that promotion on YouTube represents a combination

of professional and amateur material (Primack et al., 2015) and depicts alcohol in a range of video categories (e.g. entertainment and how-to guides) (Koff, 2013).

Content research also suggests that user-created promotion, particularly visual depictions, are a normal and routine aspect of many online spaces (Atkinson et al., 2014; Mart et al., 2009). On social networking websites, for example, it is reported that alcohol-related content features consistently on the profiles of young adults (Beullens and Schepers, 2013; Egan and Moreno, 2011; Fournier and Clarke, 2011; Kolek and Saunders, 2008; Moreno et al., 2016b; van Hoof et al., 2014), while Mart and colleagues (2009) found over 500 public Facebook applications and 50,000 groups associated with alcohol keywords. On Twitter, over 11 million tweets in a one month period were related to alcohol (one in every 1,250 tweets), with over five million related to the word ‘drunk’ (Cavazos-Rehg et al., 2014). Furthermore, over 50% of smartphone apps associated with alcohol keywords are reported to be free to download, entertaining in nature, and pro-alcohol (Eagles et al., 2014; Weaver et al., 2013). There also appears to be temporal variability for user-created promotion, with the volume of content increasing at weekends, holidays, and events, therefore coinciding with peak consumption (Cavazos-Rehg et al., 2014; Egan and Moreno, 2011; Moreno et al., 2013; West et al., 2012).

Website features which provide information about how users interact with content further suggest that young people participate with user-created promotion and that such content is positively received. Promotion on personal social networking profiles, for example, is reported as receiving many ‘likes’ and ‘comments’ from peers, particularly for content uploaded by females and images where the individual and alcohol are framed in a glamorous manner (Atkinson et al., 2014; Beullens and Schepers, 2013; Rolando et al.

2016). High levels of audience involvement are also reported on YouTube. Primack and colleagues (2015), for example, reported that the 70 videos analysed (selected using alcohol-related keywords) had combined views exceeding 333 million, and had received a median of 1,646 ‘likes’ compared to 33 ‘dislikes’. Koff (2013) also reported that videos related to college drinking had an average viewership exceeding 250,000 and over 400 comments per video. For smartphone apps, Weaver and colleagues (2013) found that 33% of entertainment apps (searched for using alcohol-related keywords) had received a four or five-star rating, an estimate comparable to the proportion of health-related apps to have a similar rating (34%). Cavazos-Rehg and colleagues (2014) also reported that promotion on Twitter, particularly event-specific posts by celebrities, received considerable interactions (e.g. retweets).

3.5.2. Framing alcohol consumption

Content research suggests that user-created promotion frames alcohol consumption in several ways. Most studies provide evidence of explicit promotion, for example images showing an individual drinking or displaying the effects of consuming alcohol (e.g. acting drunk or passed out) (Atkinson et al., 2014; Beullens and Schepers, 2013; Griffiths and Casswell, 2010; Koff, 2013; Moreno et al., 2010; Rolando et al., 2016). It is also suggested that such explicit references cover a spectrum of behaviours, ranging from mild consumption to problematic drinking and intoxication (Cavazos-Rehg et al., 2014; Moreno et al., 2010; Moreno, Christakis, Egan, Brockman and Becker, 2012; Primack et al., 2015). Other studies also provide evidence of implicit promotion, through associations to cultures and contexts synonymous with alcohol. Examples include depictions of products or branding (Beullens and Schepers, 2013), quizzes about drinking personalities (Griffiths and Casswell, 2010), reference to drinking venues (e.g.

nightclubs) (Atkinson et al., 2014; Moreno et al., 2010; Rolando et al., 2016), being a fan of pages or groups (Moraes et al., 2014; Ridout et al., 2012), downloading applications to locate venues (Weaver et al., 2013), or forum discussions about consumption norms (Parder and Vihalemm, 2011).

Content research also indicates that depictions of positive consequences from alcohol consumption significantly outweigh suggestions of negative outcomes (Atkinson et al., 2014). Beullens and Schepers (2013), for instances, found that almost three quarters of alcohol-related content on social networking profiles framed consumption in a positive manner, compared to less than 4% which suggested negative outcomes. This positive and reinforcing framing is also reported in peer comments on social media (Atkinson et al., 2014; Beullens and Schepers, 2013), Twitter content (Cavazos-Rehg et al., 2014), smartphone apps (Eagle et al., 2014; Weaver et al., 2013), YouTube videos (Koff, 2013; Primack et al., 2015), and social networking groups (Posner and Wollersheim, 2011). Positive outcomes include suggestions of fun and humour (Atkinson et al., 2014), sociability and sexuality (Koff, 2013; Parder and Vilhalemm, 2015), emotional success (Moreno et al., 2010; Primack et al., 2015), and pleasant taste (Weaver et al., 2013). The themes which feature in less frequent suggested negative outcomes include cognitive, economic, emotional, legal, physical, and social consequences (Beullens and Schepers; Primack et al., 2015). It is suggested, however, that such outcomes are often still portrayed as a necessary aspect of depicting a desirable drinking identity and important part of recounting drinking stories (Atkinson et al., 2014; Griffiths and Casswell, 2010).

Concerning the broader associations which feature, content research suggests that user-created promotion provides de facto advertising for a range of alcohol brands including

beer, lager, cider, spirits, and wine (Koff, 2013; Mart et al., 2009; Morgan et al., 2010). Primack and colleagues (2015), for example, reported that 55 alcohol brands featured across the 70 videos they reviewed. Furthermore, user-created promotion is reported to associate alcohol consumption with a variety of social settings, including private homes, public spaces, pubs, colleges, universities, and nightclubs (Atkinson et al., 2014; Eagle et al., 2014). Several studies also provide evidence that consumption is positioned alongside other health risk behaviours, including smoking, drug use, violent behaviour, sexual activity, and injury (Koff, 2013; Kolek and Saunders, 2008; Moreno et al., 2007; Primack et al., 2015; Rolando et al., 2016).

3.5.3. Promoting higher-risk consumption and influence to young people

The final theme which is reported consistently in content research is that user-created promotion may encourage higher-risk consumption. First, studies suggest that higher-risk drinking or intoxication is presented as a normal and desirable behaviour, with Griffiths and Casswell suggesting that social networking websites have become '*intoxigenic digital spaces*' which reinforce and normalise '*intoxigenic social identities*' (2010; pg. 525). More specifically, it is reported that 33% of alcohol-related videos on YouTube feature binge drinking and 7% feature behaviour suggestive of dependent drinking (Primack et al., 2015); 54% of pro-alcohol content on Twitter refers to heavy drinking (Cavazos-Rehg et al., 2014); and 17% of personal profiles on social networking websites depict problematic drinking (Moreno et al., 2010). A general acceptance of higher-risk drinking is also reported in smartphone apps (Eagle et al., 2014; Weaver et al., 2013).

Content research also suggests that user-created promotion may appeal to those under the legal purchasing age by adopting formats such as games (Eagle et al., 2014; Weaver et

al., 2013), quizzes (Griffiths and Casswell, 2010), and humorous videos (Primack et al., 2015). Content may also appeal to young people by depicting individuals in their late teens, particularly in content uploaded to social networking websites by peers (Atkinson et al., 2014; Beullens and Schepers, 2013; Egan and Moreno, 2011; Fournier and Clarke, 2011; Moreno et al., 2010; Moreno et al., 2012; Morgan et al., 2010; Ridout et al., 2010). Promotion may also indirectly appeal to young people by associating alcohol with cultures and contexts which may resonate with these age groups. These include selfies (Atkinson et al., 2014), universities (Eagle et al., 2014), real-world events (Moreno et al., 2013), celebrities (Cavazos-Rehg et al., 2014), music artists (Primack et al., 2015), socially desirable identities (Griffiths and Casswell, 2010), and social events where young people may consume alcohol (e.g. house parties) (Parder and Vilhalemm, 2011).

It is also suggested that user-created promotion contains almost no age verification mechanisms to ensure that young people under the legal purchasing age are not exposed, nor any suggestions that alcohol should only be consumed responsibly or within stated lower-risk guidelines. On social networking websites, for example, exposure to the personal profiles of others is not subject to age verification, thus placing the responsibility of determining whether content is suitable to be shared with everyone in their network onto the profile owner. More broadly, Mart and colleagues (2009) reported that profiles under the legal purchase age in the US could access a range of publicly searchable content on social networking websites, including onsite applications (e.g. ‘*Collect Shots*’) and groups (e.g. ‘*Binge Drinking*’). Eagle and colleagues (2014) also reported a similar trend for the 282 smartphone apps analysed, none of which had age restriction measures.

3.5.4. Content research: Summary

In summary, content research suggests that user-created promotion features across new media and in a variety of styles and formats. Promotion also appears to be a normal part of young people's online experiences and is often positively received, particularly by peers on social media. The narratives and discourses that feature in such content promote alcohol both explicitly, by showing or encouraging an individual to drink, and implicitly by featuring contexts and cultures associated with consumption. Intoxication and higher-risk drinking are also displayed as normal and accepted behaviours. There are consistent suggestions that user-created promotion frames consumption, and the associated consequences, in a positive manner and may even create associations to other health risk behaviours. Even when negative outcomes are featured, they are still suggested to be a desirable or necessary part of telling a fun drinking story. Such content may also appeal to younger audiences by depicting those around the legal purchasing age, adopting designs popular in these age groups, featuring cultural associations that may resonate, and by having little or no effective processes to restrict exposure.

3.6. User-created promotion and consumption: Consumer and audience research

Consumer and audience studies, building on the effect suggested in content research (see 3.5), instead focus on the individual as the unit of the analysis and explore how exposure to user-created promotion influences knowledge, attitudes, and behaviour. This paradigm has many similarities to consumer research in alcohol marketing (see 2.7) and is also underpinned by the same four research designs: (1) experiments, (2) cross-sectional surveys, (3) longitudinal surveys, and (4) qualitative interviews and focus groups. This section reviews research using each of these designs and includes studies up to July 2016.

3.6.1. Experimental research

Three experimental studies are reported, all conducted in the US. The first investigated how normative beliefs and drinking intentions among 13-15 year olds ($n = 189$) were influenced by exposure to pro-alcohol messages on social networking profiles (Litt and Stock, 2011). Participants were divided into two conditions. Those in the test group spent 40 minutes viewing three profiles which depicted pro-alcohol references and one which did not. Those in the control condition viewed three profiles which had no alcohol references and one which did. The results suggested that exposure to pro-alcohol messages in the test group was positively associated with greater willingness to drink, with the effect mediated through drinking prototypes, attitudes, and perceptions of use (e.g. perceived vulnerability to negative effects or normative beliefs). A study with a small sample of US college students ($n = 57$) supported these findings, by demonstrating that young adults who viewed an alcohol-themed profile (compared to a neutral profile) perceived more frequent drinking among other college students (Fournier, Hall, Ricke and Storey, 2013). Most recently, Marczinski and colleagues (2016) switched the focus from intentions or perceived peer drinking to self-reported consumption. One-hundred and forty-six college students (mean age 19.59 years) completed a questionnaire about their alcohol-related Facebook activity in the past 30 days, under laboratory conditions. The results suggested that alcohol posting was positively associated with scoring on several scales, including the Alcohol Use Disorders Identification Test, Timeline Follow-Back Interview, and Personal Drinking Habits Questionnaire, even after controlling for personality constructs known to predict drinking (e.g. impulsivity and social desirability).

Several factors restrict the wider application of experimental findings. As with digital marketing (see 2.7.1), these limitations include: (1) not representing authentic exposure

conditions; (2) challenges in accurately reflecting the content and narratives in fictitious profiles; (3) uncertainty over whether the demographics or social contexts depicted in fictitious profiles appeal to the participants; (4) only providing evidence of a short-term effect; and (5) not accounting for variations in real-world social media use (e.g. thresholds of privacy). Furthermore, all three studies only focused on a handful of personal social networking profiles, created either by the individual (Marczinski et al., 2016) or perceived peers (Fournier and Clarke, 2013; Litt and Stock, 2011). Consequently, existing experimental research is likely to underestimate the influence of exposure to the full range of user-created promotion (see 3.3.2).

3.6.2. Cross-sectional surveys

Cross-sectional surveys compare the association between exposure to user-created promotion and self-reported knowledge, attitudes, and behaviour at a single time point. Seventeen studies are reported in this review, representing an aggregate sample of (see Supplementary File 6). Fourteen of the studies were conducted in the US, with one apiece from Australia, South Africa, and the Netherlands. Seven studies sampled only those under the legal purchasing age in their respective country, while the other ten studies sampled a mixture of those above and below. Fourteen of the studies explored awareness of, and participation with, specified forms of user-created promotion. This included personal social networking profiles (e.g. Glassman, 2012; Westgate, Neighbors, Heppner, Jahn and Lindgren, 2014), Twitter content (Canbreara-Nguyen et al., 2016), YouTube videos (Koff, 2013), and promotion across several websites (Morgan et al., 2010; Thompson and Romo, 2016). These fourteen studies also included a mixture of content created by the individual (e.g. Miller, Prichard, Hutchinson and Wilson, 2014; Rodriguez, Litt, Neighbors and Lewis, 2016) and by peers (e.g. Westgate et al., 2014).

Two of the remaining studies only measured general digital media use, not explicitly exposure to user-created promotion (Epstein, 2011; Kaufman et al., 2014). They are included nonetheless, as they provide insight into digital media that is not included in other studies (e.g. instant messaging). The final study provided participants with a vignette describing a fictitious profile which contained either user-created promotion or references to prosocial behaviour (D'Angelo, Zhang, Eickhoff and Moreno, 2014). Although exposure to fictitious profiles is typical of experimental studies (see 3.6.1), the data was collected through a cross-sectional telephone survey and not a laboratory environment. As such, it is treated as a cross-sectional survey in this review.

Cross-sectional surveys suggest that young people are aware of, and willing to participate with, a range of user-created promotion (Moreno et al., 2016b). For instance, 32% report posting pictures of themselves consuming alcohol on their social networking profiles (Morgan et al., 2010), 56% report posting pictures of their peers drinking (Glassman, 2012), and 83% are aware of pictures posted by others which depict peer drinking (Morgan et al., 2010). Furthermore, 34% are aware of others posting about alcohol on Twitter, 38% have posted themselves or followed an account which promotes drinking (Cabrera-Nguyen et al., 2016), and 39% report searching for or sharing alcohol-related content on YouTube (Koff, 2013). In addition to these estimates, Morgan and colleagues (2010) found that young people engaged with such content despite the majority (55%) also indicating negative attitudes towards it. Miller and colleagues (2014) found that young people perceived themselves to spend less time posting alcohol-related content than their peers. Thompson and Romo (2016) reported that young adults who perceived drinking to be an important part of their identity posted more alcohol content.

All seventeen studies also measured the association that exposure had with alcohol-related knowledge, attitudes, and behaviour. The results consistently suggested that exposure and participation was associated alcohol initiation, intentions to consume, frequency and quantity of consumption, heavy drinking, event-specific drinking, higher-risk drinking, alcohol-related injury, and alcohol problems (see Supplementary File 6). Studies which also measured the different ways that young people could engage with promotion suggested that participation (e.g. uploading photos) had a stronger association with consumption than passive awareness (e.g. seeing content uploaded by others) (Canbrera-Nguyen et al., 2016; Glassman, 2012; Westgate et al., 2014). Several studies also suggested that a hierarchy existed in how promotion influenced behaviour, with content such as wall posts having a stronger association with consumption than posting photos or status updates (D'Angelo et al. 2014), and Facebook having a stronger association than Twitter (Moreno et al. 2016b).

In line with the message interpretation process model (Austin et al., 2000), cross-sectional surveys also suggest that promotion may influence social cognitions which predispose consumption. For example, research has reported moderate positive associations between exposure to user-created promotion and drinking motives (Westgate et al., 2014), alcohol-related attitudes (Koff, 2013; Miller et al., 2014), and perceived alcohol-related identity or social norms (Thompson and Romo, 2016), while a negative correlation has been shown with anticipated adverse consequences or regret (Stoddard, Bauermeister, Gordon-Messer, Johns and Zimmerman, 2012). This evidence, however, has several unresolved issues. First, Miller and colleagues (2014) reported that exposure to user-created promotion was not a predictor of attitudes when controlling for own and peer consumption, despite a positive association in the exploratory analysis. Second, the

designs of some analyses fail to acknowledge the potential mediating role of cognitions. For instance, in the regression reported by Westgate and colleagues (2014) drinking motives were only included as a control variable, with the intention to show that promotion is more predictive of drinking than motives. This does not acknowledge that the initial effect user-created promotion may have on drinking motives could mediate the link with consumption, and not just moderate the strength and direction. As such, only tentative conclusions can be drawn from this research.

There are also several broader limitations of cross-sectional surveys. As they are unable to establish causality, it is possible that those who already drink may also be more involved in creating or viewing alcohol-related media. The studies have also had a narrow focus on social networking sites, with only a few studies having considered Twitter (Canbrera-Nguyen et al., 2016), instant messaging (Kaufman et al., 2014), video sharing (Koff, 2013; Morgan et al., 2010), or Instagram (Thompson and Romo, 2014). As such, cross-sectional research has yet to explore whether: (1) young adults are aware of, and participating with, user-created promotion outside social media; (2) certain channels are more likely to encourage participation and influence consumption than others; and (3) cumulative exposure to multiple channels has a stronger association with consumption than individual channels, a hypothesis supported in alcohol marketing research (Gordon et al., 2011; Lin et al., 2012).

3.6.3. Longitudinal surveys

Longitudinal surveys extend the findings of cross-sectional studies by examining the relationship between user-created promotion and consumption across multiple time points. Seven studies are reviewed, representing an aggregate sample of 4,932

(Supplementary File 7). Four of these studies reported on follow-ups from cross-sectional surveys (D'Angelo et al., 2014b; Moreno et al., 2014; Moreno, Cox, Young and Haaland, 2015; Pumper and Moreno, 2013). All seven studies were conducted in the US, mostly with young people entering college or university, and all seven sampled those under the legal purchasing age at both baseline and follow-up. All seven studies investigated social networking websites. One study also included online videos (Tucker, Miles and D'Amico, 2013) and another Instagram and Snapchat (Boyle et al., 2016). Six studies focused exclusively on user-created promotion, while one included examples within a wider assessment of exposure to all alcohol-related media (including television and marketing) (Tucker et al., 2013).

The findings of longitudinal studies support and enhance the results of cross-sectional surveys in several ways. The findings support that young people are aware of, and participating with, a range of user-created promotion (particularly on social media). The results extend understanding by indicating that reported exposure increased at one-year and two-year follow-up, particularly in drinkers (Moreno et al., 2014; Moreno et al., 2015; Pumper and Moreno, 2013; Tucker et al., 2013). Two studies also suggested that alcohol depictions become more severe over time, progressing from no references to those suggestive of higher-risk drinking (Moreno et al., 2014; Pumper and Moreno, 2013). Most longitudinal studies further suggest that user-created promotion is associated with frequency of consumption, quantity consumed in typical drinking occasions, and higher-risk drinking, with services like Snapchat and Instagram having the strongest influence (Boyle et al., 2016). Only one study has found no effect (Huang, Soto, Fujimoto and Valente, 2014). The results extend this understanding by suggesting a causal effect, even after controlling for demographic variables, peer consumption, and other alcohol-

related social cognitions (Boyle et al., 2016; D'Angelo et al., 2014). Finally, in support of the message interpretation process model (Austin et al., 2000), one study also suggested that the effect of user-created promotion was mediated through an initial influence on descriptive norms, enhancement motives, and perceived peer consumption (Boyle et al., 2016). This helps to move the debate on from whether the effect of promotion is mediated through cognitions and on to which psychological processes are the most important.

The findings of longitudinal research do have limitations and alternative hypotheses. Concerning sampling, the exclusive focus on young people in the US means that the findings cannot be generalised to other populations, while research has also only sampled those under the legal purchase age. Concerning measurement, only a narrow range of user-created promotion channels are covered, with only two studies considering broader media portrayals or convergent digital channels such as SnapChat and Instagram. Finally, alternative hypotheses for the reported effects include response bias at follow-up or consumption and engagement with promotion emerging because of other lifestyle changes, particularly in the transition to college or university.

3.6.4. Qualitative research

Qualitative research is important as, unlike surveys and experimental designs, it can provide insight into the social and cultural significance of user-created promotion and young people's understanding of the influence it has on behaviour. Ten studies are reported, representing an aggregate sample of 667 (Supplementary File 8). Seven studies were from Australia and New Zealand (e.g. Lyons et al., 2014), two from the US (Moreno, et al., 2009; Moreno, Grant, Kacvinsky, Egan and Fleming, 2012), and one

from the UK (Atkinson et al., 2014). Nine studies focused exclusively on social networking websites while one study focused on smartphone apps (Weaver et al., 2013). For eight studies, the sample comprised young people around the legal purchasing age in their respective countries, while two studies (both in the US) only focused on those below the legal purchasing age. All ten studies were based on interviews or focus groups. All but two (Moreno et al., 2009; Moreno et al., 2012) allowed participants to navigate their digital media throughout the interviews or focus groups, to provide examples of user-created promotion they had either created or had been exposed to.

Four key themes emerge from the qualitative research. First, all the studies found that young people were aware of, and willing to participate with, a variety of user-created promotion, particularly images documenting their own drinking occasions. The findings suggest that young people considered exposure, and the act of creating content, to be a normal and socially acceptable online activity (Atkinson et al., 2014; Goodwin, Griffin, Lyons, McCreanor and Moewaka-Barnes, 2016; Hebden, Lyons, Goodwin and McCreanor, 2015; Lyons et al., 2014; Niland, Lyons, Goodwin and Hutton, 2014; Tonks, 2012). Participants also reported engaging with promotion despite also acknowledging the risks, such as parents finding out they had been drinking or their content encouraging other adolescents to drink (Moewaka-Barnes et al., 2016; Moreno et al., 2009).

Second, the participants suggested that user-created promotion plays an instrumental role in peer appraisal, establishing social values, reinforcing group belonging, facilitating social exchanges, and establishing or maintaining a drinking identity (Atkinson et al., 2014; Goodwin et al., 2016; Hebden, Lyons, Goodwin and McCreanor, 2015; Lyons et al., 2014; Niland et al., 2014; Tonks, 2012; Weaver et al., 2013). The participants also

suggested that content is often posted in a chronological storytelling fashion to provide a socially desirable narrative to drinking. This includes photos from the pre-drinking phase, being tagged at a drinking venue, and uploading photos the following day to extend the drinking occasion (Atkinson et al., 2014).

Third, the participants indicated that they are selective in the content they upload to social media and establish careful boundaries of appropriateness and acceptability, which are informally negotiated with peers on an individual and collective basis (Tonks, 2012). Specifically, participants recall strategically managing or ‘airbrushing’ content to ensure that consumption is portrayed mainly as pleasurable, fun, desirable, and reinforcing of drinking identities (Atkinson et al., 2014; Goodwin et al., 2016; Moewaka-Barnes et al., 2016). This is not to suggest that depictions of drunkenness, or the negative outcomes, are absent in user-created promotion. When included, however, the participants – particularly young females – stressed that such behaviours should still be portrayed as glamorous, fun, exciting, or integral to recalling the drinking experience (Atkinson et al., 2014; Hebden et al., 2015; Lyons et al., 2014; Niland et al., 2014; Tonks, 2012).

Fourth, the participants suggested that the depictions of alcohol they see online are considered indicative of offline behaviour (Moreno et al., 2009). These normative beliefs are important as they contrast starkly with suggestions that content is airbrushed to portray consumption in a positive and socially desirable manner, and that they are not representative of negative outcomes (Atkinson et al., 2014; Goodwin et al., 2016; Moewaka-Barnes et al., 2016). Despite this, the participants also suggested that they perceived themselves to be more media savvy and less vulnerable to the effects of user-

created promotion than younger adolescents (Lyons et al., 2014; Moreno et al., 2009). This mirrors the findings of qualitative research into marketing (see 2.7.4).

3.6.5. Audience research: Summary

Audience research provides consistent evidence that young people are aware of, and participating with, user-created promotion. Although most studies have predominantly focused on personal social networking profiles, recent research has also included convergent media such as instant messaging, Twitter, videos, forums, and smartphone apps. Cross-sectional surveys further suggest that exposure is associated with a range of drinking behaviours, alcohol-related harms, and social cognitions which predispose consumption, while longitudinal surveys indicative that these effects are likely to be casual. Qualitative research further suggests that the relationship that young adults have with user-created promotion is more complex than suggested by the exposure-equals-consumption hypothesis. Not only are young adults content to participate, but doing so is a valued activity which provides tangible rewards in terms of social and cultural capital. It is also suggested in qualitative research that the practice of creating and engaging in promotion is a strategically managed process, in which the result is content that only presents consumption, and the associated outcomes, as desirable or positive.

3.7. The relationship between user-created promotion and commercial marketing

When user-created promotion is compared to digital marketing (Chapter Two) there are similarities that warrant discussion. To date, however, research has mostly only referred to the role of users in the marketing process or the simultaneous presence of both forms of promotion in online spaces (Griffiths and Casswell, 2010; Lyons et al. 2014; Lyons et al., 2017; Moreno et al., 2016a; Ridout, 2016; Westgate and Holliday, 2016). No study

has directly discussed the similarities between digital marketing and user-created promotion or attempted to define the relationship between the two. This section draws parallels between both types of content and proposes a model to explain how they co-exist and interact, both online and in the experiences of young people.

3.7.1. Similarities between alcohol marketing and user-created promotion

There are several similarities between marketing and user-created promotion. The first similarity is that both types of promotion feature prominently across a range of new media and often do so in the same digital spaces, including social networking (Atkinson et al., 2014; Mart et al., 2009), Twitter (e.g. Cavazos-Rehg et al., 2014; Nicholls, 2012), video sharing (e.g. Primack et al., 2015; Purves et al., 2014), and smartphone apps (Weaver et al., 2013). The second similarity is that both forms of promotion airbrush content to frame drinking as a fun, normal, enjoyable, and socially desirable activity (e.g. Atkinson et al., 2014; Griffiths and Casswell, 2010; Lyons et al. 2014; Nicholls, 2012; Niland, McCreanor, Lyons and Griffin, 2017). The third similarity is that both types of promotion may appeal to young people, both directly through design (e.g. games or videos) and indirectly by featuring cultures or associations which may resonate with younger age groups (e.g. Atkinson et al., 2014; Griffiths and Casswell, 2010; Lyons et al. 2014; Lyons et al. 2017). Finally, both marketing and user-created promotion are reported to contain content which may influence higher-risk consumption, for example by presenting drinking as a fun and desirable behaviour (Griffiths and Casswell, 2010; Lyons et al. 2014) or by featuring contexts associated with heavier alcohol use (Atkinson et al., 2014).

There are also similarities in how young people are exposed to such content and the association with knowledge, attitudes, and behaviour. For example, cross-sectional

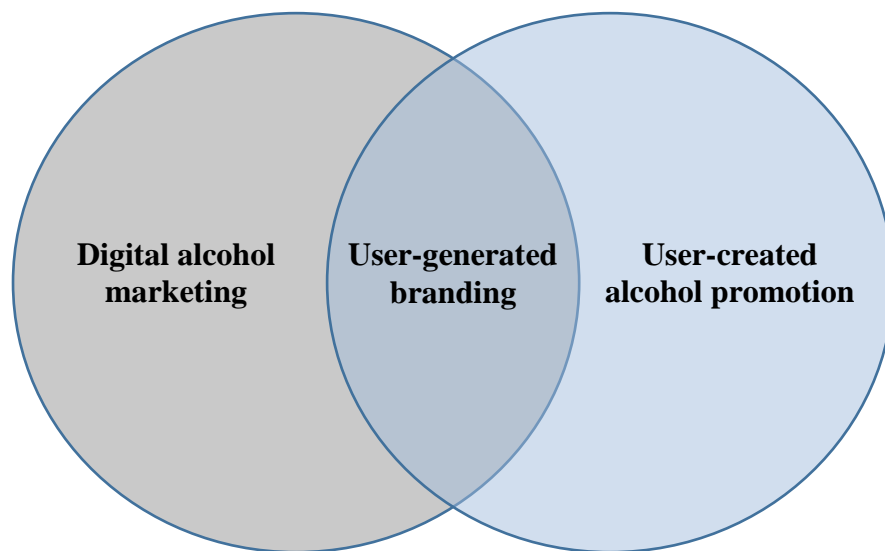
surveys find that young people report exposure to a range of digital marketing (de Bruijn et al., 2016a; Gordon et al., 2011) and user-created promotion (e.g. Morgan et al., 2010; Thompson and Romo, 2016), particularly on social media (Gupta et al., 2016). Qualitative research further indicates that young people consider exposure to both forms of promotion to be a normal and socially acceptable part of their online experience or drinking activities (Atkinson et al., 2014; Lyons et al., 2014; Purves et al., 2014; Moraes et al., 2014; Niland et al., 2017). Longitudinal surveys also report that exposure to both digital marketing and user-created promotion appears to have a causal influence on alcohol use (Boyle et al., 2016; Gordon et al., 2010b; McClure et al., 2016), while message interpretation research suggests that similar cognitions mediate the effect of both types of promotion (Boyle et al., 2016; Kenny, 2014; Litt and Stock, 2011; Fournier et al., 2013). Finally, qualitative studies suggest that both marketing and user-created promotion hold important social and cultural capital in terms of peer appraisal, social values, group belonging, and identity (Atkinson et al., 2014; Lyons et al., 2014).

3.7.2. A model of understanding

Despite evidence that digital marketing and user-created promotion co-exist in similar online spaces (e.g. Griffiths and Casswell, 2010; Moreno et al., 2016a; Westgate and Holliday, 2016), no research has clearly defined the relationship between the two. Building on the definition given for user-created promotion (see 3.3.1), this thesis therefore also provides a model that attempts to clarify this relationship (Figure 3.4). This model suggests that digital marketing and user-created promotion are separate entities that are produced by stakeholders who mostly have contrasting motivations for creating content (e.g. financial and social). This model also suggests that some user-created promotion intends to promote drinking without explicitly promoting an alcohol brand

(e.g. photos of peers), while some marketing does not require users to co-produce content (e.g. on-demand television adverts). The model suggests, however, that there are instances where users may choose to be involved in the marketing process or where marketers may realise the potential of user-created promotion to boost marketing goals. For example, the popular video-blogger ‘Topsy Bartender’ has previously worked in collaboration with Diageo (StreamDaily, 2014), while user-comments on social media are considered an influential way of extending and enhancing marketing messages (Gordon et al., 2010c; Carah, 2014). By doing so, this model also accounts for the presence and importance of user-generated branding (Arnhold, 2010). From a theoretical perspective, this model is also consistent with consumer socialisation theory, which suggests that young people are socialised as alcohol consumers through a combination of commercial marketing and social influences (Harris et al., 2015).

Figure 3.4. The relationship between digital marketing and user-created promotion



3.8. User-created alcohol promotion: A research agenda

Despite growing evidence of a link between user-created promotion and consumption, there remain gaps in understanding that would benefit from further investigation. These

include: (1) exploration of user-created promotion through a broader range of new media; (2) detailed consideration of the trends which underpin the relationship between user-created promotion and consumption; (3) further consideration of the psychological mechanisms which help to explain the influence of user-created promotion; (4) objective comparisons between user-created promotion and commercial digital marketing; and (5) greater focus on young adults in the UK. These issues are now reviewed, thus providing a research agenda for this thesis.

3.8.1. Exploring user-created promotion in a broader range of contexts

A key limitation of past research is that it has tended to focus on a narrow range of user-created promotion, partly due to inevitable lags between technological advances and the time needed to conduct research (Westgate and Holliday, 2016). Audience research has mostly only explored social networking websites, particularly personal or peer content on Facebook. Although some studies have considered other new media (e.g. smartphone apps) understanding of these alternative channels still lacks the detail that characterises research into Facebook. Despite broader coverage of user-created promotion in content research, several channels have still been overlooked or under-researched (e.g. viral videos and multimedia messaging). As such, it is likely that existing research not only underestimates young people's awareness of, and participation with, user-created promotion, but also the subsequent impact it has on knowledge, attitudes, and behaviour.

3.8.2. Trends in user-created promotion exposure and influence

The specific relationship between exposure to user-created promotion and behaviour remains poorly understood, meaning that additional research is needed. Marketing research has highlighted the importance of dividing exposure into awareness and

participation, as the latter is reported to have a stronger influence on consumption (Gordon et al., 2011; Lin et al., 2012). Although some audience research provides evidence that a stronger effect of participation also applies to user-created promotion (Canbrera-Nguyen et al., 2016; Westgate et al., 2014), this understanding remains isolated to social media. Marketing research also suggests that the influence on behaviour is best understood when cumulative exposure to all promotion channels is considered. The only attempts to explore a cumulative effect for user-created promotion are audience studies which have measured awareness of, and participation with, multiple forms of content on social networking websites (Stoddard et al., 2012; Thompson and Romo, 2016; Westgate et al., 2014). When combined with the limited coverage of promotion channels, it is likely that existing audience research underestimates the association between user-created promotion and knowledge, attitudes, and behaviour.

3.8.3. Understanding the psychological processes

The message interpretation process model suggests the ways that young people interpret media narratives can be instrumental in explaining the effect on behaviour (Austin and Knaus, 2000). Understanding this process is important as it helps to move the debate away from whether content is associated with consumption and onto how and when this influence occurs. Audience research has found that exposure to user-created promotion on social media is associated with drinking prototypes (Litt and Stack, 2012), drinking motives (Westgate et al., 2014), attitudes (Koff, 2013), and normative beliefs (Boyle et al., 2016). Qualitative research further suggests that user-created promotion also holds social and cultural capital, represents an important component in identity construction, and is perceived to display normative behaviours (Atkinson et al., 2014; Goodwin et al., 2014; Lyons et al., 2014; Moreno et al., 2009). Given the important role that

psychological processes appear to play, there is clearly a need for further research to explore how user-created promotion may influence social cognitions, and the role played by content beyond social media.

3.8.4. Broader sampling focus

Most audience research has only focused on young adults in the US, particularly those in higher education, meaning that there is a need to investigate the influence of user-created promotion in new populations (Westgate and Holliday, 2016). One population which remains underexplored is young people in Europe, particularly those around the legal drinking age in the UK. To date, only two studies have focused on this population, with one exploring the role of alcohol in young people's personal social media use (Atkinson et al., 2014) and the other exploring participation in the NekNominate drinking game (Wombacher et al., 2016). The reasons why young adults in the UK may be particularly vulnerable to user-created promotion (e.g. high internet use and higher-risk drinking) are discussed in Chapter One (see 1.3 and 1.4) and Chapter Two (see 2.8.4).

3.8.5. Comparing digital alcohol marketing and user-created promotion

Although some research has explored the role of users in the marketing process (Griffiths and Casswell, 2010; Moreno et al., 2016a; Nicholls, 2012; Westgate and Holliday, 2016), this reflects user-generated branding rather than user-created promotion (see 3.3 and 3.7). Other research has measured behaviour towards digital channels that are likely to contain both user-created promotion and digital marketing, but without distinguishing between the two types of content (Epstein et al., 2011; Tucker et al., 2013). Several studies have also referred to the simultaneous presence of user-created promotion and marketing in the same online spaces (Atkinson et al., 2014; Griffiths and Casswell, 2010; Lyons et al.,

2014; Mart et al., 2009; Moraes et al., 2014; Weaver et al., 2013), yet none have provided a direct comparison. This means that there is still limited knowledge about the similarities and differences between marketing and user-created promotion, the relationship between the two, and the combined association they have with knowledge, attitudes, and behaviour. This absence of combined investigation also means that current research is likely to underestimate the overall influence of digital media on young people.

3.9. Conclusions

This literature review draws several key conclusions. First, internet users are using digital media to create and engage with messages which promote alcohol consumption, independent of commercial marketing. This is defined as user-created promotion. Second, content research suggests that such user-created promotion features consistently across a variety of digital media, frames higher-risk alcohol use as a socially acceptable and normal behaviour, and may appeal directly or indirectly to young people. Third, audience research suggests that young people are aware of, and participating with, a variety of user-created promotion, and that such exposure is associated with alcohol-related knowledge, attitudes, and behaviour. Fourth, there are similarities between user-created promotion and digital marketing, and there appears to be an important relationship between the two which requires further investigation. Combined with other important gaps in understanding, there remain some clear areas for further investigation which provide a research agenda for this thesis.

Part Two: Methods

Chapter 4: General methods

4.1. Introduction

The research reviewed in Chapters Two and Three suggested that digital marketing and user-created promotion may influence alcohol-related knowledge, attitudes, and behaviour in young people. Despite recent research developments, there remain several gaps in understanding for digital marketing and user-created promotion that would benefit from further investigation. These gaps include a narrow focus on marketing and user content on social media, a lack of research exploring the influence that such content has on young adults in the UK, limited understanding of the psychological processes which help to explain the relationship between exposure and consumption, and no direct comparison of digital marketing and user-created promotion. Chapter Four outlines the mixed method study that was used to respond to these gaps in understanding. The chapter begins with an overview of the research questions and hypotheses (4.1 and 4.2), the critical social marketing framework used (4.3), and the project design (4.4). It then discusses the methods and ethical considerations for study one – the content analysis (4.5) - and study two – the online cross-sectional survey (4.6).

4.2. Project overview

4.2.1. Funding and support

The Salvation Army UK and Ireland funded this project as part of their alcohol strategy and research into the determinants of health in young people (Bonner et al., 2008; Salvation Army UK, 2004; 2006). The project received support from several Salvation Army divisions, including their national youth office (ALOVE!) and Scottish Drug and Alcohol Strategy Group. The first 14 months of the studentship were conducted at the Centre for Child and Adolescent Health and Wellbeing, University of Roehampton. In

January 2015, the studentship was transferred to the Institute for Social Marketing, University of Stirling.

4.2.2. Research questions

The overall aim of this study was to explore how alcohol is promoted online through digital alcohol marketing and user-created promotion, and what association (if any) exposure has with the alcohol-related knowledge (e.g. brand name recall), attitudes, and behaviour of young adults.

This overall aim was divided into seven specific research questions (RQ). The parentheses indicate which chapter and study that each question is addressed in:

RQ1: How is alcohol marketed online by the alcohol industry and what messages does such marketing suggest about consumption? (Chapter 5 – Content analysis).

RQ2: How is alcohol use encouraged by user-created promotion and what messages does such content suggest about consumption? (Chapter 5 – Content analysis).

RQ3: What are the similarities and differences between digital marketing and user-created promotion and the messages suggested about consumption? (Chapter 5 – Content analysis).

RQ4: What is the extent of young adult's awareness of, and participation with, digital marketing and user-created promotion? (Chapter 6 – Cross-sectional survey).

RQ5: What association (if any) does awareness of, and participation with, digital marketing and user-created promotion have with alcohol consumption and alcohol brand name recall? (Chapter 6 – Cross-sectional survey).

RQ6: What association (if any) does awareness of, and participation with, digital marketing and user-created promotion have with drinking motives and outcome expectancies, and how do these social cognitions contribute to understanding of the relationship between exposure and consumption? (Chapter 7 – Cross-sectional survey).

RQ7: What are the similarities and differences in young adult's awareness of, and participation with, digital marketing and user-created promotion, and the subsequent association with alcohol consumption, alcohol brand name recall, drinking motives, and outcome expectancies? (Chapters 6 and 7 – Cross-sectional survey).

4.2.3. Hypotheses

The research questions were converted into 11 hypotheses. Although most of these were directional, three were null (H6, H9 and H11) due to a lack existing research comparing digital marketing and user-created promotion from which to draw directional predictions. The parentheses indicate which chapter and study each hypothesis is addressed in:

H1: Digital marketing will contain content and messages about alcohol that may appeal to young adults and encourage consumption (Chapter 5 – Content analysis).

H2: User-created promotion will contain content and messages about alcohol that may appeal to young adults and encourage consumption (Chapter 5 – Content analysis).

H3: There will be differences in the design features, topical associations and messages suggested about alcohol in digital marketing and user-created promotion (Chapter 5 – Content analysis).

H4: Young adults will be aware of, and participating with, digital marketing and user-created promotion (Chapter 6 – Cross-sectional survey).

H5: Higher-risk drinking will be associated with greater awareness of, and participation with, digital marketing and user-created promotion (Chapter 6 – Cross-sectional survey).

H6: There will be no difference in awareness of, and participation with, digital marketing and user-created promotion [null hypothesis] (Chapter 6 – Cross-sectional survey).

H7: Greater awareness of traditional marketing and greater awareness of, and participation with, digital marketing and user-created promotion will be associated with alcohol use, higher-risk drinking, brand name recall, and drinking intentions (Chapter 6 – Cross-sectional survey).

H8: Participation with digital marketing and user-created promotion will have a stronger association with alcohol use, higher-risk drinking, brand name recall, and drinking intentions than awareness of digital marketing and user-created promotion (Chapter 6 – Cross-sectional survey).

H9: There will be no difference in the association between digital marketing or user-created promotion and alcohol consumption, higher-risk drinking, brand name recall, and drinking intentions [null hypothesis] (Chapter 6 – Cross-sectional survey).

H10: The association between digital marketing, user-created promotion, and alcohol use will be mediated through an association with drinking motives and outcome expectancies (Chapter Seven – Cross-sectional survey).

H11: There will be no difference in the drinking motives and expectancies which mediate the association between digital marketing and alcohol use and the drinking motives and expectancies which mediate the association between user-created promotion and alcohol use [null hypothesis] (Chapter Seven – Cross-sectional survey).

4.3. Research framework: Critical social marketing

There are several research and theoretical frameworks which may be employed to investigate how media content influences behaviour (Bryant and Oliver, 2009; Moyo, 2014; Wimmer and Dominick, 2010). For example, the theories of reasoned action and planned behaviour have been used to explore how marketing can positively influence the expected outcomes following consumption, which in turn predict intentions to drink (de Bruijn et al., 2012; Fleming et al., 2004). Message framing theory has been used to explore how newspaper and television coverage may shape public opinions about alcohol (Nicholls, 2011b). There are also frameworks that specifically involve the social and reflexive critique of marketing theory and practice, for instance critical marketing (Tadjewski and Brownlie, 2008; Tadjewski, 2014) and consumer socialisation theory (Harris et al., 2015). The framework chosen for this investigation was critical social

marketing. This is defined as ‘*critical research from a marketing perspective on the impact commercial marketing has upon society*’ (Gordon, 2011d; pg. 90).

The development of critical social marketing owes much to the related field of social marketing, a framework which investigates how marketing practices and principles can be used to induce behaviour change for social good or health benefit (Dann, 2010; Hastings, 2013). Critical social marketing, however, differs from its social marketing hinterland as it does not focus on changing individual behaviour, but instead seeks to identify the factors which generate health risk behaviours in the first place (French, 2009; Gordon, Russell-Bennett and Lefebvre, 2016; Hastings, 2009; Lazer and Kelly, 1973; Truong, 2014). Based on Wallack’s (1990) river metaphor, critical social marketing is therefore best understood as identifying the factors which lead an individual to enter a fast-flowing river (upstream activity such as marketing) as opposed to finding ways to assist them after they have fallen in (downstream activity such as brief interventions).

A critical social marketing approach was selected for three reasons. First, research has shown that it is an effective framework for investigating the impact of alcohol marketing on young people’s drinking (Farrell and Gordon, 2012; Gordon, 2011d; Hastings, 2009). Second, critical social marketing is not dependent on a single theory. Instead, it is an applied and conceptual framework in which the contributions of many theories and disciplines are consolidated (e.g. psychology, marketing, sociology, and communication theories) (Gordon, 2011d). This provides a rationale to use a range of methods to answer the research questions (e.g. to investigate both marketing content and the associations with behaviour). Third, investigation of user-created promotion is not clearly linked to a set of theories or research methods in the same way that marketing has been (Chaffey and

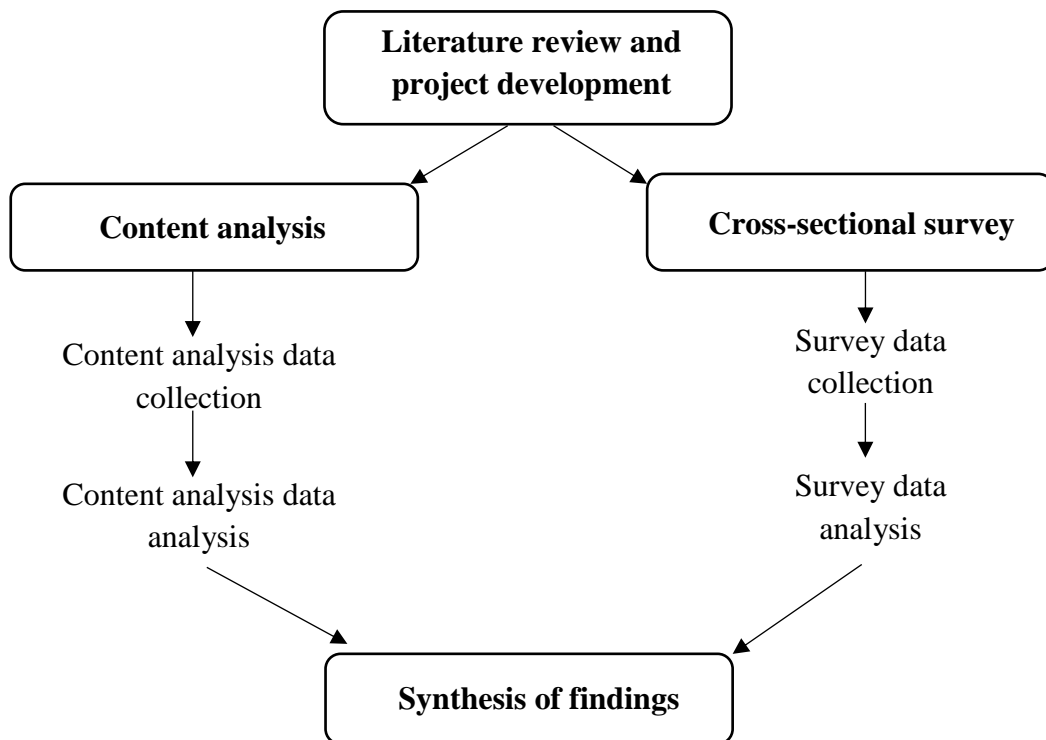
Ellis-Chadwick, 2012; Kotler and Keller, 2016). Critical social marketing therefore provides a means of applying the knowledge garnered from marketing research to structure investigation of the conceptually similar construct of user-created promotion.

4.4. Research design: Concurrent mixed methods

A concurrent mixed methods design was employed, incorporating the two main approaches used to investigate digital marketing (content analysis and consumer research) and user-created promotion (content analysis and audience research) (Figure 4.1). Study one was a content analysis of digital marketing and user-created promotion. This explored audience engagement, content design, framing of alcohol messages, and to whom the content may appeal. Study two was a cross-sectional survey. This explored awareness of, and participation with, digital marketing and user-created promotion, and what association (if any) there was with alcohol-related knowledge, attitudes, and behaviour in young adults.

Concurrent mixed method designs have been employed in previous investigations of marketing and user-created promotion, including studies which have used a combination of content analysis and consumer or audience designs (e.g. Atkinson et al., 2014; 2016 Lyons et al., 2014; Purves et al., 2014). One of the primary benefits of this approach is that findings can be synthesised to use the strengths of one to transcend the limitations of the other (Johnson, Onwuegbuzie and Turner, 2007). This means, for example, the content analysis could be used to generate hypotheses which help to explain how digital marketing and user-created promotion may influence knowledge, attitudes, and behaviours, should such an association be reported in the cross-sectional survey.

Figure 4.1. Schematic of the concurrent mixed methods research design



The remainder of this chapter provides an overview of the methods used in the content analysis and cross-sectional survey. To allow for simpler interpretation of the results, more specific details about each method (e.g. the statistical analysis processes) are reported with the results in Chapters Five (5.3), Six (6.3) and Seven (7.3). To avoid repetition, and prevent overlap, the remainder of this chapter therefore only provides a general overview of the design of each study, the rationale behind each measure used, and the ethical considerations.

4.5. Study One: Content analysis

4.5.1. Aim

The aim of study one was to explore digital marketing and user-created promotion in terms of consumer and audience engagement, design features, topical references, and the messages suggested about alcohol use. It addresses research questions and hypotheses 1-

3 (4.2.2 and 4.2.3). The study also aimed to explore why, and how, content may influence alcohol-related knowledge, attitudes, and behaviours, thus providing a point of reference for the cross-sectional survey. This study builds on previous research by using a larger sample of digital marketing and user-created promotion, exploring website features that have been under-researched (e.g. user-created Facebook pages), and directly comparing digital marketing and user-created promotion.

4.5.2. Design

A content analysis design was employed, which uses the media output as the unit of analysis and seeks to examine the characteristics and design of content, messages suggested, and audience appeal (Kassarjian, 1977; Krippendorf, 2004; Neuendorf, 2002; Sayer, 1992). The method has several benefits: (1) it is unobtrusive and provides an accurate reflection of real-world content; (2) it is free from the bias of direct methods of enquiry, for example interviews with content creators; (3) it is flexible and can incorporate a combination of quantitative and qualitative methods; and (4) it can analyse a range of communications styles, including images, textual references, and the context in which the content is placed.

Content research into digital marketing and user-created promotion has typically adopted two approaches, exploratory and inferential. Although both are descriptive in nature, they differ in their approach to collecting and analysing data. Exploratory studies employ a bottom-up approach which can generate descriptive insight into digital media channels for which there is limited understanding. These studies mostly adopt qualitative methods and allow the analysis to be driven by the data rather than a priori hypotheses. Examples include narrative reviews (Chester et al., 2010), case studies (Brooks, 2010; Nicholls,

2012), and cyberethnographic or discourse analyses (Carroll and Donovan, 2002; Griffiths and Casswell, 2010; Parder and Vilhaleem, 2015). Inferential designs instead employ top-down approaches, whereby prior research questions and hypotheses drive decisions about data collection and analysis. Studies of this nature often adopt quantitative methods and include recording content against a predefined codebook of variables (e.g. Gordon, 2011c; Primack et al., 2015) or by measuring the extent to which marketing complies with regulations (e.g. Carah et al., 2015).

Both exploratory and inferential approaches have been used to research digital marketing and user-created promotion (2.6 and 3.5). Given the relative benefits of each, this study employed a design that combined elements of both. The study was principally based on a top-down inferential analysis, driven by quantitative coding. This meant that a larger sample of content could be analysed and an empirical comparison of marketing and user-created promotion was possible. Despite the benefits of a quantitative approach, sole reliance on this method would not easily allow new themes to emerge from the data. To compliment the quantitative coding, a qualitative thematic analysis was also employed. The combined use of quantitative coding and qualitative thematic interpretation is supported by the use of similar designs in previous research (e.g. Atkinson et al., 2014; Gordon, 2011c). Carah and colleagues (2015), for example, combined quantitative coding about whether alcohol brand Facebook posts complied with marketing regulations with qualitative thematic evaluation of reported violations (e.g. excessive consumption).

4.5.3. Sampling strategy

4.5.3.a. Websites analysed

Content analysis research has typically followed trends in website popularity, with early studies focused on ‘dotcom’ websites (CAMY, 2004; Carroll and Donovan, 2002) and

recent studies focused on social networking and media sharing websites (Carah et al., 2015; Moares et al., 2014; Moreno et al., 2016b). Recent research has also begun to analyse multiple websites to better reflect the ways that users behave online (Atkinson et al., 2016; Nicholls, 2012; Purves et al., 2014; Winpenny et al., 2014). This study analysed three social media websites that are popular with young people, which contain a mixture of marketing and user-created promotion, and are reflective of different online behaviours (e.g. social networking and video sharing). The rationale for selecting each website, and specific content, is now described.

Facebook.com: This is a free-to-use social networking website which allows individuals and organisations to create profiles or pages, upload photos and videos, and interact with others. Facebook was chosen because it is the most popular social media website for 16-24 year olds in the UK, with 80% of social media users naming Facebook as their main profile (OFCOM, 2016). This age group also have a greater likelihood than older internet users to undertake many activities on Facebook (e.g. instant messaging or sharing photos) (OFCOM, 2016). On Facebook, only pages were considered. A Facebook page is a public profile created for businesses, brands, celebrities, causes, and other organisations. Unlike personal profiles, pages gain ‘fans’ (instead of ‘friends’) which are people who choose to ‘like’ the page. Pages work similarly to profiles by updating ‘fans’ with statuses, links, events, photos, and videos (Facebook, 2017d; 2017e). This information appears on the page itself and in the personal news feed of those who have ‘liked’ the page. Posted content can also be used as the basis of paid advertising that is ‘pushed’ into the news feed of users who are not already fans (Facebook, 2017f). Although both marketing and user-created promotion can exist in other formats on Facebook (e.g. apps), these were not considered unless part of a page. Pages were chosen as research indicates that they are

one of the main sources of alcohol marketing on Facebook (Atkinson et al., 2014; Carah, 2014; Nicholls, 2012). Pages were also chosen for user-created promotion because, despite their commercial intention, a pilot assessment and review of research highlighted that pages are also used in a pejorative or parodic fashion to promote alcohol without brand affiliation, thus making them ideal for a comparison (Mart et al., 2009). An example is provided in Appendix 3.

Twitter.com: This is a free-to-use microblogging website based on messages of 140 characters or less (including photos and videos). Messages can come from accounts run by other individuals (e.g. celebrities and peers) or organisations (e.g. retailers). Individuals can also create profiles to subscribe to updates, post tweets, or interact with content (e.g. retweeting and ‘liking’). Twitter was chosen because, at the point of study design, it was the second most popular social media website for 16-24 year olds in the UK, with 40% of social media users having an account (OFCOM, 2015a)². Although research into user-created promotion has typically focused on individual tweets from different accounts (Cavazos-Rehg et al., 2014; West et al., 2014), this study employed the approach of marketing research which was to sample a collection of tweets from specific accounts (Atkinson et al., 2014; Purves et al., 2014). An example is provided in Appendix 4. This study did not consider individual tweets, media results or compilations of trending topics (‘Moments’), unless featured as part of a page (Twitter, 2017c).

YouTube.com: This is a free-to-use video sharing website where users can watch, comment and rate videos uploaded by others, or can create their own channel to upload

² The latest adult media use and attitudes report (OFCOM, 2016) shows that the proportion of 16-24 year olds who have a profile on Instagram (47%) and WhatsApp (39%) is now greater than Twitter (38%).

content and create playlists. This website was chosen as 91% of 16-24 year olds who use the internet to watch videos, report doing so on YouTube (OFCOM, 2016). This study mirrored the approach employed in previous research by focusing only on individual videos as the unit of analysis (Brooks, 2010; Primack et al., 2015; Rolando et al., 2016). An example is provided in Appendix 5. Examples of excluded content include user channels (e.g. collections of videos uploaded by one user), films and television programmes which can be rented through the website, and playlists (e.g. collections of videos compiled by a user).

4.5.3.b. Sampling digital alcohol marketing

There were two key decisions for sampling digital marketing: (1) how to select the brands to sample and (2) how many brands were needed for a representative sample. Concerning the first decision, previous research suggests several strategies. These include selecting brands popular with young people (Atkinson et al., 2014; Barry et al., 2015a), brands with large online followings (Burton et al., 2013; Carah, 2014), trade press suggestions (Carroll and Donovan, 2002), databases from related studies (Nhean et al., 2014; Winpenny, 2014), computer algorithms (Williams and Schmidt, 2014), brands selected by government committees (Brooks, 2010), narrative reviews without an explicit sampling strategy (Chester et al., 2010), and studies which have used a combination of these strategies (CAMY, 2004; Purves et al., 2014).

This study used sales data to select brands (Gordon, 2011c; Jones et al., 2014; Nicholls, 2012). This provided an objective method of sampling and allowed inclusion of brands which are popular in different demographic groups, not just young people (e.g. wines). Access to such data, however, is costly. For the UK, access costs a minimum of £575 for

beer market information (KeyNote, 2015), £330 for top line beverage sales data (Nielsen, 2016), or £1,582 for a comprehensive summary of sales (Euromonitor, 2016). Sales data, however, can also be captured by proxy through the trade press. One example is *The Grocer*, an established trade magazine which reports on the UK's fast moving consumer goods sector. Each year this magazine publishes a feature on the Top 100 alcohol brands in the UK using the annual sales (£) and growth data (+/-), reported by Nielsen, as the basis for ranking. This annual report was used as a basis for the sample, with the 2012 rankings the most recent at study design (Bamford, 2012) (see Supplementary File 9).

The second decision was how many brands would be needed for a representative sample. Research shows considerable variability, ranging from four (Brooks, 2010) to 898 (Nhean et al., 2014). Broadly, there is a negative relationship between sample size and level of detail. The largest sample, for example, only explored how many brands had a presence on Facebook, and did not consider specific content (Nhean et al., 2014). In contrast, studies with smaller samples typically provide detailed analysis (e.g. Nicholls, 2012) but findings cannot be broadly generalised. At the mid-point, however, there appears to an intersection where moderately large samples are retained (e.g. $n = 40$ in Gordon, 2011c; $n = 80$ in CAMY, 2004), yet quantitative codebooks still provide a method to capture a suitable volume of descriptive detail. As this study also used a predominantly quantitative design, all 100 brands from the sampled list were included, although not all were present on the three websites (see 5.3.3.a).

4.5.3.c. Sampling user-created promotion

The two decisions relevant to marketing, choosing an appropriate sampling strategy and ensuring a representative sample, also apply to user-created promotion. Two sampling

approaches have been employed in most content research into user-created promotion. The first is to recruit participants who are willing to provide access to their personal social media profiles (e.g. Atkinson et al., 2014; Moreno et al., 2016b). While this approach does provide detail about how individuals interact with user-created promotion, as previously noted, there is a need to explore beyond personal profiles (see 3.8.1). The alternative approach, as used in this study, is to search for public content using alcohol-specific keywords through the on-site search engines. This method has been used to study user-created promotion across digital media, including the three websites in this study (Cavazos-Rehg et al., 2014; Mart et al., 2009; Primack et al., 2015). This approach has several benefits. It can standardise content across websites, it is sensitive to the semantics of how different groups describe alcohol, keywords can be tailored to reflect different alcohol behaviours (e.g. social drinking or excessive drinking), and the number of keywords can be increased to ensure a suitable sample size. The keywords used in this study were ‘*alcohol*’, ‘*beer*’, ‘*binge drinking*’, ‘*booze*’, ‘*drinking*’, ‘*drunk*’, ‘*tipsy*’, ‘*vodka*’, ‘*wasted*’ and ‘*wine*’, and are consistent with those used in previous research (Mart et al., 2009; Moraes et al., 2014; Primack et al., 2015).

Concerning sample size, research into user-created promotion has typically managed to recruit moderately large samples without compromising on detail (see Supplementary File 5). Research into substance-related videos on YouTube (e.g. alcohol and water pipes³) suggests that 70 or more videos is a sufficient sample size, providing a suitable range of keywords are used to cover different behaviours (e.g. drunkenness and partying) (Carroll, Shensa and Primack, 2013; Primack et al., 2015). As this figure is also close to

³ A water pipe is a device used to smoke tobacco and cannabis.

the number of alcohol brands that were included in this study ($n = 100$) it was decided to extract at least 100 cases per website to match the marketing sample.

4.5.3.d. Content sampled on each website

The content captured on each website varied due to differences in design and function, for example Facebook is designed to accommodate many types of content – such as photos and apps – whereas YouTube is designed only around videos. Despite this, it was important that the content collected for marketing and user-created promotion was standardised, both within and across websites, to allow for comparison. This section provides an overview and rationale of the content collected on each website. More specific details are reported in Chapter Five (5.3.4 and Table 5.1).

Facebook: Research into digital marketing and user-created promotion on Facebook has employed several sampling strategies. Examples include all posts over a set time (e.g. one week) (Moreno et al., 2016b; Nicholls, 2012; Purves et al., 2014), all content published since the page was created (Carah, 2014; Moreno et al., 2012; Posner and Wollersheim, 2011), and random samples of content (Carah et al., 2015). These approaches, however, are unsuitable for comparing marketing and user-created promotion. A pilot assessment to inform this study indicated that marketing pages posted more content than user-created pages, and did so more frequently and consistently. Consequently, recording all content since a page was created, or during a set time could upwardly bias the amount of marketing content available to analyse, while a random sample could bias any comparison as some content may coincide with peak drinking periods and others may not. This study therefore developed a systematic approach to sampling which included all fixed page features (e.g. biography), all tabs (e.g. photo

gallery and apps), and the 10 most recent author-generated posts (Table 5.1 for definitions). Content shared from other pages, comments made by users in response to posts, and comments made by administrators in response to users were excluded. This was because the study only aimed to analyse the content initiated by page administrators, not how they were interpreted or influenced by others (e.g. user-generated branding).

Twitter: Research into digital marketing and user-created promotion on Twitter has mostly sampled individual tweets over a set time (Cavazos-Rehg et al., 2014; Purves et al., 2014; Winpenny et al., 2013). Like Facebook, however, this method would upwardly bias the amount of information available to analyse towards more active accounts, or may create biases if some content coincided with periods associated with heavier consumption. This study therefore adopted a modified version of the approach for Facebook, which included fixed features on an account (e.g. display photo, biography), tabs (e.g. media gallery), and the 10 most recent author-generated tweets (Table 5.1 for definitions). As per Facebook, content shared from other accounts (e.g. retweets), posts made in response to users, and comments made by other users were excluded.

YouTube: Research into digital marketing and user-created promotion on YouTube has typically focused on individual videos (Cranwell et al., 2015; Cranwell, Britton and Bains, 2016; Koff, 2013; Purves et al., 2014; Primack et al., 2015). Consequently, this approach was also employed in this study. This method also suited the use of keywords to select user-created promotion as only individual videos were displayed in the search results, not channels with multiple videos. Mirroring the approach on Twitter and Facebook, this study also recorded all the fixed features that were present when first

opening the video (e.g. video description) (see Table 5.1 for details). As per Facebook and Twitter, comments posted by other users in response to the video were not collected.

4.5.4. Coding protocol and measures

4.5.4.a. Approaches from previous research

Content research into digital marketing and user-created promotion has typically recorded three categories of information. The first is audience size and participation. The second is design features, topical references, and ethical practice (Atkinson et al., 2014; Carah, 2014; Gordon, 2011c; Nicholls, 2012; Primack et al., 2015; Weaver et al., 2013). The third is the messages that are suggested about alcohol use, which can be used to predict how content might influence knowledge, attitudes, and behaviour (Carah, 2014; Carah et al., 2015; Cavazos-Rehg et al., 2014; Primack et al., 2015). All three categories are considered in this study, with a separate coding pro-forma for each. This section describes the three pro-forma and the rationale for the topics included.

4.5.4.b. Pro-forma one: Audience size and participation

Analytics for social media, many of which are publicly displayed alongside content, provide a way of quantifying the popularity of marketing and user-created promotion, and the level of audience participation. These metrics can apply to overall cases (e.g. Facebook page likes) or to specific items within (e.g. an individual Tweet). These variables are ideal for comparison both within marketing and user-created promotion (i.e. between brands and keywords), and between the two types of content. To avoid repetition, the full definitions of each item measured in pro-forma one are reported in Chapter Five (see 5.3.4.a).

4.5.4.c. Pro-forma two: Design features, topical references, and ethical practice

Three categories of information are typically recorded about the appearance and content of marketing and user-created promotion: (1) design features, (2) topical references, and (3) ethical practice. Design features provide insight into the appearance of content and the ways that an audience may engage (e.g. games). Topical references provide insight into who the content may be targeted towards and how it may appeal (e.g. associations with sport). Ethical behaviour explores what attempts the content creators make to mitigate any harmful effects (e.g. promoting lower risk drinking). The second pro-forma was therefore divided into three sections which addressed each relevant area. The 20 items included in pro-forma two were based on features reported frequently in previous research, those most applicable to the three websites, and those relevant to the research questions. Examples included ‘Content has online playable game(s)’ or ‘Content includes reference to a real-world event or story’. To avoid repetition, the definitions of each item measured in pro-forma two are reported in Chapter Five (Table 5.2).

4.5.4.d. Pro-forma three: Messages suggested about alcohol

Research suggests two ways of assessing the messages suggested about alcohol in digital marketing and user-created promotion: (1) use of study-specific thematic codebooks or (2) use of marketing regulations as a template. Content analyses of user-created promotion have mostly devised bespoke thematic codebooks to suit the research aims, with most items designed to measure the degree of use depicted and suggested consequences (Cavazos-Rehg et al., 2014; Primack et al., 2015; Weaver et al., 2013). Marketing research, on the other hand, has typically used regulations as a template for messages that should not be included in marketing communications (Brooks, 2010; Carah et al., 2015; Carroll and Donovan, 2002; Gordon, 2011c). In practice, there is

considerable overlap between the two methods. For example, both Primack and colleague's (2015) codebook and the Australian Beverages Advertising Code (used in Carah et al., 2015) have items related to excessive consumption and suggestions of sexual outcomes. Given the inclusion of marketing in this study, it was therefore decided to use marketing regulations as a template.

The 21 items in pro-forma three were based on Section 18 of the Non-Broadcast Advertising, Sales, Promotion, and Direct Marketing Code of Conduct for Alcohol (CAP, 2015) (Supplementary File 10). This code contains 17 items which aim to ensure that communications for alcoholic drinks ($\geq 0.5\%$ ABV) are not targeted at those aged under 18 years old and do not imply or encourage immoderate, irresponsible, or anti-social drinking. Two of the items were excluded. Item nine, factual reference to the alcohol strength of a drink, was excluded as the item was positively framed about what *could* be included in marketing, as opposed to the other items which were negatively-framed about what *could not*. Item 10, sales promotions must not imply or condone excessive drinking, was excluded as user-created promotion was unlikely to be linked to the sale of products and thus the item had little investigative benefit for comparison. During data collection, it became apparent there were additional themes not covered in the CAP code. These six themes, which are also reported in earlier content research (Atkinson et al., 2014; Nicholls, 2012; Primack et al., 2015), were therefore added. Examples of the items measured in pro-forma three include 'Content links alcohol with seduction, sexual activity, or sexual success, or implies enhanced attractiveness' and 'Content features alcohol being handled or served irresponsibly'. To avoid repetition, the full definitions of each item measured in pro-forma three are reported in Chapter Five (Table 5.3).

4.5.4.e. Qualitative thematic analysis

A qualitative thematic analysis was also employed to provide greater detail about the themes and messages analysed in the quantitative stage, thus mirroring previous research (Atkinson et al 2014; Carah, 2014; Carah et al., 2015; Gordon, 2011c). It allowed, for example, further exploration about how excessive consumption could be promoted (e.g. drinking game) and what topical references were made (e.g. seasonal references). To do so, the author collected notes and screenshots about each item on pro-forma two and three (e.g. links to sex and sexuality). After the quantitative coding had been completed, the author then reviewed all the notes and screenshots and extracted the main themes that emerged under each item (e.g. that sporting associations mostly constituted references to English Premier League Football). This thematic approach has several benefits, including being relatively quick and simple to conduct, producing accessible summaries of a large body of data, highlighting differences between types of content (e.g. photos and textual references), and being sensitive to different use of language (Braun and Clarke, 2006).

4.5.5. Ethical considerations

The study received approval from the University of Roehampton Department of Psychology Ethics Committee (Application PSYC 13/ 089) and the Salvation Army's Territorial Health Ethics Advisory Committee (Approval date 4th October 2013) (Appendix 6). Internet-mediated research is subject to several ethical challenges, most notably relating to privacy. On one hand, it can be argued that the content posted in digital spaces which are intentionally public should be considered 'in the public domain' and treated like media such as newspaper articles or television. On the other hand, ethical governing bodies suggest that online content should be treated differently to traditional media, and all attempts should be made to protect the identities of users who have not

consented to take part in the research (British Psychological Society, 2013; Eynon, Fry and Schroeder, 2008; Purves et al., 2014). Due to the nature of the study, it was impractical and inappropriate to seek consent from all users who were intentionally or incidentally included in the data collected. It was also unrealistic to expect representatives from the alcohol industry to consent to take part.

Building on previous research, the following ethical practices were adopted to minimise harm. First, no information was collected from accounts marked as private or personal, for example protected Twitter accounts, private YouTube videos, or personal social networking accounts with incidental names relating to alcohol (e.g. somebody with the surname 'Beer'). Second, this study did not collect responses posted by other internet users on a Facebook page, Twitter account, or YouTube video. While content administrators presumably are aware that all content would be publicly visible, audience members may not have wished for their responses to be public. Third, blank accounts were created on Facebook and Twitter to undertake the research (an account was not required to access content on YouTube). Both accounts contained no information that could identify the researcher, permitted they were used in an unobtrusive manner, and did not interact with any cases of digital marketing and user-created promotion. Fourth, any feature that could be used to identify an individual user was handled carefully to ensure anonymity. For example, posts that featured an individual's face have either not been used for illustrative purposes or have been edited. Exceptions were made for content that featured celebrities or actors in a professional media or marketing context (e.g. adverts) or celebrity YouTube video-bloggers. Similarly, names of individual users who had liked, commented on, or shared content were also edited. Finally, the study complied

with the terms and conditions of each website and followed trademark and copyright laws by acknowledging the source of professionally produced content.

A further unanticipated ethical challenge was the explicit nature of some user-created promotion. While depictions of higher-risk drinking were expected, other offensive material included: (1) extreme or degrading pornographic images; (2) content depicting abusive or threatening behaviour; (3) images of injuries or accidents; (4) content suggesting distress; and (5) content that promoted offensive beliefs (e.g. racism, sexism, and extremism). The author has experience of handling sensitive and offensive materials, having previously coded police statements of serious sexual assault (Critchlow, 2011; 2012). Using this experience, all attempts were made to limit non-essential exposure. This included marking the file names of explicit content, not accessing such content in the presence of others, not using extremely offensive content as examples, and debriefing with peers or supervisors in the event of particularly explicit content.

4.6. Study Two: Cross-sectional survey

4.6.1. Aim

Study two explores awareness of, and participation with, digital marketing and user-created promotion, and what association (if any) this has with alcohol-related knowledge, attitudes, and behaviours in young adults. It addresses research questions 4-7 (4.2.2) and hypotheses 4-11 (4.2.3). It builds on previous research by exploring a broader range of new media, young adults in the UK, outcome expectancies and drinking motives as social cognitive mediators, and compares marketing and user-created promotion.

4.6.2. Design

A consumer and audience design was employed. This focuses on the individual as the unit of analysis and explores the behavioural or cognitive outcomes which occur following exposure to marketing or user-created promotion (Gordon et al., 2010a). There are four research approaches associated with this design: (1) experimental studies, (2) cross-sectional surveys, (3) longitudinal surveys, and (4) qualitative interviews and focus groups (see 2.7 and 3.6 for reviews). An experimental design was discounted as these studies only demonstrate short-term effects, the artificial settings are not representative of real-world exposure (e.g. privacy settings), there are challenges in matching stimuli to the sample recruited (e.g. target audience for brands), and there are ethical barriers to measuring consumption as an outcome. A longitudinal survey was discounted as such designs are costly, require large samples (to account for attrition), need to account for many control variables (e.g. lifestyle changes), participants may become ‘wise’ to the purpose of the study through multiple test phases, and there are difficulties in controlling for innovation in digital technology between waves (Coolican, 2013). A qualitative design was discounted as the small sample sizes associated with such studies reduce generalisability, the presence of a researcher can impact on participant disclosure (although not always), and the analysis techniques would not easily allow empirical and objective comparison between digital marketing and user-created promotion.

A cross-sectional survey design was selected as it allowed for data to be collected quickly and inexpensively. This design also allowed for a larger sample than would have been feasible for qualitative research, empirical comparisons between groups and variables (e.g. marketing and user-created promotion), no attrition between time points, less likelihood of participants becoming aware of the study purpose (as with multiple test

phases), and an ability to gain empirical self-reported estimates about behaviour (e.g. awareness and participation) (Coolican, 2013; Mann, 2003; Sedgwick, 2014). Cross-sectional survey designs are also the most frequent method used in consumer research into marketing (see 2.7.2; Harris, 2011) and audience research into user-created promotion (see 3.6.2). There are of course limitations with this approach, including an inability to establish cause and effect (in independent, mediating, and confounding variables), and no insight into the effect of content at different time points (e.g. seasonal variations) (Coolican, 2013).

4.6.3. Mode of delivery

Having decided on a cross-sectional survey, it was necessary to consider the mode of delivery. Past marketing research has employed physical or computerised self-completion (de Bruijn et al., 2016a; Collins et al., 2016), market researcher interviews (Gordon et al., 2011), computerised telephone interviews (Lin et al., 2012), and via the web. Web-based surveys appear to be the favoured mode of delivery for recent research exploring alcohol marketing and user-created promotion in young adults (e.g. Canbrera-Nguyen et al., 2016; Carrotte et al., 2016; Hoffman, Austin, Pinkleton and Austin, 2016; Thompson and Romo, 2016; Westgate et al., 2014). Given that this was also the target sample in this study (see 4.6.4) a web-based approach was therefore employed. Qualtrics, a full-featured web-based survey package, was chosen to administer the survey as it has been used in past research (Alhabash et al., 2015; Alhabash et al., 2016) and for the sake of convenience, given that the University of Roehampton had a subscription for its use.

Web-based surveys have many advantages over traditional completion modes, such as written self-report. These include (1) allowing participants to respond quickly to adverts;

(2) flexibility and convenience for completion through a range of devices (e.g. phone or laptop); (3) eliminating the need for laborious data entry and potential errors; (4) reduced cost by eliminating the need to print and deliver questionnaires; (5) ability to reduce bias by stopping participants looking at later questions; (6) reducing missing data by forcing mandatory answers; (7) the use of ‘skip-logic’ to ensure participants are only presented with questions relevant to them; (8) ability to analyse data in real time; and (9) the privacy associated with web-based surveys may mean that participants provide honest answers (Blank, 2008; Callegaro, Manfreda and Vehovar, 2015; Dillman, 2000; Evans and Mathur, 2005; Halfpenny and Proctor, 2015; Rasmussen, 2008; Wright, 2005).

There are also limitations of using web-based surveys. For example, target samples may not respond due to the fatigue caused by persistent requests to complete online surveys. This is particularly an issue for populations where requests are frequent, such as students (Fielding, Lee and Blank, 2008). The absence of a researcher also means that participants are not able to ask questions or for clarification where question phrasing or mode of completion is unclear. This may lead to drop-out or poor quality answers due to frustration and incorrect answers due to misunderstanding (e.g. only selecting one answer when multiple choice allowed) (Evans and Mathur, 2005). A further concern is that fraudulent information can be difficult to detect due to a lack of contact between the researchers and participants (e.g. a participant may pose as being of target age, or provide multiple responses to receive an incentive) (Lefever, Dal and Matthíasdóttir, 2007).

4.6.4. Sampling strategy

This study focused on young adults aged 18-25 years old in the UK, with the rationale for doing so previously discussed (2.8.4 and 3.8.4). Convenience sampling was used

because of practicality, both in terms of cost and time. Convenience sampling has been frequently used in cross-sectional surveys exploring both digital marketing and user-created promotion (Carrotte et al., 2016; Epstein, 2011; Hoffman et al., 2014; Koff, 2012; Jones and Magee, 2011; Jones et al., 2015; Miller et al., 2014; Morgan et al., 2010; Thompson and Romo, 2016). There are, it is important to note, limitations with this approach, as it does not provide equal probability of selection, has high vulnerability to selection bias and confounding variables, is susceptible to high levels of sampling error, and reduces the ability to generalise to other populations (Coolican, 2013).

A convenience sample was recruited in three ways. First, adverts were posted on the ‘Surveys and Research’ section of www.thestudentroom.co.uk, a large UK-based community website for school and university students. Use of internet forums as a means of recruitment is becoming increasingly common within addiction and substance use research (Norman et al., 2014; Pontes, Szabo, and Griffiths, 2015), with the website used in this study having been employed in previous research (Corazza, Simonato, Cokery, Trincas, and Schifano, 2014; Furnell, Bryant, and Phippen, 2007). Second, an advert was placed on the internal website of the University of Roehampton’s Psychology department, which allowed first and second-year undergraduate psychology students to participate in exchange for academic credits required for a research methods module. Use of student-incentive schemes is also a method that has been used in research into user-created promotion and marketing (Boyle et al., 2017; Fournier et al., 2013; Hoffman et al., 2014; Ridout et al., 2012). Third, consistent with previous research on alcohol marketing, an advert was shared on social networking site Facebook (Carrotte et al., 2016; Jones and Magee, 2011; Moss et al., 2015; Weaver et al., 2016).

As a thank you for their involvement, all participants were offered the opportunity to enter a ballot to win one of five £10 vouchers for www.amazon.co.uk. This website was chosen because it was the most popular e-retailer in the UK at the start of data collection (Wiggenraad, 2014). It was therefore likely that most respondents would have an account through which to use a voucher, a proposition supported by the survey findings (Table 6.1). Amazon.co.uk offers a variety of services, including the sale of goods (from electronics to groceries), streaming television or films, and sale of audio or e-books. It is acknowledged that the voucher could have been used to purchase alcohol through the website (Leyshon, 2017; Sutherland, 2015). To reduce the risk of survey content stimulating alcohol purchases (e.g. responding to marketing images), the ballot winners were only contacted at the end of data collection, after which it is anticipated that any influence of the survey content would have faded. It is also noted that online sales are only a small proportion of the UK alcohol market, and therefore Amazon.co.uk was not reflective of the typical channels that young adults used to purchase alcohol (Mileham, 2017).

It is noted that the survey had originally intended to sample both adolescents and young adults (aged 13-25 years old), to explore exposure to marketing and user-created promotion across young adulthood and mirror the age groups involved in the funder's youth organisations. Ethical approval was granted to administer the survey to younger adolescents, and convenience sampling was used to recruit through schools and youth groups in south west London (while based at the University of Roehampton). There was, however, limited response to recruitment attempts, with only one secondary school returning data for young people aged 14-16 years old. The sample, however, was too small to conduct the regression and mediation analyses (approx. $n = 60$) and there were concerns over the data quality (e.g. uniform responses to Likert scales and logically implausible exposure answers). It was decided not to seek a second round of recruitment

through schools after the studentship had transferred to the University of Stirling. This was due to the time required to analyse the data already collected from young adults and the extensive content analysis (see 4.5).

4.6.5. Measures

4.6.5a. Demographic variables

The demographic variables included were age, ethnicity, gender, and religious denomination. Age was included as a screening question to ensure that participants were within the target population (18-25 years). Gender was included as it is a factor related to alcohol use in the UK, with young adult males consuming more frequently and in greater quantity than females (HSCIC, 2016). Ethnicity was included as it is also a factor related to drinking in the UK, with those from a white British background reporting greater consumption than other ethnicities (HSCIC, 2016). A list of 13 categories were used to assess ethnicity, based on the most recent UK census, with an ‘other’ box for ethnicities not listed (Appendix 7) (ONS, 2012). Religious denomination was included as it is also a factor related to personal consumption (Newbury-Birch et al., 2008), and because research suggests that attitudes and receptivity towards alcohol marketing can be influenced by religious values (Owusu-Prempeh, Antwi-Boateng, and Asuamah, 2013; Thomsen and Rekve, 2003). Participants were given seven categories of religion based on the most recent UK census, including an ‘other’ option for unspecified groups (Appendix 7) (ONS, 2012).

4.6.5.b. Internet use

Although there are a range of existing scales to measure internet use, many only provide insight into addictive or compulsive use (Meerkert, van den Eijnden, Vermulst and

Garretsen, 2009), negative outcomes from over-use (Kelley and Gruber, 2010), or contain items which are irrelevant to the aims of this study (e.g. attitudes) (Morse, Gullekson, Morris, Popovich, 2011; Zhang, 2007). Consequently, this study devised bespoke questions to meet the research needs. The design of each is as follows:

Devices used to access the internet: Participants were asked to indicate all the devices that they have used to access the internet, from a list of the five: (1) shared computer, (2) personal computer, (3) tablet, (4) smartphone or mobile phone, and (5) school, university, or work computer.

Online behaviour: Research suggests two methods for analysing online behaviour: (1) assessing which websites are frequently used, and (2) participation in specific online behaviours (OFCOM, 2015a). In this study, the first option was employed as behaviour can be still be inferred from the websites used (e.g. watching videos on YouTube). Participants were provided with a list of 12 websites and asked to indicate all of those they had a registered account or profile on (Appendix 7). Examples of websites were provided as the alternative approach, free recall, may have been affected by some participants spending longer reporting than others. The decision to include a cross-section of websites, as opposed to the most popular, intended to reflect a range of online behaviours (e.g. shopping through e-retailers or connecting with friends on social media).

Frequency and quantity of use: Internet use is mostly measured using Likert scales, with frequency of use and time spent online the most straightforward and reliable metrics (Baggio, Iglesias, Berchtold and Suris, 2017; Laconi, Rodgers and Chabrol, 2014). Both were included and evaluated on nine-point scales, with responses specific to frequency

of use (1 = Never or a few times a year – 9 = Everyday) and time spent online (1 = I don't use the internet – 9 = Nine or more hours). Nine-point Likert scales were used, as opposed to shorter variants, as longer scales offer better measurement, have greater validity and consistency, increase reliability of reporting, and provide more opportunity to detect changes (Wittink and Bayer, 2003).

4.6.5.c Awareness of traditional alcohol marketing

Survey methods for measuring exposure to traditional marketing are divided into opportunity and memory approaches (Stacy, Zogg, Unger and Dent, 2004). Opportunity approaches infer the likelihood of exposure by comparing media consumption to the density of marketing expected in that environment, for example television viewing habits or density of outdoor advertising (Collins, Ellickson, McCaffrey and Hambarsoomians, 2007; Ellickson et al., 2005; McClure et al., 2013; Pasch, Komro, Perry, Hearst and Farbaksh, 2007). This approach has several limitations, in that it (1) only provides estimations of exposure: (2) assumes that opportunity translates into exposure; (3) fails to consider variability in consumer attention; (4) ignores the creativity of the marketing message; (5) requires access to information on expenditure and placement; and (6) does not reflect the way that marketers judge the success of their campaigns (Hall, 2002).

The alternative, memory approaches, mostly involve asking participants to self-report their own exposure to marketing (e.g. Gordon et al., 2011; Synder, Milici, Slater, Sun and Strizhakova, 2006). Less frequent examples of this method include asking participants if they can identify adverts from still or obscured images (Grube and Wallack, 1994), or whether they can recall a positive response to an advert (e.g. liking or finding it humorous) (Unger, Schuster, Zogg, Dent and Stacy, 2003). As memory assessments are

more frequently reported in consumer research, it was decided to use this approach. While limitations include potential misreporting of exposure and social desirable responses, these were considered minor compared to those associated with opportunity assessments.

Participants were asked ‘*Think about ways you have seen alcohol advertised in the last 30 days. How was it advertised?*’ A reference period was deemed necessary to increase recall accuracy and control for the fact that young adults are likely to have seen most traditional marketing channels at some point in their lifetime, which could upwardly bias reporting. The use of a 30-day reference period is consistent with other recent marketing surveys (Kenny, 2014; Pinsky et al., 2010). Although previous consumer research has highlighted the benefit of measuring both awareness of, and participation with, traditional marketing communications (Gordon et al., 2011; Lin et al., 2012), this study only focused on awareness to reduce survey length and participant fatigue.

In this study, participants were presented with nine traditional marketing channels used in previous research (e.g. Gordon et al., 2011; Lin et al. 2012): (1) event sponsorship, (2) magazines, (3) television, including programme sponsorship, (4) sports sponsorship, (5) in-store posters, (6) billboards and posters, (7) newspapers, (8) packaging, and (9) price promotions. Although some previous surveys have measured exposure using relative frequency scales (e.g. 1 = Never – 5 = Often or very often) (de Bruijn et al., 2016a; Gallopel-Morvan et al., 2016; Synder et al., 2006), in this study a Yes or No response indication was used for each channel (Appendix 7) to increase convenience for participants, reduce the cognitive burden involved in accurately recalling exposure, and to allow comparison with other survey research (e.g. Gordon et al., 2011; Lin et al., 2012).

4.6.5.d Awareness of, and participation with, digital alcohol marketing

Almost all cross-sectional surveys have used memory approaches, based on structured self-report recall, to measure exposure to digital marketing (de Bruijn et al., 2016a; Jones and Magee, 2011; Jones et al., 2015; Kenny, 2014). This approach was therefore employed in this survey. In contrast to traditional marketing (which only focused on awareness), assessment of each digital channel was split to measure awareness and participation. This approach was informed by previous surveys exploring digital marketing (Gordon et al., 2011; Lin et al., 2012), content research which suggests that participation represents a key part of digital marketing (see 2.6.1), and consumer research which suggests that deeper processing created by participation has a stronger influence than awareness (Gordon et al., 2010b; Gordon et al., 2011). The phrasing of each question was specific to each channel and the keywords were emphasised in bold to make it easier for participants to see what constituted awareness and participation (Appendix 7).

Awareness of, and participation with, digital marketing was assessed for 11 channels: (1) downloadable content for mobile phones and computers (e.g. screensavers), (2) on-demand television advertisements, (3) games, (4) online shops, (5) websites, (6) marketing on social media, (7) viral videos or video adverts, (8) smartphone apps, (9) display advertisements, (10) e-mails, and (11) competitions. The channels were selected based on existing surveys (see 2.7.2), content research into digital marketing (see 2.6), ethnographic observation of marketing, and industry press reporting (see 2.4). For each, participants were shown a visual example and asked to indicate if they had seen alcohol marketed through that channel (Yes/No), and whether they had participated (Yes/No). The rationale for using dichotomous response options was to mirror the approach used for traditional marketing (to allow comparison).

A visual example of marketing was included because research has suggested that the boundaries between digital marketing and user-created content are blurred (Nicholls, 2012; Weaver et al., 2016), which can lead to challenges in recognising what represents marketing (Lyon et al., 2014). The images were selected from a database collated during the literature review (Chapter Two) and early stages of the content analysis (Chapter Five). Images were chosen to depict well-recognisable beer, cider or spirit brands, as these products are consumed most by young adults in the UK (aged 16-24 years old) (ONS, 2016a). The ranked Top 100 alcohol brands in the UK, sampled for the content analysis (see 4.5.3), was used to estimate brand popularity (Bamford, 2012). Participants were informed that the visuals were only examples and that they should also consider other instances they could recall. The rationale not to refer to a specific exposure period, as was the case for traditional marketing, was because digital marketing was considered less likely to be biased by lifetime exposure, due to its relative recent emergence.

4.6.5.e. Awareness of, and participation with, user-created promotion

Survey methods for measuring exposure to user-created promotion are divided into assumption and memory approaches. Assumption approaches infer exposure by measuring behaviour towards digital spaces which have a high likelihood of containing user-created promotion (e.g. social media) (Epstein, 2011; Gutierrez and Cooper, 2016; Kaufman et al., 2014). This method, however, is subject to similar limitations to those associated with opportunity approaches in marketing research (see 4.6.5.c). It also does not consider that some exposure through these channels may be to marketing.

The alternative approach, memory-based assessment, typically asks participants to self-report whether they recall seeing, or participating with, specific forms of user-created

promotion. This approach has been previously used to measure exposure to user-created promotion across a range of websites, including Twitter (Canbrera-Nguyen et al., 2016), Facebook (Boyle et al., 2016; Glassman, 2012; Westgate et al., 2014), YouTube (Morgan et al., 2010), and Instagram (Thompson and Romo, 2016). To facilitate comparison between user-created promotion and digital marketing (Research Question 7), memory-based approaches were therefore employed for both types of content.

Awareness of, and participation with, user-created promotion was assessed for 11 channels: (1) social media status updates, (2) non-fictional photos (e.g. peers or family drinking), (3) fictional photos (e.g. memes or viral images), (4) multimedia and instant messaging, (5) games, (6) fan pages or public groups, (7) smartphone apps, (8) forums, (9) quizzes, (10) blogs or microblogs, and (11) viral or shared videos. The channels were selected from existing surveys (see 3.6), content research (see 3.5), ethnographic observation of user-created promotion, and channels comparable to those included for marketing. Mirroring the approach for digital marketing, participants were shown a visual example of each form user-created promotion and asked if they had seen alcohol promoted through that channel (Yes/No) and whether they had participated (Yes/No). The phrasing of each question was specific to the channel and the keywords emphasised in bold to make clear what constituted awareness and participation (Appendix 7).

As with digital marketing, the example images used in the user-created promotion exposure scale were selected from a database collated during the literature review (Chapter Three) and formative stages of the content analysis (Chapter Five). The images were selected to be balanced for gender, product, and context (i.e. not focus only on young males drinking beer), and relevant to the target age group (e.g. social media

websites popular with 18-25 year olds – such as Twitter, Facebook, and YouTube). Images were chosen to avoid causing offence, risk or sensitivity to participants. This included not selecting any content of an offensive nature (see 4.5.5) or content which depicted higher-risk and harmful outcomes from alcohol (e.g. vomiting or drinking in excessive quantity).

Prior to completing this section, the respondents were informed ‘The following questions measure the ways you have seen alcohol, or the effects of alcohol, displayed or discussed online by others. By others we mean content made by friends, family, celebrities, or other individuals not related to, or about, an alcohol brand’. This was intended to mitigate any confusion over user-created alcohol promotion and user-generated branding, digital alcohol marketing, or content co-created between marketers and internet users.

4.6.5.f. Alcohol consumption and higher-risk drinking

Previous survey research has explored several alcohol consumption outcomes, including binge drinking (de Bruijn et al., 2016a), initiation and future intentions (Gordon et al., 2011), frequency of consumption (Hoffman et al., 2014), drunkenness (Kenny, 2014), amount drunk in a typical week (Thompson and Romo, 2016), cravings (Westgate et al., 2014), alcohol-related problems (Ridout et al., 2012), and higher-risk use (van Hoof et al., 2014). These drinking outcomes can be assessed using standalone questions (e.g. D’Angelo et al., 2014; Gordon et al., 2011; Morgan et al., 2010) or scales that measure a range of drinking behaviours. For the latter, aggregate scoring is typically used to indicate whether consumption is considered higher-risk, with examples of the scales used including the Alcohol Use Disorders Identification Test (AUDIT) (Jones et al., 2015; Moreno et al., 2012), Graduated-Frequency Index (Ridout et al., 2012), Daily-Drinking

Questionnaire (Rodriguez et al., 2016), Rutgers Alcohol Problem Index (Thompson and Romo, 2016), and Timeline Follow Back Interview (Moreno et al., 2012). Both standalone questions and scales were included in this study.

To assess drinking status and intentions, participants were asked whether they had ever consumed an alcoholic drink, and whether they intended to consume one in the next 6 months (both Yes/No) (Black, Eunson, Sewel and Murray, 2011; Gordon et al., 2011; Lin et al., 2012). Consumption behaviour and higher-risk drinking was measured using the Alcohol Use Disorders Identification Test – Consumption (AUDIT-C) (Bush, Kivlahan, McDonnell, Fihn and Bradley, 1998), a three-item version of the original 10-item AUDIT (Saunders, 1993). This shorter version was chosen to reduce participant burden and because it has been previously used with young adults in the UK (Barry, Chaney, Stellefson and Dodd, 2015; Davore, Shiely, Byrne and Perry, 2015; McClatchley, Shoter, and Chalmers, 2014) and has been found to display adequate sensitivity in detecting higher-risk drinking in a range of populations (Burns, Gray and Smith, 2010; National Institute for Health Care Excellence, 2010; Rubinsky, 2012; Rubinsky, Dawson, Willias, Kivlahan and Bradley, 2013; Khadjesari et al., 2017). The scale measures three behaviours: (1) frequency of consumption, (2) units drunk in a typical session, (3) and frequency of high episodic drinking. Responses were provided on a five-point scale, scored 0-4, with responses relating to frequency of consumption (Never – 4+ times a week), units drunk in typical session (1-2 units – 10+ units), and frequency of high episodic drinking (Never – Daily or almost Daily). A diagram was included to assist in estimating units in alcoholic drinks (Appendix 7).

4.6.5.g. Alcohol brand name recall and brand recognition

The influence of alcohol marketing has also been measured through brand recall (i.e. unaided free recall of brand names without reference stimuli) and brand recognition (i.e. aided or unaided tests which measure whether a consumer can identify an alcohol brand name or recall seeing that brand previously) (Gunter et al., 2010; Harris et al., 2015). Examples of recognition tests include asking participants to identify brand names from adverts with iconic features removed (Aitken, Eadie, Leather, McNeill and Scott, 1988; Grenard, Dent and Stacy, 2013; Harris et al., 2015; Unger et al., 2003), sketch memorable adverts (Stacy et al., 2004), identify which brands are associated with a real-world stimulus (e.g. sponsorship of a football team) (Alcohol Concern, 2015; Bestman, Thomas Rundle and Thomas, 2015), or pair brands with their slogans (Grube and Wallack, 1994). The main drawbacks to these approaches are: (1) they would require considerable space and complex designs in the questionnaire; (2) the use of images overlapped with the measures for exposure to digital marketing and user-created promotion, which may create confusion or prime responses; and (3) there are issues over whether the target audience of the stimulus would match the recruited sample.

An alternative approach, as employed in this study, is to ask participants to freely recall alcohol brand names (Grube and Wallack, 1994; Henriksen, Feighery, Schleicher and Fortman, 2008; Unger et al., 2003). This is a simpler and quicker task than the discussed alternatives, and allows participants to recall brands that they are familiar with and have seen marketing from. Previous research has permitted between 5 and 16 responses (Grube and Wallack, 1994; Harris et al., 2015; Unger et al., 2003). A maximum of 10 responses were permitted in this study, thus representing a mid-point in the range allowed in previous research. Participants were informed that this was a not test, and that the survey

was only interested in the amount that they could recall from memory (i.e. not with the assistance of a search engine) (Appendix 7). Participants were instructed to move onto the next question once they had either listed 10 brands or could not recall any more. As with Henriksen and colleagues (2008), misspellings were counted providing they had been spelt phonetically (e.g. ‘Jonny Walker’ instead of ‘Johnnie Walker’) or were well-known abbreviations of brand names (e.g. ‘Jäger’ for ‘Jägermeister’). Names of alcohol types, without brand affiliation, were not counted (e.g. beer).

4.6.5.h. Outcome expectancies

Expectancies were measured using the Brief-Comprehensive Effects of Alcohol scale (B-CEOA) (Ham, Stewart, Norton and Hope, 2005), a shortened 15-item version of the original 38-item Comprehensive Effects of Alcohol scale (CEOA) (Fromme, Stroot and Kaplan, 1993). The B-CEOA was chosen over others, for example the 120-item Alcohol Expectancies Questionnaire (Brown, Christiansen and Goldman, 1987) or 43-item Drinking Expectancy Questionnaire (Young and Knight, 1989), to reduce response fatigue. Traditionally, the B-CEOA has two questions per statement; one that measures the expectation that an outcome will occur because of drinking (outcome expectancies) and a second to indicate whether this outcome is considered to be desirable (expectancy evaluation) (Ham et al., 2005; Ham, Wang, Kim and Zamboanga, 2012). Consistent with marketing research, and the goals of RQ6 (4.2.3), only the items related to outcome expectancies were measured (de Bruijn et al., 2012; Fleming et al., 2004).

Participants were primed with a statement ‘*When I drink alcohol I expect that...*’ and asked to indicate their agreement that they would experience each of the 15 stated outcomes (1= Disagree, 4 = Agree). The 15 expectancy items on the B-CEOA can be

divided into subscales in two ways. The first is two higher order subscales regarding whether the outcome is perceived to be positive (e.g. *'I would enjoy sex more'*) or negative (e.g. *'I would feel dizzy'*) (Ham et al., 2012). The second is four lower order categories which are based on themes: (1) Risk and Aggression, Sociability, and Liquid confidence; (2) Self-perception/Cognitive Behavioural Impairment; (3) Sexuality; and (4) Tension reduction (Ham et al., 2005). This study employed the four-subscale approach, given the greater interpretative utility it provides (e.g. being able to consider differences between 'liquid confidence' and 'tension reduction' rather than the aggregated 'positive' group).

Although the four-factor B-CEOA has been reported as a valid measure of expectancies, and a reliable predictor of consumption, almost all research has been conducted in the US (Ham et al., 2005). Research suggests that the relationship between expectancies and consumption depends upon the meaning of the outcome, which in turn depends upon sociocultural perspectives and personal characteristics (Chartier, Hesselbrock and Hesselbrock, 2009; Chung et al., 2008; Johnson and Glassman, 1999). It is therefore possible that the grouping of expectancy items, and their association with consumption, may vary between UK and US samples because of different cultural relationships with alcohol, including a greater prevalence of binge drinking and lower minimum purchase age in the UK (WHO, 2014). An exploratory and confirmatory factor analysis is therefore provided in Appendix 8, which supports that the four-factor structure of the B-CEOA is also valid for the current sample of 18-25 year olds in the UK.

4.6.5.i. *Drinking motives*

Drinking motives were measured using the Drinking Motives Questionnaire Revised Short Form (DMQ-R SF) (Kuntsche and Kuntsche, 2009), a shortened 12-item version

of the original 20-item Drinking Motives Questionnaire Revised (DMQ-R, Cooper, 1994). Previous validations of the DMQ-R SF have reported that this shortened version performs as well as the original DMQ-R scale, both in identifying drinking motives across a range of sub-populations (e.g. gender, ethnicity, and culture) and predicting alcohol use (Kuntsche and Kuntsche, 2009).

Participants were primed with the statement ‘*In the last twelve months I drank alcohol ...*’ and asked to indicate how often they drank for each of the 12 stated motives (1 = Never, 2= Sometimes, 3 = Almost always). The 12 items on the DMQ-R SF are typically divided into four subscales: (1) Enhancement, (2) Social, (3) Conformity, and (4) Coping. This four-factor DMQ-R SF structure has been validated in a large sample of 11-19 year olds across 13 European countries, including the UK (Kuntsche et al., 2014). It has also recently been validated in a large sample of undergraduate students across 11 countries from around the world, again including the UK (MacKinnon et al., 2017). To further ensure measurement equivalence in this study, a confirmatory factor analysis is provided in Appendix 9, which supports that the four-factor structure also applies for the current sample of 18-25 year olds in the UK.

4.6.6. Ethical considerations

The study was approved by the Department of Psychology Ethics Committee at the University of Roehampton (Application PSYC 13/ 097) and the Salvation Army’s Territorial Health Ethics Advisory Committee (Approval date 4th October 2013) (Appendix 10). Given the nature of the topic (e.g. higher-risk drinking) several steps were taken to mitigate potential sensitivities. Prior to survey onset, participants were informed of the study topic and aims, the incentive for taking part, that they had ability to withdraw

at any point, and that all data would be anonymous and confidential (Appendix 7). At the bottom of the first page participants were asked to confirm they met the age criteria, understood the terms of participation, and consented to take part. At the end of the questionnaire a debriefing page outlined the purpose of the study and provided links to age-appropriate information about alcohol use (NHS Live Well, Talk to Frank, The Salvation Army Addiction Support and DrinkAware). Participants were asked to specify a memorable code to identify their anonymous response in case of any correspondence with the researcher (e.g. withdraw participation). Those who wished to enter the ballot, or collect the credits for their research methods module, were directed to a separate online questionnaire where the rules of ballot were specified and an e-mail address could be registered. As this questionnaire was separate, it was not possible to link the e-mail addresses supplied to survey responses.

4.6.7. Pre-analysis data treatment

To allow easier interpretation of the results, the statistical processes used to analyse the cross-sectional survey are reported in Chapters Six (6.3.5) and Seven (7.3.4). This section provides an overview of the data and the steps taken to prepare it for analysis.

4.6.7.a. Data collection overview

Survey responses were gathered in two six month waves (November 2013 – April 2014; February 2015 – July 2015). The break in collection was a consequence of the studentship being transferred from the University of Roehampton to the University of Stirling (see 8.8). A total of 594 attempts were made to complete the online survey. The average completion time was 20 minutes and the completion rate was 78%, which is similar to the 76% completion rate for another recent online survey with young adults exploring

alcohol marketing (Kenny, 2014). Reasons to explain non-completion by those who dropped out may include, but are not limited to, questionnaire length, complex questioning, discomfort over the topic, lack of interest, or clicking the link by accident or without intending to participate. Moreover, the design of the Qualtrics website meant that those who attempted to complete the survey across more than one time point, or using more than one device (e.g. laptop and phone), had to start from the beginning each time, thus meaning their original response would be recorded as incomplete.

4.6.7.b. Data screening

Prior to analysis, the 594 raw responses were screened for problems and inconsistencies. Unreliable responses may have been the result of genuine mistakes, or through participants filling in the survey with little regard for accuracy simply to gain the course credits or enter the ballot. A total of 189 responses were removed. This included three test responses that were inputted at various stages to check issues with survey syntax. It also included four cases that were latterly identified as having been incorrectly removed, although as the data had already been published using the initial screening results these four cases remain excluded. The rationale for removing the remaining 182 cases is now described, with the presentation indicating the order in which the processes took place:

Incomplete responses (n = 92): Responses in which a participant had not responded in full to the key study measurements (exposure to marketing and user-created promotion, alcohol use, outcome expectancies, and drinking motives).

Outside permitted age range (n = 10): Nine completed responses came from those above the permitted age range (26-30 years old) and one response under the permitted age limit

(17 years old). These responses may have arisen because participants had not read the consent statement or had entered for the prize ballot.

No age supplied (n = 16): Due to an error in the survey syntax, the question regarding age did not have a forced response option for the first month of data collection. As such there were 16 instances where participants provided full-responses, yet had not specified their age. The rationale for the inclusion of these responses was that the consent statement asked participants to agree that they were aged 18-25 years old. The presence of responses by others outside this age group, however, meant it was still possible those who had not specified age had done so because they were outside the permitted range.

Outside of UK (n = 34): One of the pitfalls of using online surveys and recruitment was the sample could include responses from outside the geographical target population (18-25 year olds in the UK). As Qualtrics recorded the IP address of each respondent, these were screened using a free online tool which reviews the location attributes of an IP address (<http://www.ip-tracker.org/>). This led to the exclusion of 20 cases possibly from Europe, seven from Canada and the US, four from Asia and three from Africa. It is possible that UK residents could have provided these responses while temporarily in another country (e.g. holiday). It is also possible that participants may have been using proxy IP addresses which created the illusion of being abroad, even when they were not (a practice sometimes used for security purposes or to access content such as on-demand television only available in certain countries) (Lambert, 2012). Consideration of other variables such ethnicity, however, suggested these IP designations were likely accurate indicators of the location, and thus the cases were excluded.

Logically implausible exposure to digital marketing (n = 18) and user-created promotion (n = 5): Responses were deemed logically implausible if a respondent indicated no awareness of a channel, yet suggested they had participated. Although it appears superficially harsh to exclude entire responses based on incorrect reporting to perhaps just one of the 22 promotion channels, several steps were taken to mitigate this occurring (see 4.6.4.d and 4.6.4.e). As such inconsistencies in these key measures, even accidentally, cast doubt about the validity of the response (e.g. diminished concentration). To screen for such results, the select cases function on SPSS was used to filter based on the equation ‘Awareness [channel type] = No and participation [channel type] = Yes’. Once filtered, the display case summaries function was used to identify relevant cases. These cases were then recorded, checked for veracity, and excluded. Eighteen cases were found to be logically implausible for digital marketing, seventeen of which were implausible on one channel and one which was implausible on two. Five cases were implausible for user-created promotion, four of which were implausible on one channel and one which was implausible on two. It is noted the proportion of implausible cases, based on the raw sample size (3.9%), is similar to that reported in another recent survey of marketing (6.7%), and therefore is not considered a cause for concern (Kenny, 2014).

Logically implausible reporting of consumption (n = 5): A response was excluded if a participant indicated that they had never had an alcohol drink, yet did report consumption on the AUDIT-C scale. The same screening process used to identify logically implausible exposure was employed, with drinking status (Yes/No) compared to the frequency of consumption and frequency of high episodic drinking questions on the AUDIT-C. The number of units consumed in a typical drinking occasion was not compared as the lowest possible score for this item was 1-2 units, meaning those who did not drink had no lower

variable to score on. Two cases were found to misreport consumption on both frequency scales, while three more were found to only misreport alcohol use on one.

Suspected duplications (n = 2): Two cases were deleted as they were suspected to be a duplicate response by a participant already included in the sample (e.g. simultaneous identical responses – particularly for demographics and IP addresses).

4.7. Conclusion

In summary, this thesis is underpinned by 7 research questions and 11 hypotheses which aim to explore how digital marketing and user-created promotion may influence alcohol use, and what association (if any) there is between exposure to such messages and knowledge, attitudes, and behaviours in young adults. To respond to these questions, this thesis employs a concurrent mixed methods design, informed by a critical social marketing approach. The first study is a content analysis which explores the design features, topical associations, ethical practice, and messages suggested about alcohol use in digital marketing and user-created promotion on Facebook, Twitter, and YouTube. The second study is a cross-sectional survey with 18-25 years old in the UK ($n = 405$). It investigates awareness of, and participation with, digital marketing and user-created promotion, and explores what association (if any) this has with alcohol use, brand recall, expectancies, and drinking motives. The following chapters now present the results. Chapter Five presents all the results of the content analysis, while the results of the cross-sectional survey are presented across Chapters Six and Seven.

Part Three: Findings

Chapter 5: A content analysis of digital marketing and user-created promotion on three social media websites

5.1. Introduction

Chapter Five presents the results of the content analysis into digital marketing and user-created promotion on Facebook, Twitter, and YouTube. The chapter starts by summarising previous content research and how this study extends understanding of digital marketing, user-created promotion, and its potential to influence alcohol use (5.2). It then builds on Chapter Four by providing specific details about the content analysis approach and analytical techniques used (5.3). The results include the sample summary (5.4.1), audience size and participation (5.4.2), design features (5.4.3), topical associations (5.4.4), ethical practice (5.4.5), and what messages are suggested about alcohol in digital marketing and user-created promotion (5.4.6). The chapter then discusses how these findings relate to previous research and how they enhance understanding of the relationship between digital marketing and user-created promotion (5.5). The chapter concludes by summarising the need to measure young adult's exposure to such content and the association it has with knowledge, attitudes, and behaviour (5.6).

5.2. Background

5.2.1. Digital marketing: Summary of content research

The review of content research presented in Chapter Two (see 2.6) identified three main themes about digital alcohol marketing. The first, relating to presence and style, suggested that digital marketing is global and continuous in terms of audience reach and volume, and represents an important feature of 360-degree marketing strategies (Atkinson et al., 2014; Brooks, 2010; Chester et al., 2010; Purves et al., 2014). This theme also suggested that marketing used a variety of new media channels and features, placed

significant emphasis on associating brands with popular cultures or identities, and created real-time interactions which blur the boundary between marketers and internet users (Atkinson et al., 2014; Carah, 2014; Nicholls, 2012). The second theme suggested that marketing may reach young people due to ineffective age verification gateways (Barry et al., 2015a; Jones et al., 2014; Winpenny et al., 2013) and appeal to them directly, through style and design, and indirectly through associations to real-world contexts (Atkinson et al., 2014; CAMY, 2004; Carah et al., 2015). The third theme suggested that marketing may promote higher-risk drinking by not adhering to regulations (Carah, 2014), featuring contexts synonymous with heavy drinking (Nicholls, 2012), not adequately promoting responsible consumption (Atkinson et al., 2014; Carah et al., 2015), and allowing user-generated branding to promote prohibited messages (Brooks, 2010; Carah, 2014).

5.2.2. User-created promotion: Summary of content research

The review of content research presented in Chapter Three (see 3.5) suggested that user-created promotion featured across many websites, adopted a variety of styles, and received frequent engagement and positive appraisal, particularly from peers on social media (Atkinson et al., 2014; Cavazos-Rehg et al., 2014; Mart et al., 2009; Primack et al., 2015; Weaver et al., 2013). It is also argued that such promotion may encourage alcohol use both explicitly, by depicting or suggesting consumption (Beullens and Schepers, 2013; Moreno et al., 2016b), and implicitly by featuring contexts or cultures associated with alcohol (Atkinson et al., 2014; Griffiths and Casswell, 2010; Moares et al., 2014). Promotion was found to mostly frame consumption in a positive manner, depict intoxication as a normal or acceptable activity, and even create associations to other health risk behaviours (Beullen and Schepers, 2013; Cavazos-Rehg et al., 2014; Griffiths and Casswell, 2010; Moreno et al., 2007; Primack et al., 2015). Even when

negative outcomes were featured, they were still suggested to be a necessary part of recalling an otherwise enjoyable drinking experience (Atkinson et al., 2014). Finally, content research suggested that user-created promotion may appeal to young people by depicting individuals close to the legal purchasing age, adopting styles of content that are popular with youth, creating associations to cultures that may resonate with young people, and by not having adequate processes to restrict underage exposure (Atkinson et al., 2014; Eagle et al., 2014; Griffiths and Casswell, 2010; Primack et al., 2015; Ridout et al., 2012).

5.2.3. The current study

Content analyses of digital marketing and user-created promotion have mostly concentrated on social networking websites, particularly Facebook, with little focus on other forms of social media that are popular with young people, such as Twitter and YouTube. There is also little comparison of how marketing and user-created promotion varies across different forms of social media (e.g. social networking compared to video sharing), and no studies which have directly compared the two types of promotion. To address this gap, this study reviews the audience size and participation, design elements used, topical associations featured, evidence of ethical practice, and messages suggested about alcohol in digital marketing and user-created promotion on Facebook, Twitter, and YouTube. It addresses research questions and hypotheses 1-3 (4.2.4 and 4.2.3).

5.3. Methods

5.3.1. Design

A content analysis was conducted on digital marketing and user-created promotion on Facebook, Twitter, and YouTube. As described in 4.5.4, a quantitative codebook was

developed specifically for this study, based on the approaches used in previous research and the current research questions. This codebook was split into three pro-forma: (1) audience size and participation; (2) design features, topical references, and ethical practice; and (3) messages suggested about alcohol. A qualitative thematic analysis was employed to provide additional descriptive insight into the items recorded on pro-forma two and three (see 4.5.4.e).

5.3.2. Online context

5.3.2.a. Websites

Digital marketing and user-created promotion was extracted from three social media websites: Facebook, Twitter, and YouTube. These websites were chosen as they are frequently used by young people in the UK (OFCOM, 2015a; 2016), contain different content styles (e.g. textual references and visual media), and contain both digital marketing and user-created promotion. Blank profiles were created on Facebook and Twitter, with the age set at 21 years old, as this reflected the young adult age focus of the study. No account was required on YouTube, as the content was publicly available and did not need a profile for access.

5.3.2.b. Websites features considered

Pages were the focus on Facebook. These are defined as public profiles that are created for businesses, celebrities, causes, and other organisations. Personal profiles, places, groups, apps, and events were not considered unless part of a page. Accounts were the focus on Twitter. Individual tweets, news or trend features, and media only results were not included unless part of a selected account. Individual videos were the focus on

YouTube, thus excluding channels, playlists, films, and programmes. Further details and justification is provided in 4.5.3.a and examples are provided in Appendices 3-5.

5.3.2.c. Amount of content sampled on each website

The content considered on the three websites varied because each had a different design that was directed towards the main purpose of the website, for example Facebook is designed for social networking whereas YouTube is a platform for video sharing. To facilitate comparison, the content analysed was standardised for digital marketing and user-created promotion (Table 5.1). The number of author-generated posts analysed on Facebook and Twitter was also standardised at 10 to ensure fair comparison across websites and to avoid upwardly biasing the presence of content on pages and accounts that posted more frequently (see 4.5.3.d for details). Content shared from other sources (e.g. retweeted) and posts made by, or in response to, other internet users were excluded. This was because the focus was on content initiated by the administrators and not how creators and users interacted (e.g. user-generated branding).

5.3.3. Sample

5.3.3.a. Alcohol marketing

A cross-section of marketing was sampled from the top 100 alcohol brands in the UK in 2012, as ranked by a trade publication using annual sales (£) and growth (+/-) (Bamford, 2012). The sample included beer ($n = 24$), wine ($n = 41$), spirits ($n = 27$), cider or perry ($n = 6$), and ready-to-drink brands ($n = 2$) (Supplementary file 9). Each brand name was searched for once, in alphabetical order, using the in-house search function on each website. Search filters ensured only applicable content was included (e.g. filtered by 'pages' on Facebook). A series of validation criteria ensured that the sample did not

include user-generated branding (e.g. ‘account has been independently verified by the website’) (Appendix 11). To ensure authenticity on YouTube, an official brand channel was first identified, and then the video which appeared top when content was filtered by ‘most popular’ was selected. This guarded against including legitimate brand adverts that had been uploaded by other internet users (e.g. old television adverts), as these did not represent intentional digital marketing behaviour.

Table 5.1. Content captured for marketing and user-created promotion

Website	Content captured
Facebook	<ul style="list-style-type: none"> • Landing page and fixed features - All information that appears when the page is loaded, including profile picture, cover photo, and page likes. • Page tabs – A mixture of fixed and optional features which can be added to the page, including: ‘About us’, ‘photos’, ‘videos’, ‘events’ etc. For the photos and videos tab, a sample of screen shots were taken. • The first 10 author-generated posts on the page timeline, including likes and shares. This excluded posts shared from other pages by the administrator, posts made on the page by other users, or comments made on posts by other users.
Twitter	<ul style="list-style-type: none"> • Landing page and fixed features – All the information that appears when the account is loaded, including profile picture, cover photo, background image, biography, Tweets made, followers and accounts followed. • A sample of photos and videos from the media gallery (if present). • The first ten author-generated posts on the timeline. This excluded those ‘retweeted’ from other accounts and comments made under the tweet by other users.
YouTube	<ul style="list-style-type: none"> • The landing page and fixed features – All the information that appears when the video is loaded, including: video name, channel uploader, display photo, subscribers, likes, dislikes and video description. • The full video.

If two brands featured in only one example of marketing, they were combined and counted only once in the study. For instance, although Stella Artois beer and cider featured separately in the top 100 list, both brands featured in the same ‘Stella Artois’ marketing (Appendix 12). If a brand had a global and UK marketing page or account, then the one from the UK was selected as default on Facebook and Twitter. On YouTube, however, a pilot review suggested that there was little regional variation and that global channels were more active. To maintain a usable sample, the global YouTube channel was selected as default. In the rare event that there was no global channel (e.g. a brand chose to divide marketing into regions) then a UK channel was used instead, if available.

5.3.3.b. User created promotion

A cross-section of user-created promotion was sampled by searching for keywords relating to alcohol: ‘*alcohol*’, ‘*beer*’, ‘*binge drinking*’, ‘*booze*’, ‘*drinking*’, ‘*drunk*’, ‘*tipsy*’, ‘*vodka*’, ‘*wasted*’ and ‘*wine*’. All cases were retrieved using the in-house search functions on each website. Search filters ensured that only applicable content was provided (e.g. ‘accounts’ on Twitter). In contrast to marketing, YouTube videos were extracted from the video search results, and not through channels. All results were compared against exclusion criteria to ensure that the content did not feature user-generated branding, commercial practices related to marketing, or content that did not meet the definition of user-generated promotion (e.g. ‘Content was aimed at promoting responsible drinking or action toward alcohol-related harm’) (Appendix 13).

5.3.4. Content measures

A quantitative codebook was developed based on previous studies and the current research questions (see 4.5.4). The codebook was split into three pro-forma: (1) audience

size and participation; (2) design features, topical references, and ethical practice; and (3) messages suggested about alcohol. Each is now briefly reviewed.

5.3.4.a Pro-forma one: Audience size and participation

On Facebook, the number of overall page ‘likes’, people talking about the page, and number of ‘likes’ and ‘shares’ on the first 10 author-generated posts were recorded. On Twitter, the number of Tweets sent by the account, account followers, and accounts followed were recorded. On YouTube, the number of channel subscribers, video length (seconds), video views, ‘likes’ and ‘dislikes’, and number of comments were recorded.

5.3.4.b. Pro-forma two: Design features, topical references, and ethical practice

This 20-item pro-forma was divided into three subsections: (1) design features, (2) topical references, and (3) ethical practice. Some features were not present on all three websites (see Table 5.2). For example, although Facebook pages and Twitter accounts could have photo galleries, this was not possible on video-based website YouTube. All pro-forma items were recorded dichotomously (Yes/No), except for gender which was categorised as Mainly male/Mainly female/Mixed/No genders featured. Further details of pro-forma development and justification are provided in 4.5.4.c.

5.3.4.c. Pro-forma three: Messages suggested about alcohol

This pro-forma contained 21 items which reviewed how alcohol use or drinking cultures were framed (Table 5.3). The scale originally included 15 items from Section 18 of the CAP Non-Broadcast Advertising, Sales, Promotion, and Direct Marketing Code of Conduct for Alcohol (CAP, 2015). During data collection, however, it became apparent that there were six recurrent themes not covered. These six themes were therefore added

before the second round of coding (Table 5.3). All 21 items were recorded dichotomously (Yes/No). The third pro-forma focused mostly on associations paired with alcohol, and therefore differed from the topical references in the second pro-forma (5.3.4.b). While the second pro-forma may capture reference to sponsorship of a sporting team, in the third pro-forma this was not recorded as linking alcohol to an unwise context unless, for example, the content had also implied the sporting activity was taking place following consumption. Further details of pro-forma development are provided in 4.5.4.d.

Table 5.2. Pro-forma two: Design features, topical references, and ethical practice

Content	Is satisfied if content....	Site
Design features		
<i>Applications</i>	Has interactive application(s).	F
<i>Competitions</i>	Refers to a competition(s).	All
<i>Engagement</i>	Encourages participation from the audience.	All
<i>Games</i>	Has online playable game(s).	F
<i>Images/photos</i>	Makes use of images.	F, T
<i>Links</i>	Links to further content (e.g. other marketing).	All
<i>Main gender</i>	Features males, females, a mixture, or no gender.	All
<i>Shop/offers</i>	Has links to a place of purchase or refers to price offers.	All
<i>Videos</i>	Makes use of videos.	All
<i>UGC</i>	Has content which appears to be have been created by other users.	All
Topical references		
<i>Celebrity</i>	Reference to celebrities (not including sport and music).	All
<i>Events</i>	Has event page, or references to sponsored event.	All
<i>Food</i>	Reference to food, food events, contexts, or celebrities.	All
<i>Humour</i>	Makes use of humour (e.g. jokes, satire, pranks).	All
<i>Music</i>	References to music, music events, or music artists.	All
<i>Popular culture</i>	Reference to popular culture (e.g. television)	All
<i>Real-world tie ins</i>	Reference to a real-world event or story.	All
<i>Sports</i>	Reference to sports, sporting events, or sportspersons.	All
Ethical practice		
<i>Age restriction</i>	Informs the content is only for those of legal purchasing age.	All
<i>Responsible drinking</i>	Has a responsible drinking message or a link to responsible drinking website.	All

F = Facebook; T = Twitter; All = content was recorded all three websites

Table 5.3. Pro-forma three: Messages suggested about alcohol

CAP code items	Satisfied if content....
<i>Socially irresponsible</i>	Features socially irresponsible content or is likely to lead people to adopt styles of drinking or behaviour that are unwise or excessive.
<i>Confidence and popularity</i>	Implies that alcohol can enhance confidence or popularity.
<i>Personal or social success</i>	Implies that alcohol is a key component in the success of a personal relationship or social event.
<i>Challenging</i>	Portrays alcohol as a challenge or implies aggression, unruly, irresponsible, or anti-social behaviour, or links alcohol with brave or daring people or acts.
<i>Sex and sexuality</i>	Links alcohol with seduction, sexual activity, or sexual success, or implies enhanced attractiveness.
<i>Priority</i>	Implies that alcohol might be indispensable or take priority in life, or that alcohol can overcome boredom, loneliness, or problems.
<i>Therapeutic</i>	Implies that alcohol has therapeutic qualities, is capable of changing mood, or represents a source of nourishment. Implies alcohol can enhance mental or physical capabilities.
<i>Drugs</i>	Links alcohol to illicit drugs.
<i>Excessive</i>	Implies, condones, or encourages excessive consumption.
<i>Handled</i>	Features alcohol being handled or served irresponsibly.
<i>Unsafe</i>	Links with activities where drinking would be unsafe or dangerous. Can feature physical activities but must not imply they are undertaken after drinking.
<i>Work</i>	Alcohol is featured being drunk by anyone in working or educational environment.
<i>Under 18s</i>	Appeals to under 18s or features real or fictitious characters likely to encourage consumption in those under 18. People shown in significant roles are behaving in an adolescent or juvenile manner.
<i>Under 25s</i>	People shown drinking, or playing a significant role, appear to be under 25 years old.
<i>Health claims</i>	Makes health, fitness, or weight control claims about alcohol.
Items added following frequent presentation in first round of coding	
<i>Lifestyle</i>	Consistently links alcohol to a culture or lifestyle.
<i>Behavioural impairment</i>	Implies consuming alcohol impairs cognitions or behaviour.
<i>Normal or regular</i>	Implies that alcohol use should be a frequent or daily behaviour.
<i>Glamour</i>	Implies that alcohol is glamorous or part of a glamorous lifestyle.
<i>Boisterous</i>	Implies that alcohol makes an individual loud, boisterous, or noisy.
<i>Drinking games</i>	Implies alcohol is a game, or refers to a drinking game.

5.3.5. Data collection

Facebook and Twitter data was captured using the print screen function and saved as JPEG images using Microsoft Paint. YouTube videos were downloaded using a third-party website (www.clipconverter.cc), while the channel and video information was also captured as a JPEG image. Digital marketing on Facebook was collected 24th August – 23rd September 2013; Twitter content 1st June – 23rd June 2015; and YouTube content 3rd May – 10th August 2015. User-created promotion on Facebook was collected 16th November 2013 – 28th January 2014; Twitter content 5th December 2013 – 29th January 2014; and YouTube content 2nd March – 30th April 2015. Once content was captured, each pro-forma was completed in sequential order, with coding input directly into SPSS for analysis. Once completed, all content was reviewed against each of the three pro-forma items a second time to ensure that no content had been omitted, address discrepancies that arose through reflexive consideration of the total sample, and to code the additional six items added to pro-forma three (see 5.3.4.c).

5.3.6. Data analysis

Data was analysed using SPSS version 21. From the first pro-forma, descriptive statistics were computed for: (1) Facebook page likes, number of people talking about the page, post likes, and post shares; (2) Tweets sent, account followers, and accounts followed; and (3) YouTube channel subscribers, video length, views, likes, dislikes, and comments. Thirteen independent samples *t*-tests were used to compare the differences between digital marketing and user-created promotion for audience size and participation. Because some of the audience and participation variables did not have normally distributed data⁴,

⁴ YouTube video views, for example, was affected by outliers (Skewness: 8.34, *SE* = .16; Kurtosis: 77.78, *SE* = .32).

robust testing (2,000 bootstrapped bias-corrected pairwise comparisons) was employed in each *t*-test to account for any bias, as recommended by Field (2013). Bootstrapping was preferred to alternative methods of analysing these variables (e.g. removal of extreme outliers, winsorising, or non-parametric testing) as the wide distribution reflected the natural popularity of some content compared to others, while robust testing is considered to provide an accurate comparison when using large samples (Field, 2013; 2016).

Frequencies were used to analyse how often the items on pro-forma two and three were coded. To compare digital marketing and user-created promotion, or between websites, it was not possible to use the raw frequency counts as the dependent variable. This was because the number of cases extracted was not consistent across the three websites or between the two types of content⁵. To address this, the frequencies were converted into proportions for each item on the pro-forma (%). These proportions were generated and analysed using a 4x2 cross-tabulation tables. In each cross-tabulation, the first category represented the website (Overall, Facebook, Twitter, and YouTube). The second category represented whether a variable was recorded as present or not (Yes/No). Separate cross-tabulations were produced for digital marketing and user-created promotion.

The items on pro-forma two and three were also subject to a top-down thematic analysis, mirroring previous research (Atkinson et al., 2014; Carah, 2014; Carah et al., 2015). The intention of this thematic analysis was not to establish new macro themes to add to those recorded in the pro-forma, but instead to provide more detail about the micro themes that

⁵ For instance, only 72 cases of marketing were recorded on Facebook, compared to 101 of user-created promotion. Therefore, if an item appeared in 36 marketing pages and 50 user-created pages the raw scores would imply a difference, despite the proportions being 50%.

existed within each item (see the 4.5.4.e). This thematic analysis was achieved by collecting notes and screenshots about each item recorded on the pro-forma (e.g. sports reference, links to sex and sexuality). After quantitative coding was completed, the qualitative notes were compiled and the main themes synthesised for each pro-forma item. Throughout the analysis, the different qualitative themes are discussed alongside the quantitative analysis to provide descriptive detail.

5.4. Results

5.4.1. Sample

The sample consisted of 196 cases of marketing (Facebook, $n = 72$; Twitter, $n = 65$; YouTube, $n = 59$) and 378 cases of user-created promotion (Facebook, $n = 101$; Twitter, $n = 108$; YouTube, $n = 169$). These samples exceed the minimum suggested for content research into online promotion of health risk behaviours ($n = 70$) (Carroll et al., 2013; Primack et al., 2015). Although the marketing sample encompassed as many of the 100 brands present on each website, the user-created promotion sample represents a smaller cross-section which is biased by the content deemed most relevant by the search engines⁶. As the aim of this study was to evaluate content, collecting substantially more user-created promotion than marketing would have increased the likelihood that certain features would eventually be recorded, or be recorded more frequently. It was therefore decided to halt data collection once the number of user-created promotion cases was almost double that of marketing. Despite the need to restrict sampling, each keyword is still represented in the user-created promotion sample: ‘*alcohol*’ ($n = 35$), ‘*beer*’ ($n = 55$), ‘*binge drinking*’ ($n = 3$), ‘*booze*’ ($n = 23$), ‘*drinking*’ ($n = 28$), ‘*drunk*’ ($n = 138$), ‘*tipsy*’ ($n = 7$), ‘*vodka*’ ($n = 50$), ‘*wasted*’ ($n = 12$), and ‘*wine*’ ($n = 27$).

⁶ For example, the keyword ‘drunk’ returns over 16.1 million hits on YouTube.

5.4.2. Audience size and participation

5.4.2.a. Facebook

An independent samples *t*-test (based on bias-corrected bootstrapping) indicated that digital marketing on Facebook had, on average, significantly more page likes than user-created promotion, $t(71.61) = 3.03$, $p < 0.05$, $d = 0.46$ (Table 5.4). Although marketing pages also had a greater average number of people talking about the page ($p = 0.69$), and user-created promotion had a greater average number of post likes ($p = 0.93$) and post shares ($p = 0.06$), none of these significantly differed.

Table 5.4. Facebook audience size and participation

Variable	Digital marketing (<i>n</i> = 72)				User-created promotion (<i>n</i> = 101)			
	Likes	Talking about	Post likes	Post shares	Likes	Talking about page	Post likes	Post shares
Mean	1,045,033	32,931	4,040	531	111,056	24,384	4,189	1,574
SD	2,611,969	151,876	6,826	971	202,330	72,507	14,097	5,328
Maximum	14,814,076	1,255,987	30,071	5,243	1,165,800	406,789	96,813	39,398
Median	109,300	1,568	785	95	31,529	448	624	120
IRQ 25 th	17,801	124	292	20	5,145	12	142	4
IRQ 75 th	387,258	7,855	3574	649	97,243	6,347	1904	761

IRQ = Inter-quarter range.

5.4.2.b. Twitter

An independent samples *t*-test (based on bias-corrected bootstrapping) indicated that user-created Twitter accounts, on average, posted significantly more Tweets than marketing, $t(124.58) = -3.47$, $p < 0.01$, $d = 0.63$ (Table 5.5). User-created promotion also had, on average, significantly more followers than marketing, $t(131.27) = -2.91$, $p < 0.05$, $d = 0.51$. There was no difference in the average number of accounts followed by marketing and user-created promotion ($p = 0.10$).

Table 5.5. Twitter audience size and participation

Variable	Digital marketing (<i>n</i> = 65)			User-created promotion (<i>n</i> = 108)		
	Tweets sent	Followers	Following	Tweets sent	Followers	Following
Mean	2,631	10,278	841	6,530	24,793	3,771
SD	2,542	13,207	973	11,198	48,919	13,510
Maximum	8,914	59,220	4,713	82,450	262,414	96,139
Median	1,690	5,805	497	3,076	4,480	411
IQR 25 th	519	1,578	211	559	1,040	75
IQR 75 th	4,635	12,041	1,056	6,686	23,183	1,606

5.4.2.c. YouTube

An independent samples *t*-test (based on bias-corrected bootstrapping) indicated that user-created promotion had, on average, significantly more channel subscribers than marketing, $t(165.11) = -8.67, p < 0.001, d = 1.35$ (Table 5.6). User-created videos were also, on average, significantly longer, $t(199.88) = -12.26, p < .001, d = 1.7$; and had a greater average number of comments, $t(184.70) = -3.36, p < .001, d = 0.49$. There was no difference in the average number of views each video had ($p = 0.71$), the average number of likes, ($p = 0.39$), or the average number of dislikes ($p = 0.16$).

5.4.3. Design features

5.4.3.a. Use of images

The design of YouTube does not support photos so this feature was only recorded on Facebook and Twitter. On these two websites, 99% of marketing posted images (Facebook, 100%; Twitter, 97%) (Table 5.7). Most marketing images were bespoke designs which promoted a specific product or brand. Similarly, 95% of user-created promotion posted images (Facebook, 100%; Twitter, 91%). Most user-created promotion focused on humorous images that are likely to have been created or also shared elsewhere online (e.g. memes) or photos documenting real drinking occasions (Figure 5.1).

Table 5.6.a. YouTube audience size and participation (marketing)

Digital marketing						
<i>(n = 59)</i>						
Variable	Subscribers	Length (sec)	Views	Likes	Dislikes	Comments
Mean	8,642	88	1,917,599	5,194	187	439
SD	28,341	47	7,726,744	31,864	990	2,310
Maximum	138,693	229	58,643,014	244,565	7,594	17,564
Median	778	57	296,763	42	5	6
IQR 25 th	41	30	20,795	3	0	0
IQR 75 th	3,657	91	953,572	421	23	75

Table 5.6.b. YouTube audience size and participation (user-created promotion)

User-created promotion						
<i>(n = 167)</i>						
Variable	Subscribers	Length (sec)	Views	Likes	Dislikes	Comments
Mean	1,801,578	308	1,601,225	22,614	560	1,922
SD	2,663,959	243	4,776,745	143,746	2,060	4,208
Maximum	14,818,712	1,857	54,540,247	1,860,700	25,075	25,372
Median	408,014	232	395,110	2,779	128	391
IQR 25 th	12,452	143	68,723	679	28	119
IQR 75 th	22,301	427	1,418,040	12,865	478	1,404

Table 5.7. Design features of digital marketing and user-created promotion

Design features	Digital marketing								User-created promotion							
	Overall		Facebook		Twitter		YouTube		Overall		Facebook		Twitter		YouTube	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Photos	99	135	100	72	97	63	-	-	95	199	100	101	91	98	-	-
Links to content	91	179	97	70	100	65	75	44	84	316	79	80	88	95	83	141
Engagement	76	148	94	68	77	50	51	30	73	276	73	74	56	60	84	142
Applications	63	45	63	45	-	-	-	-	21	21	21	21	-	-	-	-
Videos	62	122	58	42	32	21	100	59	56	210	17	17	22	24	100	169
Competitions	36	70	63	45	34	22	5	3	>1	3	3	3	0	0	0	0
Other user content	30	58	29	21	55	36	2	1	54	204	85	86	82	88	18	30
Shop/offers	15	30	24	14	17	11	3	2	12	47	10	10	1	1	21	36
Games	6	4	6	4	-	-	-	-	0	0	0	0	-	-	-	-
Main gender featured																
Even mixture	45	89	50	36	50	36	46	30	44	166	61	62	44	47	34	57
Male	32	62	32	23	32	23	28	18	37	140	23	23	27	29	52	88
Female	12	24	13	9	12	9	17	11	15	58	11	11	23	25	13	22
No gender featured	11	21	6	4	6	4	9	6	4	14	5	5	7	7	1	2

Note:

- indicates not applicable (i.e. it was not possible for that feature to appear on that website)



5.4.3.b. External links and hashtags

Almost all marketing had a hyperlink to further content (91%) (Facebook, 97%; Twitter, 100%; YouTube, 75%). Most of these linked to other marketing (e.g. websites) or related third party websites (e.g. drinkaware.co.uk). On Twitter, marketing also contained links through hashtags, including brand-created trends (e.g. ‘*#UltimateSummer*’), general trends (‘*#TBT*’⁷), or event-specific trends (e.g. ‘*#Eurovision*’). In comparison, 84% of user-created promotion had external links (Facebook, 79%; Twitter, 88%; YouTube, 83%). These were more varied than marketing, and included links to other social media content, third-party websites, personal social media profiles, e-mail addresses, and original or viral trends (e.g. ‘*#TooDrunkTooFunction*’ and ‘*#MyLifeInAPicture*’).

5.4.3.c. Encouraged audience participation

Three quarters of marketing encouraged audience participation (76%) (Facebook, 94%; Twitter, 77%; YouTube, 51%), as did a similar proportion user-created promotion (73%)

⁷ #TBT refers to ‘Throwback Thursday’, a trend about posting an older photo.

(Facebook, 73%; Twitter, 56%; YouTube, 84%). For both types of content examples included asking the audience to like, comment or share, posing direct or rhetorical questions, starting conversations, asking individuals to tag friends, running polls, suggestions to click links to further content, and asking the audience to submit content or enter competitions (Figure 5.2).



5.4.3.d. Apps

As Twitter and YouTube do not allow for apps this feature was only recorded on Facebook. Over half of the marketing pages (63%) had apps, with most having a high quality and bespoke design (Figure 5.3). Examples included product locators, interactive photo albums, shops, product comparison features, interactive event pages, music apps, quizzes, house rules tabs, magazines, social media feeds (e.g. Twitter), and mini-websites. In comparison, only 21% of user-created pages had apps. Most appeared to be third-party creations rather than bespoke designs. Examples included embedded social

media or blog feeds (e.g. Instagram), fan of the week selectors, competition apps, shops, invite a friend apps, and welcome pages.

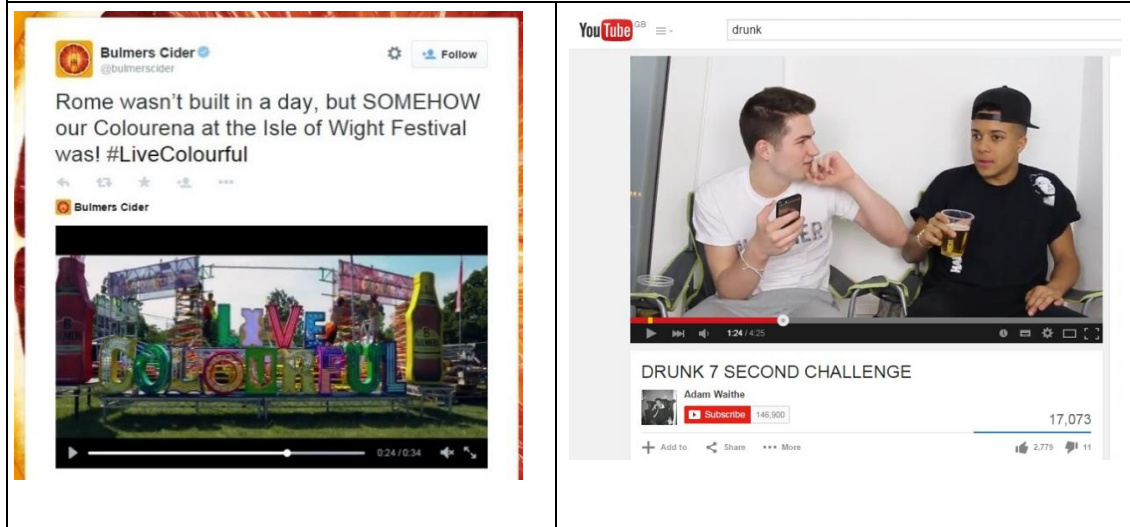
Figure 5.3. Apps in digital marketing and user-created promotion



5.4.3.e. Video content

Nearly two thirds of marketing had videos (62%) (Facebook, 58%; Twitter, 32%; YouTube, 100%). Most of the videos had a high quality and bespoke design, and included television adverts, how-to-guides, documentaries, viral videos, and interviews with celebrities or sportspersons. A similar proportion of user-created promotion also had videos (56%) (Twitter, 22%; Facebook, 17%; YouTube, 100%). Most videos appeared to be amateur in nature or, at best, semi-professional productions (e.g. produced using mobile phones). Only a handful appeared to be professional productions (e.g. video-blogs filmed in a specific studio). Examples of categories included taking part in drinking challenges, video-blogs, quizzes, how-to-guides, viral videos, and compilations of other content (Figure 5.4).

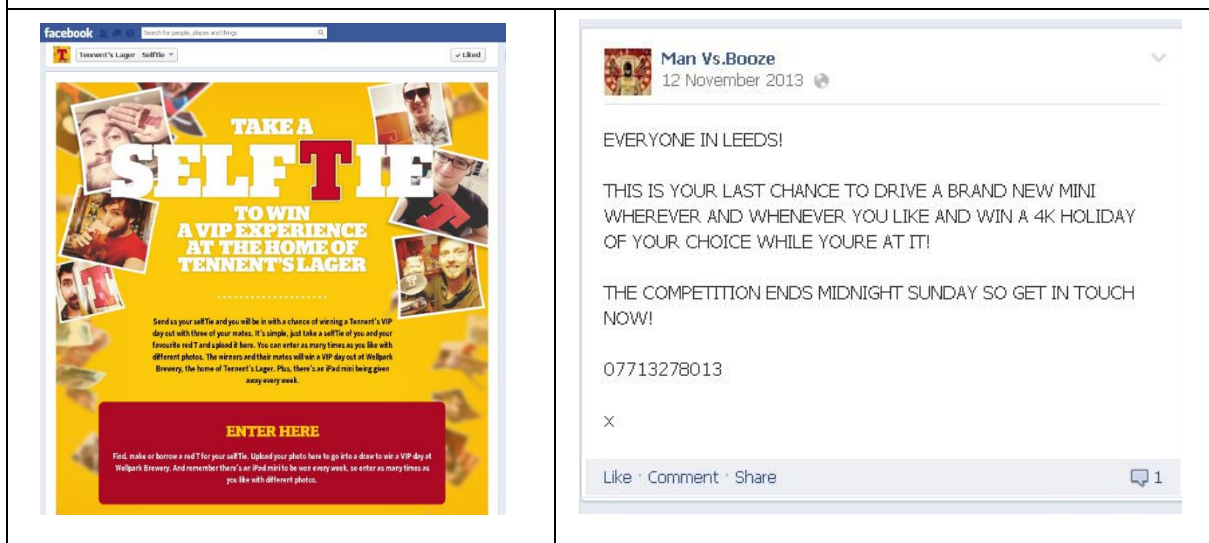
Figure 5.4. Videos in digital marketing and user-created promotion



5.4.3.f. Competitions

Over a third of marketing referred to a competition (36%) (Facebook, 63%; Twitter, 34%; YouTube, 5%). Prizes included limited edition products, event tickets, magazines, holidays, gadgets, beauty products, gift vouchers, and experiences. In comparison, less than 1% of user-created promotion referred to a competition, with all three featuring on Facebook (3%). Pages which had competitions appeared to be run by more established content creators (e.g. professional bloggers), although the prizes were considerably less valuable than marketing (e.g. fashionable bag or unspecified ‘top prizes’) (Figure 5.5).

Figure 5.5. Competitions in digital marketing and user-created promotion



5.4.3.g. Content from other users

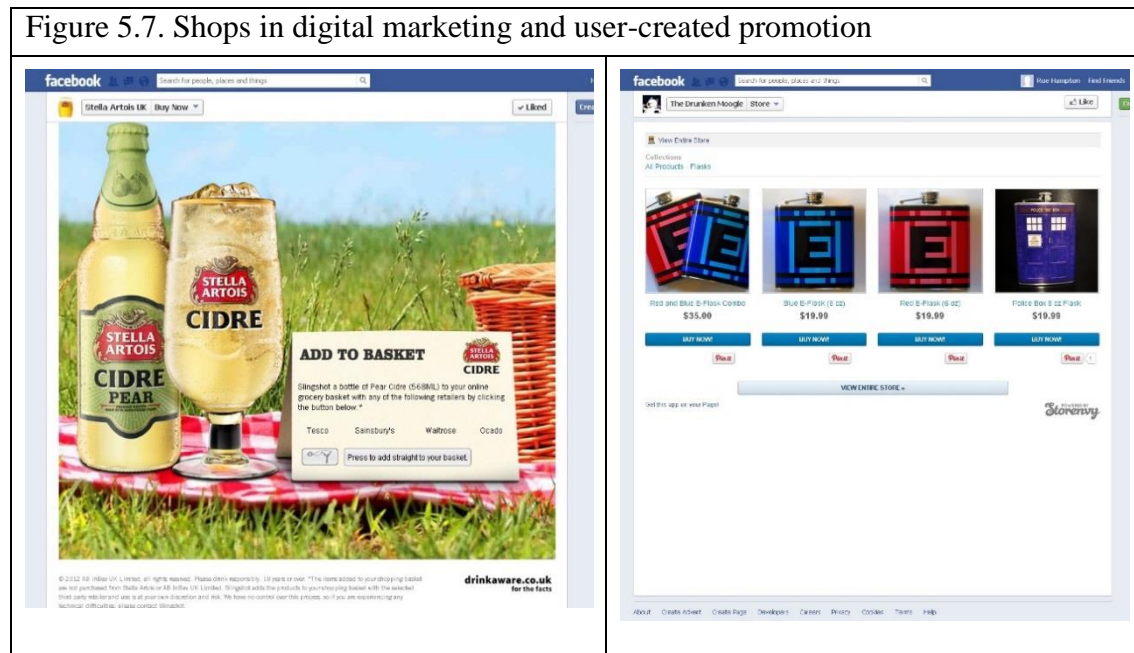
Almost a third of marketing (30%) contained content that appeared to have been created by other users or media sources (Figure 5.6) (Facebook, 29%; Twitter, 55%; YouTube 2%). Examples included fan-photos, audience comments, and videos created by other organisations (e.g. supermarket advert). In contrast, approximately half of user-created promotion contained content that was adjudged to have been clearly created or co-produced by others (54%) (Facebook, 85%; Twitter, 82%; YouTube, 18%). Examples included viral memes, professional pictures, and compilation videos created using footage made by others (e.g. from CCTV cameras or other professional produced media).



5.4.3.h. Shop or offers

Nearly a quarter of marketing (15%) provided the ability to buy products and merchandise, discussed offers, or suggested locations where such items could be purchased. The proportion to do so was highest on Facebook (24%), where shops could be added as a page app, followed by Twitter (14%) and YouTube (3%), both of which mainly referred to real-time offers and locations. In comparison, only 12% of user-created promotion referred to shops or offers (Facebook, 10%; Twitter, 1%; YouTube, 21%). No

user-created promotion sold alcohol, with most providing links to shops that sold alcohol-related merchandise or merchandise related to the account (e.g. whiskey flasks, t-shirts, and wristbands) (Figure 5.7).



5.4.3.i. Games

Twitter and YouTube do not allow for gaming features so this was only recorded on Facebook. Only a small number of marketing pages had games (6%) (Figure 5.8), with most appearing in beer and cider brands. Most adopted an ‘arcade style’, including a retro football game (Budweiser), a penalty shootout (‘Freekick Fusion’, Carlsberg), and one where the user had to catch falling fruit which was themed around the product (Crabbie’s Alcoholic Ginger Beer) (Figure 5.8). No user-created promotion featured games that could be played by the audience, although it is noted that some videos on YouTube were based around video-bloggers drinking alcohol while they were playing video or board games (e.g. ‘Drunk Gaming – Five Nights at Freddy’s 2’).

Figure 5.8. Games in digital marketing



5.4.3.j. Gender featured

Most marketing featured an even mixture of males and females (45%), with a further 32% depicting mainly males, 12% depicting mainly females, and only 11% depicting no gender (e.g. only product images). These estimates were consistent across Facebook, Twitter, and YouTube (Table 5.7). These estimates were also consistent for user-created promotion, with 44% depicting an even mixture of genders, 37% depicting mainly males, 15% depicting mainly females, and 4% depicting no gender (Figure 5.9). Again, there was little variation across the three websites, except for YouTube which had more frequent depictions of males than depictions of mixed genders (Figure 5.9).

Figure 5.9. Mixture of genders in digital marketing and user-created promotion



5.4.4. Topical references

5.4.4.a. Alcohol brands

All marketing referenced an alcohol brand, with some referring to multiple products under one brand name (e.g. Stella Artois beer and cider) (Table 5.8). Only one case referenced more than one overall ‘brand’ (Jack Daniels and Southern Comfort on the latter’s Facebook page). At the time of posting, however, both were owned the Brown-Forman Group (Bevnet, 2016). Only 62% of user-created promotion referred to an alcohol brand (Facebook, 50%; Twitter, 58%; YouTube, 71%). User-created promotion depicted a range of brands, with most featuring several different ones in the same content. Those frequently depicted were beer and spirit brands (Figure 5.10). User-created promotion which did not feature an alcohol brand mostly showed either individuals displaying the effects of over-consumption (e.g. passed out or vomiting) or depicted alcohol being consumed from unbranded containers.

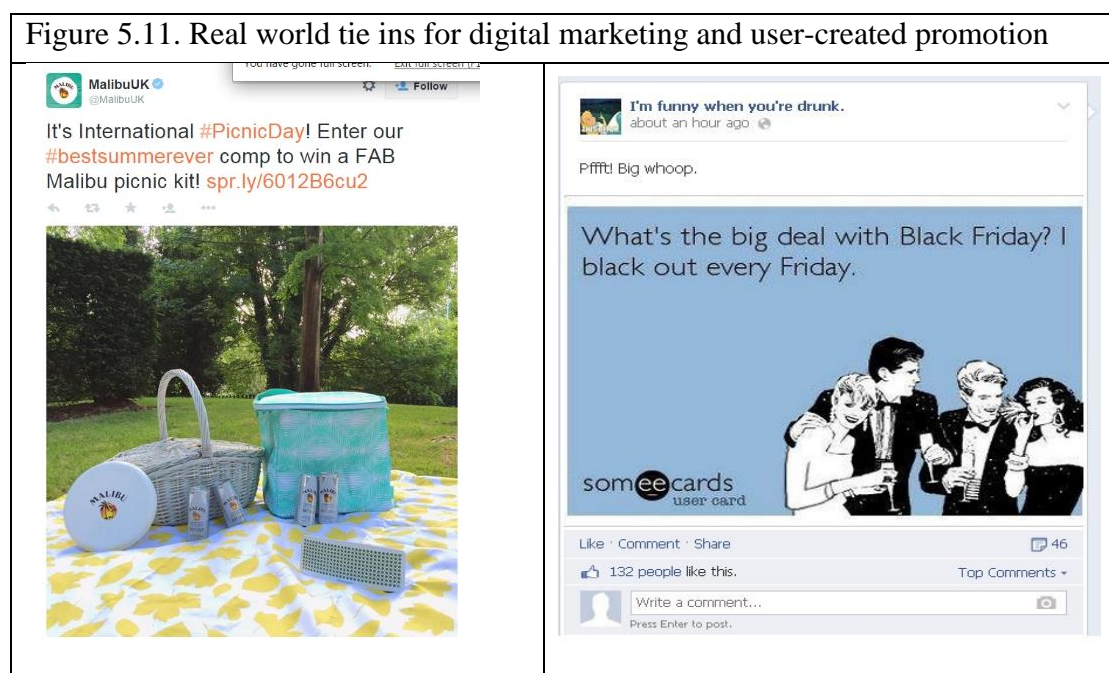


Table 5.8. Topical references in digital marketing and user-created promotion

Topical features	Digital marketing								User-created promotion							
	Overall		Facebook		Twitter		YouTube		Overall		Facebook		Twitter		YouTube	
	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Brand reference	100	196	100	72	100	65	100	59	62	233	50	50	58	63	71	120
Real-world tie ins	78	153	97	70	100	65	31	18	82	311	82	83	81	87	84	141
Music	45	89	36	21	25	16	80	47	38	143	8	8	27	29	63	106
Food	40	78	51	37	49	32	15	9	20	76	18	18	16	17	24	41
Events	37	72	49	35	45	29	14	8	2	8	6	6	2	2	0	0
Humour	36	70	38	27	32	21	32	21	78	293	83	84	80	86	73	123
Celebrity	26	50	36	26	31	20	8	4	35	132	45	45	47	51	21	36
Popular culture	35	68	35	25	46	30	22	13	47	176	60	61	69	74	24	41
Sports	26	50	28	20	29	19	19	11	9	33	7	7	19	20	4	6

5.4.4.b. Real-world tie ins

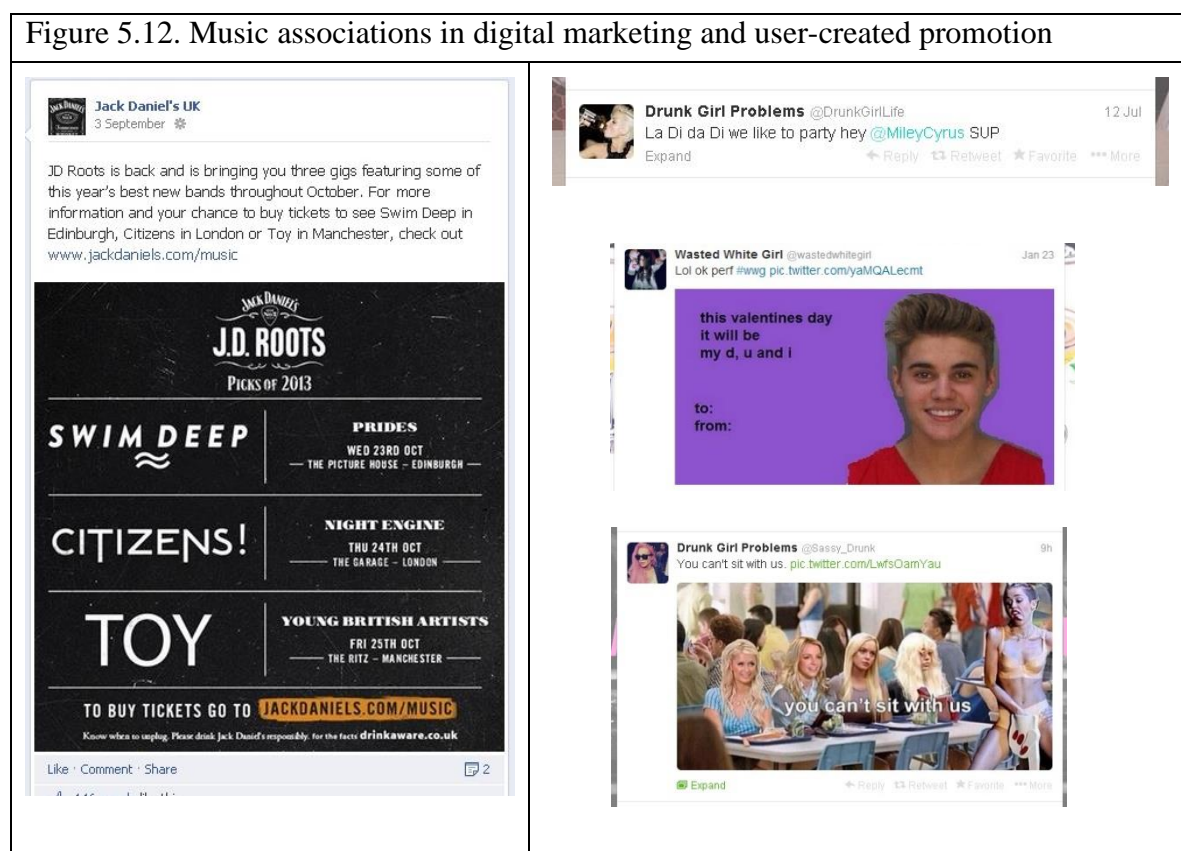
Over three quarters of marketing made real world tie ins (78%). These included sponsored events, holidays, themed days (e.g. ‘*#NationalDonutDay*’), days of the week (e.g. ‘*#WineWednesday*’), and general events (e.g. football matches). Such references featured more in the real-time environments of Facebook (97%) and Twitter (100%). On YouTube (31%), where there is less emphasis on real-time posting, videos were mostly based around fictional scenarios. A similar proportion of user-created promotion made real world tie ins (82%). On Facebook (82%) and Twitter (81%) the references were similar to marketing, particularly days of the week, seasonal references, and current events. Real world tie ins for user-created promotion on YouTube were considerably higher than marketing (84%). This was because many videos documented real drinking occasions and challenges, compared to the fictional scenarios in marketing (Figure 5.11).



5.4.4.c. Music

Approximately half of marketing referenced music (45%). This included sponsored events, posting lyrics, playlist apps (e.g. Spotify), and competitions to win music-themed

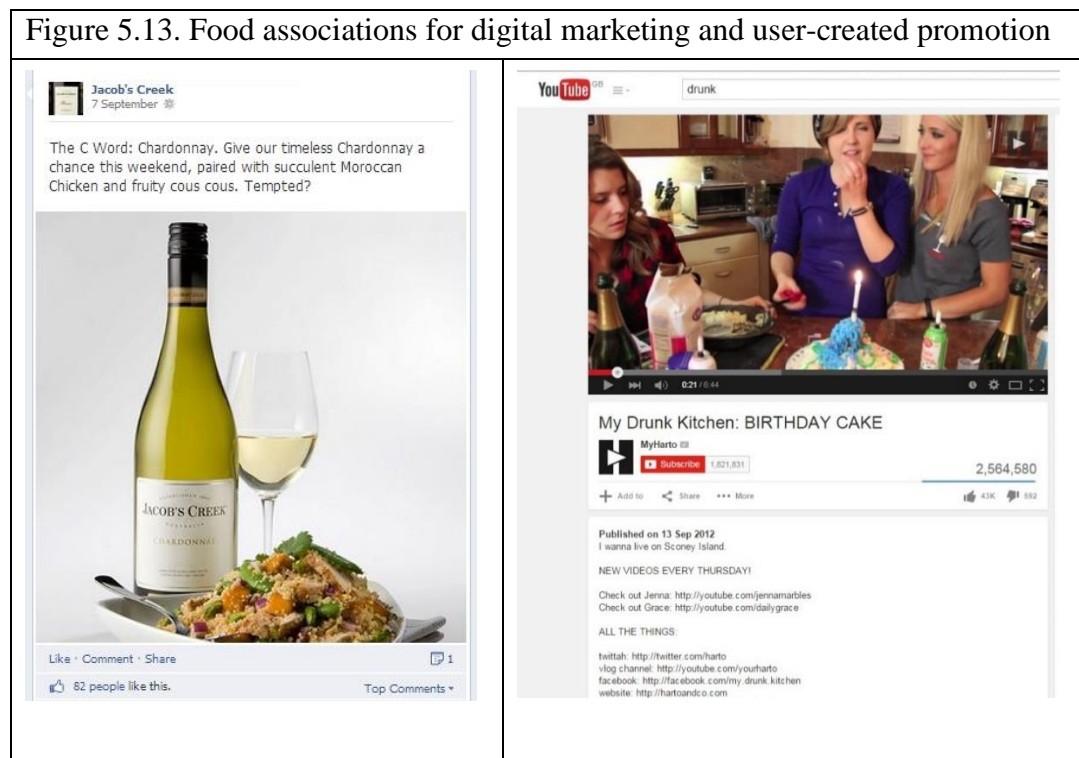
experiences. Such references were most frequent on YouTube (80%), as music was a prominent feature in videos, compared to Facebook (36%) and Twitter (21%). In comparison, 38% of user-created promotion referenced music (Facebook, 8%; Twitter, 27%; YouTube, 63%). Due to the lack of music artist or event sponsorship, these references often lacked the depth of marketing. They instead mostly reflected re-posting music videos, posting pictures of music artists, featuring music prominently in videos, and real-time conversations about music (Figure 5.12).



5.4.4.d. Food

Nearly half of marketing referred to food (40%) (Facebook, 51%; Twitter, 49%; YouTube, 15%). Examples included photos of alcohol with food, suggestions of pairing alcohol with meals, links to food events, suggesting recipes, depicting celebrity chefs, and video masterclasses. Only 20% of user-created promotion referred to food

(Facebook, 18%; Twitter, 16%; YouTube, 24%). Examples included linking alcohol to a specific meal or seasonal event (e.g. Thanksgiving), suggesting that alcohol could replace a meal, food-themed pages (e.g. ‘*The Drunk Spatula*’), recipes, and suggestions of cooking while drunk (Figure 5.13).



5.4.4.e. Events

Over a third of marketing referred to a brand-associated event (37%) (Facebook, 49%; Twitter, 45%; YouTube, 14%). Examples included music events, tastings, brewery tours, sponsored sporting events, award ceremonies, and virtual parties. Most references were posts promoting the event or documenting it after it had happened. On Facebook, due to the website design, some marketing had created event pages linked to their main page. In comparison, only 2% of user-created promotion referred to an associated event, with all featuring on Facebook (6%) or Twitter (2%). Most represented virtual parties, timings of programmes used for drinking games, and Q&A events (Figure 5.14).

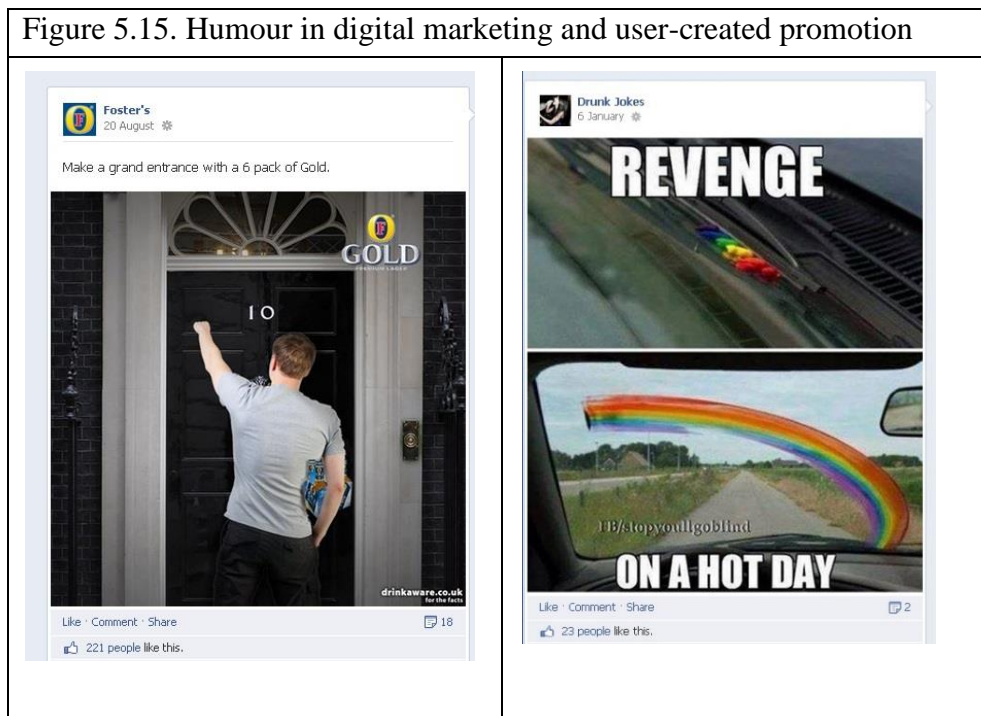
Figure 5.14. Events for digital marketing and user-created promotion



5.4.4.f. Humour

Over a third of marketing was adjudged to use humour (36%) (Facebook, 38%; Twitter, 27%; YouTube, 32%), in contrast to three quarters of user-created promotion (78%) (Facebook, 83%; Twitter, 84%; YouTube, 73%). Within both types of content humour was exhibited in a variety of ways, including images with funny captions, parody accounts, prank videos, funny stories, and comedy sketches (Figure 5.15).

Figure 5.15. Humour in digital marketing and user-created promotion



5.4.4.g. Celebrities and popular figures

Over a quarter of marketing (26%) referenced a celebrity or popular figure (Facebook, 36%; Twitter, 31%; YouTube, 8%). This excluded those classified as celebrities of sport or music (accounted for in 5.4.5.c and 5.4.5.i, respectively). Thirty-five per cent of user-created promotion also referenced celebrities (Facebook, 45%; Twitter, 47%; YouTube, 21%). Celebrities and popular figures included stars of film and television, fashion designers, politicians, and figures from literature. Most references were images or videos featuring the celebrity or something that they had said. Some user-created promotion used the celebrity or popular figure as a central part of their theme (e.g. ‘*The Osama bin Laden Drinking Game*’) (Figure 5.16).



5.4.4.h. Popular culture

Over a third of marketing (35%) referred to popular culture (Twitter, 46%; Facebook, 35%; YouTube, 22%), compared to 47% of user-created promotion (Facebook, 60%; Twitter, 69%; YouTube, 24%). Across both forms of content, references varied widely and included television shows, films, cultural events (e.g. fashion festivals), magazines, fictional characters, and board or video games (Figure 5.17).



5.4.4.i. Sports

A quarter of marketing (26%) referenced sports (Facebook, 28%; Twitter, 29%; YouTube, 19%). References were most frequent in beer and cider brands, and included both mainstream sports such football, F1, rugby, cricket, tennis, and less popular sports such as polo. In comparison, only 9% of user-created promotion referred to sports (Facebook, 7%; Twitter, 19%; YouTube, 4%). Examples including using a sporting event or sportsperson as the basis for a drinking game (e.g. 'Park Ji Sung Drinking Game'),

videos of sporting events, images of individuals playing sports, and sporting iconography (e.g. beer pong tables in the style of a basketball court) (Figure 5.18).



5.4.5. Ethical practice

5.4.5.a. Age restriction messages

Facebook

Only 43% of marketing pages had an age restriction message (Table 5.9). Most of these had low visibility, including those appearing in separate page biographies and ‘house rules’ tabs, or as footnotes to more eye-catching marketing content (Figure 5.19). Only a handful of messages appeared on the posts that would feature in a subscriber’s news feed. This means that any content shared from the page would not advise extended audiences about the age-restricted nature. Several pages stated that users were not to post images of people under the age of 25, yet did not suggest that those under the legal purchasing age should refrain from looking at the content. In comparison, only 7% of user-created pages had an age restriction message. Most of these also featured in separate biography tabs,

did not appear on individual posts, and were of a jovial nature as opposed to serious warnings (e.g. ‘we are an over 21+ page, no kids allowed!’). Several pages warned that the content may be offensive, yet did not suggest that it was unsuitable for young people.

Table 5.9. Ethical features of digital marketing and user-created promotion

	Digital marketing		User-created promotion	
	%	n	%	n
Age restriction message				
Overall	41	80	5	19
Facebook	43	31	7	7
Twitter	55	36	2	2
YouTube	22	13	10	6
Responsible drinking message				
Overall	66	130	5	20
Facebook	69	50	2	2
Twitter	59	38	1	1
YouTube	71	42	10	17

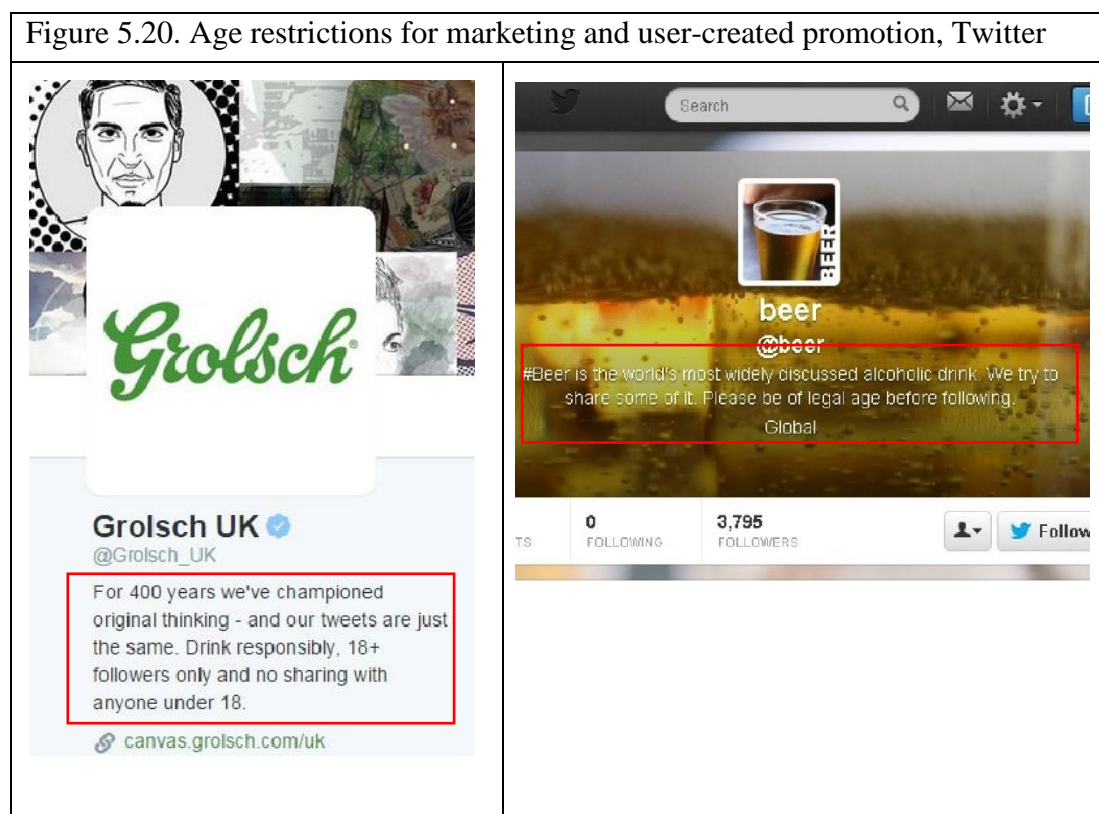
Figure 5.19. Age restrictions in marketing and user-created promotion, Facebook



Twitter

Over half of the marketing accounts had an age-affirmation message (55%). These mainly featured in the biography, meaning that they were visible to anybody viewing the account

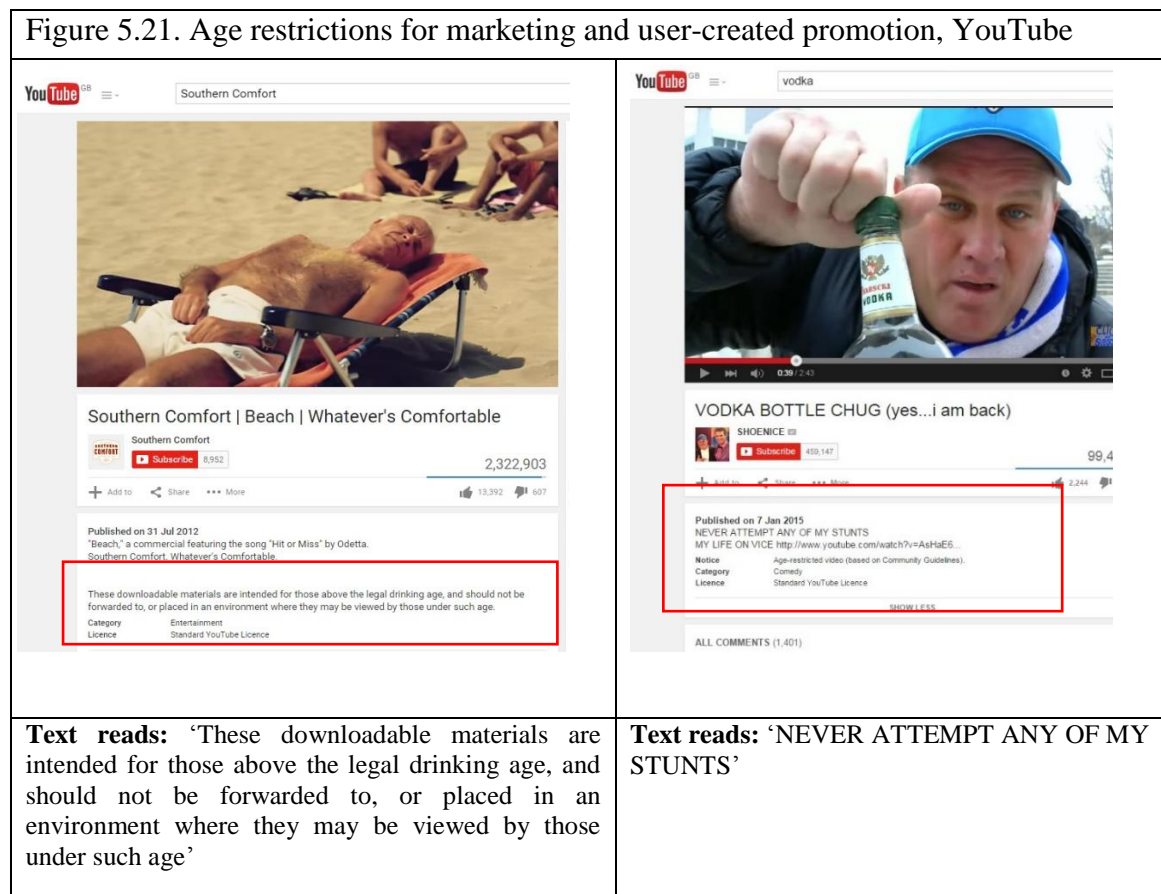
(Figure 5.20). Like Facebook, however, only a minority included age-affirmation messages on individual tweets, which means that these warnings would not be visible in a subscriber’s personal new feed, or when the content was shared with an extended audience (e.g. retweeted). Only two of the user-created promotion Twitter accounts had an age affirmation message (2%). Both appeared in the account biography and were clear statements about the content not being suitable for viewing by individuals who were under legal drinking or purchasing age.



YouTube

Only 22% of marketing and 10% of user-created videos had an age affirmation message on YouTube (Figure 5.21). These mostly represented messages at the start of the video or a statement in the video description. Several marketing cases had a message that only appeared at the end of the video, thus meaning that the marketing message had already been presented. In one user-created promotion video, the verbal age warning appeared

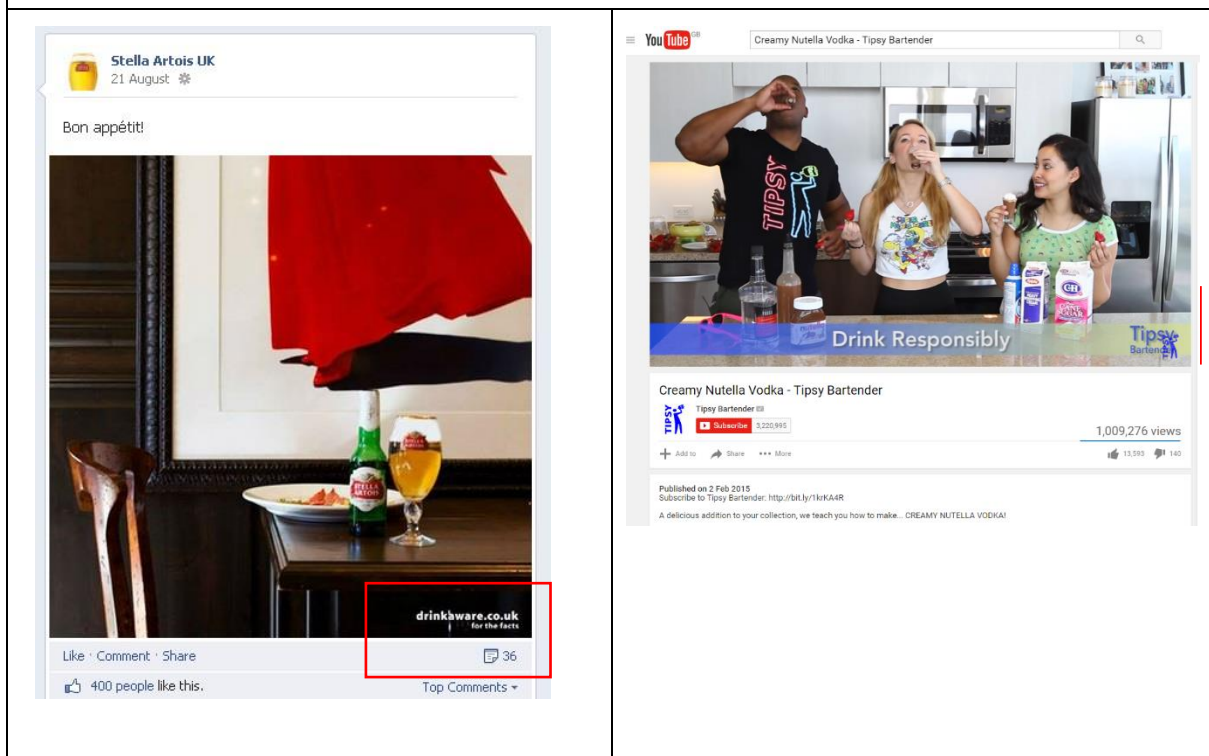
against a backdrop of others shouting ‘*Yeah, we do!*’ and an underage individual depicted on screen, albeit not seen consuming alcohol.



5.4.5.b. Promoting responsible consumption and low risk drinking

Two thirds of marketing contained a responsible drinking message or promoted lower risk consumption (66%) (Facebook, 69%; Twitter, 59%; YouTube, 71%). Messages mostly represented suggestions to drink responsibly (e.g. ‘*why let the good times go bad?*’) or links to third party websites (e.g. drinkaware.co.uk). Some marketing presented these messages in a way that still encouraged consumption (e.g. ‘*Please enjoy Foster’s responsibly*’), while others posted messages in separate biographies, at the end of videos, at the bottom of eye-catching marketing, or in small font sizes (Figure 5.22). Moreover, many individual posts did not have a responsible drinking message, so would not feature when updates appeared in a personal new feed or if shared to others (e.g. retweeted).

Figure 5.22. Responsible drinking messages in marketing and user-created promotion



In comparison, only 5% of user-created promotion contained responsible drinking or low risk consumption messages (Facebook, 2%; Twitter, 1%; YouTube, 17%). Messages were either simple statements (e.g. ‘*drink responsibly*’) or requests not to attempt to replicate challenges (e.g. ‘*Drunk gaming is for ENTERTAINMENT PURPOSES ONLY. We do not condone heavy drinking*’). There was also one narrative account of how alcohol can lead to negative outcomes (in a video-blog). Like marketing, messages often appeared in separate page biographies or video descriptions, at the end of videos, at the bottom of bright images, or in small font sizes. Moreover, some messages were presented in a colloquial fashion (e.g. ‘*And remember, please drink responsibly daaarlings*’ and ‘*Please don’t be stupid. Love you*’), while others used responsible drinking messages in a pejorative manner, thus potentially reducing their credibility in a wider context (e.g. ‘*Drink responsibly means don’t f***** spill it*’) (Figure 5.22).

5.4.6. Framing consumption and the messages suggested about alcohol

5.4.6.a. Socially irresponsible consumption or behaviour

Two marketing cases (1%), both on Twitter, arguably promoted socially irresponsible behaviour or drinking (Table 5.10) (Figure 5.23). Frosty Jacks cider posted ‘Crack open a Frosty’s, it’s time for the @championsleague final! Things are about to get Messi’. The deliberate misspelling of ‘messy’ was a reference to footballer Lionel Messi, although the term ‘messy’ has connotations of drinking until a state of impairment (Urban Dictionary, 2006). Magner’s cider posted a photo with a caption ‘One more then I’ve got to go, actually means you could definitely persuade me to stay’. This alludes to rejecting other responsibilities in favour of drinking or progression towards higher-risk consumption, as two pints of Magner’s cider (approximately 5.2 units; DrinkAware, n.d.) would exceed the daily recommended consumption for males (3-4 units) and females (2-3 units) at the time the of posting (the guidelines changed to a weekly limit of 14 units in January 2016).



Over three quarters of user-created promotion (77%) arguably suggested socially irresponsible behaviour or consumption (Facebook, 88%; Twitter, 87%; YouTube, 63%) (Figure 5.23). Examples subscribed to four categories. The first was cases where the account name (e.g. *'I'm a Binge Drinker and I love it'*) or the content within explicitly promoted excessive consumption (e.g. *'Lets see if we can get 100,000 people to get smashed playing this on Friday night'*). The second was cases that depicted, or referred to, socially irresponsible negative consequences resulting from drinking (e.g. drunken individuals crawling across main roads or falling over in public). The third was cases that referred to antisocial or irresponsible behaviour during and after drinking (e.g. opening bottles with a chainsaw, drinking whilst hanging upside down, suggestions of drink driving or urinating in public). The fourth was cases that depicted socially irresponsible or antisocial behaviour independent of any explicit reference to alcohol (e.g. speeding while driving, vandalism, and abuse or assault of others).

5.4.6.b Confidence and popularity

Four marketing cases (2%) implied that alcohol was associated with enhanced confidence or popularity (Figure 5.24). On Facebook, Heineken suggested that their product was *'The golden boy of weekdays, the superhero of the work week...'*, while Blossom Hill suggested their product could *'Add some extra sparkle to your sparkle!'* On Twitter, the biography of Lambrini suggested that their product is *'Always fun, fruity, light and bubbly'*. Malibu posted an advert on YouTube based on *'Summer you vs. rest of the year you'*. The narrative indicates that the summer protagonist is more sociable, confident, and open to new experiences. The advert concludes that *'Summer you, drinks Malibu'*, thus implying that the product is intrinsic to this enhanced popularity and confidence.

Table 5.10. Messages suggested about alcohol in digital marketing and user-created promotion

Alcohol consumption messages	Digital marketing (<i>n</i> = 196)		User-created promotion (<i>n</i> = 378)		Difference to marketing
	%	<i>n</i>	%	<i>n</i>	%
Socially irresponsible	1	2	77	291	+76
Confidence or popularity	2	4	16	61	+14
Personal or social success	35	68	26	99	-9
Challenging	2	3	39	149	+37
Sex and sexuality	8	15	31	118	+23
Priority	9	17	26	99	+17
Therapeutic	7	13	26	97	+19
Illicit drugs	0	0	16	60	+16
Excessive consumption	2	3	60	226	+58
Handled irresponsibly	7	13	32	121	+25
Unsafe context	3	6	17	63	+14
Working environment	0	0	11	42	+11
Under 18 target or appeal	11	22	48	182	+37
Depicting under 25s	26	50	62	235	+36
Health claims	>1	1	6	21	+6
Lifestyle and culture ¹	32	62	36	136	+4
Impairment ¹	0	0	41	154	+41
Every day or normal ¹	23	45	13	48	-10
Glamorous ¹	35	69	13	50	+22
Loud and boisterous ¹	>1	1	23	107	+23
Drinking games ¹	0	0	18	67	+18

¹ Themes not part of the original CAP code of conduct, but added due to repeat presentation.



The proportion of user-created promotion which implied that alcohol was associated with enhanced popularity or confidence was four times greater than marketing (16%) (Facebook, 22%; Twitter, 14%; YouTube, 14%). References were varied and included direct suggestions that alcohol could increase confidence (e.g. ‘*in all my years of public speaking, I’ve realised booze is the only coach I’ve ever needed*’) or was instrumental in being popular (e.g. ‘*Hold on, I’ve got to post a picture of my alcoholic beverage so all of my friends know how cool I am*’). Other references made implicit associations that alcohol could lead to behaviour which may be indicative of enhanced popularity or confidence (e.g. ‘*If by tipsy you mean extra fabulous then yes, I am tipsy*’) (Figure 5.24).

5.4.6.c. Personal or social success

Almost all marketing cases suggested that consuming alcohol was sociable or thirst-quenching, as permitted by the CAP regulations (CAP, 2013a). Under the spirit and letter of the regulations, however, 35% of marketing content also implied that alcohol was a key component in the success of a personal relationship or event (Figure 5.25) (Facebook,

40%; Twitter, 34%; YouTube, 29%). References included suggestions that alcohol was integral to branded social events (e.g. music festivals, sporting events, nightclub events), facilitated better social lives and relationships (e.g. ‘*inspire connections with friends and family*’, Lindemans, Facebook), and could enhance social standing (e.g. ‘*Make a grand entrance with a 6 pack of Gold*’, Fosters, Facebook).



A quarter of user-created promotion (26%) implied that alcohol was a key component in the success of a personal relationship or event (Figure 5.25) (Facebook, 31%; Twitter, 22%; YouTube, 26%). Examples mostly subscribed to four categories. The first was that an individual had a successful relationship with alcohol itself (e.g. ‘*Who needs a boyfriend when there’s this thing called wine? It will love you unconditionally and won’t talk back*’). The second was that alcohol was key to a successful personal relationship or that it could make parties and celebrations more fun (e.g. ‘*Friends that drink together, stay together*’). The third was that alcohol was integral to social events, particularly seasonal events (e.g. ‘*Getting pretty f***ing up tonight. If your not your doing New Years*

Eve wrong'). The fourth was that peers celebrated individuals who completed a drinking challenge (e.g. drinking a yard of beer and wine).

5.4.6.d. Challenging or aggressive

Three marketing cases (2%), all YouTube videos, linked alcohol with brave and daring people or acts, although none suggested that alcohol led to aggressive, unruly, or anti-social behaviour. Stella Artois, for example, depicted a character dropping a tray of beer from a hot air balloon to mimic the trick of whipping a dining cloth from under the crockery, much to the shock of the other characters. Heineken depicted a male protagonist engaging in daring acts (e.g. sneaking into an exclusive venue and fighting a pretend dragon) to impress the female he is on a date with. Bailey's contemporary take on the Nutcracker ballet depicted a female protagonist being courted by two males who then fight for her affection. To diffuse the argument, the female protagonist kicks one the would-be suitors in a ballet-type movement. Both males, shocked at the act, then leave her alone so she can enjoy a drink with her friends.

In comparison, 39% of user-created promotion linked alcohol with brave and daring people or acts, or suggested aggressive, anti-social, and unruly behaviour. On Facebook (37%) and Twitter (31%), references were a combination of visual and textual content. Examples included references to the consequences of drinking (e.g. *'I was too drunk to drive home last night, so I took a bus home.... that might seem like no big deal to you, but it was the first time I ever drove a bus'*) and suggestions that drinking was a challenge (e.g. *'If you open a beer and don't finish it you are what is known as a little b***h'*). Other examples included general references to violence or threatening behaviour (e.g. *'If I have a case of Jack (9 bottles) and Timmy steals 2, what does Timmy have now? Answer:*

A broken jaw. Timmy has a broken jaw'). On YouTube (47%), most videos either depicted an individual acting in an anti-social or aggressive manner when drunk (e.g. violence and vandalism) or suggested that alcohol was integral to a challenge (e.g. video-bloggers competing against one another in drinking challenges).

5.4.6.e. Sex and sexuality

Almost all marketing featured attractive individuals, including celebrities, actors, and members of the public, as permitted by the CAP regulations (CAP, 2012). Nevertheless, 8% of marketing also linked alcohol with seduction, sexual activity, and sexual success, or implied that alcohol enhanced attractiveness (Facebook, 11%; Twitter, 5%; YouTube, 7%). Examples included attractive individuals wearing few clothes or swimwear, depictions of couples in loving embraces while drinking the product, highly attractive models in branded attire at sponsored events, or suggestions that alcohol was a key component in the success of a date (Figure 5.26).

In contrast to marketing, user-created promotion appeared to place less emphasis on the use of attractive individuals. Almost a third of user-created promotion (31%) referred to seduction, sexual activity, or implied attractiveness (Facebook, 28%; Twitter, 54%; YouTube, 13%) (Figure 5.26). References mostly came from two categories. The first drew explicit associations between alcohol and sex, including suggestions that consumption may lead to enhanced sexual attractiveness or success (e.g. *'most people look sexy after a few drinks, and others I just pray for'*), connotations of sexual behaviour (e.g. *'I sexually abuse my liver'*), and visual depictions of individuals and alcohol in sexually suggestive poses. The second category featured general references to sex or sexuality. This existed on a spectrum of explicitness, with some content depicting minor

innuendos (*'Seduction: it's not what you wear, it is how you take it off'*) while others made unequivocal references or posted pornographic images.



5.4.6.f. Priority

Nine per cent of marketing implied that alcohol may be indispensable or take priority, or that drinking can help overcome boredom, loneliness, or problems (Facebook, 4%; Twitter, 20%; YouTube, 1%). Most references were suggestions that drinking alcohol was a superior option to alternatives, or that consumption was an essential part of an activity (Figure 5.27). Examples included *'step aside water, this is a job for wine'* (Vino Maipo, Facebook), *'Everything stops for Pimms O'clock'* (Pimms, Twitter), and *'We think every day should be chardonnay day'* (Lindeman's, Twitter). One YouTube video, produced by Tennent's lager, implied that returning to drink with friends in Scotland helped to combat the protagonist's unhappiness caused by living in London.



In comparison, 26% of user-created promotion implied that alcohol may be indispensable or could help overcome boredom, loneliness, or problems (Facebook, 44%; Twitter, 34%; YouTube, 11%) (Figure 5.27). Examples on Facebook and Twitter included suggestions that drinking took priority or was difficult to quit (e.g. *'Funny how 8 glasses of water seems impossible, but 8 beers a day seems necessary'*) or that alcohol could help to resolve the stress caused by problems (e.g. *'If at first you don't succeed, try drinking a beer while you do it. You'll be amazed at how much less you care'*). Examples on YouTube included suggestions that getting drunk was *'the meaning of life'* or that it was difficult to stop or refrain from drinking (e.g. *'I did the twelve steps to AA but somebody left a bottle of cheap vodka on the 13th step'*).

5.4.6.g. Therapeutic

Most marketing suggested that alcohol could be relaxing or played an important part in doing so, as permitted by the CAP regulations (CAP, 2013b). Seven per cent of marketing, however, implied that alcohol had therapeutic qualities, was capable of changing mood, or could enhance mental or physical capabilities (Facebook, 6%; Twitter, 11%; YouTube 3%) (Figure 5.28). Namaqua wine on Facebook, for example, suggested that alcohol could ‘...cure the crabbiness of old age’ and ‘...wine makes people happy’, while content from the same brand on Twitter suggested ‘*The HAPPIEST of people don’t have the BEST of everything...they just drink WINE!*’

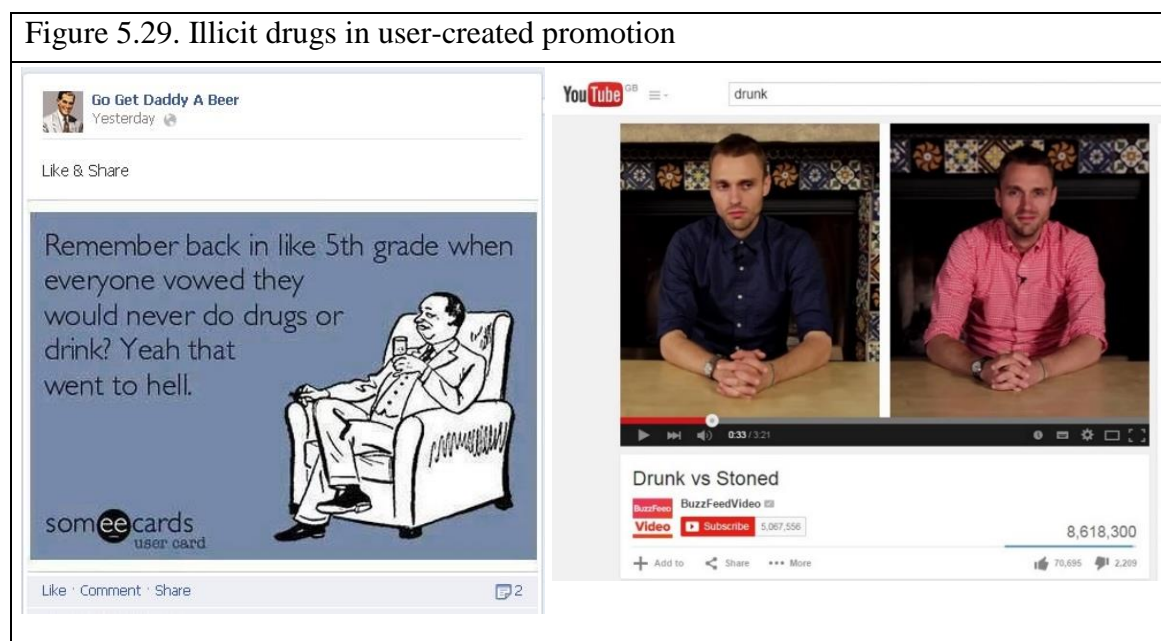


In comparison, 26% of user-created promotion implied that alcohol has therapeutic qualities or is capable of changing mood, physical condition, and behaviour (Facebook, 45%; Twitter 31%; YouTube 11%) (Figure 5.28). References included suggestions that alcohol could make an individual feel happy or relaxed (e.g. ‘*liquid happiness*’) or could

be used to handle stress or anxiety (e.g. ‘*Getting drunk and listening to loud music solves 90% of all life’s problems*’ and ‘*When I get off work, I’m going to binge drink and pretend today never happened*’).

5.4.6.h. Illicit drugs and other substances

None of the marketing referred to illicit drugs or other substances (including tobacco or legal highs), whereas 16% of user-created promotion did (Facebook, 19%; Twitter, 25%, YouTube, 8%) (Figure 5.29). On Twitter and Facebook, references were mostly pictures of drugs and related-paraphernalia (e.g. water pipes and bongs) or textual references (e.g. ‘*Remember back in 5th grade when everyone vowed they would never do drugs or drink? Yeah that went to hell*’ and ‘*Stop telling kids to say no to drugs. You’re driving up prices. Quit f***ing with supply and demand*’). The most common drug referenced was cannabis (more colloquially referred to as weed). Other drug references included cocaine, ecstasy, Adderall (a branded prescription drug for attention-deficit hyperactivity disorder), crystal meth and, MDMA.



5.4.6.i. Excessive consumption

Three marketing cases condoned, implied, or encouraged excessive consumption (2%). Two of these cases are cited as socially irresponsible content (see 5.4.6.a). The third was Namaqua wine, who posted a photo on Twitter depicting an individual carrying an estimated 5 litres of wine with the caption ‘*Never turn up empty handed for a Braai*’ (Afrikaans for BBQ or Grill). Given the quantity of product depicted, and the fact that the caption does not explicitly suggest that the alcohol is to be shared with others, this post could be interpreted as implying excessive consumption.

Figure 5.30. Excessive consumption in user-created promotion



In comparison, 60% of user-created promotion condoned, implied, or promoted excessive consumption (Facebook 65%; Twitter, 66%; YouTube 52%). Visual references mainly depicted individuals in the process of consuming a large amount of alcohol (e.g. ‘*The Yard of Wine and Beer Challenge*’ or ‘*Man vs. Booze – Vodka Pint*’) or those displaying behaviour associated with excessive consumption (e.g. passed out or vomiting). Textual

references on Facebook and Twitter also suggested that creators had, or were going to, drink excessively (e.g. ‘*This bottle of vodka doesn’t have a suggested serving size on the label, so I’m gonna assume it’s just one serving*’) or encouraged excessive audience drinking (e.g. ‘*if one glass of wine is good for you, just imagine what a whole bottle could do*’). Excessive consumption was, in several instances, also promoted through the case name (e.g. ‘*Drinking hard on a Saturday night, clinging to life on a Sunday*’ or ‘*I am a binge drinker and I love it*’) (Figure 5.30).

5.4.6.j. *Handled or served irresponsibly*

Seven per cent of marketing depicted alcohol being handled irresponsibly or served in a casual manner with little regard to the quantity (Twitter 7%; Facebook 3%; YouTube 10%). Examples included individuals struggling to carry large quantities of alcohol, sports stars spraying champagne, juggling alcohol in a flamboyant fashion, drinking while on another person’s shoulders, and alcohol being poured casually or with little regard to quantity. A more obscure example was an advert in which a tray of beer was dropped from a mock-dinner party in a hot air balloon (Stella Artois, Figure 5.31).



In comparison, almost a third of user-created promotion depicted alcohol being handled irresponsibly (32%) (Figure 5.31). The proportion to do so was highest on YouTube (41%), in which videos documented the whole process of alcohol being handled irresponsibly or served with little regard to quantity (e.g. consuming an entire 70cl bottle of vodka while hanging upside down, or opening a wine bottle with a drill or chainsaw). There was no difference in the proportion of content on Facebook and Twitter to make such references (both 25%). On both websites, most references depicted young adults pouring alcohol straight into their mouths from the bottle, particularly spirits such as vodka and whiskey, although beer and wine featured occasionally. Notably, most references featured real people, with only a handful being graphic examples.

5.4.6.k. Alcohol in an unsafe context

Six marketing cases linked alcohol with activities or contexts where drinking would be considered unsafe and dangerous, or implied physical activity following consumption (3%). Three of these represented obvious examples, including playing football while holding beer bottles (Carling, Twitter), drinking champagne while standing in the sea (Moet and Chandon, Facebook), and flying a hot air balloon while drinking beer (Stella Artois, YouTube). Other references only implicitly linked alcohol to unsafe contexts. These included a bar that appeared to be in the trunk of a car (Old Speckled Hen, Facebook) and drinking while playing the physical skill game Twister (Echo Falls, Facebook) (Figure 5.32).

In comparison, 17% of user-created promotion referred to consumption in situations where drinking would be considered unsafe and dangerous or implied physical activity following consumption (Facebook, 16%; Twitter, 7%; YouTube, 24%). Most references

were visual depictions, and included consuming alcohol during or before driving, cycling, swimming, playing football, handling firearms, using dangerous machinery, and participating in extreme sports (e.g. stunt skateboarding). Other examples included playing drinking games while in the sea, consuming alcohol through a snorkel while underwater, or crawling across a busy main road when drunk (Figure 5.32).



5.4.6.1. Working environment

No marketing referred to alcohol being consumed in a work environment, although two accounts did draw associations between alcohol and work. First, on Facebook, Guinness suggested improving a dreary office environment by turning the windows into a mock pint of Guinness. Second, on Twitter, Pimm’s intimated that it was okay to drink instead of working providing the individual had activated their ‘out of office’.

In comparison, 11% of user-created promotion referred to alcohol in the workplace, including school or educational settings (Facebook 22%; Twitter, 15%; YouTube 2%) (Figure 5.33). References included suggestions of drinking at work, alcohol impairing

the ability to work, alcohol taking priority over work (e.g. ‘*If whiskey interferes with your business, give up your business. No use trying to do two things at once*’), and alcohol helping to address work-induced stress (e.g. ‘*Here’s to all the hardworking teachers out there. You can’t hit the kids, but you can hit the bottle. Cheers!*’). Some content also contained images showing alcohol in a work or school environment (e.g. an office water cooler filled with beer or champagne).



5.4.6.m. Under 18 target or appeal

Eleven per cent of marketing potentially appealed to those under 18 years old or showed individuals acting in a juvenile or adolescent manner (Figure 5.34). Examples included graphic and sport-based games (e.g. ‘*Freekick Fusion*’), fictional characters (e.g. Super Mario fancy dress), celebrities (e.g. actor Daniel Radcliffe), sportspersons (e.g. footballer Wayne Rooney), real world tie ins (e.g. reference to popular television shows such as X-Factor), and juvenile or slapstick comedy. Other marketing content also used cartoons and vibrant colours that may appeal to a younger audience.

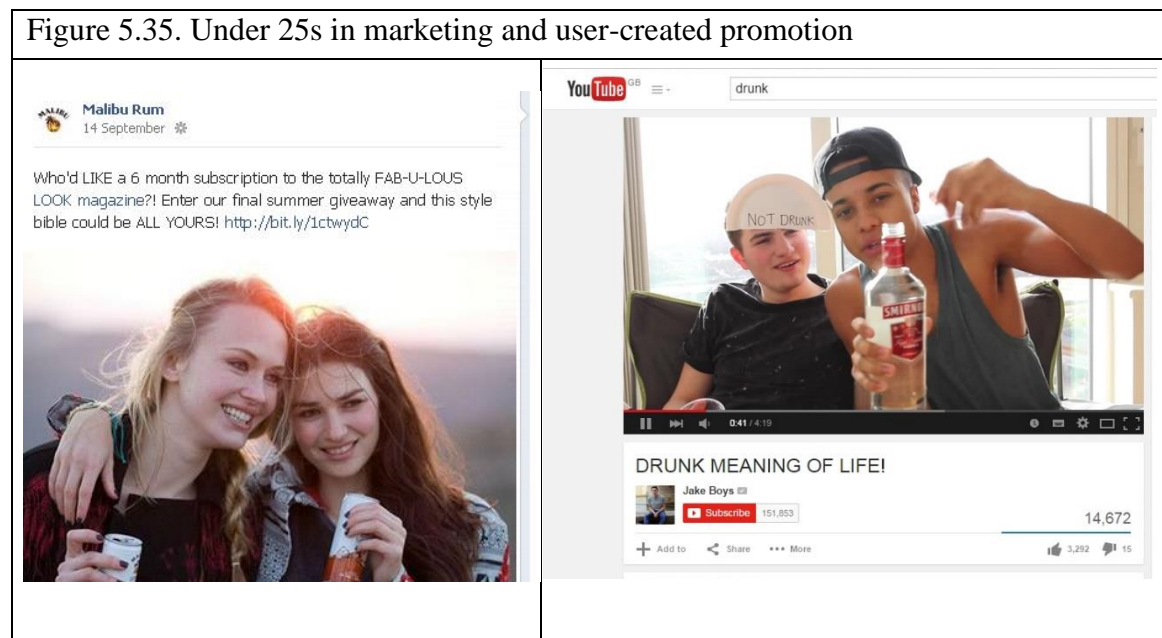


In comparison, almost half of user-created promotion potentially appealed to those under 18 years old or showed individuals acting in a juvenile or adolescent manner (48%) (Facebook, 70%; Twitter, 61%; YouTube 26%) (Figure 5.34). Appeal was varied, but included cartoon images (e.g. Homer Simpson), characters, music artists or television shows popular with young people (e.g. Harry Potter), childish jokes, youth contexts (e.g. gaming arcade or schools), children's toys and fancy dress (e.g. Transformers), animals (e.g. a dog drinking beer), or depictions of those under the age of 18 years old.

5.4.6.n. *Depicting those under, or appearing to be under, 25 years old*

Over a quarter of marketing featured an individual who appeared to be under 25 years old, either drinking or featuring prominently in the content (26%) (Facebook, 31%; Twitter, 25%; YouTube 20%). This represented a combination of those who could be verified to be under the age of 25 (e.g. celebrities) and actors or real-world consumers who appeared to be under this age (Figure 5.35).

In comparison, 62% of user-created promotion featured individuals who appeared to be under 25 years old (Facebook, 68%; Twitter, 61%; YouTube 59%) (Figure 5.35). Some represented celebrities (e.g. Miley Cyrus) and professional video-bloggers (e.g. Adam Waithe and Oakley Glynn-Jones) for whom it was possible to verify their age. For the most part, however, content mainly featured members of the public, particularly those who appeared to be aged 16-25 years old. Some content even featured extreme instances in which the person depicted was of either child or infant age (e.g. accounts themed around the ‘*Drunk Baby*’ meme).



5.4.6.o. Health claims

Only one marketing case (Lindeman’s, Facebook) suggested that alcohol might have health benefits. This represented an image in which a winged corkscrew was depicted in the various stages of a ‘*star-jump*’ exercise with the caption ‘*wine aerobics*’ (Figure 5.36). In contrast, 6% of user-created promotion referred to purported health benefits of alcohol (Facebook, 8%; Twitter, 7%; YouTube, 4%). The majority represented satirical suggestions that alcohol could have direct health or dietary benefits (e.g. ‘*The vodka diet*,

lose three days in one week' and 'Grapes are fruit, fruit is healthy, wine is made of grapes, therefore drinking of wine is healthy'). Some content did make intended legitimate suggestions that alcohol had health properties (e.g. YouTube video 'Top 5 Benefits of Red Wine Best Health and Beauty Tips Lifestyle').



5.4.6.p. Associations to culture or lifestyles

Almost a third of marketing made consistent reference to a culture or lifestyle (32%). This included supporting or participating in sport (e.g. five-a-side and football fans), attending music festivals and concerts, social contexts (e.g. dinner parties), or location-specific cultures (e.g. beach and surfing culture). Other marketing either did not make consistent reference to a culture and lifestyle, or only made a fleeting reference to several different examples. That reference to cultures and lifestyles was greater on YouTube (41%), compared to Facebook (25%) and Twitter (31%), perhaps indicates the advert-style nature of YouTube marketing requires a clearer cultural narrative compared to the reactionary and real-time conversational nature of other social networking websites.

Over a third of user-created promotion made consistent reference to a culture or lifestyle (32%) (Facebook 33%; Twitter 35%; YouTube 39%). Unlike marketing, where such underlying narratives simply supported the main goal of promoting the product, user-created promotion made more specific and explicit links between drinking and cultures or lifestyles (e.g. in the content name). These included associations to sports participation (*'Drunk Cyclist'*), cooking (*'Drunk Spatula'*), being a parent (*'Life, wine and being a mom'*), school and education (*@drunksixthgrade'*), self-styled cultural groups (e.g. geek and gaming culture), location-specific cultures (e.g. drinking on beaches, bars or nightclubs), and gender-focused drinking (e.g. *'Girls night out'* and *'@Whitegrlwasted'*).

5.4.6.q. Cognitive and behavioural impairment

None of the marketing content suggested that alcohol impaired behaviour or cognitions. In comparison, 41% of the user-created promotion did (Facebook 42%; Twitter, 41%; YouTube, 40%) (Figure 5.37). These mostly reflected depictions of individuals displaying the negative effects and consequences of overconsumption. Examples included lost consciousness, difficulties in remaining standing or walking, slurred speech, vomiting, memory loss, diminished hand-eye-coordination, hangovers, hallucinations, incontinence, and distorted perceptions of behaviour (e.g. exaggeration).



5.4.6.r. Frequent or daily behaviour

Nearly a quarter of marketing (23%) suggested that consumption should occur on a frequent or daily basis. References were more frequent on real-time websites Facebook (36%) and Twitter (26%) compared to the archived nature of YouTube (3%). The remainder of marketing instead concentrated on promoting consumption at weekends or special events, thus coinciding with peak drinking periods. In comparison, only 13% of user-created promotion suggested that consumption should be frequent or daily, with most instead suggesting consumption at the weekends, special occasions, or seasonal events. Most of the user-created promotion that did suggest frequent consumption implied that it should take place daily (Figure 5.38). Like marketing, suggestions of frequent or daily consumption were recorded more in the real-time contexts of Facebook (23%) and Twitter (21%) compared to YouTube (1%), where videos mostly only documented one-off instances of drinking (e.g. challenges).

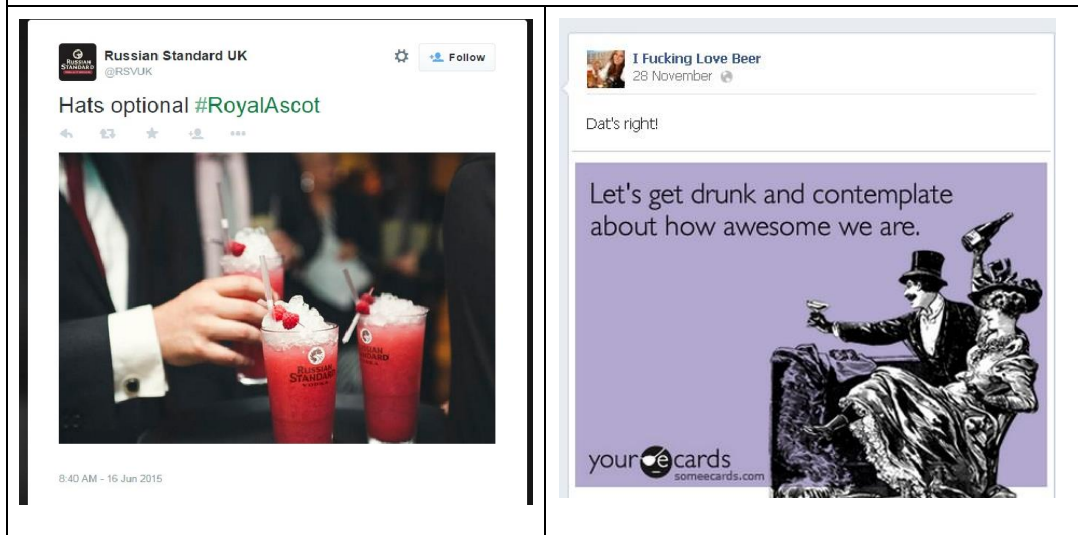


5.4.6.s. Glamourous

Over a third of marketing (35%) associated alcohol with glamorous or desirable lifestyles (Figure 5.39), with the proportion greater for ready-to-drink and spirit brands (51%) compared to wine (38%) or beer and cider brands (18%). Examples included

glamorous or smartly dressed protagonists (e.g. celebrities), stylish drinking contexts (e.g. exclusive events), competitions with glamorous prizes (e.g. win a stylish trip to Paris), upmarket corporate events (e.g. award ceremonies), and limited edition products (e.g. added gold leafing or luxury Belgian chocolate).

Figure 5.39. Glamorous drinking in digital marketing and user-created promotion



In comparison, only 13% of user-created promotion suggested that alcohol was part of a glamorous or desirable lifestyle (Facebook, 29%; Twitter, 10%; YouTube 6%). Many of the examples referred to a cartoon meme series that depicted people in formal dress consuming alcohol, with captions parodying the behaviour of those from the upper class (Figure 5.39). Other examples included visuals of people dressed in smart clothes while consuming alcohol or acting in a drunken fashion (e.g. in evening dresses or tuxedos).

5.4.6.t. Loud, boisterous, and noisy

Only one marketing case linked alcohol to loud, boisterous, or noisy behaviour. This reference, on Captain Morgan's Facebook page, showed a group of pirates with their drinks raised and shouting. The accompanying caption reads '*Partied in Panama. Brought down the house*'. In comparison, 23% of the user-created promotion associated

alcohol with loud, boisterous, or noisy behaviour (Facebook, 19%; Twitter, 22%; YouTube 38%). The majority represented images and videos that depicted loud and boisterous behaviour after consuming alcohol, for example shouting and creating excessive noise, harassing or threatening others, and creating anti-social disturbances.

5.4.6.u. Drinking games

No marketing referred to drinking games but 18% of user-created promotion did (Figure 5.40). Examples included topical drinking games (e.g. ‘*The Osama Bin Laden drinking game*’), established drinking games (e.g. ‘*beer pong*’ and ‘*ring of fire*’), and one-off challenges (e.g. ‘*The Yard of Beer and Wine Challenge*’). YouTube had the greatest proportion of references (24%), with most representing individuals filming themselves playing drinking games (e.g. ‘*Best Friend Drunk Tag*’ and ‘*Never have I ever.... with booze!*’). Facebook was second (14%), with pages being used to post rules or instructions (e.g. ‘*The Made in Chelsea Drinking Game*’) or simply to celebrate multiple games (e.g. ‘*I love drinking games*’). Twitter had the fewest references (8%) with most just topical links (e.g. ‘*There should be a drinking game whenever Miley sticks out her tongue you take a shot. Everyone would be wasted #SNL*’).

Figure 5.40. Drinking games in user-created promotion

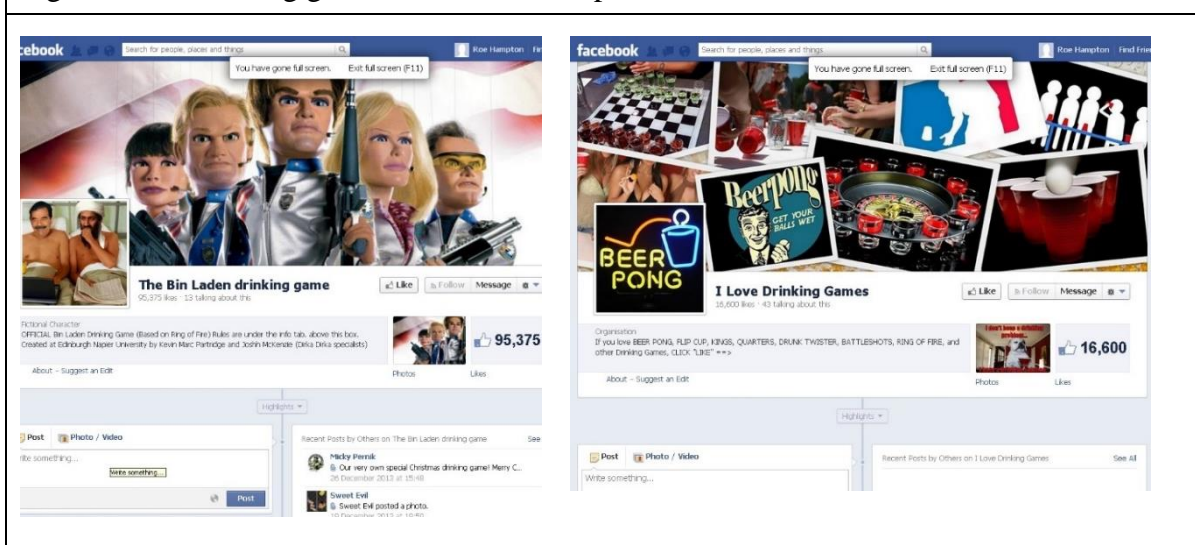


Table 5.11. Hypotheses and outcomes for Chapter Five

Hypotheses	Hypotheses outcome
H1: Digital marketing will contain content and messages about alcohol that may appeal to young adults and encourage consumption.	Accepted: Digital marketing featured prominently across social media popular with young people, contained a variety of designs and topical references which may appeal to younger age groups, did not have comprehensive ethical practice, and featured some messages which may promote irresponsible or higher-risk consumption.
H2: User-created promotion will contain content and messages about alcohol that may appeal to young adults and encourage consumption.	Accepted: User-created promotion featured prominently across social media popular with young people, contained a variety of designs and topical references which may appeal to younger age groups, had very limited ethical practice, and featured many messages which may promote irresponsible or higher-risk consumption.
H3: There will be differences in the design features, topical associations, and messages suggested about alcohol in digital marketing and user-created promotion.	Accepted: Although both featured prominently across social media used by young people, digital marketing had more high-quality, bespoke, and innovative designs. In contrast, user-created promotion had a simpler production quality, had less ethical practice, and contained a higher number of references likely to promote higher-risk or irresponsible alcohol use.

5.5. Discussion

The results suggest that digital marketing and user-created promotion figures prominently on social media, uses a range of design features and topical associations to appeal to audiences, and contains messages which may imply or condone unwise and higher-risk consumption. There were differences between the two types of content, with user-created promotion appearing to have less bespoke or sophisticated designs, contain less evidence of ethical practice (e.g. age restriction warnings), and feature more messages which promote alcohol in an irresponsible manner. The results therefore support the three study hypotheses (Table 5.11). The findings extend previous research in three ways. First, by investigating a broader range of alcohol brands, including under-researched marketing

for products targeted at older age groups (e.g. wine brands). Second, by considering multiple forms of social media, including Twitter and YouTube content, rather than focusing exclusively on Facebook. Third, by directly comparing digital marketing and user-created promotion.

5.5.1. Digital marketing

The results support previous content research into digital alcohol marketing in three ways (see 2.6 for a review, or 5.2.1 for summary). First, concerning style and presence, the results further show that alcohol marketing featured prominently online, as at least half of the 100 brands sampled were recorded as having marketing on each of the three websites. The results are also consistent with suggestions that marketing uses a variety of design features and topical associations to create content which may appeal to a range of audiences. Examples recorded included the use of images and videos, apps, user-created content, games, real world ties ins, and cultural or sporting references. The audience sizes and levels of participation recorded further suggest that these marketing techniques are successful in reaching consumers, and encouraging them to engage. The reported links to traditional marketing are also consistent with suggestions that digital media is now a central component of, and has strong links to, 360-degree marketing strategies. Examples recorded in this study included references to competitions, links to brand-sponsored activities (e.g. events or sporting teams), hyperlinks to other online marketing (e.g. between Facebook and Twitter), reference to retailer price offers, and opportunities to purchase the products or merchandise.

Second, the results are also consistent with suggestions that digital marketing may reach and appeal to young people, including those under the legal purchasing age. For example,

less than half of marketing displayed an age restriction message. When age restriction messages were present, most were not clearly visible, juxtaposed against eye-catching promotion, or appeared after the marketing. The absence of clear age restriction messages is important for YouTube and Twitter, where research has already demonstrated that underage profiles can bypass the processes intended to restrict access or exposure to marketing (Barry et al., 2015a; Barry et al., 2015b; Winpenny et al., 2013). It is also important for Facebook, where research suggests that some young people fabricate their age (ASA, 2013). One-in-ten cases also contained content that may appeal to under 18s or depicted adolescent or juvenile behaviour, while a quarter featured real or fictional characters who appeared to be under 25 years old (e.g. celebrities). It is also plausible that the design features and topical associations may appeal to young people, including references to cartoon games (e.g. penalty shoot-outs), music artists (e.g. former Disney star Miley Cyrus), sports (e.g. Premier League football), celebrities (e.g. Harry Potter actor Daniel Radcliffe), and popular culture (e.g. television talent shows).

Third, the results support suggestions that marketing may condone or promote irresponsible and higher-risk consumption (Atkinson et al., 2014; Carah et al., 2015; Carroll and Donovan, 2002; Gordon, 2011c). Although the proportion of marketing that explicitly suggested higher-risk consumption was minimal (see 5.4.6.a and 5.4.6.i), other content made associations to personal, social, and sexual success, suggestions of alcohol taking priority and being therapeutic, or handling alcohol in an irresponsible manner, none of which are permitted by the CAP guidelines (CAP, 2015). Marketing also included associations between alcohol and specific lifestyles and cultures, depicted consumption as a frequent behaviour, or suggested it is part of a glamorous and desirable lifestyle. Notably, marketing contained almost no suggestions about negative consequences, for

instance cognitive behavioural impairment or loud, boisterous, and noisy behaviour. Moreover, only two-thirds of marketing contained a responsible or lowest risk drinking message and, like age-restrictions, most messages had low visibility (e.g. in biography) or appeared secondary to promoting alcohol (Atkinson et al., 2014; Carah, 2014; Nicholls, 2012).

5.5.2. User-created promotion

The results are consistent with research into user-created promotion in three ways (see 3.6 for a review, or 5.2.2 for a summary). First, concerning content presence and style, the results further suggest that public user-created promotion features prominently on social media which is popular with young people (Cavazos-Rehg et al., 2014; Mart et al., 2009; Moares et al., 2014; Primack et al., 2015). The results extend understanding by demonstrating that user-created promotion uses a concentrated number of design features and topical associations to create appealing or desirable content. These include images, links to other online content, engagement with the audience, real world tie ins, and humour. The reported audience sizes and estimates of involvement further suggest that such content is successful in reaching and appealing to users, who are subsequently willing to participate by liking, commenting, and sharing promotion (Atkinson et al., 2014; Cavazos-Rehg et al., 2014; Primack et al., 2015).

Second, concerning messages of alcohol use, the results are consistent with suggestions that user-created content promotes consumption both explicitly, by suggesting or depicting alcohol use, and implicitly through associations to brands, drinking games, norms, and contexts synonymous with consumption (Atkinson et al., 2014; Beullens and Schepers, 2013; Koff, 2013; Moreno et al., 2014; Parder and Vihalemm, 2011). The

results are also consistent with suggestions that promotion presents higher-risk consumption as a normal or socially acceptable behaviour (Cavazos-Rehg et al., 2014; Griffiths and Casswell, 2010; Moreno et al., 2010; Primack et al., 2015). These suggestions of higher-risk use also juxtapose against an almost entire absence of messages promoting responsible or lower-risk drinking, particularly on Facebook and Twitter. User-created promotion also framed alcohol and the related consequences in a positive manner. Examples included associations with confidence and popularity, personal and social success, and sexual attractiveness (Primack et al., 2015). Although negative messages featured more than in marketing content, for example cognitive behavioural impairment, these outcomes were still suggested to be fun or desirable. Promotion also created associations with other illicit substances (Moreno et al., 2007; Morgan et al., 2010; Primack et al., 2015).

Third, the results support suggestions that user-created promotion may reach and appeal to young people, including those under the legal purchasing age. Specifically, age-restriction messages were only found in one-in-twenty cases of user-created promotion. When such messages were present they either had low visibility (e.g. in extended descriptions of videos or separate page biographies) or a satirical or jovial tone. Concerning appeal, almost half of user-created promotion contained content which may appeal to those under 18 years old or depicted adolescent and juvenile behaviour, while nearly two thirds featured real or fictional characters who appeared to be under 25 years old. This included examples of young children and infants suggested to be consuming alcohol (e.g. *The Drunk Baby*). It is also plausible that the topical associations featured may appeal to young people, including real-world tie ins, use of childish humour (e.g.

pranks), popular culture (e.g. television shows or films), music artists or events, celebrities, and youth orientated contexts (e.g. school, college and university).

5.5.3. Comparisons between digital marketing and user-created promotion

One of the unique features of this study is that it compared the similarities and differences between digital marketing and user-created promotion. Concerning audience size and involvement, user-created promotion appeared more successful in attracting audiences on Twitter and YouTube, although marketing had larger audience sizes on Facebook. Despite differences in audience size, the levels of participation were consistent for both forms of content, with no difference between likes and shares on Facebook, interaction with other accounts on Twitter, and views, likes, dislikes, and comments on YouTube.

Concerning the design of content, the results showed some consistency between digital marketing and user-created promotion. For example, both forms of content were found to make frequent use of photos and videos, hyperlinks to other online content, attempts to engage with audiences, and posting content created by other users. The majority of digital marketing and user-created promotion also depicted an even mix of males and females in content, rather than focus exclusively on one gender. Despite these superficial similarities, the thematic analysis suggested that marketing adopted a more professional and bespoke approach to content design (e.g. images and apps personalised specifically to the brand), whereas user-created promotion mostly produced amateur content or recycled content created elsewhere online (e.g. viral memes or videos). Carlsberg's Facebook page, for example, themed all content around football culture through images of relevant iconography, a competition to win tickets to Premier League matches, and a bespoke football-themed game (*'Freekick Fusion'*). In contrast, the user page *'Drunk*

Football mainly consisted of amateur-quality memes, had no bespoke game or app, and mainly shared real world stories not exclusive to the page (e.g. goal updates from matches). The only exception to this was YouTube videos created by professional bloggers which also mostly carried personalised branding and a uniform approach to content design (e.g. *'Topsy Bartender'*).

Concerning the topical associations that featured, there was consistency across marketing and user-created promotion for real-world tie ins, music, celebrities, and popular culture. With respect to differences, marketing featured a greater proportion of references to food, sports, and associated events, while user-created promotion made greater use of humour. As with previous research, user-created promotion consistently featured alcohol brands in the content (Griffiths and Casswell, 2010; Mart et al., 2009; Primack et al., 2015). That most content featured multiple products suggests that this de facto free advertising is likely to benefit the alcohol industry on a broad scale, and not just individual brands. This finding is important as research suggests that brand messages stemming from other users potentially have a stronger impact (Gordon et al., 2010c; Lyons et al., 2014; Weaver et al., 2016). That over a third of content did not reference an alcohol brand, however, supports claims that some promotion aims to glamorise consumption or intoxication in general, and that not all content of this nature fits rigidly to the definition of user-generated branding (see 3.7). This is consistent with research which suggests that drinking contexts and narratives can hold as much social and cultural capital as branding (Atkinson et al., 2014; Lyons et al., 2014; Moewaka-Barnes et al., 2016; Tonks, 2012).

In terms of messaging, user-created promotion contained more content related to unwise or higher-risk consumption than marketing. These included suggestions of social

irresponsibility, excessive drinking, high-risk handling, enhanced confidence, challenging or unruly behaviour, alcohol taking priority, therapeutic qualities, consumption in unwise scenarios, health claims, and appeal to those under 18 years old. User-created promotion did, however, contain fewer messages than marketing about glamorous or desirable lifestyles or personal and social success. It was expected that marketing would show less harmful references, as pro-forma three was based on the items in the CAP Non-broadcast regulations which restrict such associations (Table 5.3). These regulations, however, do not apply to user-created promotion. The presence of these higher-risk references becomes even more significant when it is considered that user promotion also contained fewer attempts to restrict exposure to individuals under the legal purchasing age and had little serious promotion of responsible or lower-risk consumption, compared to marketing.

5.5.4. Limitations

The sampling approach employed has several limitations. First, as only three forms of social media were included, and the study only focused on specific features of each, the results cannot be generalised to other forms of new media (e.g. instant messaging, either within Facebook or in a separate smartphone app). Second, collection of user-created promotion on Twitter and Facebook occurred around Christmas and Thanksgiving (November–January), two seasonal holidays that are synonymous with higher alcohol use (Baker, 2011; Donnelly, 2015; Hosie, 2016; Mundy, 2012; Leonard, 2014). Third, 12 of the alcohol brands analysed do not feature in the 2016 list of the 100 leading brands in the UK (Brown, 2016). Consequently, the results are not entirely representative of current marketing practice, and it is plausible that new brands may have increased in popularity due to innovative digital marketing not captured here. Fourth, the tight inclusion criteria

meant that some marketing was not included, even though observed in the initial searches. On YouTube, for example, while initial search results may have suggested the presence of alcohol marketing (e.g. an individual video), the respective channels did not meet the relevant inclusion criteria (Appendix 12). Fifth, the user-created promotion sample is based on a limited number of keywords, while the searches had to be halted to ensure that content was not over-represented in comparison to marketing. This means that only a cross-section of relevant search results are included, and certain keywords (e.g. drunk) returned a greater volume of applicable content than others (e.g. wine). Finally, this study did not consider user interaction or promotion shared from other accounts, despite research suggesting that it may be instrumental in extending suggested drinking narratives (Atkinson et al., 2014; Lyons et al., 2014; Nicholls, 2012; Weaver et al., 2016). The reason for this omission was to keep the focus on the content initiated by the marketers or promotion administrators, and not how creators or users interacted (e.g. user-generated branding). Exploration of how users interact with marketing and user-created promotion remains an important avenue for future research.

There are also several methodological issues. First, only the author completed the coding. Some previous content research reports inter-rater reliability as a mechanism to address researcher subjectivity, however this is not always the case (for examples see Atkinson et al., 2014; Brooks, 2010; Carroll and Donovan, 2002; Griffiths and Casswell, 2010; Moraes et al., 2014; Nicholls, 2012; Ridout et al., 2010; Winpenny et al., 2013). To mitigate the potential for any coding errors, and to ensure robustness in this study, the author coded content twice to allow for reflexive consideration, address discrepancies, and establish consistency across the whole sample. Nevertheless, there remains the potential that the reporting of certain topical associations and messages suggested about

alcohol may be informed by the experience or opinion of the author. Second, the quantitative design of the pro-forma means that the features and associations reported are not exhaustive. On pro-forma one, for example, the number of post comments on Facebook or number of retweets and favourites on Twitter were not recorded. On pro-forma two, while a fixed number of features helped to generalise across a wide range of content, a qualitative and bottom-up approach may have identified more topical themes which are used to appeal to audiences.

5.6. Conclusion

This chapter has four main conclusions. First, marketing and user-created promotion features prominently on social media and has attracted large audiences who are willing to participate. Second, both forms of content may reach young people due to an absence of visible age restriction messages, and appeal to them through design features and topical references. Third, both forms of content include messages which imply or condone higher-risk consumption, create associations that are supposedly restricted through marketing codes of conduct, and have poor promotion of responsible and lower-risk drinking. Underneath these broad similarities, however, there are differences. User-created promotion adopted simpler designs which focused more on promoting unwise or high-risk consumption. Marketing, on the other hand, adopted sophisticated designs, was highly personalised towards a brand, and focused more on associating alcohol with glamorous lifestyles or social success. Despite these differences, it is plausible that both forms of content are likely to promote consumption. Future research should therefore evaluate awareness of, and participation with, digital marketing and user-created promotion, and examine the similarities and differences in how they influence knowledge attitudes, and behaviours. This will be the focus of Chapters Six and Seven.

Chapter 6: Awareness of, and participation with, digital marketing and user-created promotion, and the association with alcohol use and brand knowledge

6.1. Introduction

Chapter Six presents the first set of findings from the cross-sectional survey. It explores exposure to digital marketing and user-created promotion, and what association (if any) this has with drinking behaviour and brand knowledge in young adults. The chapter starts by summarising previous consumer and audience research, and how this study extends understanding of digital marketing and user-created promotion (6.2). It then builds on Chapter Four by providing details about the survey and analytical techniques used (6.3). The results presented include a summary of the sample (6.4.1), awareness of traditional marketing (6.4.2), and awareness of, and participation with, digital marketing and user-created promotion (6.4.3-6.4.7). The results then explore the association between exposure and alcohol use (6.4.8), higher-risk consumption (6.4.9), drinking intentions (6.4.10), and brand name recall (6.4.11). The chapter then discusses how the findings enhance understanding of digital marketing and user-created promotion (6.5). It concludes by summarising the need to explore which social cognitions mediate the link between digital media exposure and alcohol use (6.6).

6.2. Background

6.2.1. Digital marketing: Summary of consumer research

The review of consumer research presented in Chapter Two (2.7) identified several key trends about exposure to digital marketing and the association with alcohol use. Self-report research has found awareness of digital alcohol marketing in young people to range from 5% for e-mail marketing (Gordon et al., 2011) to 88% for marketing social networking websites (Jones et al., 2015). Evidence further suggests that young people are

willing to participate, with the proportion doing so ranging from 4% for accessing brand websites (Gordon et al., 2011) to 32% interacting with marketing on social networking sites (de Bruijn et al., 2016a). Young people's exposure also appears to be increasing. For instance, a longitudinal study in Scotland reported that the proportion of adolescents who were aware of, and participating with, marketing on social networking sites had doubled by two-year follow-up (Gordon et al., 2010b). Evidence further suggests that exposure to digital marketing is positively associated with drinking intentions, alcohol consumption, and higher-risk use (de Bruijn et al., 2016a; Gordon et al., 2011; Jones and Magee, 2011; Lin et al., 2012; McClure et al., 2013), with these relationships reported as causal by longitudinal surveys (de Bruijn et al., 2016b; Gordon et al., 2010b; McClure et al., 2016). It has also been suggested that participation with digital marketing has a stronger association with alcohol use, despite greater awareness and participation with traditional marketing communications (Gordon et al., 2011; Lin et al., 2012).

6.2.2. User-created promotion: Summary of audience research

The review of audience research in Chapter Three (3.6) highlighted several key trends about exposure to user-created promotion and the association with alcohol use. Cross-sectional surveys have found that young adults are aware of, and participating with, a range of user-created promotion. For instance, 32% have uploaded pictures of themselves consuming alcohol to social media (Morgan et al., 2010), 56% have posted pictures of their peers drinking (Glassman, 2012), 38% have posted on Twitter or followed an account which promotes drinking (Cabrera-Nguyen et al., 2016), and 54% had taken part in the NekNominate drinking game (Moss et al., 2015). Longitudinal surveys and experimental studies have also suggested that awareness of, and participation with, user-created promotion is causally linked with willingness to drink, frequency of consumption,

and higher-risk use (Boyle et al., 2016; Litt and Stock, 2011; Marczynski et al., 2016). Qualitative evidence further suggests that young people produce content which presents consumption as a desirable and positive behaviour, and that participation provides rewards in terms of social and cultural capital (Atkinson et al., 2014; Lyons et al., 2014).

6.2.3. The current study

Consumer and audience research has mostly concentrated on social networking websites, particularly Facebook, with little focus on other forms of new media which are popular with young people (e.g. apps). There are also no studies which have compared exposure to marketing and user-created promotion, or considered how any differences impact on the associations with brand knowledge and drinking behaviour. This study measures awareness of, and participation with, a greater range of digital marketing and user-created promotion than previous studies (11 channels for each). It also compares the awareness and participation reported for both types of content and considers whether one has a stronger association with alcohol use and brand knowledge. It addresses research questions 4, 5 and 7, and hypotheses 4-9 (4.2.4 and 4.2.3).

6.3 Method

6.3.1. Design and sample

As described in Chapter Four (4.6), an online cross-sectional survey was conducted with 18–25 years old in the UK ($n = 405$). Responses were collected in two six-month waves, November 2013–April 2014 and February 2015–July 2015. A convenience sample was recruited through adverts posted in three online contexts. First, adverts were posted on the ‘Surveys and Research’ forum section of www.thestudentroom.co.uk, a large UK-based community website for school and university students. Second, an advert was

placed on a university website, which allowed first and second-year undergraduate psychology students to partake in the study in exchange for academic credits that were required for a research methods module. Eligible students had not covered content related to the aims of the study, or marketing in general, as part of their undergraduate degree course. Third, an advert was shared on social media by the researcher.

6.3.2. Measures

6.3.2.a Demographics

Age, gender, ethnicity, and religious denomination were measured.

6.3.2.b Awareness of traditional marketing

Awareness of traditional marketing was assessed using structured and self-reported recall (4.6.5.c for rationale). Participants were asked ‘*Think about ways you have seen alcohol advertised in the last 30 days. How was it advertised?*’ They were presented with a list of nine traditional (offline) communication channels used in previous exposure research (Gordon et al., 2011; Lin et al., 2012); (1) event sponsorship, (2) magazines, (3) television, including programme sponsorship, (4) sports sponsorship, (5) in-store posters, (6) billboards and posters, (7) newspapers, (8) packaging, and (9) price promotions. Participants indicated all those they had seen alcohol marketed through by clicking a ‘Yes’ response icon next to each channel. Responses were summed to create an aggregate awareness score (0-9). A Cronbach’s Alpha indicated that the scale provided average consistency ($\alpha = 0.69$) (Field, 2013).

6.3.2.c. Awareness of, and participation with, digital marketing

Awareness of, and participation with, digital marketing was assessed using structured and self-reported recall (4.6.5.d for rationale). Participants were presented with 11 channels: (1) downloadable content (e.g. screensavers), (2) on-demand television advertisements, (3) games, (4) online shops selling alcohol or branded merchandise, (5) websites, (6) social media (Facebook and Twitter), (7) viral or shared videos, (8) smartphone apps, (9) display advertisements, (10) e-mails, and (11) competitions. For each, participants were shown a visual example and asked to indicate if they had seen alcohol marketed through that channel (Yes/No), and whether they had participated with marketing through that channel (Yes/No). The phrasing of each question was specific to the channel and the keywords emphasised in bold to ensure clarity over what constituted awareness and participation. Participants were reminded that the visual images only provided examples and to consider other instances of marketing that they recalled. Responses were summed to create an aggregate score for awareness and participation (both 0–11). A Cronbach's Alpha indicated good consistency for the awareness scale ($\alpha = 0.70$) and average consistency for the participation scale ($\alpha = 0.65$).

6.3.2.d. Awareness of, and participation with, user-created promotion

Awareness of, and participation with, user-created promotion was assessed using structured and self-reported recall (4.6.5.e for rationale). Participants were presented with 11 channels: (1) social media statuses, (2) non-fictional photos (e.g. peers drinking), (3) fictional photos (e.g. memes or viral images), (4) multimedia and instant messaging, (5) games, (6) fan pages or public groups, (7) apps, (8) forums, (9) quizzes, (10) blogs or microblogs (e.g. Twitter), and (11) viral or shared videos. For each, participants were shown a visual example and asked to indicate if they had seen alcohol promoted through

that channel (Yes/No), and whether they had participated with promotion through that channel (Yes/No). The phrasing of each question was specific to the channel and the keywords emphasised in bold to ensure clarity over what constituted awareness and participation. Responses were summed to create an aggregate score for both awareness and participation (0-11). A Cronbach's Alpha indicated good consistency for the awareness scale ($\alpha = 0.70$) and average consistency for the participation scale ($\alpha = 0.69$).

6.3.2.e Alcohol Use Disorders Identification Test - Consumption (AUDIT-C)

To measure alcohol use, and gain indication of higher-risk consumption, participants completed the AUDIT-C (4.6.5.f. for rationale). The scale assessed three types of behaviour: (1) frequency of consumption, (2) units drunk in a typical drinking session, (3), and frequency of high episodic drinking. Responses were provided on five-point scales, scored 0-4, with the answers on each scale relative to the options applicable to frequency (Never – 4+ times a week), units drunk (1-2 units – 10+ units), and frequency of high episodic drinking (Never – Daily/Almost Daily). A diagram depicting the unit content of various alcoholic drinks was included to assist in estimating the units drunk on a typical drinking day. Responses to the three questions were summed to create an aggregate score (0-12). A Cronbach's Alpha indicated the scale had acceptable internal consistency ($\alpha = 0.81$). Previous research has suggested several cut-off scores to indicate increasing or higher-risk drinking on the AUDIT-C, with thresholds sometimes segmented by gender and population (Khadjesari et al., 2017). A cut-off score of ≥ 5 was used to identify increasing or higher-risk consumption in this study (Research in Practice, 2015). As the AUDIT-C is reportedly 80% as accurate as the full AUDIT, a score of ≥ 5 is also used to indicate a positive score during initial screening in the UK's National

Health Service Health Check Programme: Best Practice Guidance, at which stage more detailed screening using the full AUDIT is recommended (Department of Health, 2013).

6.3.2.f. Future intentions to drink

Drinking intentions were measured through the single item ‘*Do you think you will drink an alcohol drink in the next six months - a whole drink, not just a sip?*’ (Yes/No).

6.3.2.g. Recall of alcohol brand names

Participants were asked to supply the names of as many alcohol brands they could recall (4.6.5.g). Responses were limited to a maximum of 10 to avoid bias created by some participants spending a long time on the task and others only spending a short while or ignoring the question. Participants were informed that the question was a not test, and that the survey was only interested in the amount they could recall from memory. Participants were instructed to move onto the next question once they had either filled all the blank spaces or could no longer recall any more brand names from memory.

6.3.4. Procedure

The questionnaire was hosted www.qualtrics.com, a web-based tool for creating online surveys. Advertisements highlighting the aims and methods of the study were placed on the ‘Surveys and Research’ section of www.thestudentroom.co.uk. The adverts remained there throughout the two recruitment periods and were refreshed fortnightly. An advert was also uploaded to the student recruitment website and shared on Facebook. Those who met the inclusion criteria (18-25 years old and living in the UK) were invited to click on a hyperlink, which directed their web-browser to the questionnaire. Prior to survey onset participants were informed of the study aims, incentive, anonymity, the voluntary nature

of the study, and ability to withdraw at any point. Participants were asked to confirm they met the age criteria and consented to take part (Yes/No). After the questionnaire was completed a debriefing page was displayed that asked participants whether they would like to enter a ballot to win one-of-five £10 vouchers for an e-retailer (Yes/No) as a thank you for participation. Those who wished to enter were redirected to a separate questionnaire to provide an e-mail address. Those who did not were directed to final page which confirmed the questionnaire was finished.

6.3.5 Statistical analyses

Data was analysed using SPSS version 21. Descriptive statistics were computed for: demographics; internet use, AUDIT-C score; brand names recalled; awareness of traditional marketing; and awareness of, and participation with, digital marketing and user-created promotion. Independent samples *t*-tests (2,000 bootstrapped pairwise comparisons) were used to explore how awareness of, and participation with, marketing and user-created promotion differed in those who indicated higher-risk consumption (≥ 5 on the AUDIT-C) compared to those who did not. Paired samples *t*-tests (based on 2,000 bootstrapped pairwise comparisons) examined the differences between awareness of, and participation with, digital marketing and user-created promotion.

The associations between digital marketing, user-created promotion, and alcohol-related outcomes were tested through four regression models. Two hierarchical linear regressions were conducted with AUDIT-C score and total brand name recall as the respective dependent variables. Two hierarchical logistic regressions were conducted with classification of higher-risk consumption and drinking intentions as the dependent variables (both Yes/No). Demographic variables of age, gender, ethnicity, and religious

denomination were entered in step one of each model, alongside awareness of traditional marketing. These control variables were chosen as they are factors known to be associated with personal alcohol use in the UK (Gordon et al., 2010b; Newbury-Birch et al., 2009; HSCIC, 2016). Three of the demographic variables were categorical. Male was used as the baseline for gender. Ethnicity was coded into binary categories, ‘White British’ and ‘Other’, and the latter was used as the baseline. Religion was coded into binary categories (Yes/No). ‘No’ was used as the baseline. Awareness of digital marketing was entered at stage two, participation with digital marketing at stage three, awareness of user-created promotion at stage four, and participation with user-created promotion at stage five. The variables were entered in this order to: (1) compare awareness of traditional marketing to awareness of digital marketing; (2) compare digital marketing to user-created promotion; and (3) compare awareness of digital marketing and user-created promotion to participation with digital marketing and user-created promotion. All four regressions were based on 2,000 pairwise bootstrapped samples. All variables were entered using a forced entry method.

6.4. Results

6.4.1. Sample characteristics and internet use

The sample ($n = 405$) had an average age of 21.15 ($SD = 2.22$). Most participants were female (72%), identified as White British (66%), and indicated no religious denomination (62%) (Table 6.1). Almost the entire sample used the internet every day (99%), with the majority spending two-four hours online (65%). Participants had accessed the internet through a range of devices, with personal computers (97%) and mobile or smartphones (96%) reported most. On average, participants had a registered account or profile on 5.68 of the 12 websites listed ($SD = 1.94$, range: 4-95%), encompassing a range of online behaviours (e.g. social networking, video sharing, and online shopping).

Table 6.1. Sample characteristics and internet use

Variable	%	<i>n</i>
<i>Gender</i>		
Male	28	113
Female	72	292
<i>Ethnicity</i>		
White British	66	267
Other	34	138
<i>Religion</i>		
No religion	62	250
Yes	38	155
<i>Internet use – Frequency</i>		
Everyday	99	402
Four or more times a week	>1	3
<i>Internet use – Average duration per day</i>		
One hour or less	15	58
Between two and four hours	65	264
Five or more hours	20	83
<i>Device use</i>		
Personal computer	97	392
Mobile phone	96	388
Work, university, or school computer	87	354
Tablet	64	259
Shared computer	43	173
<i>Websites used (most popular)</i>		
Facebook	95	385
Amazon	84	339
YouTube	78	315
Twitter	67	270
eBay	64	259

6.4.2. Awareness of traditional marketing communications

Participants, on average, were aware of 4.30 of the nine traditional (offline) marketing channels ($SD = 2.29$, range: 32-80%) (Table 6.2). An independent samples t -test indicated those who scored positive for higher-risk consumption reported significantly more awareness of traditional marketing ($M = 4.65$, $SD = 2.30$) compared to those who scored negative ($M = 3.89$, $SD = 2.20$), $t(403) = -3.36$, $p < 0.001$, $d = 0.33$.

Table 6.2. Awareness of traditional (offline) marketing communications

Traditional (offline) marketing communications	%	<i>n</i>
Television (including programme sponsorship)	80	323
Price promotion	65	262
Billboards and posters	54	219
In-store posters	54	217
Magazines	42	168
Packaging	35	143
Event sponsorship	35	143
Newspapers	35	141
Sports sponsorship	32	127
<i>Average</i>	<i>48</i>	<i>193</i>
Cumulative mean (SD)	4.30 (2.29)	
AUDIT-C Negative	3.89 (2.20)	
AUDIT-C Positive	4.65 (2.30)	

6.4.3. Awareness of digital marketing

Participants, on average, were aware of 6.23 of the 11 digital marketing channels ($SD = 2.52$, range: 29-88%) (Table 6.3). An independent samples t -test indicated those who scored positive for higher-risk consumption reported significantly more awareness of digital marketing ($M = 6.53$, $SD = 2.49$) compared to those who scored negative ($M = 5.86$, $SD = 2.52$), $t(403) = -2.70$, $p < 0.01$, $d = 0.27$.

6.4.4. Participation with digital marketing

Participants, on average, had participated with 2.33 of the 11 digital marketing channels ($SD = 1.96$, range: 3-54%) (Table 6.3). An independent samples t -test indicated those who scored positive for higher-risk consumption reported significantly more participation with digital marketing ($M = 2.77$, $SD = 2.04$) compared to those who scored negative ($M = 1.81$, $SD = 1.72$), $t(403) = 5.06$, $p < 0.001$, $d = 0.50$.

Table 6.3. Awareness of, and participation with, digital marketing

Channel	Awareness		Participation		Change
	%	<i>n</i>	%	<i>n</i>	%
On-demand TV ads	88	355	49	199	-39
Videos	84	340	54	220	-30
Display advertisements	76	309	12	49	-64
Social media	65	262	20	81	-45
Online shop	62	249	15	61	-47
Competitions	57	229	16	66	-41
Websites	50	202	28	114	-22
Apps	46	186	20	79	-26
Games	35	141	10	39	-25
E-mail	33	133	6	26	-27
Downloadable content	29	116	3	11	-26
<i>Average</i>	57	229	21	86	-36
Cumulative mean (SD) ¹	6.23 (2.52)		2.33 (1.96)		-3.90
AUDIT-C Negative ²	5.86 (2.52)		1.81 (1.72)		-4.05
AUDIT-C Positive ³	6.53 (2.49)		2.77 (2.04)		-3.76

Paired samples t -tests:

¹Cumulative mean: $t(404) = 39.22$, $p < 0.001$, $d = 3.90$

²AUDIT-C Negative: $t(183) = 25.54$, $p < 0.001$, $d = 3.78$

³AUDIT-C Positive: $t(220) = 30.16$, $p < 0.001$, $d = 4.07$

6.4.5. Awareness of user-created promotion

Participants, on average, were aware of 7.48 of the 11 user-created promotion channels ($SD = 2.22$, range: 30-99%) (Table 6.4). An independent samples t -test indicated those who scored positive for higher-risk consumption reported significantly more awareness

of user-created promotion ($M = 7.89$, $SD = 1.89$) compared to those who scored negative ($M = 6.99$, $SD = 2.39$), $t(403) = -4.11$, $p < 0.001$, $d = 0.41$.

6.4.6. Participation with user-created promotion

Participants, on average, had participated with 4.36 of the 11 user-created promotion channels ($SD = 2.41$, range: 6-77%) (Table 6.4). An independent samples t -test indicated those who scored positive for higher-risk consumption reported significantly more participation with user-created promotion ($M = 5.32$, $SD = 2.13$) compared to those who scored negative ($M = 3.21$, $SD = 2.21$), $t(403) = 9.78$, $p < 0.001$, $d = 0.97$.

6.4.7. Differences between alcohol marketing and user-created promotion

Table 6.4. Awareness of, and participation with, user-created promotion

Channel	Awareness		Participation		Change
	%	<i>n</i>	%	<i>n</i>	%
Non-fictional photos	99	401	77	310	-22
Fictional photos	94	381	60	242	-34
Social media posts	94	381	58	233	-36
Shared and viral videos	84	341	68	275	-16
Multimedia messaging	83	335	65	264	-18
Social networking pages	67	273	25	101	-42
Micro-blogging	60	243	23	93	-37
Quizzes	53	213	23	94	-30
Apps	48	193	16	66	-32
Forums	36	147	6	26	-30
Games	30	122	15	62	-15
<i>Average</i>	<i>68</i>	<i>275</i>	<i>39</i>	<i>160</i>	<i>-28</i>
Cumulative mean (SD) ¹	7.48 (2.22)		4.36 (2.41)		-3.10
AUDIT-C Negative ²	6.99 (2.39)		3.21 (2.21)		-3.78
AUDIT-C Positive ³	7.89 (1.98)		5.32 (2.13)		-2.57

Paired samples t -tests:

¹Cumulative mean: $t(404) = 30.68$, $p < 0.001$, $d = 3.05$.

²AUDIT-C Negative: $t(183) = 23.89$, $p < 0.001$, $d = 3.53$.

³AUDIT-C Positive: $t(220) = 21.44$, $p < 0.001$, $d = 2.89$.

The average proportion of participants who were aware of each user-created promotion channel was 20% greater than each traditional marketing channel, and 11% greater than

each digital marketing channel (Table 6.5). Cumulatively, participants were aware of user-created promotion through 1.25 channels more than they were digital marketing. A paired samples *t*-test confirmed this difference to be significant, $t(404) = -11.21$, $p < 0.001$, $d = 1.12$. The average proportion of participants who had participated with each user-created promotion channel was 19% greater than each digital marketing channel (Table 6.5). Cumulatively, respondents had participated with 2.05 more user-created promotion channels than digital marketing. A paired samples *t*-test confirmed this difference to be significant, $t(404) = -19.82$, $p < 0.001$, $d = 1.97$.

Table 6.5. Comparing exposure to traditional marketing, digital marketing, and user-created promotion

Variable	Traditional marketing ¹	Digital marketing	User-created promotion
Average % of sample aware of each channel	48	57	68
Mean cumulative awareness	4.30	6.23	7.48
Average % of participating with each channel	– ²	21	40
Mean cumulative participation	– ²	2.33	4.38

¹Only nine channels were measured for traditional marketing, and therefore no paired samples *t*-test could be conducted with digital marketing or user-created promotion.

²Participation was not measured for traditional marketing.

6.4.8. Association between awareness, participation, and AUDIT-C score

Average scoring on the AUDIT-C was 4.76 ($SD = 3.07$). The association between AUDIT-C scoring and exposure was analysed using a hierarchical linear regression. The first step of the model examined the association between AUDIT-C scoring, demographic

variables, and awareness of traditional marketing (Table 6.6). This step was significant, $F(5, 399) = 10.44, p < 0.001$, and accounted for 12% of the variance explained. Within this step, being male and of white British ethnicity was positively associated with AUDIT-C scoring. Awareness of traditional marketing also had a significant positive association ($\beta = 0.19, p < 0.005$). This indicated the more traditional marketing a participant was aware of the more likely they were to report greater AUDIT-C scoring.

The second step examined the association between AUDIT-C scoring and awareness of digital marketing. This step did not significantly change the model, $F(1, 398) = 2.50, p = 0.11$, and explained little change in the variance ($\Delta R^2 = 0.006$). This indicated that the number of digital marketing channels that participants were aware of was not associated with a change in AUDIT-C scoring. Being aware of traditional marketing retained a significant and positive association in this step, even after controlling for awareness of digital marketing ($\beta = 0.11, p < 0.05$).

The third step examined the association between AUDIT-C scoring and participation with digital marketing. This step did significantly change the model, $F(1, 397) = 13.91, p < 0.001$, and increased the variance explained to 15% ($\Delta R^2 = 0.030$). This indicated that the more digital marketing channels a participant was participating with the more likely they were to report greater AUDIT-C scoring. In step three, awareness of traditional marketing continued to have a significant and positive association with AUDIT-C scoring, even when controlling for awareness of digital marketing ($\beta = 0.10, p < 0.05$).

The fourth step examined the association between AUDIT-C scoring and awareness of user-created promotion. This step was significant, $F(1, 396) = 11.37, p < 0.001$, and

increased the variance explained to 18% ($\Delta R^2 = 0.024$). This indicated that the more user-created promotion a participant was aware of the more likely they were to report greater AUDIT-C scoring. In step four, participation with digital marketing still had a significant and positive association, even when controlling for awareness of user-created promotion ($\beta = 0.21, p < 0.001$). Awareness of traditional marketing, however, ceased to be a positive predictor ($\beta = 0.09, p = 0.89$). This indicated that the association between awareness of user-created promotion and AUDIT-C scoring was stronger than between AUDIT-C scoring and awareness of traditional marketing.

The final step examined the association between AUDIT-C scoring and participation with user-created promotion. This step was significant, $F(1, 395) = 89.67, p < 0.001$, and increased the variance explained to 33% ($\Delta R^2 = 0.153$). This indicated that the more user-created promotion a participant was participating with the more likely they were to report greater AUDIT-C scoring. In this final step, participation with user-created promotion was the only form of content or level of exposure to have a significant and positive association. This indicated that the association between participation with user-created promotion and AUDIT-C scoring was stronger than any of the other exposure variables.

Table 6.6. Association between exposure to marketing and user-created promotion and AUDIT-C scoring

Variables	Unstandardised coefficients		Standardised coefficients	<i>t</i>	<i>p</i>	ΔR^2
	<i>b</i>	<i>SE</i>	β			
<i>Step One</i>						0.12
Age	0.11	0.07	0.08	1.62	n.s.	
Gender (0 = Male, 1 = Female)	-0.96	0.34	-0.14	-2.94	<.005	
Ethnicity (0 = Other, 1 = White British)	1.43	0.33	0.22	4.59	<.001	
Religion (0 = No, 1 = Yes)	-0.47	0.31	-0.07	-1.54	n.s.	
Awareness of traditional marketing (0-9)	0.19	0.06	0.14	2.90	<.005	
<i>Step Two</i>						0.006
Awareness of digital marketing (0-11)	0.10	0.07	0.08	1.58	n.s.	
<i>Step Three</i>						0.030
Participation with digital marketing (0-11)	0.36	0.09	0.23	3.73	<.001	
<i>Step Four</i>						0.024
Awareness of user-created promotion (0-11)	0.27	0.07	0.19	3.38	<.001	
<i>Step Five</i>						0.153
Participation with user-created promotion (0-11)	0.71	0.07	0.55	9.47	<.001	

Durbin Watson: 1.86

Unstandardised coefficients, standard errors, and *p* values based on 2,000 bootstrapped pairwise comparisons

DV: AUDIT-C score (0-12).

6.4.9. Association between awareness, participation, and higher-risk consumption

Fifty-five per cent of the sample scored ≥ 5 on the AUDIT-C, thus indicating potentially higher-risk consumption. The association between higher-risk consumption and exposure was analysed using a hierarchical logistic regression. The first step of the regression examined the association between higher-risk consumption, demographic variables, and awareness of traditional marketing (Table 6.7). This step was significant, $\chi^2(5) = 42.34$, $p < 0.001$, accounted for 13% of the variance, and could classify higher-risk drinkers with 63% accuracy. Being male increased the odds of higher-risk consumption by 100% (Adjusted Odds Ratio = 2.00, $p < 0.005$), and being white British increased the odds by 153% (AOR = 2.53, $p < 0.001$). Awareness of traditional marketing was also associated with higher-risk consumption, with each extra form of marketing that participants were aware of increasing the odds by 15% (AOR = 1.15, $p < 0.01$).

The second step examined the association between higher-risk consumption and awareness of digital marketing. This step was not significant, $\chi^2(1) = 0.45$, $p = 0.50$, only accounted for a small change in the variance explained ($\Delta R^2 = 0.001$), and had no impact on the classification accuracy (63%). This indicated that awareness of digital marketing was not associated with greater odds of being a higher-risk drinker (AOR = 1.03, $p = 0.53$). In this step, awareness of each extra form of traditional marketing continued to significantly increase the odds of higher-risk consumption by 13%, even after controlling for awareness of digital marketing (AOR = 1.13, $p < 0.05$).

The third step examined the association between higher-risk consumption and participation with digital marketing. This step was significant, $\chi^2(1) = 12.40$, $p < 0.001$,

increased the variance explained to 17% ($\Delta R^2 = .036$), and maintained the classification accuracy at 63%. Participation with each form of digital marketing increased the odds of being a higher-risk drinker by 30% (AOR = 1.30, $p < 0.001$). In this step, awareness of each form of traditional marketing continued to significantly increase the odds by 13%, even when controlling for participation with digital marketing (AOR = 1.13, $p < 0.05$).

The fourth step examined the association between higher-risk consumption and awareness of user-created promotion. This step was significant, $\chi^2(1) = 6.93$, $p < 0.01$, increased the variance explained to 19% ($\Delta R^2 = 0.020$), and raised the classification accuracy to 64%. In this stage, awareness of user-created promotion was associated with higher-risk consumption, with each extra form of promotion that participants were aware of increasing the odds of being a higher-risk drinker by 17% (AOR = 1.17, $p < 0.01$). Awareness of each form of traditional marketing continued to significantly increase the odds of being a higher-risk drinker by 12% (AOR = 1.12, $p < 0.05$), while participation with each form of digital marketing continued to increase the odds by 30% (AOR = 1.30, $p < 0.001$), even after controlling for awareness of user-created promotion.

The final step examined the association between higher-risk drinking and participation with user-created promotion. This step was significant, $\chi^2(1) = 51.34$, $p < 0.001$, increased the variance explained to 33% ($\Delta R^2 = 0.137$), and raised the classification accuracy to 73%. In this stage, participation with each extra form of user-created promotion increased the odds of being a higher-risk drinker by 64% (AOR = 1.64, $p < 0.001$). In the final step, participation with user-created promotion was the only form of content or level of exposure to have an association.

Table 6.7. Association between exposure to marketing and user-created promotion and higher-risk consumption

Variable	<i>n</i>	Odds ratio	95% CI for odds ratio		<i>p</i>
Step One					
Age	405	1.06	0.97	1.17	n.s.
Gender					
Female	292	1.00			
Male	113	2.00	1.24	3.24	<0.005
Ethnicity					
Other	138	1.00			
White British	267	2.53	1.63	3.95	<0.001
Religious					
Yes	155	1.00			
No	250	1.26	0.82	1.94	n.s.
Awareness of traditional marketing (0-11)	405	1.15	1.05	1.26	<0.01
Step Two					
Awareness of digital marketing (0-11)	405	1.03	0.94	1.13	n.s.
Step Three					
Participation with digital marketing (0-11)	405	1.30	1.12	1.52	<0.001
Step Four					
Awareness of user-created promotion (0-11)	405	1.17	1.04	1.33	<0.05
Step Five					
Participation with user-created promotion (0-11)	405	1.64	1.41	1.90	<0.001
Model summary					
	χ^2	df	<i>p</i>	Nagelkerke R^2	Accuracy (%)
Step One	42.34	5	<0.001	0.133	63.2
Step Two	0.45	1	n.s.	0.134	62.5
Step Three	12.40	1	<0.001	0.170	63.2
Step Four	6.93	1	<0.01	0.190	64.2
Step Five	51.34	1	<0.001	0.327	72.6

p values based on 2,000 bootstrapped pairwise comparisons

DV: Indication of higher-risk alcohol use (≥ 5 on AUDIT-C)

Comparison to null model: $\chi^2(9) = 113.45, p < 0.001$; Hosmer and Lemeshow test at step five: $\chi^2(8) = 7.96, p = 0.44$

6.4.10. Association between awareness, participation, and intentions to drink

Eighty-four per cent of participants intended to consume an alcoholic drink in the next six months. The association between drinking intentions and exposure was analysed using a hierarchical logistic regression. The first step of the model examined the association between drinking intentions, demographics, and awareness of traditional marketing (Table 6.8). This step was significant, $\chi^2(5) = 39.52, p < 0.001$, accounted for 16% of the variance, and classified drinking intentions with 85% accuracy. Age was significantly associated with drinking intentions (AOR = 1.16, $p < 0.05$), being white British increased the odds of having intentions by 278% (AOR = 3.78, $p < 0.001$), and not being religious increased the odds by 99% (AOR = 1.99, $p < 0.05$). Awareness of traditional marketing was not associated with drinking intentions (AOR = 1.07, $p = 0.30$).

The second step examined the association between drinking intentions and awareness of digital marketing. This step was significant, $\chi^2(1) = 4.78, p < 0.05$, and increased the variance accounted for to 18% ($\Delta R^2 = 0.018$). The classification accuracy, however, remained at 85%. In this stage, awareness of digital marketing was associated with drinking intentions, with each extra form of marketing that participants were aware of increasing the odds of having drinking intentions by 15% (AOR = 1.15, $p < 0.05$).

The third step examined the association between drinking intentions and participation with digital marketing. This step was significant, $\chi^2(1) = 19.08, p < 0.001$, and increased the variance explained to 25% ($\Delta R^2 = 0.071$). The classification accuracy, however, remained at 85%. Participation with each extra form of digital marketing increased the odds of having future drinking intentions by 68% (AOR = 1.68, $p < 0.001$). In this step,

awareness of digital marketing ceased to have a significant association with drinking intentions (AOR = 0.97, $p = 0.73$).

The fourth step examined the association between drinking intentions and awareness of user-created promotion. This step was not significant, $\chi^2(1) = 1.52$, $p = 0.22$, and did not increase either the variance explained ($\Delta R^2 = .006$), or classification accuracy (85%). In this stage, however, participation with digital marketing continued to have a significant association, with participation with each extra form of digital marketing increasing the odds of having future drinking intentions by 67% (AOR = 1.67, $p < 0.001$), despite controlling for awareness of user-created promotion.

The final step examined the association between future drinking intentions and participation with user-created promotion. This step was significant, $\chi^2(1) = 57.24$, $p < 0.001$, and increased the variance explained to 45% ($\Delta R^2 = 0.194$) and classification accuracy to 89%. In this stage, participation with each extra form of user-created promotion increased the odds of having drinking intentions by 110% (AOR = 2.10, $p < 0.001$). In the final step, participation with user-created promotion was the only form of content or level of exposure to have a positive association. Not being religious (AOR = 2.27, $p < 0.05$) and being White British (AOR = 3.01, $p < 0.005$) also continued to significantly increase odds of having drinking intentions.

Table 6.8. Association between exposure to marketing and user-created promotion and intentions to drink

Variable	<i>n</i>	Odds ratio	95% CI for odds ratio		<i>p</i>
Step One					
Age	405	1.16	1.01	1.32	<0.05
Gender					
Female	292	1.00			
Male	113	1.42	0.72	2.80	n.s.
Ethnicity					
Other	138	1.00			
White British	267	3.78	2.11	6.73	<0.001
Religious					
Yes	155	1.00			
No	250	1.99	1.10	3.51	<0.05
Awareness of traditional marketing (0-11)	405	1.07	0.94	1.21	n.s.
Step Two					
Awareness of digital marketing (0-11)	405	1.15	1.01	1.30	<0.05
Step Three					
Participation with digital marketing (0-11)	405	1.68	1.31	2.17	<0.001
Step Four					
Awareness of user-created promotion (0-11)	405	1.11	0.94	1.29	n.s.
Step Five					
Participation with user-created promotion (0-11)	405	2.10	1.68	2.63	<0.001
Model summary at each step	χ^2	df	<i>p</i>	Nagelkerke R^2	Accuracy (%)
Step One	39.52	5	<0.001	0.161	84.7
Step Two	4.78	1	<0.05	0.179	84.7
Step Three	19.08	1	<0.001	0.250	85.4
Step Four	1.52	1	n.s.	0.256	85.4
Step Five	57.24	1	<0.001	0.450	89.1

p values based on 2,000 bootstrapped pairwise comparisons

DV: Intentions to drink (Yes/No)

Comparison to null model: $\chi^2(9) = 122.15, p < 0.001$; Hosmer and Lemeshow test at step five: $\chi^2(8) = 10.59, p = 0.23$.

6.4.11. Association between awareness, participation, and brand name recall

From a maximum of 10, the average number of brand names recalled was 7.99 ($SD = 2.97$) (Table 6.9). The relationship between exposure and brand name recall was analysed using a hierarchical linear regression. The first step examined the association between brand name recall, demographic variables, and awareness of traditional marketing (Table 6.10). This step was significant, $F(5, 399) = 12.71, p < 0.001$, and accounted for 14% of the variance. Within this step, age was positively associated with brand name recall, as was being of white British ethnicity. Awareness of traditional marketing also had a significant positive association ($\beta = 0.23, p < 0.001$). This indicated that the more traditional marketing a participant was aware of the more likely they were to recall a greater number of alcohol brand names.

Table 6.9. Brand names recalled, by category

Variable	M	SD
Beer	3.02	2.15
Spirit	3.37	2.28
Wine	0.35	0.76
Cider	0.88	1.13
RTD	0.37	0.63
Overall	7.99	2.97

RTD = Ready to drink

The second, third, and fourth steps saw the introduction of awareness of, and participation with, digital marketing, and awareness of user-created promotion. None of these variables, however, created a significant change in the model and only accounted for small combined increase in variance explained ($\Delta R^2 = 0.014$) (Table 6.10). This indicated that digital marketing did not influence brand recall, nor did awareness of user-created promotion. Throughout all three stages the control variables of age, white British ethnicity, and awareness of traditional marketing retained positive associations.

Table 6.10. Association between exposure to marketing and user-created promotion and brand name recall

Variables	Unstandardised coefficients		Standardised coefficients	<i>t</i>	<i>p</i>	ΔR^2
	<i>b</i>	<i>SE</i>	β			
<i>Step One</i>						0.14
Age	0.15	0.06	0.12	2.47	<0.05	
Gender (0 = Male, 1 = Female)	-0.54	0.30	-0.08	-1.75	n.s.	
Ethnicity (0 = Other, 1 = White British)	1.37	0.34	0.22	4.58	<0.001	
Religion (0 = No, 1 = Yes)	-0.15	0.29	-0.02	-0.53	n.s.	
Awareness of traditional marketing (0-9)	0.31	0.06	0.23	5.00	<0.001	
<i>Step Two</i>						0.005
Awareness of digital marketing (0-11)	0.10	0.06	0.08	1.57	n.s.	
<i>Step Three</i>						0.002
Participation with digital marketing (0-11)	0.09	0.10	0.06	1.00	n.s.	
<i>Step Four</i>						0.007
Awareness of user-created promotion (0-11)	0.14	0.08	0.10	1.80	n.s.	
<i>Step Five</i>						0.021
Participation with user-created promotion (0-11)	0.26	0.09	0.21	3.19	<0.01	

Durbin Watson: 2.05

Unstandardised coefficients, standard errors and *p* values of significance based on 2,000 Bootstrapped pairwise comparisons

DV: Brand name recall (0-10).

The final step examined the association between brand recall and participation with user-created promotion. This step was significant, $F(1, 395) = 10.18, p < 0.001$, and increased the variance explained to 17% ($\Delta R^2 = 0.021$). This indicated that the more user-created promotion a participant was participating with the more likely they were to recall a greater number of brand names. In this final step, age, white British ethnicity, and awareness of traditional marketing retained a significant and positive association with brand recall.

6.5. Discussion

The results suggest that young adults are aware of, and participating with, digital marketing and user-created promotion, and that exposure is associated with alcohol use, higher-risk consumption, drinking intentions, and brand recall. This supports three of the chapter hypotheses, and presents exceptions to three (Table 6.14). Hypothesis seven is only partly supported because awareness of digital marketing was not associated with AUDIT-C scoring or higher-risk drinking, awareness of user-created promotion was not associated with drinking intentions, and only participation with user-created promotion was associated with brand recall. Hypothesis six is rejected as the participants reported greater awareness of, and participation with, user-created promotion compared to digital marketing. Hypothesis nine is also rejected as user-created promotion had a stronger association with drinking behaviour and brand name recall than digital marketing.

6.5.1. Alcohol marketing

The results are consistent with past research, by demonstrating a significant association between awareness of, and participation with, alcohol marketing and increased alcohol use (see 2.7 or 6.2.1). The results extend knowledge given that research exploring digital marketing has only considered a limited range of online channels (de Bruijn et al., 2016a;

Gordon et al., 2011; Jones and Magee, 2011; Lin et al., 2012). Young adults are increasingly using new media for recreational activities such as gaming, sharing media, shopping, and downloading apps (OFCOM, 2015a; 2016). By exploring these channels in the context of marketing, the findings suggest that the alcohol industry is reactive to changes in how young adults use the internet and have developed digital marketing strategies which appear successful in reaching them and encouraging them to participate.

Table 6.11. Hypotheses and outcomes for Chapter Six

Hypotheses	Hypotheses outcome
H4: Young adults will be aware of, and participating with, digital marketing and user-created promotion.	Hypothesis accepted – Participants were aware of, and participating with, digital marketing and user-created promotion.
H5: Higher-risk drinking will be associated with greater awareness of, and participation with, digital marketing and user-created promotion.	Hypothesis accepted – Participants who scored positive for higher-risk drinking reported greater awareness of, and participation with, digital marketing and user-created promotion.
H6: There will be no difference in awareness of, and participation with, digital marketing and user-created promotion [<u>null hypothesis</u>].	Hypothesis rejected - Participants reported greater awareness of, and participation with, user-created promotion compared to digital marketing.
H7: Greater awareness of traditional marketing and greater awareness of, and participation with, digital marketing and user-created promotion will be associated with alcohol use, higher-risk drinking, brand name recall, and drinking intentions	Hypothesis partly accepted - Awareness of digital marketing was not associated with AUDIT-C scoring or higher-risk consumption. Awareness of user-created promotion was not associated with drinking intentions. Only awareness of traditional marketing and participation with user-created promotion was associated with brand name recall. All other forms of exposure were associated with AUDIT-C scoring, indication of higher-risk consumption and drinking intentions.
H8: Participation with digital marketing and user-created promotion will have a stronger association with alcohol use, higher-risk drinking, brand name recall, and drinking intentions than awareness of digital marketing and user-created promotion.	Hypothesis accepted – Participation with digital marketing and user-created promotion had a stronger association with alcohol use, higher-risk drinking, drinking intentions, and brand recall (for user-created) than awareness.
H9: There will be no difference in the association between digital marketing or user-created promotion and alcohol consumption, higher-risk drinking, brand name recall, and drinking intentions [<u>null hypothesis</u>].	Hypothesis rejected - Awareness of, and participation with, user-created promotion had a stronger association alcohol use, higher-risk drinking, drinking intentions, and brand name recall than the corresponding association of digital marketing.

In comparison to previous survey research, average awareness of digital marketing was 16% greater than reported by adolescents in mainland Europe (de Bruijn et al., 2016a) and at least 50% greater than reported by adolescents in New Zealand (Lin et al., 2012) and Scotland (Gordon et al., 2011). It is noted, however, the channel with the highest estimate of awareness (88%, on-demand television) is comparable to the upper estimate reported in other recent surveys (Fox et al., 2015; Jones et al., 2015). An increase was also true for participation, with average involvement at least 15% higher than reported in previous research (Gordon et al., 2011; Lin et al., 2012). Average awareness was also higher for digital than traditional marketing. This contrasts with research in Scotland (Gordon et al., 2011) and New Zealand (Jones and Magee, 2011; Lin et al., 2012) where the average awareness of traditional marketing, which was close to the estimate in this study, was higher than digital marketing. The findings therefore suggest that although awareness of traditional marketing has remained stable in recent years, digital marketing has become increasingly successful in reaching young people, continuing the upward trend reported in previous research (Gordon et al., 2010b; Jernigan et al., 2017).

There are three alternative explanations for the higher estimates of awareness and participation. First, most previous research has only focused on adolescents younger than the current sample. The higher estimates may therefore simply reflect the greater amount of online marketing that young adults (who are legal targets for such content) are aware of, and participating with. This would explain why the upper estimate of awareness was similar to Jones and colleagues (2015), as this study also sampled young adults. This explanation is also consistent with the positive association between age and exposure reported in previous longitudinal surveys (Gordon et al., 2010b). Second, it may be that the inclusion of a visual example stimulated cue-reactivity, which research suggests

facilitates better marketing recall (McCracken and Macklin, 1998). Finally, the increase may reflect the greater expenditure on digital marketing (OFCOM, 2015a) or increased internet use by young adults (ONS, 2015a) compared to the measurement points of previous research. This explanation would again support why the findings are more comparable to recent surveys (Fox et al. 2015; Jones et al., 2015; Kenny, 2014). Regardless of the reason, increased exposure does help to explain the alcohol industry shift in promotional expenditure towards new media.

The findings are consistent with reviews of research exploring traditional alcohol marketing, which suggest an association between exposure and alcohol use (Anderson et al., 2009; Gordon et al., 2010a; Jernigan et al., 2017; Smith and Foxcroft, 2009), and also support formative research which has suggested this link is also true for digital marketing (de Bruijn et al., 2012; de Bruijn et al., 2016b; Gordon et al., 2010b; McClure et al., 2016). The results are also consistent with suggestions that digital marketing has a more powerful association than traditional marketing (Hastings and Sheron, 2013), and that participation has a stronger association than awareness (de Bruijn et al., 2016a; Gordon et al., 2011; Lin et al., 2012). Evidence suggests that the alcohol industry is also aware of this and is encouraging consumers to engage with digital marketing (Atkinson et al., 2014; Carah et al. 2014; Nicholls, 2012), even by adding quick response barcodes and augmented reality features to traditional marketing such as product packaging (Purves et al., 2014) and pint glasses (Nudd, 2012). Nonetheless, participation with digital marketing was lower than awareness of both traditional and digital marketing. It therefore remains plausible that some young adults who may not participate may still be aware of digital and traditional marketing, which the findings suggest is also associated with alcohol use, albeit not as strongly as participation. As research suggests that the

association between marketing and consumption is best understood as cumulative across all marketing channels (Gordon et al., 2011; Lin et al., 2012) and these findings also further support that all forms of exposure should be considered.

6.5.2. User-created promotion

The results are consistent with previous research which has suggested that young adults are aware of, and participating with, a range of user-created promotion, and that this exposure is associated with alcohol use and higher-risk drinking (Gupta et al. 2016; Moreno et al., 2016a; Ridout, 2016; Westgate and Holliday, 2016). The results extend understanding by suggesting that user-created promotion which exists beyond social networking websites is also successful in reaching young adults and encouraging them to participate. This includes under-researched channels such as microblogging, viral, and shared videos, smartphone apps, online games, and forums.

Nevertheless, that participants were most exposed to user-created promotion on social networking websites supports why such content has featured prominently in exploratory content analyses (Atkinson et al., 2014), experimental studies (Litt and Stock, 2011), longitudinal surveys (Boyle et al., 2016), and qualitative research (Lyons et al., 2014). That the reported awareness and participation with content on social networking websites was higher than previous surveys (Cabrera-Nguyen et al., 2016; Glassman et al., 2012; Morgan et al., 2010) may reflect the detailed phrasing of each question or the visual examples used to stimulate cue-reactivity (McCracken and Macklin, 1998). It is also possible that awareness participation may be greater in young people in the UK compared to the USA, where most previous research has been conducted.

The results are also consistent with suggestions that user-created promotion is associated with alcohol use (Gupta et al., 2016; Moreno et al., 2016a; Ridout et al., 2016; Westgate and Holliday, 2016). That this association was best understood when awareness and participation was measured cumulatively is consistent with previous research exploring user-created promotion on social networking sites (Stoddard et al., 2012; Westgate et al., 2014). The results broaden understanding by suggesting that cumulative exposure also includes channels beyond social networking such as video sharing, forums, and apps. The results also show that participation had a stronger association with alcohol use than awareness. Nonetheless, it remains plausible that those who do not participate may still be aware of user-created promotion, which the results suggest is also associated with alcohol consumption. That both a cumulative effect and stronger association of participation are also trends observed for alcohol marketing (Gordon et al., 2010b; Lin et al., 2012) suggests the way that user-created promotion influences consumption has similarities to its commercial counterpart. Future research should therefore consider how other marketing concepts, for instance message interpretation (Austin and Knaus, 2000; Austin et al., 2000), may aid understanding of the influence that user-created promotion has on knowledge, attitudes, and behaviour.

6.5.3. Relationship between digital marketing and user-created promotion

The comparison between digital marketing and user-created promotion highlighted four important findings. First, young adults were aware of, and participating with, more user-created promotion than traditional or digital marketing. This is consistent with previous research which suggests that there appears to be a greater volume of user-created promotion on social media than marketing, thus suggesting increased likelihood of exposure (Mart et al., 2009). Second, user-created promotion had a stronger association

with drinking behaviour than marketing. This is consistent with research which suggests that young people may perceive user-created promotion to be more authentic or credible than marketing (Atkinson et al., 2014; Weaver et al., 2016). It is also consistent with Chapter Five which suggested that user-created promotion contains more explicit references to higher-risk drinking than marketing (5.4.6). Third, participants reported awareness of, and participation with, a mixture of digital marketing and user-created promotion. This is consistent with research which suggests that the online environments frequented by young people, particularly social media, feature a mixture of commercial marketing and user-created promotion (Atkinson et al., 2014; Griffiths and Casswell, 2010; Lyons et al., 2014; Moares et al., 2014). Finally, user-created promotion had a stronger association with brand name recall than marketing. This supports research which suggests that user content provides de facto advertising for brands (Mart et al., 2009; Nicholls, 2012). That Chapter Five suggested user-created promotion referred to a greater range of brands than marketing (see 5.4.4.a) also helps to explain why it had a stronger association than marketing for brand name recall.

6.5.4. Limitations

The results have several limitations. The findings are cross-sectional and are open to the possibility that existing drinking may fuel interest in alcohol-related media and not the other way around. A causal relationship is supported by longitudinal surveys into traditional marketing (Anderson et al., 2009; Smith and Foxcroft, 2009), digital marketing (de Bruijn et al., 2016b; Gordon et al., 2010b; McClure et al., 2016), and user-created promotion (Boyle et al., 2016; D'Angelo, 2014b). A causal hypothesis is also supported by message interpretation research, which suggest that exposure to alcohol-related media influences social cognitions which predispose alcohol use. Examples

include expectancies, desirability, drinker identity, and brand allegiance (Austin et al., 2006; Austin and Knaus, 2000; Chen, Grube, Bersamin, Waiters and Keefe, 2005; Fleming et al., 2004; Grube and Waiters, 2005; McClure et al., 2013). To date, however, only a limited number of studies have provided evidence that these social cognitive pathways explain the impact of digital marketing (de Bruijn et al., 2012; Kenny, 2014) or user-created promotion (Boyle et al., 2016; Litt and Stack, 2012). Further research is required before it can be accepted that the effect of digital marketing and user-created promotion is not attributable to reverse causality or residual confounding factors.

The small and self-selected sample also means that the findings are not representative of all young people in the UK, and considerably more females chose to participate in the study than males. Indeed, the different modes of recruitment may have also skewed the findings. For instance, that some young adults were recruited from a digital forum and social networking site (and therefore may be more engaged in digital activities) provides another alternative explanation why awareness and participation with marketing and user-created promotion was greater than reported in previous research. Indeed, the opt-in process for those in the digital forum and social networking site may also mean that only those with a greater interest in alcohol chose to participate. Furthermore, as the remaining participants were recruited from an undergraduate psychology course the possibility of response bias cannot be rejected. This could be the result of familiarity with research methods, or token participation to receive the module credits. As all responses were anonymous it was not possible to compare between the modes of recruitment.

It is also possible that the example images in the survey may have influenced reported awareness and participation. For example, the marketing images only depicted beer, cider

or spirit brands which are frequently consumed by young adults and popular in the UK market (e.g. Carlsberg or Smirnoff) (see 4.6.5.d and Appendix 7). They did not depict wine or ready-to-drink (RTD) brands. Although participants were asked to consider marketing for other brands that they had seen, it is possible that actually featuring other categories as examples may have increased accuracy of reporting. This is particularly true given that most participants were female, who are more likely to consume wine products than males or the combined young adult population (ONS, 2016a). That the images also appeared before the assessment of brand name recall, may also explain why beer, cider, and spirit brands names had higher recall. The images of user-created promotion deliberately excluded offensive material or content which explicitly depicted higher-risk alcohol consumption or negative consequences (see 4.6.5.e). Chapter Five, however, suggested that such content is a normal and constituent part of user-created content. Including images reflective of higher risk behaviour may therefore have increased respondent recognition of user-created promotion and increased accuracy of recall.

A final limitation is that the results may underestimate awareness of, and participation with, marketing and user-created promotion, and therefore also the association with consumption. First, the measurement tool only provides insight into channel-level awareness and participation. The results do not differentiate between participants who had created and shared many alcohol-related photos compared to someone who had only created and shared a few. Second, the channels assessed are not exhaustive and did not consider, for instance, marketing on music streaming services (MacLeod, 2013b), social news websites (Finnis, 2015), viral trends such as NekkNominate (Wombacher et al., 2016), or user-generated branding. Third, online platforms enable marketing to be submerged below conscious awareness or disguised as content created by others peers

(Purves et al. 2014; Weaver et al., 2016). This can make it difficult to recognise what constitutes marketing, which may lead to under-estimations in reported exposure (Lyons et al., 2014). Measurement of awareness and participation only had dichotomous responses. It is possible that a 'do not know' option may have helped to identify when a respondent could not be sure that they had been exposed to a marketing or user-created promotion channel, but equally did not feel confident rejecting they had not. Fourth, it was decided that also measuring participation with traditional marketing may have increased response fatigue. It is acknowledged there would have been investigative benefit in comparing participation with traditional and digital marketing.

6.6. Conclusion

This chapter has three conclusions. First, young adults are aware of, and participating with, a range of digital marketing and user-created promotion. Second, exposure to digital marketing and user-created promotion is positively associated with alcohol use, higher-risk consumption, and drinking intentions, while user-created promotion is additionally associated with brand name recall. Third, user-created promotion has higher rates of awareness and participation and a stronger association with drinking behaviour and brand knowledge compared to digital marketing. There are limitations which inform how the results can be interpreted, including the high gender skew, cross-sectional design, and self-selected sample. To strengthen the suggestion that marketing and user-created promotion is associated with alcohol use, future research should explore the psychological and social cognitive pathways which underpin the relationship between exposure and consumption. This now represents the focus of Chapter Seven.

Chapter 7: Digital marketing, user-created promotion, and the mediating role of outcome expectancies and drinking motives

7.1. Introduction

Chapter Seven presents the second set of results from the cross-sectional survey. It explores what role (if any) outcome expectancies and drinking motives play in mediating the association between exposure to digital marketing and user-created promotion and alcohol consumption. The chapter begins by summarising why outcome expectancies and motives may represent mediating factors, previous research which has explored these social cognitions in digital marketing and user-created promotion, and how this study extends understanding (7.2). It then builds on Chapter Four by providing specific details about the survey methods and analytical techniques used (7.3). The results present the descriptive statistics for expectancies and motives (7.4.1), eight mediation models which consider the interactions between exposure, motives, expectancies, and consumption (7.4.2–7.4.9), and a comparison of these eight models (7.4.10–7.4.12). The chapter concludes by summarising the need to further explore how cognitions help to explain the link between digital media and alcohol consumption (7.5).

7.2. Background

7.2.1. Message interpretation and the role of social cognitions

Systematic reviews of research into the effect of alcohol-related media consistently suggest that exposure is associated with consumption (Anderson et al., 2009; Gupta et al., 2016; Jernigan et al., 2017; Scott et al., 2016; Smith and Foxcroft, 2009; Stautz et al., 2016). From social psychology perspectives, however, it is argued that the effect goes beyond the simplicity of a dose-response relationship with exposure (Hoffman et al., 2016). It is instead suggested that the pathways between exposure and behaviour are

subject to psychological processes, commonly referred to as mediators (variables which account for the relationship) and moderators (factors which determine the direction and strength of the relationship) (Baron and Kenny, 1986; Hayes, 2013). For media portrayals of alcohol, the role of mediation is mostly investigated using the Message Interpretation Process Model (MIP) (Austin and Knaus, 2000; Austin et al., 2000). This model suggests that the influence media narratives have on emotional and cognitive processes plays an important role in informing decisions to drink. This makes the information processing stages which follow just as important as the initial exposure (Austin et al., 2006). Research into traditional marketing supports the MIP model proposition by highlighting a range of mechanisms which mediate the relationship between exposure and consumption. These include drinking prototypes (Dal Cin et al., 2009), attitudes (Morgenstern et al., 2011), identity and brand allegiance (McClure et al., 2013), desirability (Austin et al., 2006; Scull et al., 2014), drinking beliefs (Pinkleton et al., 2001), and social norms (Kenny, 2014).

Theories of observational learning and media effect support the suggestion that media narratives can influence social cognitions (Bryant and Oliver, 2009; Wimmer and Dominick, 2009). For instance, social learning theory suggests that behavioural schemas are vicariously modelled by observing the outcomes experienced by others (Bandura, 1977; 1986). Cultivation theory suggests that the themes and ideological messages presented in the media can influence perceptions of reality and behaviour (Gerbner, 1998). Research also suggests that media characters may act as ‘super peers’ who provide prototypes for behaviour which are not available in immediate interpersonal relationships (Brown, Halpern and L’Engle, 2005). This provides a means of understanding how higher-risk consumption may develop even when there is no family history. Finally, the

uses and gratification theory suggests that media content may not initiate new cognitions, but rather that audiences seek out content in a goal-orientated manner to reinforce existing schemas (Katz, 1959; O'Donohoe, 1993; Ruggiero, 2000).

7.2.2. The Motivational Model of Alcohol Use

The Motivational Model of Alcohol Use (MMAU) (Cox and Klinger, 2004) provides one framework of social cognitions which may be influenced by marketing and user-created promotion. This model suggests that the decision to drink is based upon emotional and rational processes that are grounded in the affective changes which are perceived to occur when drinking. The model consists of two components, drinking motives and outcome expectancies. For drinking motives, the decision to consume is thought to reflect the desire to attain a valued outcome (Cooper, 1994), with motives classified into four dimensions: enhancement, social, conformity, and coping (Kuntsche, 2007). Outcome expectancies instead represent the affective changes which are perceived to occur following consumption, and whether these outcomes are considered desirable or not (Patrick, Wray-Lake, Finlay and Maggs, 2010). At the highest order, expectancies are grouped into two dimensions, with negative expectancies undesirable and inhibiting of drinking, and positive expectancies salient and reinforcing (Jones, Corbin and Fromme, 2001). Expectancies can also be grouped thematically. For instance, '*I would feel calm*' is considered a tension reduction expectancy (Ham et al., 2005). Although related, expectancies differ from motives because they are based on the probability that an outcome will happen, but do not assume that an individual will drink intentionally to achieve that effect. Holding a drinking motive, however, is considered necessary and therefore motives are thought to be the most proximal social cognition to consumption (Kuntsche, Knibbe, Gmel and Engels, 2005).

7.2.3. Alcohol marketing, drinking motives, and outcome expectancies

The suggestion that outcome expectancies may at least partly help to explain the association between marketing and alcohol consumption is supported by message interpretation research into traditional marketing communications (Austin and Knaus, 2000; Austin et al., 2006; Dunn and Yniguez, 1999; Fleming et al., 2004; Lipsitz, Brake, Vincent and Winters, 1993; Morgenstern, Isensee, Sargent and Hanewinkel, 2011; Pinkleton et al., 2001). Concerning digital marketing, a longitudinal survey with adolescents in four European countries found that exposure to online marketing was associated with positive, arousal, and sedation expectancies, and that this mediated the association with frequency of alcohol consumption (de Bruijn et al., 2012). A cross-sectional survey with young adults in the Republic of Ireland also reported that perceived social norms mediated the association between exposure to digital marketing and alcohol use. That this mediating role was strongest for participation with marketing on social networking websites, further suggests that it is the interaction between marketing, the consumer and peers which produces the strongest influence on cognitions and behaviour (Kenny, 2014). Qualitative findings are also consistent with the effects reported in survey research, by suggesting that digital marketing can play an important cultural and symbolic role in young people's identity construction and peer socialisation (Atkinson et al., 2014; Lyons et al., 2014; Moraes et al., 2014; Niland, McCreanor, Lyons and Griffin, 2017).

7.2.4. User-created promotion, drinking motives, and outcome expectancies

The suggestion that social cognitions help to explain the association between user-created promotion and alcohol consumption is consistent with previous audience research. Experimental studies have reported that the effect of alcohol-related Facebook profiles on drinking intentions is mediated through drinking prototypes, attitudes, perceptions of

use and normative beliefs (Fournier et al., 2013; Litt and Stock, 2011). Cross-sectional surveys have reported positive associations between exposure to user-created promotion and drinking motives (Westgate et al., 2014), attitudes (Koff, 2013; Miller et al., 2014), and alcohol-related identities (Thompson and Romo, 2016), and a negative association with anticipated adverse consequences (Stoddard et al., 2012). Longitudinal research has also reported that the relationship between alcohol-related Facebook posting and weekly drinking is mediated through an initial influence on descriptive norms, enhancement motives, and perceived drinking in peers (Boyle et al., 2016). Qualitative research has further suggested that young people airbrush user-created promotion so that it conforms to the desirable expectancies and motives of being pleasurable and fun (Atkinson et al., 2014; Goodwin et al., 2016; Moewaka-Barnes et al., 2016). Even when negative outcomes do feature, they are still suggested to be an integral part of a drinking experience (Atkinson et al., 2014; Lyons et al., 2014; Niland et al., 2014; Tonks, 2012).

7.2.5. The current study

Concerning the MMAU, consumer research into digital marketing has only considered the mediating role of expectancies, and not motives, while audience research into user-created promotion has considered motives, but has only limited understanding about the role of expectancies. It is not clear why these pathways have yet to be fully explored, or why in some studies the cognitions are only considered controlling factors (moderators) rather than facilitators (mediators), as is implied by the MIP model and behavioural and media effect theories. This study explores these two pathways and considers whether the motives and expectancies which mediate the association of digital marketing are the same as those that mediate the association of user-created promotion. The chapter addresses research questions 6 and 7 (4.2.2) and hypotheses 10 and 11 (4.2.3).

7.3. Methods

This section only reviews the additional survey measures and statistical approaches which are integral to this chapter. Please see section 6.3 for a short summary of the sample and other survey measures, or section 4.6 for a detailed review of the cross-sectional survey design, sampling, and all measures included (4.6).

7.3.1. Additional survey measures

7.3.1.a. Outcome expectancies

Outcome expectancies were measured using the Brief-Comprehensive Effects of Alcohol scale (B-CEOA) (Ham et al., 2005; Ham et al., 2013). Respondents were provided with the statement ‘*When I drink alcohol I expect that...*’ and asked to indicate their agreement that they would experience 15 stated outcomes (1 = Disagree, 2 = Slightly disagree, 3 = Slightly agree, 4 = Agree). Exploratory and confirmatory factor analyses were conducted to evaluate the factor construction and item loadings (Appendix 8). From these analyses, the 15 items on the B-CEOA were divided into four subscales which mirror previous research: Risk/Liquid Confidence/Sociability (R/LC/Social, seven items, $\alpha = 0.87$), changes in Self-perception/Cognitive Behavioural Impairment (CBI/SP, four items, $\alpha = 0.56$), Sexual outcomes (two items, $\alpha = 0.76$), and Tension reduction (two items, $\alpha = 0.74$) (Ham et al., 2005). Responses were summed to create a score for each subscale.

7.3.1.b. Drinking Motives

Motives for consumption were measured using the Drinking Motives Questionnaire – Revised Short Form (DMQ-R SF) (Kuntsche and Kuntsche, 2009). Respondents were primed with the statement ‘*In the last twelve months I drank alcohol*’ before being provided with 12 statements and asked to indicate how often they drank for those reasons

(1 = Never, 2 = Sometimes, 3 = Almost always). A Confirmatory Factor Analysis was conducted to evaluate the factor construction and item loadings (Appendix 9). From this analysis, the 12 items on the DMQ-R SF were divided into the four commonly reported motive subscales, each with three items: Enhancement ($\alpha = 0.77$), Social ($\alpha = 0.92$), Conformity ($\alpha = 0.81$), and Coping ($\alpha = 0.80$) (MacKinnon et al., 2017). Responses were summed to create a score for each subscale (1-9).

7.3.2. Statistical analyses

Analysis was conducted on SPSS version 23. Descriptive statistics were computed for: (1) awareness of, and participation with, digital marketing and user-created promotion; (2) the four drinking motive subscales; (3) the four outcome expectancies subscales; and (4) AUDIT-C scoring. To assess whether the association between exposure and AUDIT-C scoring was mediated through expectancies and motives, eight parallel mediation models were computed using the PROCESS extension for SPSS (Hayes, 2013). This technique uses a series of bootstrap comparisons to create a distribution of the indirect effect between the independent and dependent variables, accounting for mediating factors. Providing the distribution of the indirect effect does not contain zero, the mediators are considered to account (at least partly) for the association between the independent and dependent variables in the sampled population (Hayes, 2013). The bootstrap method of calculating mediation (indirect effects) is considered advantageous to other approaches (e.g. Baron and Kenny, 1986; Iacobucci, 2012) as it computes all the analyses simultaneously, meaning that separate regressions are not needed to establish initial associations between independent variables, dependent variables, and mediators. The bootstrap method is also considered to be more accurate in identifying a mediating (indirect) effect and handling non-parametric data (Hayes, 2013; Field, 2013).

It is possible to include multiple independent variables and mediating factors in a single parallel mediation model (e.g. both awareness of, and participation with, digital marketing). Doing so, however, can cause a cancelling effect in which more dominant predicting variables eliminate the effect of others (Hayes, 2013). This was a legitimate concern, as Chapter Six has already demonstrated that the association between participation with user-created promotion and AUDIT-C score cancelled out the association of all preceding exposure variables (e.g. participation with digital marketing) (see 6.4.8). This concern was also relevant to the mediators, as drinking motives are thought to supersede the effect of expectancies in mediation models (Kuntsche, Wiers, Janssen and Gmel, 2010). To address this problem, eight separate mediation models were conducted. These eight models were divided into four pairs, with each pair focusing on one type of exposure: (1) awareness of digital marketing; (2) participation with digital marketing; (3) awareness of user-created promotion; and (4) participation with user-created promotion. Within each pair, one model included the four expectancy subscales as mediators and the other model included the four drinking motive subscales as mediators. The differences between the models were then compared using the standardised indirect coefficients. For all eight models, AUDIT-C score represented the dependent variable. All eight models were based on 10,000 bootstrapped samples, as recommended by Hayes (2013). A 95% confidence interval and the bootstrap percentile method was used to calculate the indirect effect. In each model age, gender, ethnicity (White British or other), religion (Yes/No), and awareness of traditional marketing were included as covariates, mirroring the regressions in Chapter Six.

There was a rationale to exclude awareness of digital marketing from the mediation analysis, as this variable was known to have no association with AUDIT-C score (see

6.4.8). This lack of direct association meant it was possible to accurately predict that there would be no mediating association through motives and expectancies. Nevertheless, this model was still computed to explore whether awareness of digital marketing was associated with motives or expectancies, regardless of whether it led to an association with alcohol use in the current sample.

7.4. Results

7.4.1. Descriptive statistics

Table 7.1 reports the descriptive statistics for awareness of, and participation with, digital marketing and user-created promotion, the four drinking motive subscales, the four outcome expectancy subscales, and AUDIT-C scoring.

Table 7.1. Descriptive statistics for key mediation variables

Variable	Max	Mean (SD)
<i>Awareness</i>		
Digital marketing	11	6.23 (2.52)
User-created promotion	11	7.48 (2.22)
<i>Participation</i>		
Digital marketing	11	2.33 (1.96)
User-created promotion	11	4.36 (2.41)
<i>Motives</i>		
Enhancement	9	5.71 (1.84)
Social	9	6.40 (2.14)
Conformity	9	4.13 (1.56)
Coping	9	4.43 (1.67)
<i>Expectancies</i>		
Risk, Liquid confidence, and Social	28	22.19 (4.46)
Self-perception and Cognitive Impairment	16	8.62 (2.43)
Sexual	8	4.02 (1.68)
Tension Reduction	8	4.37 (1.47)
<i>AUDIT-C</i>	12	4.76 (3.07)

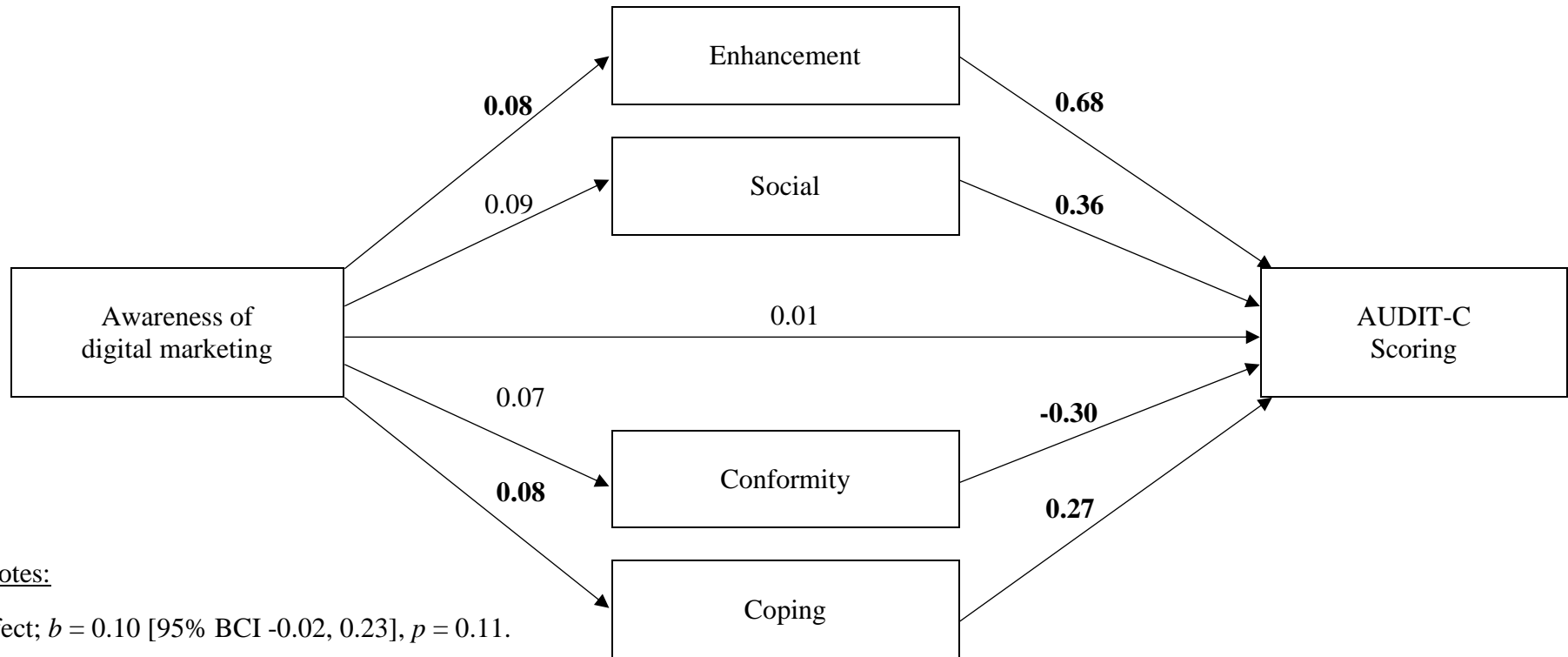
7.4.2. Drinking motives and awareness of digital marketing

The first mediation model indicated that awareness of digital marketing was positively associated with enhancement and coping motives (Figure 7.1). There was no association with social or conformity motives. The model also demonstrated that enhancement, social and coping motives were positively associated with AUDIT-C scoring, while conformity motives had a negative association with AUDIT-C scoring. The percentile bootstrapped confidence interval for the indirect effect was not wholly above zero at two decimal places, $b = 0.09$ [95% BCI 0.00, 0.18]. This indicated that there was no mediation between the predictor and outcome variable. This lack of indirect effect was expected as Chapter Six indicated that there was no direct association between awareness of digital marketing and AUDIT-C scoring (see 6.4.8).

7.4.3. Expectancies and awareness of digital marketing

The second mediation model indicated that awareness of digital marketing was not associated with any of the outcome expectancy subscales (Figure 7.2). The model did indicate, however, that R/LC/Social, sexual, and tension reduction expectancies had a positive association with AUDIT-C scoring, while CBI/SP expectancies had a negative association with AUDIT-C scoring. The percentile bootstrap confidence interval for the indirect effect was not entirely above zero at two decimal places, $b = 0.05$ [95% BCI - 0.01, 0.12]. This indicated that there was no mediation between the predictor and outcome variable. This lack of effect was expected as both Chapter Six (see 6.4.8) and the first mediation model (see 7.4.2) indicated no direct association between awareness of digital marketing and AUDIT-C scoring.

Figure 7.1. Mediation model for digital marketing awareness, drinking motives, and AUDIT-C scoring



Model notes:

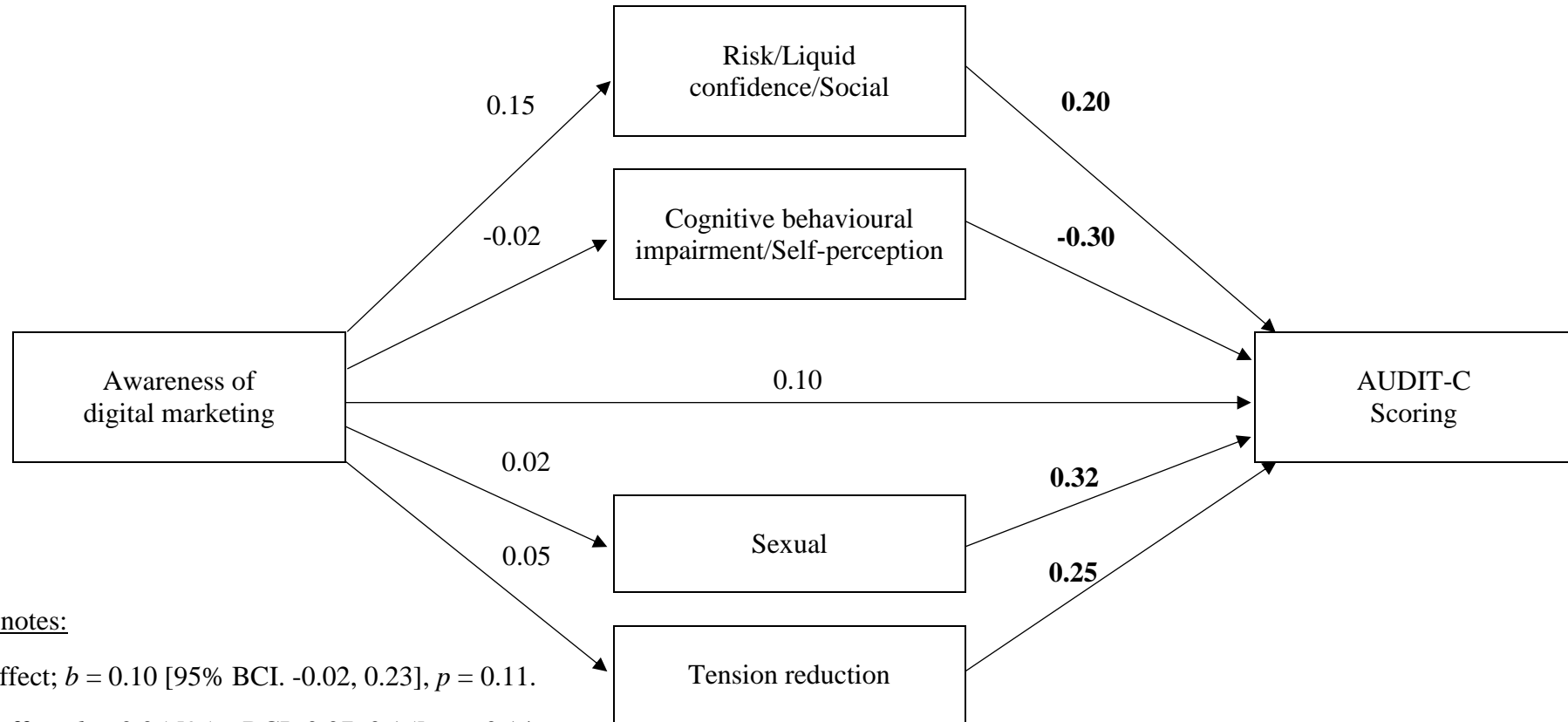
Total effect; $b = 0.10$ [95% BCI -0.02, 0.23], $p = 0.11$.

Direct effect; $b = 0.01$ [95% BCI -0.08, 0.10], $p = 0.80$.

Indirect effect; $b = 0.09$, [95% BCI 0.00, 0.18].

Co-efficient in **bold** significant.

Figure 7.2. Mediation model for digital marketing awareness, outcome expectancies, and AUDIT-C scoring



Model notes:

Total effect; $b = 0.10$ [95% BCI. -0.02, 0.23], $p = 0.11$.

Direct effect; $b = 0.05$ [95% BCI -0.07, 0.15], $p = 0.14$.

Indirect effect; $b = 0.06$ [95% BCI -0.01, 0.12].

Co-efficient in **bold** significant.

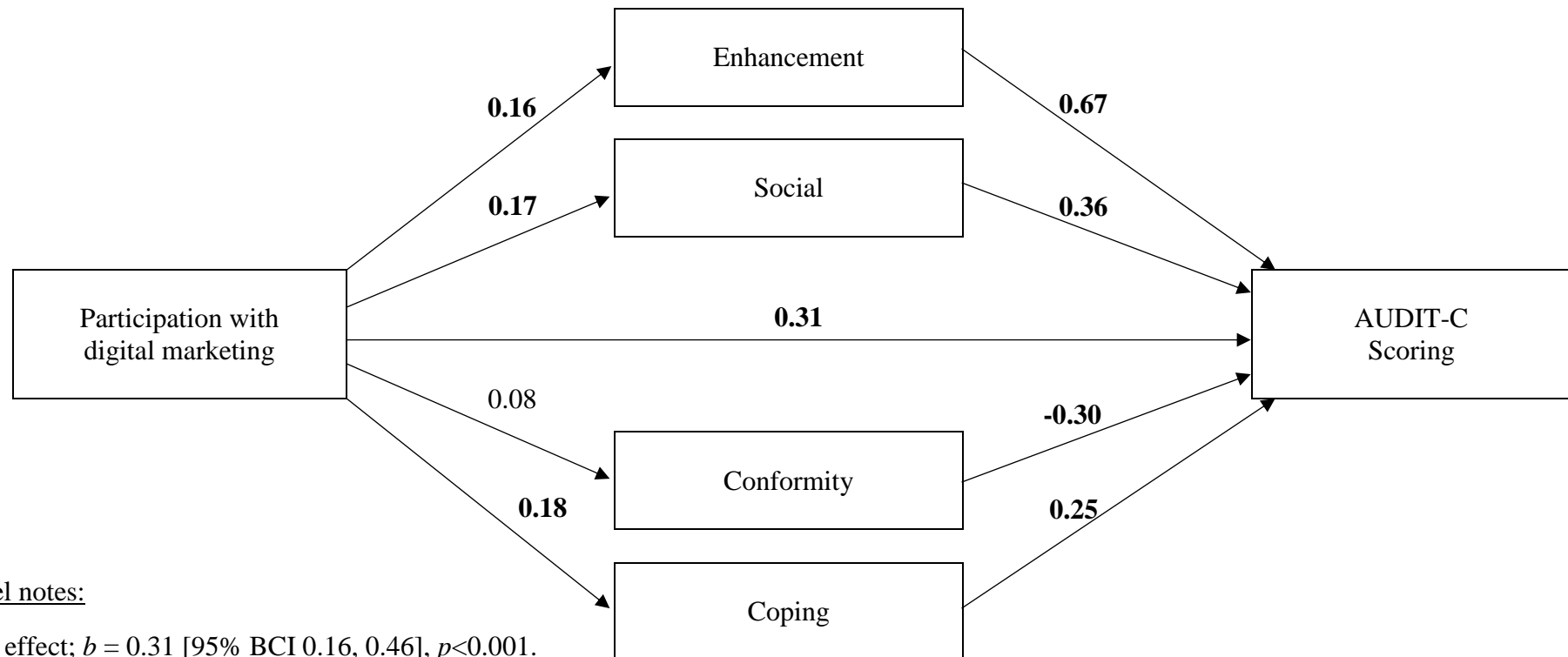
7.4.4. Drinking motives and participation with digital marketing

The third mediation model indicated that participation with digital marketing was positively associated with enhancement, social, and coping motives (Figure 7.3). There was no association with conformity motives. As per the first model, enhancement, social and coping motives had a positive association with AUDIT-C scoring, while conformity motives had a negative association with AUDIT-C scoring. The percentile bootstrap confidence interval for the indirect effect was entirely above zero at two decimal places, $b = 0.19$ [95% BCI 0.09, 0.30]. This indicated that the association between participation with digital marketing and AUDIT-C scoring was mediated through drinking motives. Of the four motive subscales, the individual indirect effects indicated that participation with digital marketing had a significant positive association with AUDIT-C scoring through enhancement, social, and coping motives (Table 7.2). Conformity motives had no mediating (indirect) role.

Table 7.2. Unstandardised indirect associations between digital marketing participation, motives, and AUDIT-C scoring

Variable	Effect	Boot SE	Lower 95% BCI	Upper 95% BCI	Sobel Test <i>p</i>
Total indirect effect	0.19	0.05	0.09	0.30	-
Enhancement motives	0.11	0.04	0.04	0.19	<0.005
Social motives	0.06	0.02	0.02	0.12	<0.05
Conformity motives	-0.02	0.02	-0.06	0.00	n.s.
Coping motives	0.04	0.02	0.01	0.86	<0.01

Figure 7.3. Mediation model for digital marketing participation, drinking motives, and AUDIT-C scoring



Model notes:

Total effect; $b = 0.31$ [95% BCI 0.16, 0.46], $p < 0.001$.

Direct effect; $b = 0.12$ [95% BCI 0.01, 0.23], $p < 0.05$.

Indirect effect; $b = 0.19$, [95% BCI 0.09, 0.30].

Co-efficient in **bold** significant.

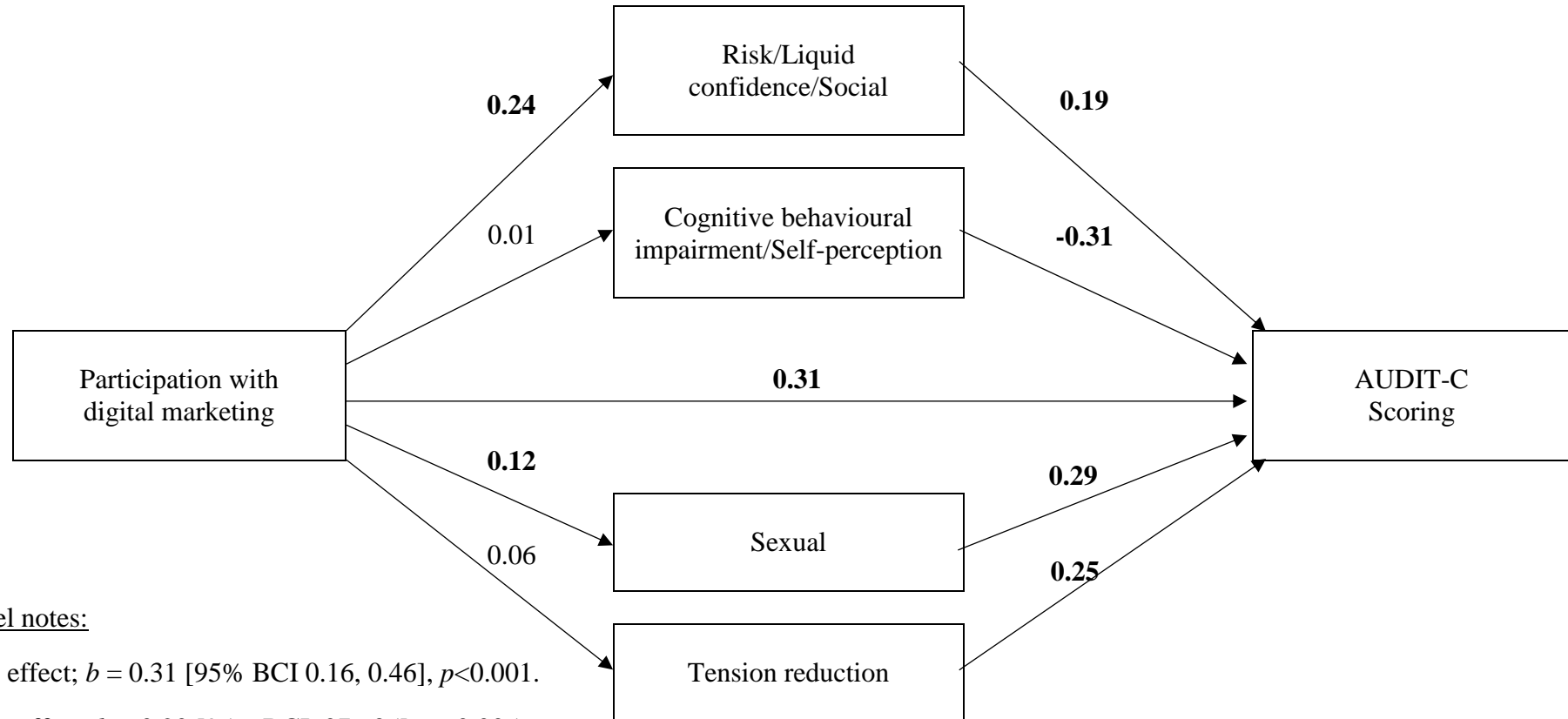
7.4.5. Expectancies and participation with digital marketing

The fourth mediation model indicated that participation with digital marketing was positively associated with R/LC/Social and sexual expectancies (Figure 7.4). There was no association with CBI/SP or tension reduction expectancies. As per earlier models, R/LC/Social, sexual and tension reduction expectancies had a positive association with AUDIT-C scoring, while CBI/SP expectancies had a negative association with AUDIT-C scoring. The percentile bootstrap confidence interval for the indirect effect was entirely above zero at two decimal places, $b = 0.10$ [95% BCI 0.03, 0.17]. This indicated that the positive association between participation with digital marketing and AUDIT-C scoring was mediated through outcome expectancies. Of the four expectancies subscales, the individual indirect effects indicated that participation with digital marketing had a significant positive association with AUDIT-C scoring through R/LC/Social and sexual expectancies (Table 7.3). Tension reduction and CBI/SP expectancies had no mediating association.

Table 7.3. Unstandardised indirect associations between digital marketing participation, expectancies, and AUDIT-C scoring

Variable	Effect (<i>b</i>)	Boot SE	Lower 95% BCI	Upper 95% BCI	Sobel Test <i>p</i>
Total indirect effect	0.10	0.04	0.03	0.17	-
R/LC/Social	0.05	0.02	0.01	0.10	<0.05
CBI/SP	-0.00	0.02	-0.05	0.04	n.s.
Sexual	0.04	0.02	0.01	0.07	<0.05
Tension reduction	0.01	0.01	-0.00	0.04	n.s.

Figure 7.4. Mediation model for digital marketing participation, outcome expectancies, and AUDIT-C scoring



Model notes:

Total effect; $b = 0.31$ [95% BCI 0.16, 0.46], $p < 0.001$.

Direct effect; $b = 0.20$ [95% BCI .07, .35], $p < 0.005$.

Indirect effect; $b = 0.10$ [95% BCI 0.03, 0.17].

Co-efficient in **bold** significant.

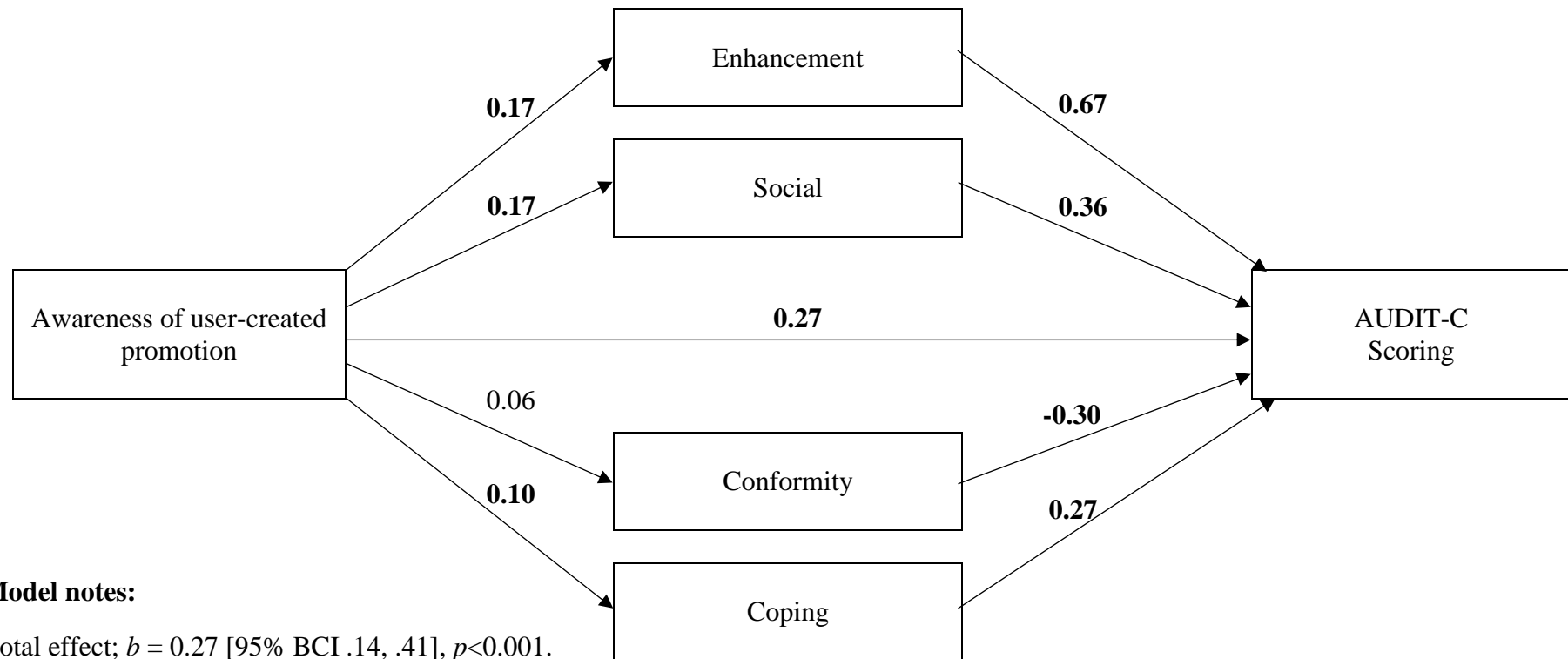
7.4.6. Drinking motives and awareness of user-created promotion

The fifth mediation model indicated that awareness of user-created promotion was positively associated with enhancement, social, and coping motives (Figure 7.5). There was no association with conformity motives. As per earlier models, enhancement, social, and coping motives also had a positive association with AUDIT-C scoring, while conformity motives had a negative association with AUDIT-C scoring. The percentile bootstrap confidence interval for the indirect effect was entirely above zero at two decimal places, $b = 0.18$ [95% BCI 0.09, 0.28]. This indicated that the positive association between awareness of user-created promotion and AUDIT-C scoring was mediated through drinking motives. Of the four motive subscales, the individual indirect effects indicated that awareness of user-created promotion had a significant positive association with AUDIT-C scoring through enhancement, social and coping motives (Table 7.4). Conformity motives had no mediating role.

Table 7.4. Unstandardised indirect associations between awareness of user-created promotion, motives, and AUDIT-C scoring

Variable	<i>Effect</i>	Boot SE	Lower 95% BCI	Upper 95% BCI	Sobel Test <i>p</i>
Total indirect effect	0.18	0.05	0.09	0.28	-
Enhancement motives	0.11	0.04	0.04	0.19	<0.001
Social motives	0.06	0.02	0.02	0.11	<0.01
Conformity motives	-0.02	0.01	-0.06	0.00	n.s.
Coping motives	0.03	0.01	0.01	0.06	<0.05

Figure 7.5. Mediation model for awareness of user-created promotion, drinking motives, and AUDIT-C scoring



Model notes:

Total effect; $b = 0.27$ [95% BCI .14, .41], $p < 0.001$.

Direct effect; $b = 0.09$ [95% BCI -0.01, 0.19], $p = 0.08$.

Indirect effect; $b = 0.18$, [95% BCI 0.08, 0.28].

Co-efficient in **bold** significant.

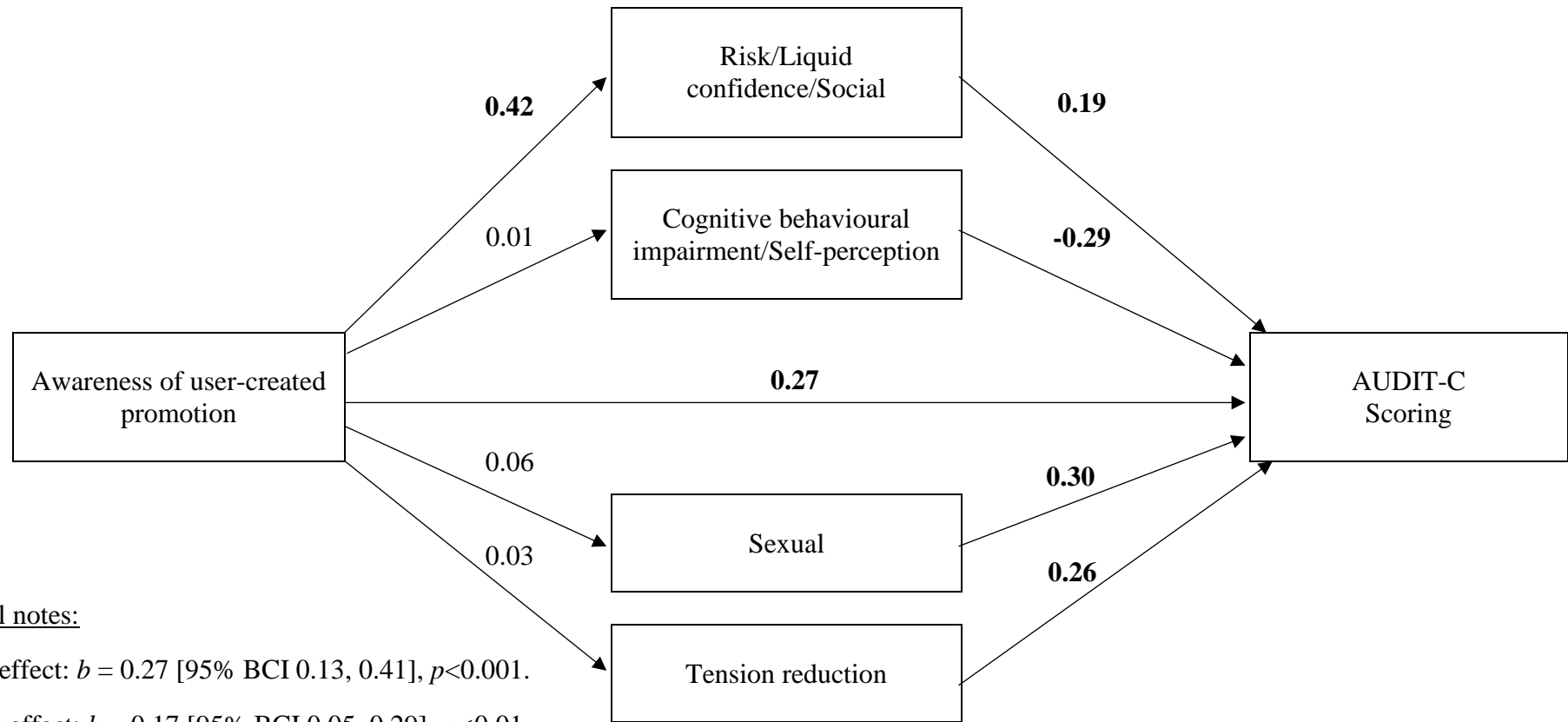
7.4.7. Expectancies and awareness of user-created promotion

The sixth mediation model indicated that awareness of user-created promotion was positively associated with R/LC/Social expectancies (Fig 7.6). There was no association with CBI/SP, tension reduction, or sexual expectancies. As per earlier models, R/LC/Social, sexual, and tension reduction expectancies had a positive association with AUDIT-C scoring, while CBI/SP expectancies had a negative association with AUDIT-C scoring. The percentile bootstrap confidence interval for the indirect effect was entirely above zero at two decimal places, $b = 0.10$ [95% BCI 0.03, 0.17]. This indicated that positive association between awareness of user-created promotion and AUDIT-C scoring was mediated through outcome expectancies. Of the four expectancies subscales, the individual indirect effects indicated that awareness of user-created promotion had a significant positive association with AUDIT-C scoring through R/LC/Social expectancies (Table 7.5). Tension reduction, sexual and CBI/SP expectancies had no mediating role.

Table 7.5. Unstandardised indirect associations between awareness of user-created promotion, expectancies, and AUDIT-C scoring

Variable	Effect	Boot SE	Lower 95%	Upper 95%	Sobel
	<i>(b)</i>		BCI	BCI	Test <i>p</i>
Total indirect effect	0.10	0.04	0.03	0.17	-
R/LC/Social	0.08	0.03	0.02	0.14	<0.01
CBI/SP	-0.00	0.02	-0.04	0.03	n.s.
Sexual	0.02	0.01	-0.00	0.05	n.s.
Tension reduction	0.01	0.01	-0.01	0.03	n.s.

Figure 7.6. Mediation model for awareness of user-created promotion, outcome expectancies, and AUDIT-C scoring



Model notes:

Total effect: $b = 0.27$ [95% BCI 0.13, 0.41], $p < 0.001$.

Direct effect: $b = 0.17$ [95% BCI 0.05, 0.29], $p < 0.01$.

Indirect effect: $b = 0.10$ [95% BCI 0.03, 0.17].

Co-efficient in **bold** significant.

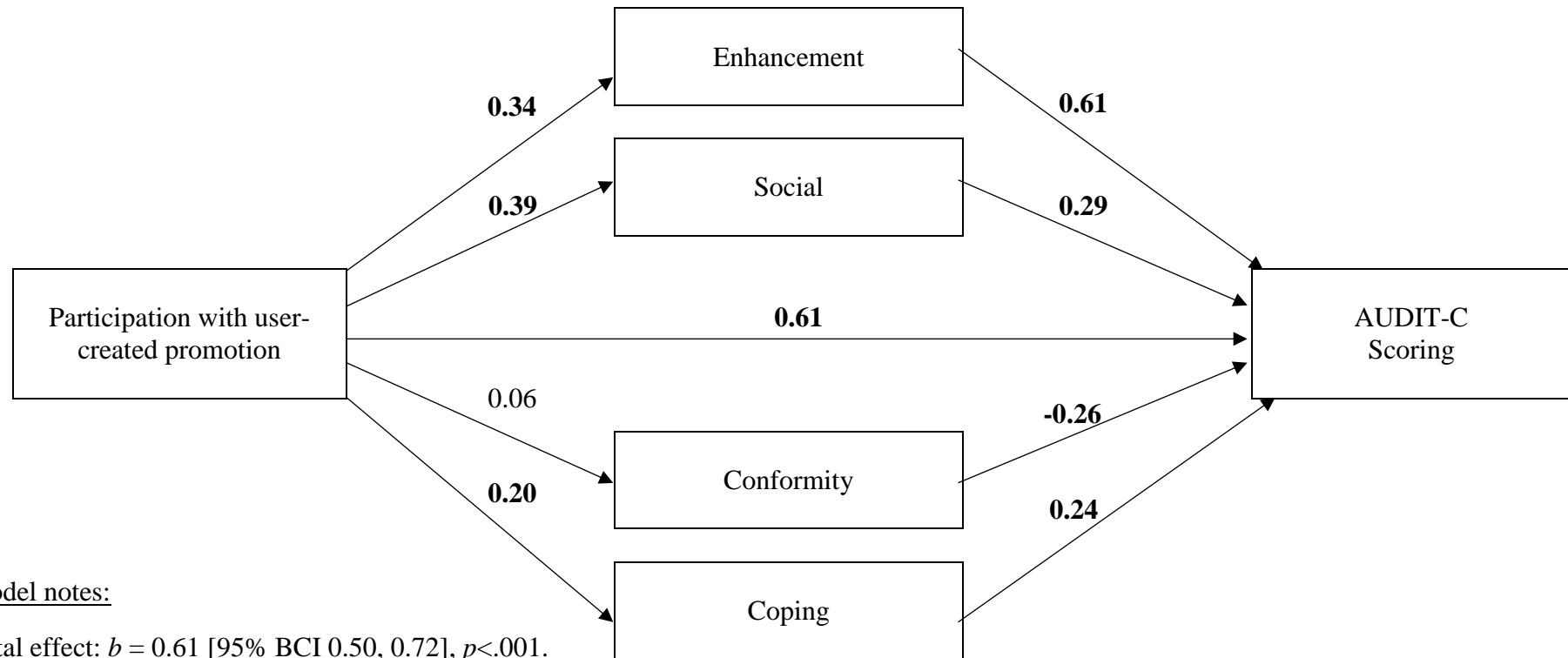
7.4.8. Drinking motives and participation with user-created promotion

The seventh mediation model indicated that participation with user-created promotion was positively associated with enhancement, social, and coping drinking motives (Fig 7.7). There was no association with conformity motives. As per earlier models, enhancement, social and coping motives had a positive association with AUDIT-C scoring, while conformity motives had a negative association with AUDIT-C scoring. The percentile bootstrap confidence interval for the indirect effect was entirely above zero at two decimal places, $b = 0.35$ [95% BCI 0.27, 0.45]. This indicated that the positive association between participation with user-created promotion and AUDIT-C scoring was mediated by drinking motives. Of the four motive subscales, the individual indirect effects indicated that participation with user-created promotion had a significant positive association with AUDIT-C scoring through enhancement, social and coping motives (Table 7.6). Conformity motives had no mediating role.

Table 7.6. Unstandardised indirect associations between participation with user-created promotion, motives, and AUDIT-C scoring

Variable	Effect	Boot SE	Lower 95% BCI	Upper 95% BCI	Sobel Test <i>p</i>
Total indirect effect	0.35	0.04	0.27	0.45	-
Enhancement motives	0.21	0.04	0.13	0.30	<0.001
Social motives	0.12	0.03	0.05	0.19	<0.01
Conformity motives	-0.02	0.01	-0.04	0.00	n.s.
Coping motives	0.05	0.02	0.02	0.08	<0.05

Figure 7.7. Mediation model for participation with user-created promotion, drinking motives, and AUDIT-C scoring



Model notes:

Total effect: $b = 0.61$ [95% BCI 0.50, 0.72], $p < .001$.

Direct effect: $b = 0.26$ [95% BCI 0.16, 0.36], $p < .001$.

Indirect effect: $b = 0.36$, [95% BCI 0.27, 0.45].

Co-efficients in **bold** significant.

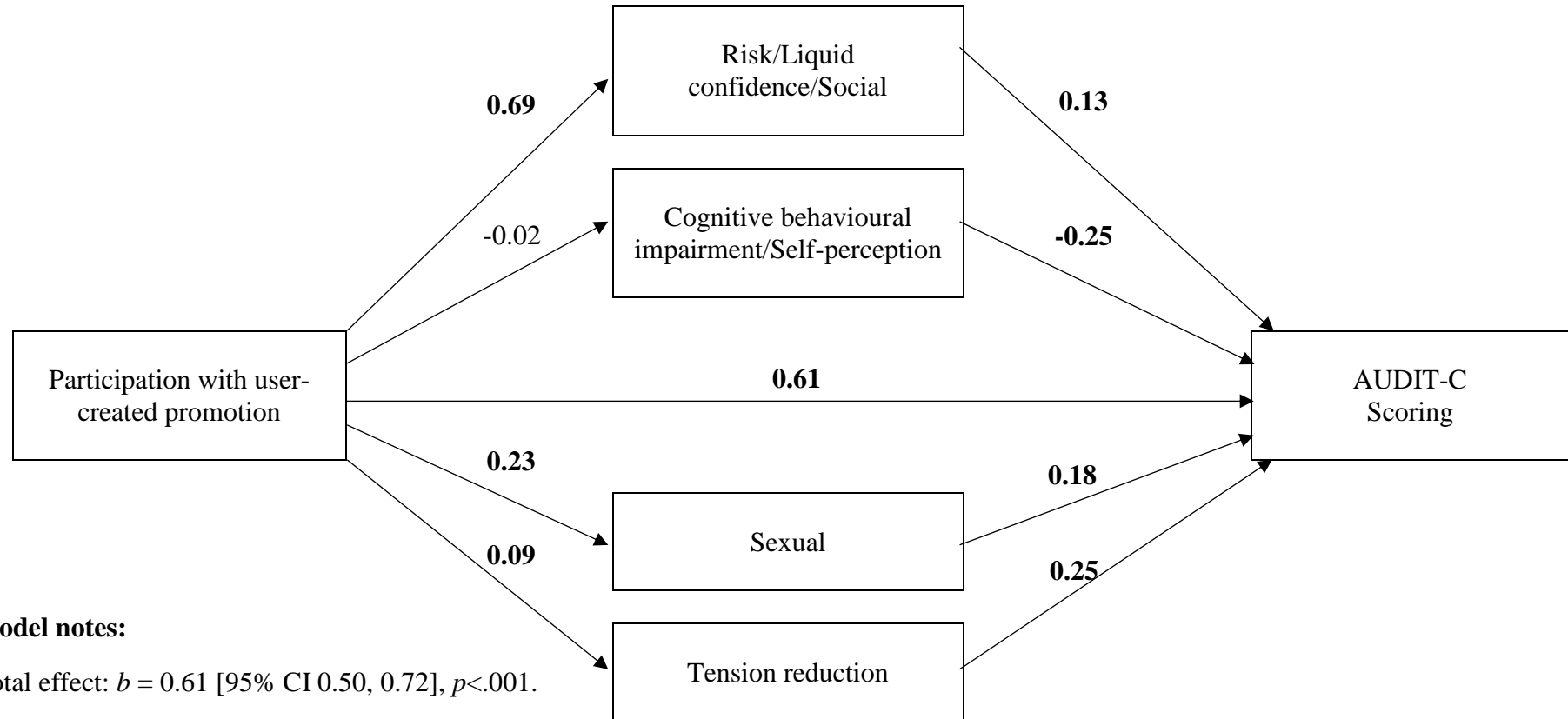
7.4.9. Expectancies and participation with user-created promotion

The eighth mediation model indicated that participation with user-created promotion was positively associated with R/LC/Social, sexual and tension reduction expectancies (Fig 7.8). There was no association with CBI/SP expectancies. As per earlier models, R/LC/Social, sexual and tension reduction expectancies had a positive association with AUDIT-C scoring, while CBI/SP expectancies had a negative association with AUDIT-C scoring. The percentile bootstrap confidence interval for the indirect effect was entirely above zero at two decimal places, $b = 0.16$ [95% BCI 0.10, 0.23]. This indicated that outcome expectancies mediated the positive association between participation with user-created promotion and AUDIT-C scoring. Of the four expectancies subscales, the individual indirect effects indicated that participation with user-created promotion had a significant positive association with AUDIT-C scoring through R/LC/Social, sexual and tension reduction expectancies (Table 7.7). CBI/SP expectancies had no mediating role.

Table 7.7. Unstandardised indirect associations between participation with user-created promotion, expectancies, and AUDIT-C scoring

Variable	Effect <i>(b)</i>	Boot SE	Lower 95% BCI	Upper 95% BCI	Sobel Test <i>p</i>
Total indirect effect	0.16	0.03	0.10	0.23	-
R/LC/Social	0.09	0.02	0.05	0.14	<0.005
CBI/SP	0.01	0.01	-0.02	0.04	n.s.
Sexual	0.04	0.02	0.01	0.09	<.05
Tension reduction	0.02	0.01	0.00	0.05	<0.05

Figure 7.8. Mediation model for participation with user-created promotion, outcome expectancies, and AUDIT-C scoring



Model notes:

Total effect: $b = 0.61$ [95% CI 0.50, 0.72], $p < .001$.

Direct effect: $b = 0.44$ [95% BCI 0.33, 0.56], $p < .001$.

Indirect effect: $b = 0.16$, [95% BCI 0.10, 0.23].

Co-efficient in **bold** significant.

7.4.10. Comparing the drinking motive mediation models

Participation with user-created promotion had the strongest indirect (mediating) association through drinking motives, followed by awareness of user-created promotion and participation with digital marketing (Table 7.8). All the mediation models, apart from awareness of digital marketing, had an indirect association through enhancement, social and coping motives. No models had an indirect association through conformity motives.

7.4.11. Comparing the outcome expectancy mediation models

Participation with user-created promotion had the strongest indirect (mediating) association through outcome expectancies, followed by awareness of user-created promotion and participation with digital marketing (Table 7.9). All models, except for awareness of digital marketing, had an indirect association through R/LC/Social expectancies. Participation with user-created promotion and digital marketing also had an indirect association through sexual expectancies. Only participation with user-created promotion had an indirect association through tension reduction expectancies.

7.4.12. Comparing the mediation role of expectancies and drinking motives

The overall indirect (mediating) association of motives was stronger than expectancies for both digital marketing and user-created promotion (Tables 7.8 and 7.9). For all models, enhancement motives had the strongest indirect association, followed by social motives and R/LC/Social expectancies (although R/LC/Social expectancies had a stronger indirect association than social motives for awareness of user-created promotion). These were followed by coping motives, sexual expectancies, and tension reduction expectancies, although the latter two only had an indirect association for participation with user-created promotion and digital marketing, not awareness.

Table 7.8. Standardised indirect associations across the motive mediation models

<i>Variables</i>	Model 1			Model 2			Model 3			Model 4		
	Digital marketing awareness			Digital marketing participation			User-promotion awareness			User-promotion participation		
	β	<i>SE</i>	p^1	β	<i>SE</i>	p^1	β	<i>SE</i>	p^1	β	<i>SE</i>	p^1
Total indirect effect	0.07	0.04	-	0.12	0.03	-	0.13	0.03	-	0.28	0.03	-
Enhancement	0.04	0.02	n.s.	0.07	0.02	<0.005	0.08	0.02	<0.001	0.16	0.03	<0.001
Social	0.02	0.02	n.s.	0.04	0.02	<0.05	0.04	0.02	<0.01	0.09	0.03	<0.001
Conformity	-0.02	0.01	n.s.	-0.01	0.01	n.s.	-0.01	0.01	n.s.	-0.01	0.01	n.s.
Coping	0.02	0.01	n.s.	0.03	0.01	<0.01	0.02	0.01	<0.05	0.04	0.01	<0.05

¹ p value refers to Sobel test of indirect effect, provided for descriptive interpretation.

Table 7.9. Standardised indirect associations across the expectancy mediation models

<i>Variables</i>	Model 1			Model 2			Model 3			Model 4		
	Digital marketing awareness			Digital marketing participation			User-promotion awareness			User-promotion participation		
	β	<i>SE</i>	p^1	β	<i>SE</i>	p^1	β	<i>SE</i>	p^1	β	<i>SE</i>	p^1
Total indirect effect	0.05	0.03	-	0.06	0.02	-	0.07	0.02	-	0.13	0.02	-
R/LC/Social	0.02	0.02	n.s.	0.03	0.01	<0.05	0.06	0.02	<0.001	0.07	0.02	<0.001
CBI/SP	0.00	0.01	n.s.	-0.00	0.01	n.s.	-0.00	0.01	n.s.	0.00	0.01	n.s.
Sexual	0.01	0.01	n.s.	0.02	0.01	<0.05	0.01	0.01	n.s.	0.03	0.02	<0.05
Tension Reduction	0.01	0.01	n.s.	0.01	0.01	n.s.	0.01	0.01	n.s.	0.02	0.01	<0.05

¹ p value refers to Sobel test of indirect effect, provided for descriptive interpretation.

7.5. Discussion

The results suggest that drinking motives and expectancies do mediate (at least partly) the association between digital marketing, user-created promotion, and alcohol consumption. This supports the two hypotheses, although there are caveats to both (Table 7.10). Concerning hypothesis 10, as expected, awareness of digital marketing had no direct association with alcohol use, and therefore no mediating association through expectancies or drinking motives. Concerning hypothesis 11, tension reduction expectancies also mediated the association between user-created promotion and consumption. This was not the case for marketing, which was only associated with enhancement, social and coping motives, and expectancies of sexuality and risk, liquid confidence, and social outcomes.

Table 7.10. Hypotheses and outcomes for Chapter Seven

Chapter hypotheses	Hypotheses outcome
H10: The association between digital marketing, user-created promotion and alcohol use will be mediated through an association with drinking motives and outcome expectancies.	Hypothesis <i>partly</i> accepted – Participation with digital marketing and awareness of, and participation with, user-created promotion was associated with drinking motives and outcome expectancies, and this mediated the association between exposure and AUDIT-C scoring. Awareness of digital marketing had no direct or indirect association with AUDIT-C scoring.
H11: There will be no difference in the drinking motives and expectancies which mediate the association between digital marketing and alcohol use and the drinking motives and expectancies which mediate the association between user-created promotion and alcohol use [<u>null hypothesis</u>].	Hypothesis <i>partly</i> accepted – Both digital marketing and user-created promotion had an indirect association through enhancement, social and coping motives, and R/LC/Social and sexual expectancies. User-created promotion also had an indirect association with AUDIT-C scoring through tension reduction expectancies.

7.5.1. Alcohol marketing, social cognitions, and alcohol consumption

The results are consistent with previous consumer research by demonstrating that the latter message interpretation stages appear to be as important as initial exposure (Austin

and Knaus, 2000), and that alcohol-related social cognitions are important mediators of the relationship between exposure and consumption (Austin and Knaus, 2000; Austin and Meli, 1994; Fleming et al., 2004; Morgenstern et al., 2011; Pinkleton et al., 2001). This mediating association was strongest for participation, which suggests that only limited involvement with highly persuasive digital marketing may be potentially as influential as repeated awareness of marketing content which only has average appeal or persuasiveness. Previous research, including the content analysis in Chapter Five, suggests that the alcohol and marketing industries are aware of this, and therefore place consumer interaction at the center of their digital marketing strategies (Atkinson et al., 2014; Nicholls, 2012; Purves et al., 2014).

The results help to extend understanding of digital marketing in two ways. First, they suggest that the association between marketing and consumption is also mediated through drinking motives, a social cognition pathway which has not been considered in previous consumer research. Second, given the stronger indirect association reported, the findings also suggest that marketing which presents persuasive messages around drinking motives (particularly enhancement and social) may be more influential than marketing that focuses on suggested outcomes from consumption. Content research, including Chapter Five, suggests that the alcohol and marketing industries are aware of this potential and are creating marketing narratives which suggest, for example, that alcohol consumption is frequently underpinned by social motives (Atkinson et al., 2014; Carah et al., 2014; Hastings et al., 2010; Nicholls, 2012; Purves et al., 2014).

Although the results are consistent with previous consumer research into digital marketing, there are two caveats. The first is that the results only show a mediating

association through participation, but not awareness. This contrasts with de Bruijn and colleagues (2012), who reported that the association between *exposure* to digital marketing and consumption was also mediated through expectancies. That de Bruijn and colleagues did not differentiate between awareness and participation, however, does provide an alternative explanation for this. It is logical that participation may have a greater influence on social cognitions than awareness, as it affords marketers an extended opportunity to create an emotional connection and provides greater time for the consumer to process the marketing message. A cross-sectional survey of young adults in Ireland supports this by demonstrating that participation with digital marketing also had a stronger association with perceived social norms than awareness (Kenny, 2014).

The second caveat, which also contrasts with de Bruijn and colleagues (2012), is that the current study found no association between digital marketing and negative outcome expectancies (CBI/SP). Descriptive and exploratory research, including the content analysis in Chapter Five, suggests that alcohol marketing typically presents an appealing and positive image of consumption (Atkinson et al., 2014; Brooks, 2010; Carah, 2014; Nicholls, 2012; Purves et al., 2014). That marketing did not have any association with negative expectancies is therefore consistent with the outcomes which are predicted by the MIP model and observational learning theories (Austin and Knaus, 2000; Bryant and Oliver, 2009; Wimmer and Dominick, 2009). Nonetheless, as this association has only been explored in two studies, further research is required to explore how digital marketing influences negative expectancies (if at all) and what impact this has on consumption.

7.5.2. User-created promotion, social cognitions, and alcohol consumption

The results are consistent with previous audience research in two ways. First, the findings reaffirm that the later message interpretation stages appear to be as important as initial

exposure, and that social cognitions help to explain the link between user-created promotion and consumption (Boyle et al., 2016; Litt and Stock, 2011; Thompson and Romo, 2016). That the persuasiveness of content appears to play a key role is significant because user-created promotion is theoretically less likely to have repeat exposure than targeted marketing campaigns, therefore making initial influence important. Second, exposure to user-created promotion was associated with expectancies and motives which reflected positive outcomes. This is consistent with qualitative research which suggests that young adults carefully airbrush user-created promotion so that it frames consumption and the consequences in a positive and desirable manner (Atkinson et al., 2014; Hebden et al. 2015; Lyons et al., 2014; Niland, 2014).

The findings extend understanding of user-created promotion in three ways. First, the results explore mediation pathways which have not been considered (e.g. expectancies of risk, liquid confidence, and sociability). Second, the results build on previous survey research by suggesting that social cognitions can represent important mediators, and not just control variables or moderators (e.g. Westgate et al., 2014). Third, the results demonstrate that the message interpretation trends evident in the relationship user-created promotion and alcohol consumption are similar to those reported for marketing. This includes that participation had a stronger association with social cognitions than awareness, that drinking motives had a stronger mediating association than expectancies, and that exposure was associated with positive motives and expectancies.

7.5.3. Comparing digital marketing and user-created promotion

The comparison between digital marketing and user-created promotion highlighted two important findings. The first is that the effect of both marketing and user-created

promotion was largely mediated through the same motive (enhancement, social and coping) and outcome expectancy pathways (risk, liquid confidence, social and sexual). This suggests that young adults interpret similar messages about motives and outcomes from both marketing and user-created promotion. The results, however, are only based on cumulative exposure, and therefore provide no indication about whether different forms of content are associated with different mediation pathways. For example, is marketing on social media predominately associated with motives about sociability, whereas user-created promotion on video sharing websites predominately associated with expectancies of risk? Future research, perhaps based on controlled exposure to digital marketing and user-created promotion, is required to investigate whether varying types of content influence expectancies and motives in different ways.

The second important trend is that user-created promotion had a stronger indirect effect through expectancies and motives than digital marketing. This helps to explain the stronger direct association between user-created promotion and alcohol use reported in Chapter Six (see 6.4.8). A likely hypothesis for this, as suggested in Chapter Five, is that user-created promotion contains more direct and explicit references to drinking motives and outcomes compared to digital marketing (see 5.4.6), and contains less promotion of responsible or lower-risk drinking (see 5.4.5.b). It is also notable that while awareness of digital marketing had no association with expectancies and motives, awareness of user-created promotion did. The influence of user-created messages even at the awareness level helps to explain why alcohol marketers consider co-creation and user-generated branding to be a core part of digital marketing strategies (Brodmerkel and Carah, 2013; Lyons et al., 2014; Moraes et al., 2014; Nicholls, 2012; Purves et al., 2014).

7.5.4. Limitations

The results are based on a small, self-selected sample with a sizable gender skew, which reduces generalisability. The results are also based on a cross-sectional design. This means that directional relationships cannot be inferred and it is conceivable that reverse causality could exist in the mediation models. For example, it is possible that young adults may only engage with user-created promotion which reinforces existing expectancies developed through peer relationships or previous drinking experience. This is also true for motives, as individuals may pay greater attention to marketing which reflects their existing motives to drink, as suggested by the use and gratifications theory (O'Donohoe, 1993). Although the mediating role of social cognitions remains of interest, regardless of whether they play a causal or reinforcing role, further research is required to clarify.

There are three limitations associated with the expectancies scale (B-CEOA). The first is that the CBI/SP subscale had relatively low internal consistency, albeit consistent with previous validations of the scale (Ham et al., 2005). Theoretically, this may be because there are only a few items in the subscale (Field, 2013). This does not, however, explain why the subscales with even fewer items (sexual and tension reduction) had acceptable consistency and the CBI/SP did not. Second, although the subscales very closely mirrored the original B-CEOA four-factor structure, the item '*I would act aggressive*' was included on the CBI/SP subscale (not the sexual subscale) and the item '*I would be clumsy*' was included in the R/LC/Social subscale (not the CBI/SP subscale) (see Appendix 8 for exploratory and confirmatory factor analyses and discussion). The B-CEOA has only been previously used in research with young adults in the US (Ham et al., 2012; Hatzenbuehler, Corbin and Fromme, 2008; Zamboanga et al., 2009). It is therefore

possible that these structural differences reflect the variation in expectancy groupings between young people in the UK and USA. Further research is required to clarify. Finally, the results only focused on the outcome expectancies component on the B-CEAO, and did not include the evaluations component to measure how desirable each outcome was perceived to be. This component was excluded to decrease research fatigue and because it has been excluded in previous marketing research (e.g. de Bruijn et al., 2012; Fleming et al., 2004). These valuations may be worth exploring as moderators in future research.

The mediation approach also has limitations. Expectancies and motives were analysed in separate models and only latterly compared using standardised co-efficients. This approach was taken to analyse the independent contributions of each social cognition, and because motives were likely to supersede the effect of expectancies in a single model (Kuntsche et al., 2010). It would have been possible to enter all mediators hierarchically through alternative software, for instance MPlus or AMOS, although this was not possible through the SPSS PROCESS extension used. Research on traditional marketing has previously shown that social cognitions do operate in a hierarchical or linear fashion (McClure et al., 2013). Future research should therefore explore how drinking motives and outcome expectancies interact with each other in the relationship between media exposure and consumption.

Finally, by only including expectancies and motives the results are likely to underestimate the social cognition pathways which mediate the association between digital marketing, user-created promotion, and consumption. In the context of digital media, for example, research has already emphasised the additional role of perceived social norms (Kenny, 2014) and drinker prototypes (Litt and Stock, 2011). There is no comprehensive model

which includes all relevant social cognitions, which is perhaps because over-saturating any model with mediators can disguise important pathways under dominant predictors. This line of enquiry is also complicated by the fact that social cognitions can influence each other in a top-down manner (McClure et al., 2013). This further reaffirms the need for future message interpretation research to explore the different pathways between exposure and consumption, and how different aspects of social psychology and cognition interact during these processes.

7.6. Conclusion

This chapter demonstrates that the association between digital marketing, user-created promotion, and consumption is mediated through drinking motives and expectancies, particularly anticipated positive outcomes. That this mediating association was stronger for user-created promotion than digital marketing, and for participation over awareness, helps to explain the stronger direct associations with alcohol outcomes reported in Chapter Six. There are limitations which inform the interpretation of the results, including the gender skew, cross-sectional design, self-selected sample, validity questions with the expectancies scale, and limitations associated with the mediation analysis. Future research should consider other social and marketing cognitions which may mediate the association between exposure and consumption and use different statistical techniques to explore the hierarchical nature of these mediators.

Part Four: Discussion and conclusions

Chapter 8: General discussion, implications, and conclusions

8.1. Introduction

Chapter Eight presents a narrative synthesis and general discussion of the findings. It begins by reviewing the research questions and hypotheses (8.2) and how the findings help to extend understanding of digital marketing, user-created promotion, and critical social marketing (8.3). The chapter then discusses the implications for stakeholders (8.4), the challenges of regulating online content (8.5), the future research agenda (8.6), research challenges (8.7), and reflections on the research process (8.8). It closes with an overall conclusion for the thesis (8.9).

8.2. Research questions and hypotheses

The research questions were addressed through a mixed method design. This included a content analysis of digital marketing and user-created promotion, and a cross-sectional survey which measured exposure to both forms of content and the association with alcohol-related knowledge, attitudes, and behaviour in young adults. Of the 11 hypotheses, the eight directional hypotheses and one of the null hypotheses were supported, and the remaining two null hypotheses were not supported:

H1: Digital marketing will contain content and messages about alcohol that may appeal to young adults and encourage consumption.

The first hypothesis was supported, as the content analysis found that alcohol brands were well-represented on social media and able to attract large audiences that are willing to participate. Marketing used sophisticated designs and topical references, some of which may appeal to young adults (e.g. games and popular culture). Marketing also had limited responsible drinking and age restriction messages, yet did contain content that implied

unwise or irresponsible consumption (e.g. associations of personal and social success or depicting individuals who appeared to be under 25 years old).

H2: User-created promotion will contain content and messages about alcohol that may appeal to young adults and encourage consumption.

The second hypothesis was supported, as the content analysis found that user-created promotion was well-represented on social media and able to attract large audiences that are willing to participate. User-created promotion adopted an array of design features and topical references, some of which may appeal to young people (e.g. humour and cartoon characters). Ethical practices were mostly absent, with only one in twenty cases having a responsible drinking or age restriction message. User-created promotion also contained several messages that implied or promoted unwise consumption, including socially irresponsible behaviour, excessive drinking, appeal to those under 18 years old, and implying that alcohol has therapeutic qualities.

H3: There will be differences in the design features, topical associations, and messages suggested about alcohol in digital marketing and user-created promotion.

The third hypothesis was supported, as the content analysis found differences between digital marketing and user-created promotion. Marketing adopted bespoke and sophisticated designs that were personalised to a brand, while user-created promotion mostly had an amateur appearance and recycled content produced elsewhere online (e.g. humorous memes). User-created promotion contained more messages about irresponsible consumption than marketing, including suggestions of excessive use, socially irresponsible behaviour, confidence or popularity, and appeal to those aged under 18

years old. Marketing instead contained fewer messages about excessive use and more messages about responsible drinking and age restriction.

H4: Young adults will be aware of, and participating with, digital marketing and user-created promotion.

The fourth hypothesis was supported, as the cross-sectional survey found that young adults were aware of, and participating with, a range of digital marketing and user-created promotion. Young adults were also aware of a range of traditional marketing communications, albeit not to the same extent as either form of online content.

H5: Higher-risk drinking will be associated with greater awareness of, and participation with, digital marketing and user-created promotion.

The fifth hypothesis was supported, as the cross-sectional survey found that higher-risk consumption in young adults (≤ 5 on the AUDIT-C) was associated with greater awareness of, and participation with, digital marketing and user-created promotion.

H6: There will be no difference in awareness of, and participation with, digital marketing and user-created promotion [null hypothesis].

The sixth hypothesis was not supported, as the cross-sectional survey found that young adults were aware of, and had participated with, more user-created promotion than digital marketing.

H7: Greater awareness of traditional marketing and greater awareness of, and participation with, digital marketing and user-created promotion will be associated with alcohol use, higher-risk drinking, brand name recall, and drinking intentions.

The seventh hypothesis was supported, at least in part, as the cross-sectional survey found that participation with both digital marketing and user-created promotion was positively associated with alcohol use, drinking intentions, and higher-risk consumption. The hypothesis was only partly supported, however, as awareness of digital marketing was not associated with alcohol use and higher-risk consumption, awareness of user-created promotion was not associated with drinking intentions, and only participation with user-created promotion was associated with brand name recall. Awareness of traditional marketing was associated with most of the consumption outcomes (except drinking intentions). This implies that although digital marketing is more successful in reaching young adults, traditional marketing still has an important role in influencing knowledge, attitudes, and behaviours in this age group.

H8: Participation with digital marketing and user-created promotion will have a stronger association with alcohol use, higher-risk drinking, brand name recall, and drinking intentions than awareness of digital marketing and user-created promotion.

The eighth hypothesis was supported, as the cross-sectional survey found that participation with digital marketing and user-created promotion had a stronger association with consumption, higher-risk drinking, and drinking intentions than awareness.

H9: There will be no difference in the association between digital marketing or user-created promotion and alcohol consumption, higher-risk drinking, brand name recall, and drinking intentions [null hypothesis].

The ninth hypothesis was not supported, as the cross-sectional survey found that awareness of, and participation with, user-created promotion had a stronger association

with alcohol consumption, higher-risk drinking, and future drinking intentions than the comparable exposure to digital marketing.

H10: The association between digital marketing, user-created promotion, and alcohol use will be mediated through an association with drinking motives and outcome expectancies.

The tenth hypothesis was supported, as the cross-sectional survey found that the association between digital marketing, user-created promotion, and alcohol use was mediated (at least partly) through drinking motives and expectancies.

H11: There will be no difference in the drinking motives and expectancies which mediate the association between digital marketing and alcohol use and the drinking motives and expectancies which mediate the association between user-created promotion and alcohol use [null hypothesis].

The eleventh hypothesis was supported, at least in part, as the cross-sectional survey found that the direct associations which digital marketing and user-created promotion had with alcohol consumption were both mediated through the same drinking motives (enhancement, social, and coping) and outcome expectancies (risk, liquid confidence, sociability, and sexuality). The only exception was that participation with user-created promotion also had a mediating effect through outcome expectancies of tension reduction, whereas alcohol marketing did not.

8.3. Understanding the association between digital media and alcohol use

This section sets out the main unique contributions to knowledge made in this thesis. It does so first in lay terms, before reviewing these contributions in the context of previous research. The unique contributions, in order of proposed significance, are:

Comparison between digital marketing and user-created promotion: To the author's knowledge, this thesis provides the first direct comparison of digital marketing and user-created promotion in terms of design, topical references, messages suggested about alcohol, exposure in young adults and the association with alcohol-related knowledge, attitudes, and behaviour. By doing so, it is the first study to examine the relationship between the two, how they interact, and the importance of considering their combined association with alcohol use.

Broader definition of user-created promotion: Chapter Three provided a definition of user-created promotion which accounts for content beyond social networking websites (e.g. apps, forums, and videos). The content analysis and cross-sectional survey then demonstrated that this definition can be applied objectively in research to evaluate the design of such content, the messages suggested about alcohol, and the associations with alcohol-related knowledge, attitudes, and behaviour in young adults.

Investigation of new forms of digital marketing and user-created promotion: Both the content analysis and cross-sectional survey included forms of digital media, and specific types of content within new media, which have been under-researched in both alcohol marketing (e.g. marketing for wine brands) and user-created promotion (e.g. exposure to forums, apps, and videos).

Enhanced understanding of the psychological processes which help to explain the association between digital media and consumption: The cross-sectional survey explored how drinking motives and outcome expectancies mediated the association between marketing, user-created promotion, and alcohol consumption. It provides

evidence of pathways which have not been considered in previous research, namely the association between marketing and drinking motives, and the association between user-created promotion and outcome expectancies.

Exploring the association between digital media and alcohol consumption in young adults in the UK: This population is particularly vulnerable to online alcohol messages due to considerable levels of internet use and higher-risk drinking, yet remains underexplored compared to research on those under the legal purchasing age (for marketing) and young adults in the US (for user-created promotion).

8.3.1. Understanding digital marketing

8.3.1.a. Reflections on the main debate

Despite over four decades of research, the influence of alcohol marketing and the appropriate regulatory response continues to be debated in politics and research. Recent examples of debates have featured in the UK (House of Lords, 2015; Health and Sport Committee, 2016), Republic of Ireland (Alcohol Action Ireland, 2016), South Africa (Parry, London and Myers, 2014), and Lithuania (Paukštė, Liutkute, Štelemekas, Midttun and Veryga, 2014). Two diametrically opposed positions typically underpin these debates. On one hand, the alcohol and marketing industry challenge any association with harm, instead arguing that marketing facilitates brand switching, promotes responsible drinking, does not target young people, and that restrictions will have unintended negative consequences (e.g. loss of sponsorship funding) (Fogarty and Chapman, 2012; Martino et al., 2016). On the other hand, those who advocate for policy change argue that marketing exposure is causally linked to consumption, particularly in young people, and

that tighter restrictions are required (Alcohol Concern, 2013; AHA, 2013; Anderson, 2009; Hastings and Sheron, 2013; WHO, 2011).

The results presented in this thesis are consistent with the position that both traditional and digital marketing is associated with alcohol-related knowledge, attitudes, and behaviour in young adults. The content analysis suggested that some digital marketing may promote unwise drinking and appeal to young people. The cross-sectional survey suggested that young adult's exposure to traditional and digital marketing is positively associated with alcohol use, higher-risk consumption and drinking intentions. The cross-sectional survey also suggested that this association was mediated through drinking motives and outcome expectancies, thus suggesting that the messages reported in the content analysis are an important component of how marketing influences behaviour. Although this study cannot be used to discern the potential impact of tighter restrictions, the positive association between exposure and consumption does suggest that reducing awareness and participation may help reduce alcohol use.

8.3.1.b. Relation to previous alcohol marketing research

The findings are consistent with previous alcohol marketing research in four ways. First, the association between traditional marketing communications and consumption, reported in the cross-sectional survey, is consistent with reviews of earlier research (Anderson et al., 2009; Gordon et al., 2010a; Jernigan et al., 2017; Scott et al., 2016; Smith and Foxcroft, 2009; Stautz et al., 2016). Second, the findings of both studies are consistent with a recent review of digital marketing research which concluded that online marketing used approaches that may be attractive to young people, undermined codes which restrict irresponsible marketing, and that exposure is associated with drinking

outcomes (Lobstein et al., 2016). Third, the findings of the cross-sectional survey are consistent with research which suggests that the association between digital marketing and consumption is stronger than traditional marketing (Gordon et al., 2011; Lin et al., 2012). Fourth, the findings from the cross-sectional survey are also consistent with the message interpretation process model by demonstrating that the later information processing stages, and their impact on social cognitions, should be considered just as important as the initial exposure (Austin et al., 2006; Austin and Knaus, 2000).

8.3.1.c. Contributions to understanding digital alcohol marketing

In relation to the research agenda for marketing (see 2.8), this thesis makes several contributions. It has analysed more brands than previous research, thus increasing generalisability in understanding of alcohol marketing practice. This was achieved in the content analysis by reviewing the top 100 alcohol brands in the UK, and in the cross-sectional survey by measuring brand name recall across a range of product types. This provides insight into categories that represent a growing part of the UK market, for example spirit and wine brands, but which are seldom explored (Douglas, 2016; Schmidt, 2016; Shaw, 2016). Investigating underexplored brands is important as it helps to provide insight into marketing that may be aimed at older audiences. In the UK, for example, adults over 45 years old are twice as likely to drink wine as young adults aged 16–24 years, with the latter more likely to consume beers, spirits, and alcopops (ONS, 2016a). As older age groups are not exempt from the health and social consequences which can arise from alcohol (Gell et al., 2015; WHO, 2014), the findings therefore provide insight into how products predominately consumed by older populations are marketed online.

This thesis also investigated a broader range of new media. This was achieved in the content analysis by including two websites that are under-researched in comparison to social networking websites (Twitter and YouTube), and in the cross-sectional survey by measuring exposure to more channels than previous research. This wider focus is important for three reasons. First, researchers suggest that keeping pace with marketing innovation is a key obstacle in establishing a link between marketing and consumption (Gordon et al., 2010a; Jernigan, 2009). Second, given that previous research has only explored a restricted number of the channels in the marketing mix, it is likely that the findings underestimate exposure to online marketing and the association with consumption. Third, continuing changes in internet use habits also alter opportunities for exposure. Since 2007, for example, the proportion of the UK adult population that watch online films or television at least once a week has doubled (OFCOM, 2015a). Moreover, multimedia messaging service SnapChat has amassed almost 10 million daily users in the UK since 2012 (Kuchler, 2016). Both forms of new media have been reported to contain alcohol marketing (Peterson, 2015; Schultz, 2016). The two studies therefore help to restore some parity between research and contemporary marketing.

The findings also help to broaden understanding about the role of audience involvement in marketing. The content analysis suggested that marketing seeks to harness participation, both explicitly (e.g. asking to share content) or subtly through design (e.g. games). The cross-sectional survey further suggested that these attempts are successful, as the digital marketing channels retained, on average, almost a third of those who had reported awareness. Although distinguishing between levels of exposure is not unique to this study (Gordon et al., 2010b; Gordon et al., 2011; Lin et al., 2012; Kenny, 2014), measuring both for the same channels provides insight into which forms of marketing are

most successful in fostering participation. This is important as the cross-sectional survey also suggested that participation had a stronger association than awareness with higher-risk drinking, motives, and expectancies.

The results also respond to Meier's (2011) suggestion to use message interpretation theories to account for the role of cognitions in the association between marketing and consumption. The content analysis found that marketing aimed to associate alcohol with positive narratives, such as personal or social success and glamorous or desirable lifestyles. The cross-sectional survey then further found that participation with digital marketing was associated with positive motives and expectancies, and that these mediated the relationship between exposure and consumption. Notably, the drinking motives (enhancement, sociability) and expectancies (liquid confidence, sociability, and sexuality) that were associated with marketing exposure in the survey were congruent to the themes reported in the content analysis. This provides a tangible example of the benefits of using a mixed method design.

The findings also respond to Meier's (2011) suggestion for a greater focus on existing drinkers, and not only those under the legal purchasing age. As already discussed, the content analysis also included marketing for brands which are predominately consumed by older adults (e.g. wine). Data for the content analysis was also collected using proxy social media accounts with a minimum of age of 21 years (the mid-point between 18-25 years). This ensured that the marketing content analysed reflected that which young adults were likely to be exposed to. The sample for the survey also focused on 18-25 year olds in the UK. This specific focus on newly legal drinkers is important for five reasons: (1) the global prevalence of heavy episodic drinking is highest among this age group,

particularly in the UK (WHO, 2014); (2) over-consumption in young adults is associated with negative outcomes (AFS, 2016, IAS, 2013); (3) they represent legitimate targets for alcohol marketers (Hastings et al., 2010); (4) they are at increased risk of exposure due to high use of digital media (OFCOM, 2016); and (5) marketing targeting adult drinkers is more common than that aimed at those under the minimum purchase age (Meier, 2011).

8.3.2. Understanding user-created promotion

8.3.2.a. Reflections on the main debate

There appears to be agreement about the association between user-created promotion and alcohol consumption in young adults, among both researchers (Gupta et al., 2016; Moreno et al., 2016a; Ridout, 2016; Westgate and Holliday, 2016) and charities and non-governmental organisations (DrinkAware, n.d; Flanagan, 2014; Local Government Association, 2014; Mahon, 2014; Press Association, 2014). The results of this thesis are consistent with these suggestions. The content analysis reported that user-created promotion contained content which may appeal to young adults and promote unwise or irresponsible consumption. The cross-sectional survey suggested that young adults are aware of, and participating with, user-created promotion and that this is associated with alcohol use, higher-risk consumption, and drinking intentions. The cross-sectional survey further suggested that this association was mediated through motives and expectancies, thus indicating that the messages reported in the content analysis are an important component of how such promotion influences behaviour.

8.3.2.b. Relation to previous user-created promotion research

The results of this thesis are consistent with previous research in three ways. First, the content analysis suggested that user-created promotion appeared frequently on social

media, used a range of designs and topical associations, framed alcohol consumption in a positive light, and suggested that higher-risk drinking is a normal and acceptable behaviour (see 3.5 for a review). Second, the cross-sectional survey is consistent with reviews of research which have reported an association between user-created promotion and consumption (Gupta et al., 2016; Moreno et al., 2016a; Ridout, 2016; Westgate and Holliday, 2016). Third, the cross-sectional survey is also consistent with audience research which has suggested that user-created promotion can influence alcohol-related social cognitions, and that these cognitions help to explain the association between exposure and consumption (Boyle et al., 2016; Fournier et al., 2014; Koff, 2013; Litt and Stock, 2011; Miller et al., 2014; Stoddard et al., 2012; Thompson et al., 2016).

8.3.2.c. Contributions to understanding user-created promotion

In relation to gaps for understanding user-created promotion (see 3.8), this thesis makes several contributions. It has explored user-created promotion through a broader range of new media. This was first achieved in Chapter Three by providing a definition which encompassed user-created promotion from a wide range of online sources. It was also achieved in the content analysis by reviewing websites which are under-researched in comparison to social networking websites (Twitter and YouTube), and social networking website features which are under-researched in comparison to personal profiles (e.g. public pages). It was also achieved in the cross-sectional survey, by measuring exposure to more user-created promotion channels than any previous research. This extended focus helps to keep pace with innovation in digital technology and changes in how the population behave online.

This thesis also demonstrated that some trends reported in marketing research are also evident for user-created promotion. Chapter Three suggested a comparable marketing mix (Hastings, 2013) also exists for user-created promotion, and the cross-sectional survey found that this was reflected in reported awareness and participation. This suggests that existing research into social media alone, particularly personal and peer profiles, is likely to underestimate exposure to user-created promotion and the association with consumption. Marketing research also highlights the importance of distinguishing between awareness and participation (Gordon et al., 2011). In this thesis, the content analysis suggested that audience participation was also a frequent and important feature of user-created promotion, while the cross-sectional survey indicated that, on average, over half of those aware of each channel also reported participation. This is important as participation had a stronger association than awareness for alcohol use, higher-risk drinking, and drinking intentions. Clear distinction between awareness and participation has not been a consistent feature of audience research. These findings suggest that such an approach should be adopted to better understand the influence on behaviour.

This thesis also helps to inform understanding about how social cognitions help to explain the association between user-created promotion and consumption. The content analysis reported that user-created promotion presented positive messages about alcohol, including suggestions of personal and social success, therapeutic qualities, sexual enhancement, and confidence or popularity. Even when negative consequences did feature they were still framed as desirable outcomes. The cross-sectional survey then found that exposure to user-created promotion was associated with positive motives and expectancies, and that these mediated the relationship between exposure and consumption. Notably, the drinking motives (enhancement, sociability, coping) and

expectancies (risk, liquid confidence, sociability, sexuality, tension reduction) that were associated with exposure to user-created promotion in the survey were congruent to the themes reported in the content analysis. This therefore suggests that the message interpretation model, which so far has only been used to investigate marketing, also represents a legitimate framework for the study of user-created promotion.

This thesis focused on young adults in the UK, thus extending understanding beyond the US (where most previous research has been conducted). The content analysis used social media accounts with an age of 21 years, while the cross-sectional survey only included 18-25 year olds in the UK. Conducting research on young adults in the UK, as opposed to the US, is important given that the former has a lower minimum purchase age and higher levels of alcohol use disorders and heavy episodic drinking in this age group (WHO, 2014).

8.3.3. The relationship between digital marketing and user-created promotion

Research has only made formative acknowledgement that marketing and user-created promotion co-exist in the same digital spaces, with most studies focused on the role of users in marketing (Atkinson et al., 2014; 2016; Griffiths and Casswell, 2010; Mart, 2009; Moraes et al., 2014; Nicholls, 2012; Purves et al., 2014). User participation in the marketing process, however, is classified as user-generated branding, thus implying a commercial context, whereas user-created promotion has no intentional link to marketing (see 3.3.1). This thesis provides one of the first direct comparisons between digital marketing and user-created promotion. This section now reviews the contributions that this comparison has provided.

8.3.3.a. *Differences between digital marketing and user-created promotion*

The results suggest several differences between marketing and user-created promotion. The content analysis showed that user-created promotion had more emphasis on promoting excessive or unwise consumption than marketing. Such explicit and frequent depictions of higher-risk drinking were also combined with a near-total absence of age restriction warnings or messages promoting responsible or lower-risk consumption. This is explainable, at least partly, because marketing is overseen by codes for responsible promotion, including ‘in-house guidelines’ (Carlsberg, 2009; Diageo, 2016b; Heineken, 2015; SABMiller, 2014), industry bodies (Portman Group, 2015; Scotch Whiskey Association, 2015), independent regulation (CAP, 2015), website terms of use (Facebook, 2017g; Twitter, 2017d; Google, 2017), and scrutiny from charities (Alcohol Advertising Review Board, n.d.; Mortimor, 2015; Stewart, 2016). Sanctions include removal of content, blacklisting with media providers, public criticism, and expulsion from industry groups, all of which may have financial implications. In contrast, user-created promotion is governed only by the terms and conditions which a user agrees to when registering to use the website (e.g. Facebook, 2017h; Twitter, 2017e; YouTube, 2017c). The sanctions mostly only result in content removal or account suspension, which are not typically associated with considerable financial risk to the creator.

The second difference was the cross-sectional survey found that awareness of, and participation with, user-created promotion was greater than reported for digital marketing. One explanation for this is that there appears to be more user-created promotion online than marketing, thus increasing the probability of exposure (Mart et al., 2009). This was supported in the content analysis, where even a small number of keywords returned more content for user-created promotion than the top 100 alcohol

brands sampled. Participation was also found to be greater for user-created promotion. This is noteworthy, because the content analysis reported that requests to participate appeared in a comparable proportion of marketing and user-created promotion, while marketing also contained more design features which are likely to encourage participation (e.g. games). There are four possible explanations for greater participation with user-created promotions: (1) young people perceive the content created by other users to be more credible and worthy of engagement; (2) they consciously believe they are not the targets of marketing; (3) user-created promotion is considered more congruent to drinking identities; and (4) creating and interacting with content made by peers is considered more acceptable and normalised than engaging with marketing (Atkinson et al., 2014; Purves et al., 2014; Weaver et al., 2016).

The third difference is that the cross-sectional survey reported that user-created promotion had a stronger association with alcohol-related knowledge, attitudes, and behaviours. The wider results provide several explanations for this. The content analysis reported that user-created promotion made more explicit reference to unwise and irresponsible consumption, compared to marketing. The content analysis also found that user-created promotion contained fewer messages about responsible and lower-risk consumption, meaning that user-created promotion lacked any buffer to the consumption message. Moreover, as research suggests that cumulative exposure is positively associated with consumption (Gordon et al., 2010b), it is of little surprise that the greater reported exposure to user promotion, compared to marketing, resulted in a stronger association with consumption. Finally, as message salience is an important determinant of the effect on consumption (Austin and Knaus, 2000), the stronger association that user-

created promotion had with motives and expectancies also helps to explain how the more explicit drinking messages reported in the content analysis translated into behaviour.

8.3.3.b. Similarities between digital marketing and user-created promotion

Both studies indicated similarities between marketing and user-created promotion. The content analysis demonstrated that both forms of content received comparable levels of audience participation (e.g. likes) and used similar design features (e.g. visual media and links to other content). Similarities in design are unsurprising given that the creativity of both types of promotion is constrained by website design, while certain features (e.g. posting photos) are normative online behaviours (Atkinson et al., 2014; Tonks, 2014). Similarities were also found for topical associations and positive messages suggested about alcohol, including personal and social success, lifestyles reference, and real world tie-ins. Previous research suggests that forming positive brand capital is a primary function of marketing, with the goal being to create a brand personality that consumers respond to, develop pseudo-relationships with, and use in their own identity construction (Casswell, 2004; Jernigan, 2009; Purves, 2017). Industry documents also emphasise the use of market research to develop advertising and brands which consumers consider personal and credible (Hastings et al., 2010). Given this intention to create marketing which resonates with consumers, the thematic overlaps with the content produced by the target audiences themselves are therefore inevitable.

The cross-sectional survey also showed consistencies in how marketing and user-created promotion is received by young adults and is associated with behaviour. For example, young adults reported exposure to both digital marketing and user-created promotion in similar online spaces, for instance social networking and media-sharing websites. Both

types of content also had a positive association with alcohol use, higher-risk drinking, and future intentions to drink. Similar consistency was also found for the social cognitions which mediated the association with consumption, including enhancement, social and coping motives and expectancies of risk, sociability, liquid confidence, and sexuality.

8.3.3.c. The relationship between digital marketing and user-created promotion

This thesis contributes towards understanding of the relationship between marketing and user-created promotion. The literature review presented in Chapter Three conceptualised digital marketing and user-created promotion as two separate entities, yet with some overlap and interaction (see 3.7.2). The two studies conducted add further weight to this.

The content analysis suggested that marketing mostly represented bespoke and branded content with a sales-focused motivation and a professional market context (e.g. shops). User-created promotion, conversely, did not consistently or systematically feature specific alcohol brands, and there was limited evidence of a professional market context. This is consistent with the model suggestion that marketing and user-created promotion are separate entities with different motivations for content creation. Despite this, the content analysis also suggested that marketing was sensitive to the utility and influence of users, and attempted to foster participation or upcycle user-created content into marketing (e.g. fan photos). Furthermore, over half of user-created promotion referred to at least one alcohol brand, highlighting that such content also provides de facto advertising for brands, even when not directly solicited. This is consistent with the model suggestion of an overlapping and interacting relationship, creating instances where

marketers harness the power of user-created messages and users acknowledge that brands are important components in creating and reinforcing drinking identities or narratives.

The cross-sectional survey showed that young adults reported awareness of, and participation with, a mixture of digital marketing and user-created promotion. This indicates that the suggested interactive relationship between marketing and user-created promotion is also realised in the experiences of young adults, and not just similarities in content design and a shared ability to promote alcohol. This relationship was further reinforced, as both marketing and user-created promotion had an association with consumption and higher-risk drinking, with the association of both mediated through similar motives and expectancies. The association between user-created promotion and brand name recall also suggests that the de facto advertising provided by user-created promotion has tangible benefits to the alcohol industry in terms of increasing awareness of brands. This reaffirms the utility of user-created content and supports why the alcohol industry considers it an important part of marketing (Carah et al., 2014; Nicholls, 2012)

Support for this model has implications for understanding the association between digital media and alcohol use. The combined exposure to both forms of content suggests that the true effect of digital media on alcohol consumption is best understood as a combination of marketing and user-created promotion. This is consistent with consumer socialisation theory, which suggests that young people are socialised to be alcohol consumers through a combination of marketing and social influences (e.g. peers) (Harris et al., 2015). The results therefore imply that existing research focused on either digital marketing or user-created promotion in isolation is likely to underestimate the influence that digital media has on consumption. Future research should therefore assess a combination of marketing,

user-created promotion, and the user-generated branding that intersects the two (as is implied by the model). The results also suggest that any attempts to address or mitigate the effect of marketing (e.g. by tightening restrictions) must control for the concurrent influence of user-created promotion. This issue is revisited in the implications for stakeholders (see 8.4).

8.3.4. Understanding critical social marketing

This thesis builds on critical social marketing research by showing that the framework also has utility for investigating digital media, including general depictions of alcohol beyond commercial marketing. This wider application benefits researchers by providing a rationale for future studies to draw on established marketing methods and theories even when exploring broader alcohol-related media. For example, further use of the message interpretation process model to explore the social cognitions which are influenced by user-created promotion is a possible focus in future studies. Critical social marketing, however, is not just a framework to inform research design. Instead it is underpinned by four principles which guide the approach to research and interpretation of the findings (Gordon, 2011d). This section reviews how the thesis has responded to these four steps and draws attention to the other activities which took place alongside the studies.

Step one: Research using a marketing perspective and methods

This thesis presents a series of chapters which outline and evaluate marketing practice and perspectives, or use established marketing research methods to explore the impact on behaviour. Chapters Two and Chapter Three presented a review of research into the development, design and influence of digital marketing and user-created promotion. Chapter Four reviewed important methodological and ethical challenges which

characterise investigations of digital media. Chapter Five presented a content analysis of the design, topical associations, levels of engagement and messages suggested about alcohol in marketing and user-created promotion. Chapters Six and Seven measured exposure to digital marketing and user-created promotion, and the association with alcohol-related knowledges, attitudes, and behaviour.

Step two: Contribution to the scientific evidence base and dissemination

Contributions to the scientific evidence base are discussed in section 8.3. Concerning dissemination, the findings are principally reported in this thesis. Elements have also been shared through peer-reviewed journals, national and international conferences, a community-research engagement group and a third-sector networking event (see pg. 21 for summary). Dissemination in an invited book chapter is also currently under review. The findings have also been used as the basis for teaching materials for both postgraduate courses and continued professional development programmes, both of which were facilitated by the UK Centre for Tobacco and Alcohol Studies. The author has also contributed to an on-going paper about the ethics of using social media for public health research, co-ordinated by the Centre for Public Health at Queen's University Belfast (Hunter et al., 2017).

Step three: Contributions to upstream social marketing

Early findings from this thesis formed the basis of the Salvation Army's written evidence submission to the Scottish Parliament's Stage One review of the Alcohol (Licensing, Public Health and Criminal Justice) (Scotland) Bill (Salvation Army, 2015). From this written submission, the author and a senior Salvation Army representative were called to provide oral evidence to the committee, alongside representatives from the Portman

Group, the Advertising Standards Association, and the Institute for Practitioners in Advertising (Scottish Parliament, 2015). The author has also used these findings to help contribute to Cancer Research UK's written submission to the CAP consultation on the advertising of foods high in fat, salt, and sugar (CRUK, 2016).

Step four: Contributions to downstream social marketing interventions

As part of the funding arrangement the researcher spent time connected with ALOVE, the Salvation Army's youth network for 12-25 year olds (ALOVE, n.d). This organisation has a history of social action, for example a campaign to address human trafficking through censorship of advertising for sex services (ALOVE, 2012). As part of this connection, the researcher gave a presentation to youth workers at a national networking event and chaired a discussion about how they could raise and tackle the issue of online health risk behaviours. The researcher was also invited to give a keynote presentation to 150 young people (aged 12-18 years old) at the Salvation Army's Scotland Summer School about how the internet can influence health risk behaviours. As a member of the Scotland Drug and Alcohol Strategy Group, the researcher also liaised with the Salvation Army's drug and alcohol support workers, and other stakeholders from across the organisation (e.g. homelessness services), to raise awareness of the role that new media may play in initiating or reinforcing alcohol consumption.

8.4. Implications for stakeholders

Beyond contributions to the research evidence base, it is also important to review what implications the results have for stakeholders within the fields of public policy, regulation, and marketing. This section therefore sets out the reflections and implications for five key stakeholders: (1) the UK Government; (2) non-governmental organisations

and health information providers; (3) website operators; (4) internet users; and (5) the alcohol and marketing industries.

8.4.1. UK Government

In the context of alcohol policy debates, the government is identified as having an important stewardship role in protecting the health of citizens (Katikireddi, Bond and Hilton, 2014). In the UK, the most recent alcohol strategy accepted that there was a known link between advertising and consumption (HM Government, 2012). Despite this, the strategy suggested that existing self-regulatory approaches remained appropriate and that new media provided advertisers with the capacity to '*minimise young people's interaction with alcohol marketing*' (pg. 8). In support, the government cited age verification procedures as an example of good practice, although it is unclear whether this implies that exposure should only be minimised in those under the legal purchase age. While most issues concerning alcohol marketing are not devolved to the individual UK countries, and are instead controlled by the overall Westminster Government, digital alcohol marketing has also been cited as a priority for action for the Scottish Government (AFS, 2017; Global Alcohol Policy Alliance, 2016).

The results of this research have several implications for the UK Government's alcohol strategy. First, the content analysis found that some marketing contained content which is supposedly restricted through existing self-regulations (e.g. suggestions of personal and social success and appeal to those under 18 years old). This contributes to a growing body of evidence that has questioned the efficacy of such self-regulatory systems (Hastings et al., 2010; Noel and Babor, 2016; Noel, Babor and Robaina, 2016; Vendrame et al., 2015). Second, the cross-sectional survey indicated that digital marketing achieves

greater awareness than traditional marketing, suggesting that new media has achieved the opposite of minimising exposure in young people. Third, the actions outlined in the strategy appear heavily focused upon protecting those under 18 years old from marketing. The results presented, however, suggest that there is also a need to consider the impact on young adults, particularly regarding higher-risk drinking. Fourth, although the strategy does accept that interpersonal factors are also a key determinant of consumption, it does not consider how this influence has evolved through digital media (e.g. user-created promotion). A press release from the Local Government Authority, regarding the NekNominate viral drinking game, did call on social media operators to work in partnership with the Government to tackle messages about higher-risk alcohol use on social media (LGA, 2014), however no evidence can be found to support that any further action was taken.

8.4.2. Non-governmental organisations and health information providers

Non-governmental organisations (NGOs) and health information providers have two roles in responding to alcohol-related harm and marketing. In an advocacy role, NGOs have been forthcoming in their suggestions for tighter controls on digital media. This includes calls for alcohol marketing to be heavily restricted on social media, websites to have more robust age affirmation processes, a need for more stringent guidelines on acceptable alcohol content, and action towards unauthorised use of alcohol trademarks (e.g. user-generated branding) (AFS, 2017; Alcohol Concern, 2016; AHA, 2014; Dobson, 2012; Leyshon, 2011; WHO, 2014). The results presented feed into this debate by supporting that reductions in exposure to digital marketing and user-created promotion may have a positive impact on reducing consumption in young adults.

Non-governmental organisations and health information providers also play an important role in countering pro-drinking messages through social marketing (Kass-Hout and Alhinanawi, 2013). A novel example is the Big.Alcohol.Exposed online crowdsourcing campaign, which aimed to raise money for a Liverpool-based barbershop to buy-out Chang Beer's sponsorship of Everton Football Club, the only alcohol shirt sponsor in the English Premier League (Indiegogo, n.d.). Although it is improbable they will ever reach the \$23 million target (it had only reached \$2,175 as of 25th February, 2017), the campaign has already achieved the goal of generating discussion about the issue of alcohol sponsorship (Goldstein, 2016; Jardine, 2016; Scottish Cancer Prevention Network, 2016; Thorn, 2016). Research also suggests that new media can also play an important and effective role in the attempts to promote individual behaviour change (Milward et al. 2016; Pederson, Naranjo and Marshall, 2017). For example, an evaluation of Alcohol Concern's Dry January campaign found that digital media had played a fundamental role and was useful in maximising exposure without compromising on funding (Russell, Ross-Houle, Critchley and Whitfield, 2016).

Building on the findings of Burton and colleagues (2013), who compared commercial marketing and social marketing Twitter accounts, the current results provide several implications for social marketing by NGOs and health information providers. Marketers could use the design features and topical associations identified in successful digital marketing and user-created promotion to enhance the appeal of their own campaigns. Furthermore, the content analysis identified how alcohol is positively framed through online messages, therefore providing insight into the messages that could be countered. That cumulative exposure had the strongest association with behaviour, particularly for participation, also suggests that social marketers could improve campaigns by using a

range of new media and increasing opportunities for interaction. The cross-sectional survey also provided evidence of social cognitions that mediate the association with consumption. Motives and expectancies do not have a unidirectional relationship with consumption (Kuntsche, 2007). Social marketing could therefore frame lower-risk consumption goals around comparable motives and expectancies or challenge the positive outcomes suggested (e.g. liquid confidence). Finally, that user-created promotion had a stronger association with behaviour suggests that social marketers should also consider new ways in which they can recruit users into their campaigns.

Evidence that these suggestions do contribute positively to social marketing is 'Hello Sunday Morning' (HSM), an Australian campaign which encourages individuals to reduce consumption by engaging in fun activities on hangover-free days (HSM, n.d). Akin to its commercial marketing counterpart, the promotional material for HSM depicts bespoke branding and contains salient topical associations such as music and popular culture. The messages also frame lower-risk drinking around personal and social success, confidence and popularity, attractiveness, being fit and healthy, and contexts which are likely resonate with young adults (e.g. surfing). The HSM campaign also has a presence across multiple new media channels, including a website, social networking website and a smartphone app, thus allowing for cumulative exposure. Finally, HSM is built upon user input and community reinforcement. This is achieved through both a bespoke social networking website which allows users to interact, and extensive use of user-generated content in marketing (e.g. pictures and guest blogs). These practices have led HSM to grow to a global community of 50,000 individuals, who have enjoyed a combined 1.5 million Sunday mornings by reducing consumption. It has also produced positive

evaluations (Carah, Meurk and Angus, 2015; Carah, Meurk and Hall, 2015; Fry, 2014; Hamley and Carah, 2012; Pennay, MacLean and Rankin, 2016; Victoria Health, 2016).

8.4.3. Website operators

As both gatekeepers and facilitators, and given their critical role in shaping marketing practice, website operators play an important role in addressing online content (Carah and Meurk, 2017; Mart, 2017). To date, however, their response to alcohol-related media has been mixed. On the one hand, they have been proactive in their regulation of alcohol marketing, by establishing behavioural standards and processes which ensure responsible advertising. Facebook, for example, has a specific in-house advertising review process which ensures that content uses correct corporate branding, does not feature prohibited messages, and is not irresponsibly targeted (Facebook, 2017g). These processes are further buffeted by additional regulations for Facebook pages (where content is not covered by initial review processes) and stipulations that alcohol marketing must comply with national legislation or self-regulation (Facebook, 2017i). Similar guidance also exists for other popular websites such as Twitter (2017d) and YouTube (Google, 2017).

In contrast to the proactive steps taken for commercial marketing, the response of website operators to user-created promotion has been less rigorous. In the wake of the NekNominate viral drinking game, the Local Government Authority in the UK stated that Facebook and Twitter ‘*have a responsibility*’ to help address the harm caused by the game and called on them to ‘*show leadership and not ignore what is happening on their websites*’ (LGA, 2014). Despite mounting pressure, Facebook decided not to remove NekNominate content on the premise that they ‘*do not tolerate content which is directly harmful, for example bullying, but controversial or offensive behaviour is not necessarily*

against our rules' (Cullen et al., 2014). Facebook instead suggested they would deal with complaints on a case-by-case basis and stressed that users could use website tools to hide content they found offensive from their timelines (Fishwick, 2014). This inactivity towards addressing any potential harm was further compounded by suggestions that Facebook was in fact profiting from the viral game by placing adverts next to NekNominate content (Ellicott, 2014).

The results highlight several implications for website operators. The content analysis suggested that some marketing contained messages which promoted irresponsible alcohol use (e.g. personal and social success or appeal to those under 18 years old). This raises questions about the efficacy of existing processes or behavioural standards. The content analysis also found that user-created promotion contained a high number of references to irresponsible or excessive consumption, while the survey found that user-created promotion also had a stronger association with higher-risk drinking than marketing. Website operators appear to be a key independent arbitrator who could feasibly address such user content, so their inaction leaves an important gap. This is not to suggest that websites should proscribe what can be shared in private online spaces (e.g. personal profiles), however all the user-created promotion reviewed in the content analysis was publicly accessible. Given the parallels with marketing, and the public nature of some content, website operators may help to achieve reductions in higher-risk drinking by applying their best practice for marketing to user-created promotion (e.g. review processes) or providing more robust guidelines for permitted public content (Leyshon, 2011). Examples may include mandatory lower-risk drinking messages, streamlined complaint processes, or action on unauthorised use of alcohol trademarks.

8.4.4. Internet users

Facebook's inactivity towards NekNominate content was predicated on the assumption that it is users who are responsible for their own behaviour and that the websites are only passive facilitators (Pope, 2014). The results support this need for user accountability in two ways. First, both studies showed that users take an active role in creating content which promotes alcohol use (including higher-risk drinking), even when not prompted by marketers. As such, the motives and responsibility for creation rests with the user. Second, although it is plausible that an individual may experience unsolicited or passive exposure, both studies demonstrated that users also voluntarily choose to participate with marketing and user-created promotion. The results of the survey further indicate that this voluntary involvement had a stronger association with higher-risk drinking and alcohol-related social cognitions than passive awareness, thus highlighting the importance of the decisions that users make online.

There is research which suggests that users can be empowered to change their online behaviour. Interventions such as cognitive behavioural therapy, for example, have been used to address addiction to online behaviours such as pornography, gambling, or compulsive shopping (Young, 2007). Moreover, educational interventions have been found to increase awareness and reporting of online risk factors in young people (Schilder, Brusselaers and Bogaerts, 2016). Initiatives such as 'Hello Sunday Morning' also suggest that users can help to reinforce and promote lower-risk consumption. Anecdotal examples of users promoting lower-risk drinking can also be found even without professional NGO involvement, including bloggers discussing how they overcame alcohol addiction, support pages for those affected by alcoholism and lifestyle articles (Appendix 14). To date, however, there appears to have been no formal attempts

to use behavioural interventions or preventative education strategies to respond to digital marketing or user-created promotion, and no research which has measured the influence of user-created messages that promote lower-risk drinking.

8.4.5. Alcohol and marketing industry

The thesis findings also have implications for the critical reflection of marketing theory and practice (Tadjewski and Brownlie, 2008). The content analysis supports that digital marketing should be updated frequently, link to 360 degree marketing activities, and employ creative strategies which are functional, have varied salient appeal, and encourage participation (Ashley and Tuten, 2014; Chaffey and Ellis-Chadwick, 2012; Kotler and Keller, 2016). The survey results support that digital marketing should employ a ‘marketing mix’ across the varied motivations that consumers have for using the internet (e.g. entertainment, social and information gathering), and provide a range of opportunities to engage with content (e.g. passive exposure, active participation, and co-production of marketing) (Chaffey and Ellis-Chadwick, 2012; Heinonen, 2011). The results also support that social and marketing cognitions, motivations, attitudes, and interactions play an important mediating role in consumer decisions, and that marketers should therefore carefully consider how their messages are presented (Dholakia, Bagozzi and Pearo, 2004; Kotler, Armstrong, Harris and Piercy, 2016; McClure et al., 2013). That user-created promotion was associated with brand knowledge also supports that audiences extend marketing messages through word of mouth, and that such activity is an effective means of influencing consumer behaviour, particularly when the message is considered credible to the recipient (Arnold, 2010; Kotler and Keller, 2016; Levy and Gvili, 2015; Prendergast, Ko and Yuen, 2010; Schmidt and Iyer, 2015; Smith, Coyle, Lightfoot and Scott, 2007; Zhao, Yang, Narayan and Zhao, 2013). The association

between user-created promotion and consumption is also consistent with consumer socialisation theory, which considers that individuals are socialised as consumers through a combination of commercial and interpersonal influences (Kotler et al., 2016; Harris et al., 2015).

Concerning the main public health debate for alcohol marketing (see 8.3.1.a), this thesis has implications for the alcohol and advertising industry position on digital media. The Advertising Association refutes suggestions that digital marketing targets and influences young people (Baker, 2012; Roderick, 2017a). Instead it is suggested that marketers act in accordance with regulations, meet the best standards for age verification, do not target young people, and mitigate inappropriate user-generated content where possible. This position also extends to industry opinions on user content. For example, a 2015 report by think-tank DEMOS, funded by SAB-Miller, suggested that reported declines in consumption by young adults could be partly attributable to social media providing a diversionary activity or negative depictions of alcohol in the media (Birdwell and Wyborn, 2015). The findings presented do not support either position.

There are, however, signs that the alcohol industry has shifted its position towards digital media. A second report by DEMOS, again funded by SAB-Miller, instead acknowledged that marketing does have a small effect on consumption, including in those underage, and that changing media and marketing habits may have increased exposure in younger age groups (Wyborn, 2016). In terms of how to respond to this, the report suggested that although commercial marketing continues to experience tighter regulation more ‘*needs to be done to tackle positive portrayals of excessive drinking in the media more broadly*’ (pg. 45). The position adopted in this second DEMOS report is reflected by the current

findings in two ways. First, the cross-sectional survey showed that digital media has enhanced the ability of marketers to reach young people and that continued tighter restrictions may help to reduce consumption. Second, the findings also support the need for a rethink about reducing depictions of excessive consumption more broadly in the media, and particularly through user-created promotion. Despite these conclusions, alcohol companies continue to place considerable investment into digital marketing, including strategies that are focused on user involvement (Bennett, 2016; MediaKix, 2016; Neisser, 2016; Roderick, 2017b). It is worth noting, however, the second report was only published in September 2016, and therefore the legacy of the report conclusions on industry behaviour (if any) remains unclear.

8.5. Regulatory actions and challenges in addressing alcohol messages online

8.5.1. Current action

Despite opportunities for more stakeholder action (see 8.4), it is important to outline and evaluate the steps already taken to address alcohol message through digital media. To date, it has been the alcohol and marketing industries which have been the most proactive in responding through self- and co-regulatory frameworks. The Portman Group (a collective body of 13 alcohol producers) set the precedent in 2009 by publishing responsible marketing guidelines which applied to over 20 digital media channels. This included targeted marketing (e.g. display banners), downloadable or streamed content, and user-generated branding in official marketing channels (e.g. social media pages) (Portman Group, 2009). These regulations have since been supplemented by digital marketing codes from producers and other industry bodies (AB InBev, 2014; Diageo, 2016b; Heineken, 2015; IARD, 2016; SABMiller, 2014). Such codes do not apply to user-created promotion, providing it does not appear in a industry controlled space.

Responses by the alcohol industry have also been supplemented by changes to independent regulatory codes. For example, in 2011 the Committee of Advertising Practitioners extended their digital remit to include all online marketing channels that were under the control of the alcohol companies (CAP, 2010), including both paid-for advertising (e.g. display banners) and non-paid-for channels (e.g. social media pages) (Internet Advertising Bureau, 2010). This was further enhanced by action from the UK independent broadcast regulator, OFCOM, who extended their remit to include marketing through on-demand video services (e.g. television catch-up), providing it could be established that the content legally fell within the control of UK law (OFCEM, 2009; 2015c). As with industry codes, CAP and OFCEM regulations do not apply to most user-created promotion, unless the content meets certain professional parameters (e.g. an online television show) or features in a brand controlled space (e.g. official marketing YouTube channel).

Self and co-regulatory responses are further bolstered by the terms and conditions set by the website operators. Akin to the CAP regulations and industry guidelines, these codes of conduct outline the behaviours and standards that are expected of site users, both personal and commercial, and also identify irresponsible content that is prohibited. It is assumed that the individual (or company) takes responsibility for adhering to these regulations in order to remain a site user. For example, Facebook's terms of use stipulate that alcohol marketing must *'comply with all applicable local laws and required or established industry codes, guidelines, licenses and approvals; and apply age and country targeting criteria consistent with Facebook's targeting guidelines and applicable local laws'* (Facebook 2017g). As discussed in 8.4.4, most of the action taken by website

operators has only focused on commercial marketing. The only stipulations that uniformly apply to all individual users are the terms and conditions that a user agrees to when registering (and conditions for specific features such as Facebook pages or apps).

There appear to be only a few examples of Governments adapting statutory legislations for alcohol marketing to include digital media (AFS, 2017; Mart, 2017). In 2008, the French Government extended their marketing legislation (known as the Loi Évin) to cover certain forms of digital marketing, for example interstitial or intrusive advertising (e.g. display banners and pop-ups) and content that may appeal to young people (e.g. videos and animations) (Association Nationale de Prévention en Alcoologie et Addictologie, 2008; Gallopel-Morvan et al., 2016; Montonen and Tuominen, 2017). A further court ruling in 2012 indicated that the Loi Évin restrictions also applied to intrusive advertising on social networking sites (Cecchini and Belloni, 2015). This legislative change, however, still does not cover non-intrusive social media pages, micro-blogging, online movies, and smartphone apps (Cecchini and Belloni, 2015; Gallopel-Morvan, Diouf, Lecas, Rigaud and David, 2015; Lecas, 2016). Statutory approaches have also been adopted in Scandinavia. In Finland, for example, the government has prohibited (1) alcohol product placement in games; (2) encouraging individuals to share marketing on social media; (3) consumer comments on social media; (4) online competitions; (5) viral marketing; and (6) ‘advergaming’ (Montonen and Touminen, 2017; Tuominen and Aalto-Matturi, 2015; Yleisradio Oy, 2014). This legislation covers marketing on the internet, games consoles, tablets, and mobile phones. Similar restrictive policies are also reported in Norway and Sweden (AFS, 2017). Nonetheless, given the recent introduction of this legislation in Finland, the impact on exposure to digital marketing and consumption remains hypothetical (Montonen and Tuominen, 2017).

As with self- and co-regulatory frameworks, the legislative approaches adopted by France and Finland only apply to commercial marketing and not user-created promotion (Montonen and Tuominen, 2017). There is evidence of formal judicial systems taking action against internet users who abuse others (Carter, 2014; Laville, 2017; SkyNews, 2015), those who release personal images without permission (Bolton, 2015; Matharu, 2015), and those who commit hacking offences (Eleftheriou-Smith, 2016; Osborne, 2016). The criminal nature, however, means that such acts fundamentally differ from user-created promotion. To the author's knowledge, the only example of statutory action being taken in the context of user-created promotion was a suspended prison sentence and community service order for two individuals who consumed a fish when taking part in the NekNominate drinking game (BBC, 2017; Hawken, 2017). As with the previous examples, however, the conviction relates more to the criminal act of animal cruelty as opposed to the drinking game, and this therefore represents an extreme example that differs from more common user-created promotion (e.g. photos or peer drinking).

In summary, progressive steps have been taken to regulate alcohol content through digital media. Most action, however, has only focused on commercial marketing and does not consider user-created content unless featured in a brand controlled space. Moreover, most action on digital marketing has been based on self and co-regulation policies. This comes against a backdrop of research which suggests that such approaches are not effective (Hastings et al., 2010; Noel and Babor, 2016; Noel et al., 2016; Vendrame et al., 2015), including research into digital marketing (Brooks, 2010; Carah et al., 2015; Carroll and Donovan, 2002). Self-regulatory approaches are also criticised for having inadequate restrictions on exposure, inadequate enforcement, being too reliant on public complaints,

being retrospective and slow, lacking meaningful sanctions, and being out of touch with public opinion (AFS, 2017). Research suggests, however, that the criticisms of self-regulation are not easily resolved by defaulting to statutory legislation. Although the Loi Évin law is cited as an exemplar for marketing legislation (AHA, 2013), research still suggests that over half of young people in France report seeing alcohol advertisements on the internet in the past month (Gallopel-Morvan et al., 2016). There is also a lack of robust evidence for marketing bans in general (Siegfried et al., 2014) and anecdotal suggestions that marketers are already prepared to get around heavy restrictions (Guy, 2016). As such the effectiveness of legislation remains uncertain.

8.5.2. General challenges of regulating new media

Establishing the best practice for regulating digital alcohol content is complicated by the general challenges presented by new media (Cabot and Pindell, 2013; Koske, Bitetti, Wanner and Sutherland, 2014; Marsden, 2008; 2011; Mart, 2017). First, some digital content transcends physical borders, a phenomenon referred to as global commons or extra-territorial content. This means that the responsibility for action does not fit rigidly within the regulations or laws of one country (Koske et al., 2014; Mulgan, 2015; Strang, 2013). Global commons are particularly important for alcohol marketing policy due to inconsistencies in the regulatory approaches across countries (for a review see WHO, 2014). Those responsible for enforcing the marketing ban in Finland, for example, admit that they cannot legislate on marketing produced in other countries, unless proven to be specifically targeted at individuals in Finland (Montonen and Tuominen, 2017). Consequently, it does not stop consumers following global marketing on social media or product placement in global video-streaming services (e.g. Netflix). The challenges of global commons are also impacted by a lack of consistency at an international level. The

EU Audio-visual Media Services Directive, for example, stipulates that regulation of online-streaming services should adopt a ‘*country-of-origin*’ principle (HM Government, 2016; pg. 1; IAS, 2016c). The vacuums of responsibility that are created by global commons only serve to make the inaction of the website operators more notable, as their terms of use provide the only framework that uniformly applies to all users (both personal and commercial), regardless of their national affiliation.

Second, constant media innovation challenges the design and enforcement of regulations. This also means that researchers must attempt to continually evaluate whether these changes also have a negative impact on health (Gordon et al., 2010a; Jernigan, 2009). Early digital marketing research, for example, focused on dotcom and traditional social networking websites (e.g. MySpace). The survey results from this thesis, however, suggests that exposure to these channels has already been superseded by modern and more complex social networking websites, media sharing platforms and instant messaging services. Even when supporting evidence does exist, policies must still be updated to match media developments, unless a blanket policy is applied (e.g. a total ban). This is challenging for statutory approaches, as creating legislation can be a time-consuming process. Legislators must also consider how new digital marketing, such as interactive packaging or virtual reality in on-trade settings, interferes with existing laws on licensing, packaging, and point-of-sale. These challenges support those who suggest that self-regulation is more appropriate for digital content, as the non-statutory nature and input from marketers allows processes to be more flexible, negates the need for costly and time-intensive legislation, and does not require processes for statutory enforcement (ASA, 2013; Baker, 2012; Castro, 2011; Martino et al., 2017; Roderick, 2017a).

8.6. Research limitations and challenges

Several limitations make the findings less generalisable and conclusive. The limitations specific to each study are reviewed in the respective chapters to provide immediate context to the findings (see 5.5.4, 6.5.4 and 7.5.4). Concerning the general limitations, all the studies are based on measurement at only one time point. This is less of an issue for the content analysis, as data was collected over an 18-month period. It is more relevant for the survey, as the findings are open to the possibility that existing drinking may fuel interest in alcohol-related media and not the other way (Jones and Jernigan, 2010). Researchers using cross-sectional designs, however, suggest the fact that users pay any attention to such content supposes that they are receiving some form of reward (Aitken et al., 1988; Anderson et al., 2009). Theories of observational learning, planned behaviour and uses and gratification, also imply that the role that media narratives play in *reinforcing* and *maintaining* health risk behaviours should, to some extents, be considered as important as the factors which initiate the behaviour in the first place.

A second limitation is that the findings cannot be generalised to populations beyond the samples used. In the content analysis, for example, only three websites were included. Although this compares favourably with previous research, the cross-sectional survey showed that young adults also report exposure to marketing and user-created promotion through channels not reviewed, such as smartphone apps and multimedia messaging services. In the cross-sectional survey the sample was small and self-selected, is likely to include a high proportion of undergraduate students, and has a high gender skew towards females. The focus on young adults also means that the findings cannot be generalised to other age groups. This is important as older age groups also demonstrate rapidly increasing rates of internet use, thus creating a need to explore the influence of new media

on their health behaviours (ONS, 2016b). Young people under the age of 18 years in the UK are also under-represented in research into user-created promotion. This study did originally intend to sample young people aged 12-25 years old. This was not possible, however, due to poor uptake in study interest from schools, with only one school agreeing to participate and successfully returning data.

A third limitation is that data collection was disrupted by the transfer of the studentship (June 2014–February 2015). In the content analysis, it is therefore possible that seasonal trends resulting from this disruption may have influenced comparisons between content. For example, user-created promotion on Facebook and Twitter was collected around Christmas, which may have generated more real-world tie ins or appeal to youth (e.g. Father Christmas), compared to marketing content collected in spring and summer. Furthermore, twelve of the most popular alcohol brands in the 2012 rankings did not feature in the 2015 version, when marketing was collected from Twitter and YouTube. This means that the content findings are not wholly representative of marketing from the most popular brands at the later collection stage, and it is possible that new brands in the rankings may have increased in popularity due to innovative digital activities that are not reported. The transfer also caused disruption to survey recruitment. This is important because the first recruitment phase coincided with both Christmas, which may have generated more marketing to promote price offers, and the NekNominate drinking game, which likely increased the volume of user-created promotion. It is also possible that media innovations between the two recruitment phases have not been captured. For example, the number of UK users with a profile on SnapChat and Instagram increased almost two-fold in 2013-2015 (OFCOM, 2016). As both websites had reportedly been employed by alcohol marketers by the second recruitment phase, the survey may

underestimate marketing exposure by not explicitly measuring exposure to these channels (Barry et al., 2015a; Joseph, 2015; Schultz, 2016; Shaw, 2015).

A final general limitation is the lack of comparison and limited use of controlling variables. The content analysis only focused on alcohol marketing or user-created promotion and did not include ‘neutral’ content (i.e. marketing for products not specifically about alcohol). It is therefore not possible to contextualise whether alcohol marketing is exceptional in how it targets and influences audiences, or whether messages of consumption also exist in other online content. This is a particular issue for user-created promotion, as other content that is built around identities synonymous with drinking, for example the Lad Bible (over 17 million Facebook likes⁸) or UniLad (over 20 million Facebook likes¹), may also include messages about alcohol (Appendix 15). Furthermore, by not measuring exposure to neutral content in the survey it is not possible to ascertain how exposure to alcohol marketing and user-created promotion compares to, for example, marketing for soft drinks. Finally, only a handful of control variables were included in the survey. There is plentiful research linking other factors to young adult’s consumption, including education, employment, peer influence, family history, and personality traits (National Institute on Alcohol Abuse and Alcoholism, 2006; Schelleman-Offermans, 2012; Seaman and Ikegwonu, 2010). It is therefore possible that other factors, that are unknown or have not been discussed, may moderate the effect of marketing and user-created promotion. Previous research in the UK has found an effect of alcohol marketing, despite controlling for a range of interpersonal variables (Gordon et al., 2010; Gordon et al., 2011; Harris et al., 2015). This research, however, was only

⁸ Correct as of 20th November 2016

based on young adolescents, and thus understanding of the role that these variables play in young adults requires further investigation.

8.7. Future research agenda

Although this thesis supports an association between digital marketing, user-created promotion and alcohol consumption, further research is warranted. An obvious avenue would be the use of longitudinal designs to explore the associations reported in this thesis. A longitudinal content analysis, for example, would allow mapping of trends in marketing and website innovation. A longitudinal survey could explore causality between the independent variables (digital marketing and user-created promotion), behavioural outcomes (alcohol use and higher-risk consumption), and mediators (expectancies and drinking motives). Although longitudinal investigation of digital marketing continues to emerge (de Bruijn et al., 2016b; Gordon et al., 2010; McClure et al., 2016), research has only focused on a small number of channels and some of the baseline waves are nearly 10 years old, which means that the findings lack application to current digital media. While longitudinal investigation of user-created promotion is based on more recent data collection, such research has a predominant focus on social networking websites and therefore does not account for broader user-created promotion (Boyle et al. 2016; D'Angelo et al. 2014; Huang et al. 2014; Moreno et al. 2014). A longitudinal study with multiple waves, measuring exposure to both digital marketing and user-created promotion, would be of benefit to provide insight into exposure and influence across adolescence and young adulthood.

It is also important to keep pace with the innovation of marketing and new media. While this thesis investigated more digital marketing than previous research, future studies

should also include other convergent channels such as marketing on video and music streaming services (MacLeod, 2013b; Peterson, 2015; Schultz, 2015b), multimedia messaging (Bergen, 2015; Joseph, 2015; Monllos, 2015; Schultz, 2016), virtual reality packaging (Nudd, 2012; Spencer, 2014), product placement in video games (Pasch and Velaquez, 2013), and virtual reality at point of sale (Johnson, 2015b; Nafarrete, 2015). Future channels to be explored for user-created promotion include articles on social entertainment websites (Finnis, 2015), dating applications (Conway, 2015), and generic references in video games (Cranwell et al., 2016). Future research should also consider the content and influence of user-generated branding, as this provides an important intersection between digital marketing and user-created promotion.

The findings of the cross-sectional survey also suggested that social cognitions mediated the association between digital marketing, user-created promotion, and consumption. To date, consumer and audience research into new media has only considered drinking motives, outcome expectancies, perceived social norms, and normative beliefs (Boyle et al., 2016; de Bruijn et al., 2012; Fournier et al., 2013; Kenny, 2014; Litt and Stock, 2011; Stoddard et al., 2012; Thompson and Romo, 2016; Westgate et al., 2014). The role of other social cognition pathways, such as drinking prototypes, drinking identity and brand allegiance, remains unknown. As this study only focused on mediators (variables that help account for the relationship), further research exploring the role of moderators (factors that determine the direction and strength of the effect) is also important. Exploration of substance abuse risk personalities, self-control and liking of advertisements, would be of particular value (Grenard et al., 2013; Koordeman et al., 2012; Woicik, Stewart, Pilhl and Conrod, 2009).

There is also need for innovation in the methods used to investigate exposure to alcohol-related media and the association with knowledge, attitudes, and behaviour consumption. For survey research, exposure could be measured using frequency scales to gain greater insight into the degree of awareness and participation that young adults experience (e.g. de Bruijn et al., 2016a). Research has also suggested the importance of exploring exposure to specific brands, as opposed to exposure to any brand through specific media channels (Roberts et al., 2016; Sigel et al., 2016). Future surveys could therefore enquire whether certain brands achieve greater exposure in young people in the UK, and whether particular brands have a stronger association with consumption. Furthermore, the scale used to measure alcohol use in the survey (AUDIT-C) only provided basic information about consumption. For greater detail, scales such as the Timeline-Follow Back Interview (Sobell and Sobell, 1996) or drinking diaries (Bloomfield, Hope and Kraus, 2013; NHS, n.d.) could be employed. Meier (2011) also suggests a need for innovative approaches that provide greater insight into exposure and influence. Novel suggestions include eye-tracking (Thomsen and Fulton, 2007), following consumers and observing exposure (Meier, 2011), consumer panels to report regular diaries of exposure (Collins et al., 2016; Fox et al. 2015), or forming partnerships with website operators to analyse analytical data on interactions with alcohol-related content.

There are inherent challenges in addressing digital media, some of which currently have no clear solutions (see 8.5.2). As any response requires the active involvement of multiple parties, research which explores stakeholder views of digital marketing and user-created promotion, and what common ground they share with respect to the effectiveness and feasibility of responses, would be fruitful. Such research already exists for overall alcohol strategies (Anderson and Baumberg, 2006; Hawkins and Holden, 2013) and pricing of

alcohol (Giesbrecht, Greenfield, Anglin and Johnson, 2004; Katikireddi et al., 2014). There is only a small amount of this type of research focused on marketing. Fogarty and Chapman conducted semi-structured interviews with both young people aged 18-25 years old in Australia (2013a), and with alcohol policy experts and advocates (2013b). Young people reported limited knowledge of alcohol advertising control policies, and only offered conditional support for tighter restrictions due to doubts about effectiveness. For the policy experts and advocates, there was lack of agreement about the preferred form that regulations should take, where to start and who the policy should be directed at. Although these two studies provide an important starting point, both only had a broad focus on all marketing communications (not just digital), did not consider user-created promotion, and did not include website operators in their sample. These gaps highlight a clear agenda for further research of this nature.

The future research agenda is not isolated to commercial marketing or user-created promotion. Social marketing has been criticised for lacking reflexivity (Tadajewski and Brownlie, 2008). Critical social marketing, on the other hand, has become well-rehearsed in critically evaluating commercial marketing and its impact on knowledge, attitudes, and behaviour (Gordon et al., 2016; Hastings, 2009; Lazer and Kelly, 1973; Truong, 2014). Given the close relationship between social marketing and critical social marketing, there appears to be a logical pathway in which the skills used for scrutinising commercial marketing could also be used to evaluate social marketing activities. For example, messages about lower-risk drinking can be found across a variety of digital media channels and a range of organisations in the UK (e.g. NHS, NGOs, charities, and the alcohol industry). Little is known about the differences in how lower-risk drinking is promoted across this variety of sources, exposure across all media channels, how

consumers interpret the messages suggested about lower-risk drinking, what influence cumulative exposure to such messages has on alcohol consumption, and how this association compares to commercial marketing and user-created promotion. A comparable study to the one reported, but focusing on how digital media promotes lower-risk consumption, would be an important starting point.

8.8. Reflections on the research process

Reflecting on the role of the researcher is an important part of the learning process. Four factors warrant discussion. The first was the transfer of the PhD to the University of Stirling. In my experience, transferring between institutions mid-way through a PhD is rare, meaning there is limited guidance and a great need for intuition and perseverance. The process invokes a myriad of administrative and personal challenges, including informing supervisors about the withdrawal, convincing the new supervisors about the merits of the project, negotiating the administrative processes, the personal and logistical challenges that I experienced when relocating from London to Stirling, adapting to the processes and regulations of a new institution, establishing new working relationships, and minimising the impact on the research project. Nevertheless, I have no doubt that the ends have certainly justified the means.

The second reflection concerns how my personal experiences have influenced the research, or have been altered thus. As a young adult, who drinks alcohol and uses digital media, it was not possible to approach this study without pre-determined views. Rather than a limitation, this familiarity proved advantageous in making key decisions about study design and topic area (e.g. creating the definition of user-created promotion and understanding the ethical challenges of analysing online content). Approaching this topic,

I had never critically considered how digital media may influence health risk behaviours. While the response to digital media requires action from many stakeholders (see 8.4), since undertaking this study I have been increasingly aware of the responsibility that I have as an internet user in terms of what I choose to engage with online, what types of content I share with others, and how I interact with other internet users (see 8.4.4 for further discussion about implications for users).

The third reflection concerns the relationship that I had with the project funders and the connotations raised by the funding source. While I consider myself ‘*a moderate drinker*’, the Salvation Army adopt a position of abstinence in solidarity with those whose lives have been affected by alcohol (Salvation Army, n.d). The Salvation Army also actively advocate for robust alcohol policies to minimise harm (Salvation Army, 2012; 2015). This brought about two challenges. The first was that the funding created preconceptions in others about the research (e.g. a presumed goal of promoting abstinence). The second challenge was ensuring that the research *did* remain objective, and not produce results that simply support an existing organisational position. These challenges presented unique opportunities for me to address perceptions, both highlighting to external groups and researchers that the Salvation Army places great emphasis on evidence-based approaches to reducing alcohol-related harm, and internally by bringing the perspective of a moderate drinker to a group who typically do not consume alcohol.

The fourth reflection focuses on balancing a PhD alongside other commitments. Extra-curricular activities have been almost ever-present throughout my PhD, ranging from teaching statistics to undergraduates, to providing research support in the Institute for Social Marketing and the Salvation Army. At the outset of the PhD process, I had limited

experience of conducting social research, academic writing, and researching alcohol marketing. While the PhD process has enhanced my knowledge in these areas, extra-curricular activities provided further opportunities to develop skills in project management, professional relationships, and data analysis. Involvement in a project that identified and described arguments in population-level alcohol policy debates, provided me with skills in critical appraisal of research and understanding of the bigger picture in alcohol policy. Involvement in a project which explored the presence of alcohol marketing at the UEFA EURO 2016 football tournament, provided a practical means of investigating and understanding the challenges that face marketing regulation (Purves, Critchlow and Stead, 2017). While this balancing act was physically and mentally demanding, and required careful time management and sacrifice, I believe that these experiences have been crucial in shaping the researcher and the content of this thesis.

8.9. Conclusion

In conclusion, this thesis is consistent with suggestions that exposure to digital alcohol marketing and user-created promotion is associated with alcohol-related knowledge, attitudes, and behaviour in young adults. The findings suggest that commercial alcohol marketing features prominently online and is characterised by sophisticated designs and positive messages about consumption. The findings suggest that user-created promotion also features prominently online although, unlike marketing, it is characterised by simple designs and more explicit messages about excessive or higher-risk alcohol use. Concerning exposure, young adults appear to be aware of, and participating with, both digital marketing and user-created promotion, and this exposure is associated with alcohol use, higher-risk consumption, drinking intentions, drinking motives, and outcome expectancies. Despite differences between marketing and user-created promotion,

including the latter having higher levels of exposure and a stronger association with consumption, the findings also highlight a mutual relationship between marketers and users which suggests that the true impact of digital media is best understood through the shared combination of both types of content. In a wider context, the findings highlight a need for further research to better understand how online content influences alcohol use and inform how stakeholders may respond to the link between digital media and health risk behaviours.

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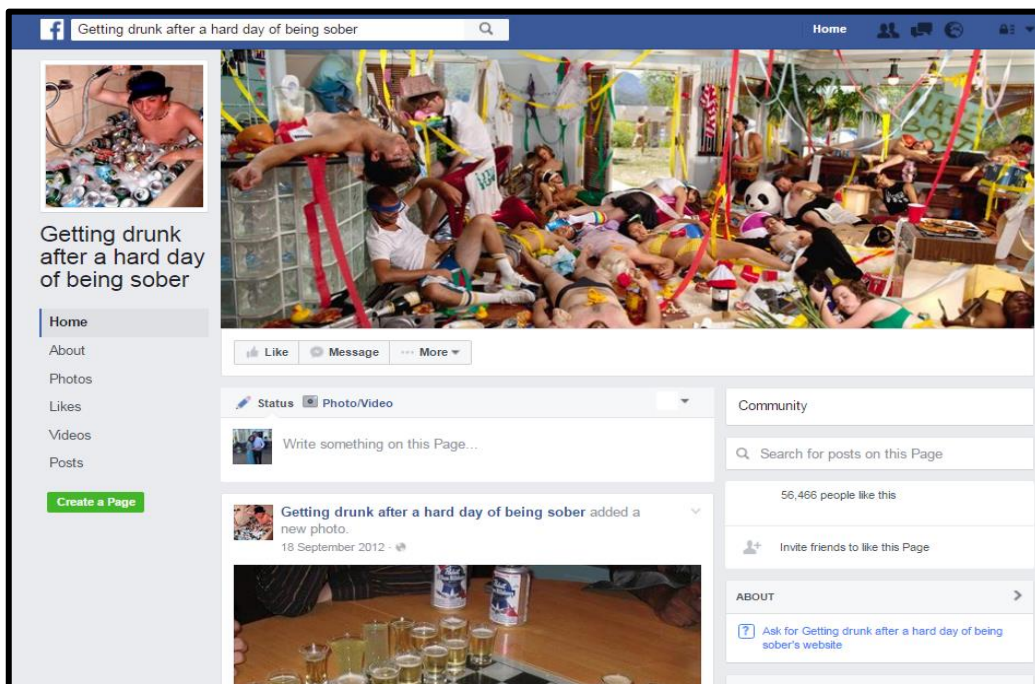
Appendices

Appendix 1: User-generated branding and user-created promotion

User-generated branding

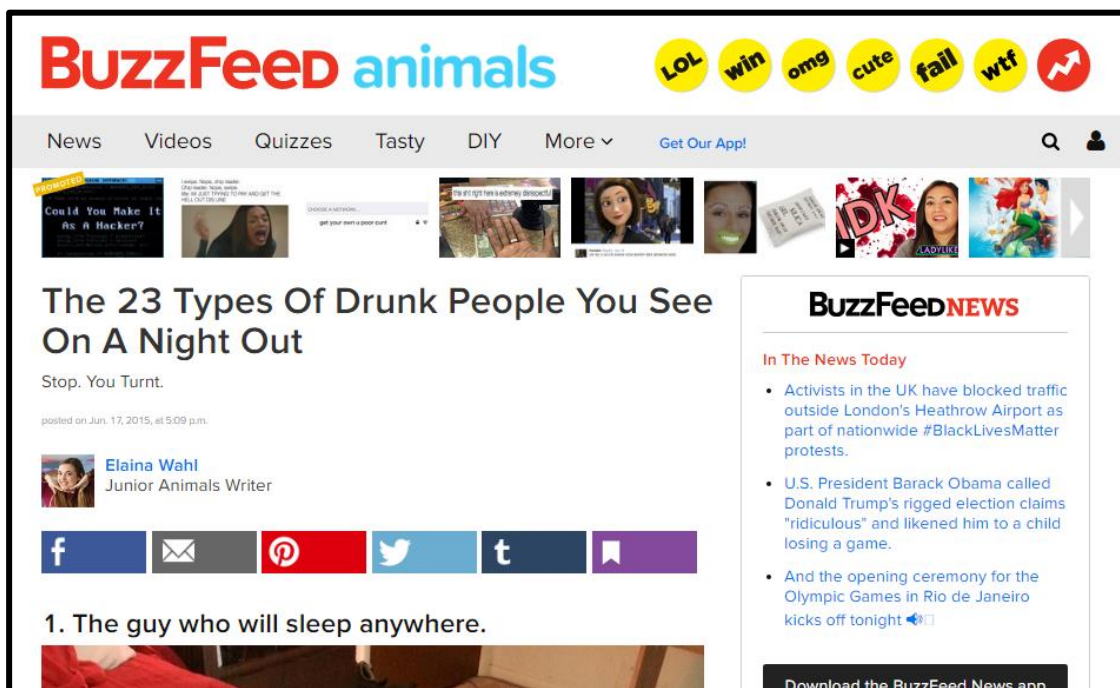


User-created promotion

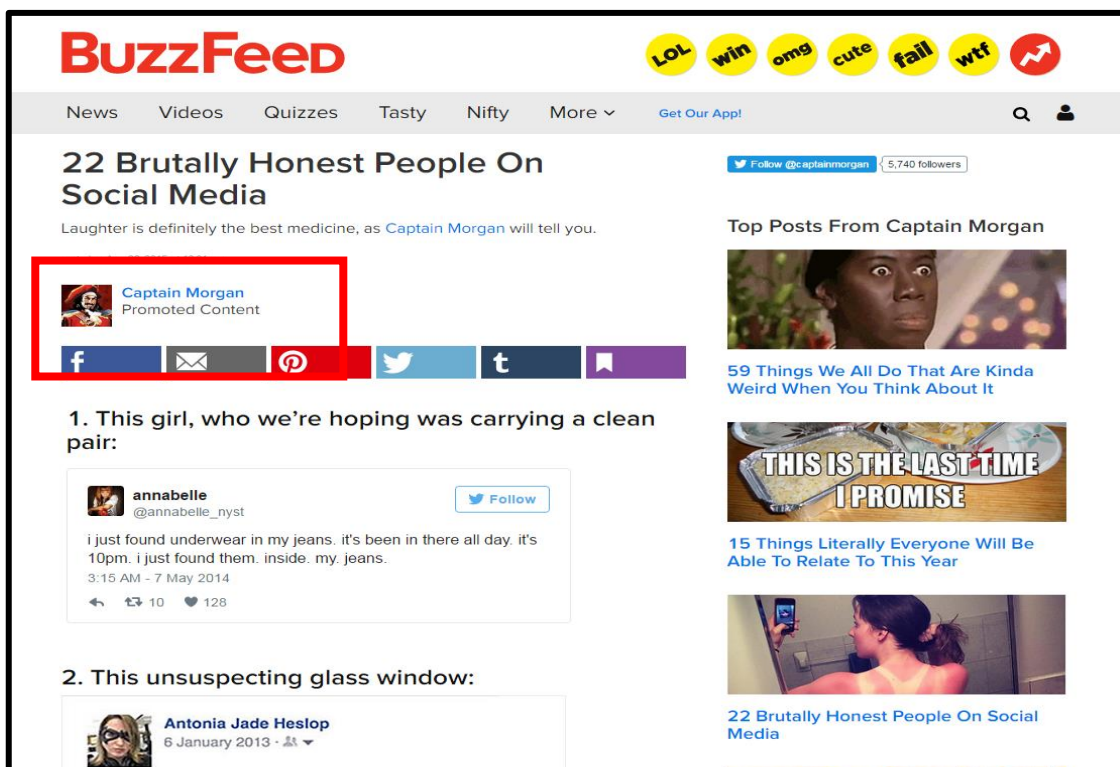


Appendix 2: Social news with and without brand input

Without brand input (user-created promotion)



With alcohol industry input (digital marketing)



Appendix 3: Facebook page

The screenshot shows the Facebook interface for the Guinness GB page. At the top, the Facebook logo and search bar are visible. The main header features a large harp logo with 'ESTD 1759' and a Guinness glass. Below this, the page name 'Guinness GB' is shown with 414,330 likes and 5,222 people talking about it. The 'About' section describes the page as the official one for Guinness fans in GB. Navigation tabs for Photos, Likes, Events, and Videos are present. A 'Guinness Class St. Patrick's Week' event is highlighted. A recent post from Guinness GB is visible, along with a '5 Friends' section and an 'Invite Your Friends' button. The right sidebar contains a 'Recent' list of years from 2013 to 1700s.

Appendix 4: Twitter account

Home Notifications Messages Search Twitter Tweet

Carlsberg
@carlsberg
Probably the best beer in the world
20,313 Followers

TWEETS 4,281 FOLLOWING 1,533 FOLLOWERS 20.3K FAVORITES 9,655 LISTS 2

Carlsberg @carlsberg
Brewing premium lager since 1847. Probably the best beer in the World. By clicking 'Follow' you confirm you are of legal purchasing age in your country.
facebook.com/Carlsberg
Joined July 2012

Tweet to Carlsberg

883 Photos and videos

Tweets Tweets & replies Photos & videos

Pinned Tweet
Carlsberg @carlsberg · Mar 2
170 years ago our founder J.C. Jacobsen was already showing some endurance skills...

1000 KM COPENHAGEN -> MUNICH
MAGICAL YEAST (AND STORE IT IN YOUR HAT BOX)
KEEP YOURSELF HYDRATED AND THE YEAST COLD
IN HORSE CARRIAGE

13 29 View photo

Carlsberg @carlsberg · May 31
Missing the #BPL already? Keep calm and have a Carlsberg.
#Hallucinations

Who to follow · Refresh · View all

- dawsonera** @dawsonera
Followed by Uni Roehampto...
Follow
- Ariana Grande** @Ariana...
Follow
- CampusProject** @RoeCam...
Followed by Uni Roehampto...
Follow

Find friends

Trends · Change

- #Glastonburied**
Find the #Glastonburied treasure for a chance to go to Glastonbury!
Promoted by EE
- #MondayMotivation**
Beat the Monday blues - 14 ways to make your day at work fun
37.6K Tweets about this trend
- Caitlyn Jenner's**
The heartwarming reactions to Caitlyn Jenner's stunning magazine cover
386K Tweets about this trend


https://twitter.com/carlsberg/followers

Appendix 5: YouTube video

The image is a screenshot of a YouTube video player. The main video shows a woman in a black beanie and a denim vest, smiling and holding a glass of red liquid with a candy cane. The video title is "CANDY CANE INFUSED VODKA" and the channel is "TippyBartender". The video has 185,566 views and was published on 23 Dec 2013. The description reads: "CANDY CANE INFUSED VODKA...an amazing treat for the holidays. We used it to make a yummy Candy Cane Hot Chocolate cocktail. Enjoy." The right sidebar features a list of "Up Next" videos, including "How to do a shot Russian style - (International Week) - Tippy Bartender", "How to make Oreo Cookie Infused Vodka", "How to make a Cum Shot - Tippy Bartender", "Glow in the Dark Blue Cocktail - Tippy Bartender", "How to make Bubblegum Infused Vodka", "Nutella Henny Hot Chocolate - Tippy Bartender", "How to make Candy Corn Infused Vodka - (Halloween) - Tippy Bartender", "Chinese Green Tea Lychee Cocktail - (International Week) - Tippy Bartender", "Nutella Fireball Christmas - Tippy Bartender", and "How to make Chocolate Cake Infused Vodka - Tippy Bartender".

Appendix 6: Ethical approval for content analysis

Thu 24/10/2013 13:44

 Jan.Harrison@roehampton.ac.uk
Ethics Application Ref: PSYC 13/ 089

To: critchln@roehampton.ac.uk
Cc: L.Slade@roehampton.ac.uk; D.Bray@roehampton.ac.uk; c.gilvarry@roehampton.ac.uk

Dear Nathan,

Ethics Application
Applicant: Nathan Critchlow
Title: Irresponsibly responsible: The role and effectiveness of self-governed regulations in the protection from harmful alcohol messages
Reference: PSYC 13/ 089
Department: Psychology

On behalf of the Ethics Committee I am pleased to advise you that your Department has approved your above application and confirmed that, apart from the item mentioned below, all other conditions for approval of this project have now been met. Please note that we do not require a response to this condition. Your Department has also approved the minor amendment to your above application dated 11.10.13.

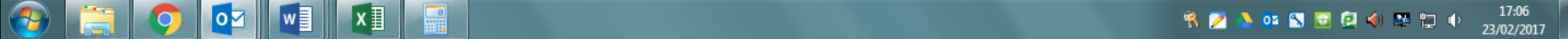
We do not require anything further in relation to this application.

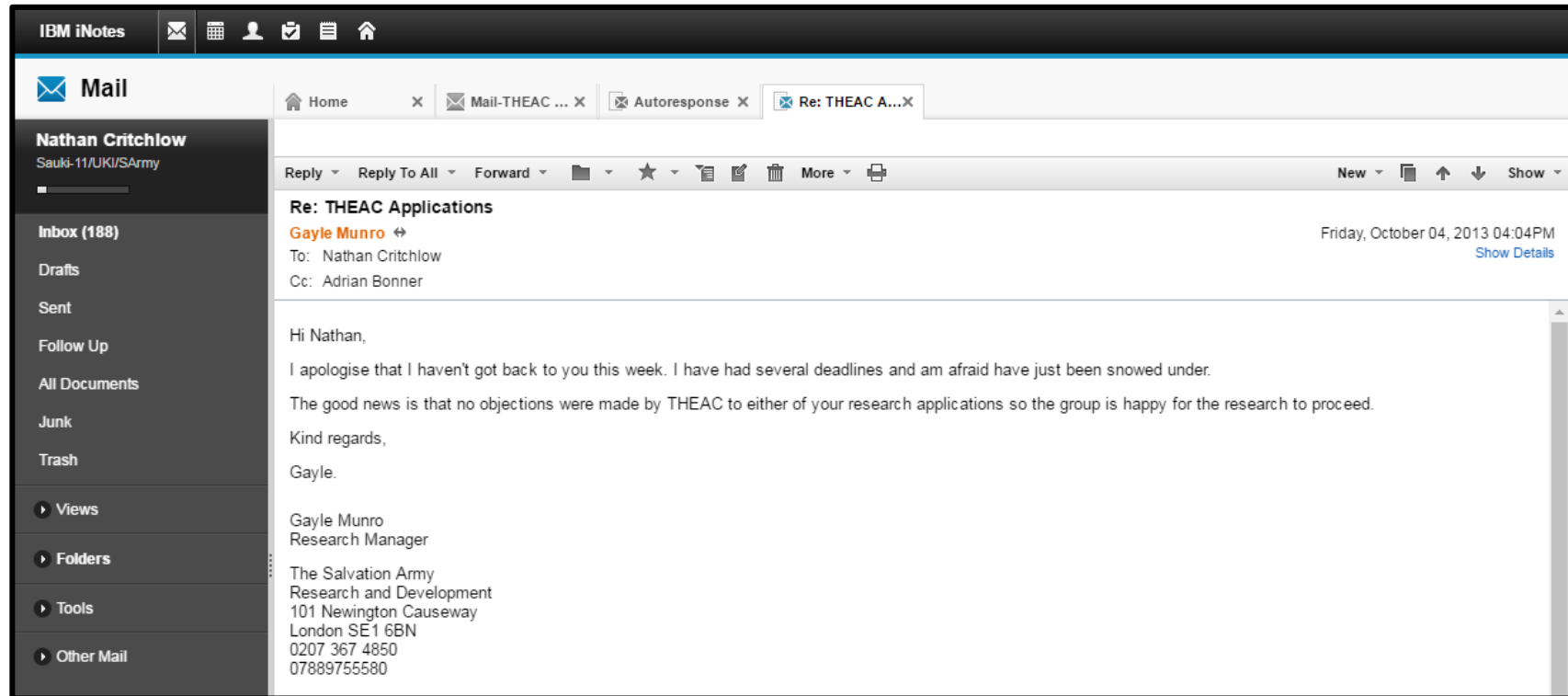
Condition:
 It is our understanding that your procedures are not in conflict with the Terms and Conditions of the social media sites you are using and, under these conditions, the application is approved. Please note that the University does not accept any legal liability should you fail to adhere to these conditions and it is a condition of approval that you do so.

Please advise us if there are any changes to the research during the life of the project. Minor changes can be advised using the Minor Amendments Form on the Ethics Website, but substantial changes may require a new application to be submitted.

Many thanks,
 Jan

Jan Harrison
 Ethics Officer - Research & Business Development Office
 University of Roehampton | Froebel College | Roehampton Lane | London | SW15 5PJ

 17:06
23/02/2017



Appendix 7: Screenshots from cross-sectional survey

The Internet and Alcohol: A 2014 Survey

Aim

The main aim of this research is to explore the relationship between increased alcohol messages on the internet and the effect this has on alcohol consumption in young people (aged 13-25) in the UK.

Sample

For the purposes of this investigation we are only looking for respondents aged between 13-25. You are only allowed to complete the online questionnaire if you are aged 18 or over. If you are aged under 18 please do not continue to complete this questionnaire online.

Prize draw

All participants in this investigation will be invited to take place in a ballot to win one of 5 £10 Amazon vouchers. You will be asked at the end of questionnaire to supply an e-mail address. This e-mail address serves two functions (1) to register your participation in the ballot and (2) so that the winners can be contacted once the ballot has been drawn. The ballot will take place once all the data has been collected. Participation in the ballot is entirely voluntary. E-mail address will not be used for any further research purpose, nor will they be passed to a third party. As soon as the ballot has been drawn, and the respective winners have claimed their prize, then the e-mail addresses will be deleted.

Right to withdraw

You are under no obligation to either start or complete the questionnaire. You can withdraw your participation from the questionnaire at any point without needing to justify your decision and with no consequence to your studies or place in the ballot. You can also request for your data to be withdrawn at any time after completing the questionnaire. In order to do this, please contact the investigator with your participant number, which you will receive at the end of the questionnaire. Please be aware, however, that data may already have been published in aggregate form at the time of request. Finally, if you are a student who is volunteering for course credits as part of an undergraduate module, please be advised that there will be no adverse consequences in relation to assessment for your degree if you decide to withdraw.

Confidentiality and anonymity

All data relating to your participation in this study will be held and processed in the strictest confidence and in accordance with the Data Protection Act (1998). All data will be held securely in password protected computer files and locked filing cabinets. No one outside of the research team will have access to your individual data, and anonymity will be protected at all times. Whilst your responses will be linked to a unique number which you will supply at the end of the investigation and your data which will be identified by your unique number only. Your identity will not be passed on to anyone who is not involved in this study, and will be protected in the publication of any findings.

Contacting the research team

Should use wish to contact any member of the research team, either before or after completing the questionnaire, then please contact either the lead researcher using the below contact details.

Lead Researcher

Name: Nathan Critchlow
Address: Office 2TS University of Stirling
Stirling
FK9 4LA


E-mail: nathan.critchlow@stir.ac.uk

Consent Statement:

- I agree to take part in this research, and I understand that the information I provide will be treated in confidence by the investigator and that my identity will be protected in the publication of any findings.
- I understand that I am free to send any questions I have to the researchers who conduct this study by email (see email address above).
- I am free to withdraw at any point or discuss any concerns with the researchers by email or in person. If I decide to withdraw, I can still request a debrief form from the lead investigator.
- I understand that the information provided by me will be held anonymously, so that it is impossible to trace this information back to me individually. Data will be accessible only to the lead investigator and the research team.

Please note: if you have a concern about any aspect of your participation or any other queries please raise this with the investigator. However, if you would like to contact an independent party please contact the Head of Department or the principal researcher's Director of Studies. The contact details for both individuals can be seen above (and also on the debrief form at the end of the questionnaire).

I can confirm I am between the ages of 18-25 and I agree to take part in this research



<p>What age are you? Please write in the box below.</p> <input type="text"/>
<p>What gender are you? Please tick one box only.</p> <p><input type="radio"/> Male</p> <p><input type="radio"/> Female</p>
<p>Do you regard yourself as belonging to any particular religion? Please select one box only.</p> <p><input type="radio"/> Christian</p> <p><input type="radio"/> Muslim</p> <p><input type="radio"/> Buddhism</p> <p><input type="radio"/> Jewish</p> <p><input type="radio"/> Sikh</p> <p><input type="radio"/> No religion</p> <p><input type="radio"/> Other (please specify)</p> <input type="text"/>
<p>To which ethnic group do you belong to? Please tick one box only.</p> <p><input type="radio"/> White British</p> <p><input type="radio"/> White Irish</p> <p><input type="radio"/> White/Black Caribbean</p> <p><input type="radio"/> White/Black African</p> <p><input type="radio"/> White Asian</p> <p><input type="radio"/> Indian</p> <p><input type="radio"/> Pakistani</p> <p><input type="radio"/> Bangladeshi</p> <p><input type="radio"/> Chinese</p> <p><input type="radio"/> Caribbean</p> <p><input type="radio"/> African</p> <p><input type="radio"/> Do not wish to say</p> <p><input type="radio"/> Other (please specify)</p> <input type="text"/>
<p>Have you used the internet in the last 12 months? Please tick one box only.</p> <p><input checked="" type="radio"/> Yes</p> <p><input type="radio"/> No</p>
<p>What devices do you use or have previously used to access the internet? Please tick all those which apply to you.</p> <p><input type="checkbox"/> Shared Computer</p> <p><input type="checkbox"/> Personal Computer (including laptop)</p> <p><input type="checkbox"/> Tablet (e.g. iPad)</p> <p><input type="checkbox"/> Smartphone or Mobile Phone (e.g. iPhone, Windows Phone)</p> <p><input type="checkbox"/> School, university or work computer.</p>

Which of the following websites are you a member of (i.e. have a registered and active account or profile)? Please tick all that apply.

<input type="checkbox"/> Facebook	<input type="checkbox"/> Bebo
<input type="checkbox"/> Twitter	<input type="checkbox"/> Pinterest
<input type="checkbox"/> Google+	<input type="checkbox"/> LinkedIn
<input type="checkbox"/> YouTube	<input type="checkbox"/> Ebay
<input type="checkbox"/> Myspace	<input type="checkbox"/> Amazon
<input type="checkbox"/> Instagram/Tumblr/Flickr	<input type="checkbox"/> Blogger

How often do you use the internet? Please tick one box only.

Never - six times a year

Once a month

Twice a month

Once a week

Twice a week

Three times a week

Four times a week

Five-six times a week

Everyday

On average, how long do you spend on the internet per day? Please tick one box only.

I don't use the internet

30 minutes

1 hour

1-2 hours

3 hours

4 hours

5-6 hours

7-8 hours

9+ hours

Think about ways you have seen alcohol advertised in the last 30 days. How was the alcohol advertised? Please tick as many as you feel apply to you.

- Websites (e.g. www.carlsberg.com or www.lambrini.co.uk).
- Facebook (or equivalent social networking site such as MySpace)
- Twitter (or equivalent micro blogging site such as Reddit)
- YouTube (or equivalent video sharing site such as DailyMotion)
- E-mail (including chain e-mail, viral e-mail)
- Mobile (including screen savers and apps)
- Event sponsorship (e.g. Smirnoff NightLife Exchange)
- Magazines
- Television (including programme sponsorship)
- Sports sponsorship
- In store posters
- Billboards/posters
- Newspapers
- Packaging
- Price promotion/offers

Advertising companies are increasingly using the internet to advertise their products. At the same time people who use the internet are increasingly using the internet to discuss alcohol and the effect alcohol has, both with their friends and other internet users.

The next section is about different ways which you have seen alcohol advertised or discussed online, and whether you have engaged with these messages. Remember we are interested in your experience, not the experiences of others.

The first part of this section is about how alcohol is advertised by brands or the companies which make alcohol. This includes beer, wine, cider, 'alcopops' (i.e. Barcadi Breezer), spirits (including rum, vodka, sambuca, tequila) and whiskey.

When you are ready to start the next sequence of questions please tick the box below.

- Ok, lets go!


>>

In this section, please look at the example or pairs of examples given. Once you have looked at the example(s) please answers the questions immediately underneath.

The images and brands shown are only examples. If you have seen or engaged with a form of advertising shown but with an alcohol brand which is not shown you should still answer yes.

Example: You may not have seen or used Foster's Facebook page before (which is example used) but you may have seen or used Carlsberg's Twitter page. In this case you would still answer 'Yes'.


By alcohol brand we mean this includes Beer, wine, cider, 'alcopops' (i.e. Barcadi Breezer), spirits (including rum, vodka, sambuca, tequila) and whiskey.



Alcohol company websites (such as www.carlsberg.co.uk, www.strongbow.co.uk)

	Yes	No
Have you seen a website created by an alcohol company?	<input type="radio"/>	<input type="radio"/>
Have you accessed a website created by an alcohol company?	<input type="radio"/>	<input type="radio"/>

>>




Official social network accounts or pages created by an alcohol company (e.g. Smirnoff's official Facebook and Twitter page).

	Yes	No
Have you seen a Facebook, Twitter or other social network page which has been created by an alcohol company?	<input type="radio"/>	<input type="radio"/>
Have you ever liked, commented, shared or interacted with a Facebook, Twitter or other social networking page which has been created by an alcohol company?	<input type="radio"/>	<input type="radio"/>



Videos or video adverts made by an alcohol company (e.g. Carlsberg's 'Fan Academy' or associated adverts on YouTube).

	Yes	No
Have you seen a viral video or video advert made by alcohol company on the internet?	<input type="radio"/>	<input type="radio"/>
Have you watched, commented on or shared a funny video or advert made by an alcohol company?	<input type="radio"/>	<input type="radio"/>



Smartphone applications or mobile games made by an alcohol company (e.g. WKD's 'Big Head' iPhone application, Smirnoff's 'Recipie App').

	Yes	No
Have you seen a smartphone application or mobile game created by an alcohol company?	<input type="radio"/>	<input type="radio"/>
Have you downloaded, used or played a smartphone application made by an alcohol company?	<input type="radio"/>	<input type="radio"/>



Online games or interactive applications made by an alcohol brand (e.g. Strongbow's Penalty Shootout' or Budwesier's 'Create your own FA Cup Fan Film).

	Yes	No
Have you seen online games or interactive applications created by an alcohol brand?	<input type="radio"/>	<input type="radio"/>
Have you either played or used an online game or interactive application made by an alcohol brand?	<input type="radio"/>	<input type="radio"/>

Sponsored Create an advert

Sailor Jerry UK



Sailor Jerry is a straight-up, no nonsense spiced rum. The flavour's strong, but it goes down smooth.

Beck's Vimeo Takeover



In 2011 Beck's created The Green Box Project, a new way to see art, music, design and fashion. Click to see what we have done to Vimeo

Get Phuzza'd



Phuzza (pronounced Pooh-za) is the Zulu term for drink and Thursday is the day on which wild South Africans are getting phuzza'd.

OR

Who to follow · refresh · view all



Heineken_Beer Heiskan · Follow
Promoted · Followed by @Official_RFU and others.



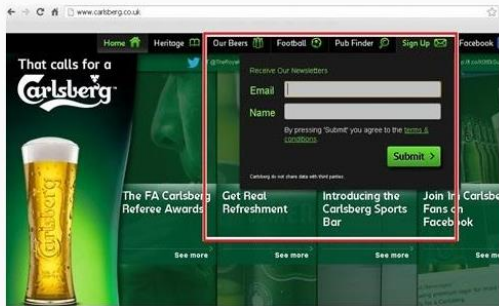
DuncanCastles Duncan Castles · Follow
Followed by @DuncanCastles and others.



JerryTBarton Joseph Barton · Follow
Followed by @JTB and others.

Display adverts or promoted messages from alcohol companies (e.g. adverts on websites, promoted 'Tweets').

	Yes	No
Have you seen a display advert, created by an alcohol brand which advertises an alcoholic drink?	<input type="radio"/>	<input type="radio"/>
Have you clicked on a display advert, created by an alcohol company, which advertises an alcoholic drink?	<input type="radio"/>	<input type="radio"/>



E-mail 'newsletters' or alternative streams of information from alcohol brands

	Yes	No
Have you seen a newsletter, prompt to sign up for a newsletter or another stream of information from an alcohol company?	<input type="radio"/>	<input type="radio"/>
Have you signed up to , or received a newsletter or another stream of information from an alcohol company?	<input type="radio"/>	<input type="radio"/>



Mobile phone or laptop 'screensavers' or other downloadable content (e.g. ringtones) which have been created by an alcohol company.

	Yes	No
Have you seen a mobile phone wallpaper, computer screen saver or other downloadable content created by an alcohol company?	<input type="radio"/>	<input type="radio"/>
Have you downloaded or used any content created by an alcohol company for your mobile phone or computer?	<input type="radio"/>	<input type="radio"/>



Advertisements at the start of on-demand television (such as 4OD or ITVPlayer)

	Yes	No
Have you seen a video advert at the start of online on demand television which advertises an alcohol company.	<input type="radio"/>	<input type="radio"/>
Have you watched, clicked on or shared a video advert at the start of on-demand TV which advertises an alcohol company?	<input type="radio"/>	<input type="radio"/>



Online competitions run by an alcohol brand (e.g. "Strongbow's Penalty Challenge" or Budweiser's 'Win Tickets to the FA Cup Final')

	Yes	No
Have you seen an online competition made by an alcohol company?	<input type="radio"/>	<input type="radio"/>
Have you entered an online competition made by an alcohol company?	<input type="radio"/>	<input type="radio"/>



Online shop selling alcohol or alcohol merchandise (e.g. Stella Artois online or Jack Daniel's t-shirts).

	Yes	No
Have you seen an online shop which sells alcohol or alcohol merchandise (e.g. t-shirts)?	<input type="radio"/>	<input type="radio"/>
Have you shopped from or bought any item from an online shop which sells alcohol or alcohol merchandise (e.g. t-shirts)?	<input type="radio"/>	<input type="radio"/>

This next section is interested in the ways you have seen alcohol or the effects of alcohol displayed or discussed online by others.

By 'others' we mean friends, family, celebrities, strangers or any other individual not related to an alcohol brand. Remember we are interested in your experience, not the experiences of others.

By alcohol we mean: Beer, wine, cider, 'alcopops' (i.e. Barcadi Breezer), spirits (including rum, vodka, sambuca, tequila) and whiskey.


When you are ready to start the next sequence of questions please tick the box below.

Okay, lets go!

The method of answering for this section is identical the section you have just completed.

As a reminder, please look at the example, or pairs of examples, given. Once you have looked at the example(s) please answers the questions immediately underneath.


The images shown are only examples. If you have seen or engaged with a form of alcohol discussion or image which mirrors an example but is not identical (e.g. you have seen a motion-enabled GIF, but not a YouTube video) you should still answer 'Yes'.



The screenshot shows a Facebook news feed. A status update is highlighted with a red box. The status text reads: "Ha! Soo drunk right now. Having a cracking time. Going to be feeling this tomorrow!". Below the status, there is a comment that says: "Lol! Where you at mate, Can come and meet you?". The status has 2 likes and was posted 2 seconds ago. Below the status, there is a link titled "Why Can't England Play With A Smile?" with a thumbnail image of a football player.

Facebook statuses and/or other social networking updates or comments about drinking alcohol or the effects of drinking alcohol.

	Yes	No
Have you seen a Facebook status, Twitter 'Tweet' or other social networking update about drinking alcohol or the effects of drinking alcohol?	<input type="radio"/>	<input type="radio"/>
Have you written your own Facebook status or social network update about alcohol or its effects, or have you liked, commented or shared somebody else's update status update about alcohol or its effects?	<input type="radio"/>	<input type="radio"/>



The photograph shows a person lying face down on a wooden floor. They are surrounded by a large number of empty white and red plastic cups, arranged in a circle around them. The scene appears to be indoors, possibly in a living room or a similar setting. The photo is a screenshot from a social media post, with text at the bottom that reads: "REMEMBER WHEN I GOT RLY DRUNK, PASSED OUT, AND THEN THIS PICTURE HAPPENED".

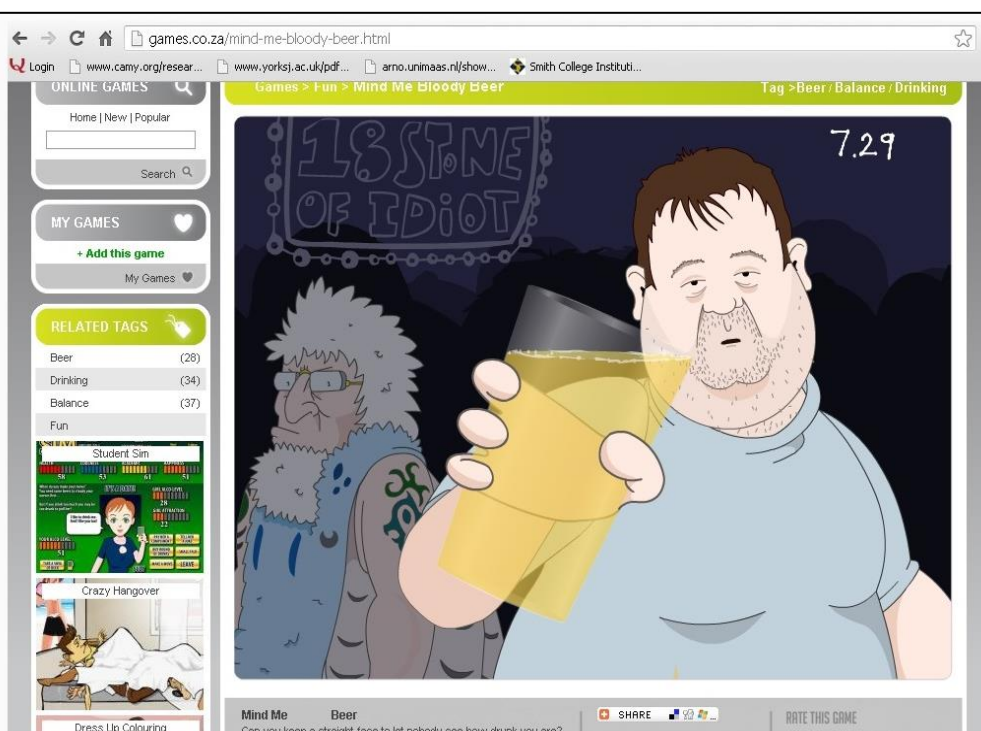
Photos of yourself, friends or other people (including celebrities) drinking alcohol or showing the effects of drinking alcohol (e.g. acting drunk or hungover).

	Yes	No
Have you seen photos of friends or other people drinking alcohol or acting drunk? (e.g. on Facebook Twitter or Instagram)	<input type="radio"/>	<input type="radio"/>
Have you uploaded, shared, commented or liked a photograph which shows you, your friends, or other people drinking alcohol or showing the effects after drinking alcohol?	<input type="radio"/>	<input type="radio"/>



Content or messages sent through modern multimedia messaging (e.g. SnapChat, Vine, BBM, WhatsApp or viral e-mails) which show alcohol consumption or the effects of alcohol consumption

	Yes	No
Have you seen an e-mail or messages (including viral e-mails, BBM, SnapChat and WhatsApp) about alcohol or the effects of alcohol?	<input type="radio"/>	<input type="radio"/>
Have you sent, received or forwarded a message (including e-mail, SnapChat, BBMor WhatsApp) about alcohol or the effects of alcohol?	<input type="radio"/>	<input type="radio"/>



Interactive games on the internet which are about alcohol or the effects of drinking alcohol (such as 'Don't Spill My Pint' or 'Digital Bartender').

	Yes	No
Have you seen interactive games about alcohol that you can play on the internet?	<input type="radio"/>	<input type="radio"/>
Have you played an interactive game about alcohol on the internet?	<input type="radio"/>	<input type="radio"/>

Groups or fan pages on Facebook (or other social networking sites) about alcohol or the effects of drinking alcohol? (e.g. 'Go home, you're drunk' or other parody accounts).

	Yes	No
Have you seen groups or fan pages on Facebook about drinking alcohol, or its effects? (e.g. 'Go Home You're Drunk')?	<input type="radio"/>	<input type="radio"/>
Have you liked, commented on or shared a page on Facebook about drinking alcohol, or the effects of drinking alcohol?	<input type="radio"/>	<input type="radio"/>

Online videos about drinking alcohol or the effects of drinking alcohol (e.g. 'The Ultimate Drunk Fails Compilation' on YouTube or 'How to drink a pint in 4 seconds!').

	Yes	No
Have you seen a funny video about drinking alcohol or the effects of drinking alcohol?	<input type="radio"/>	<input type="radio"/>
Have you watched, shared, commented on or uploaded a video about drinking alcohol or the effects of alcohol?	<input type="radio"/>	<input type="radio"/>



Smartphone applications and games about alcohol or the effects of drinking alcohol which have NOT been made by an alcohol company (such as 'Beer Goggles' or 'Pretend to Drink a Pint').

	Yes	No
Have you seen smartphone applications about alcohol or the effects of alcohol (e.g. Beer Goggles)?	<input type="radio"/>	<input type="radio"/>
Have you downloaded, used or played a smartphone application about alcohol or the effects of alcohol?	<input type="radio"/>	<input type="radio"/>

Top 10 Beers

[new topic](#) [post reply](#) Page 1 of 7 [64 posts] Go to page [1](#), [2](#), [3](#), [4](#), [5](#) ... [7](#) Next

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Author	Message
	<p>Post subject: Top 10 Beers Posted: Sat Apr 13, 2013 4:17 pm</p> <p>offline</p> <p>1 Erdinger Dunkel 2 Wehenstaphaner Dunkel 3 Erdinger Heffeweisen 4 Grimbergen Belgian Double 5 Sam Smiths Bitter 6 York Brewery Yorkshire Terrier 7 Black Sheep Bitter 8 Sam Adams Chocolate Bock 9 Fullers ESB 10 ... Smithwicks Irish Ale</p> <p style="text-align: right;">!</p> <p>Top profile pm quote</p>
	<p>Post subject: Re: Top 10 Beers Posted: Sat Apr 13, 2013 4:21 pm</p> <p>offline</p> <p>Little creatures ale brewed in Fremantle, better than anything I've tasted in the UK although I wouldn't admit it to the locals.</p> <p style="text-align: right;">!</p>

Forums discussing alcohol or the effects of alcohol? (such as www.thestudentroom.co.uk).

	Yes	No
Have you seen forums which discuss the drinking of alcohol or the effects of drinking alcohol?	<input type="radio"/>	<input type="radio"/>
Have you written or contributed to a forum discussing alcohol or the effects of alcohol?	<input type="radio"/>	<input type="radio"/>

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Random Quiz Polls Surveys Questions Scored Quizzes Personality Quizzes

what kind of drinker are you

by: |

114 Responses Take this first to vote! Like 0 Add to Favorites

do you know what kind of drinker you are? are you fun and exciting, the center of attention! do you get depressed and sad and think about passed love or passed experiences! are you loud and roudy and like to start fights and alot of drama?

1 Do dance when your at a party?

- Yeah, im usually the first one on the dance floor.
- yea a little but im mostly sitting down
- sometimes but rather sit down and judge the ppl that are dancing

2 who or what do you think of when you at a party?

- i dont think im to busy having fun

Created by [Profile Picture] 20 Send Friend Request

Online quizzes about alcohol (e.g. 'what type of drinker are you?')

	Yes	No
Have you seen quizzes on the internet which are about alcohol or the effects of drinking alcohol?	<input type="radio"/>	<input type="radio"/>
Have you created or completed a quiz on the internet or the effects of drinking alcohol?	<input type="radio"/>	<input type="radio"/>

I suggest we drink before we go out drinking.



someecards

Online photos about alcohol of effects of alcohol not created by friends (e.g. 'memes')

	Yes	No
Have you seen an online photo about alcohol or effects of alcohol which was not created by either you or your friends? (e.g. funny parody photo)	<input type="radio"/>	<input type="radio"/>
Have you ever liked, shared or commented on an online photo about alcohol or effects which is not about or created by you or your friends?	<input type="radio"/>	<input type="radio"/>



Party Problems @Partyprobs
Drunk me and sober me are two totally different people
Expand



drunk @drunk
Get me drunk and ill tell you whatever you want to
Expand ← Reply ↻ Retweet

Twitter accounts (or equivalent micro blogging site) or Tweets about alcohol or the effects of drinking alcohol.

	Yes	No
Have you seen a Twitter Accounts or Tweet about alcohol or the effects of drinking alcohol? (incl. celebrities or friends).	<input type="radio"/>	<input type="radio"/>
Have you followed a Twitter account, or written or 'retweeted' a Twitter Tweet about alcohol or the effects of drinking alcohol?	<input type="radio"/>	<input type="radio"/>

We would like to ask you some questions about alcohol consumption. Remember all responses provided to this study are completely anonymous. We will not tell anybody your answer. Only you will know what you have put.

To clarify by alcohol we refer to; Beer, wine, cider, 'alcopops' (i.e. Barcadi Breezer), spirits (including rum, vodka, sambuca, tequila) and whiskey.

Have you ever had a proper alcoholic drink - a whole drink, not just a sip? Please tick one box only.

Yes
 No

How old were you when you had your first alcohol drink? Please select one from the list below.

▼

How often do you drink an alcoholic drink? Please tick one box.

Never
 Monthly or less
 2-4 times per month
 2-3 Times per week
 4+ times per week

How many units of alcohol do you drink on a typical day when you are drinking? Please tick one box.

To calculate please use the picture below which indicates the typical number of units per drink type. Please multiply the number units by the number of drinks you would have on a typical day.



- 1-2 units
- 3-4 units
- 5-6 units
- 7-9 units
- 10+ units

How often have you had 6 or more units if female or 8 or more if male, on a single occasion on the last year? Please tick one box only.



- Never
- Less than monthly
- 1-3 times a month
- 1-2 times a week
- Three or more times a week

Do you think you will drink an alcohol drink in the next 6 months - a whole drink not just a sip? Please tick one box only.

- Yes
- No

Can you tell us the names of as many makes or brands alcohol that you can think of (up to a maximum of ten)? Please use the text boxes below.

This is **not** a test. We are interested in how many alcohol brands you are able to remember from memory. Once you have recorded all the brands you can think of then please move on to the next questions using the button below.

The following questions contain statements about the effects of alcohol. Please answer each statement according to your own personal feelings and beliefs about alcohol. We're interested in what YOU think, even if you have not drunk alcohol before.

Please indicate the extent to which you agree with the following statements by circling the appropriate number for each question

When I drink alcohol, I expect that.....

	Disagree	Slightly Disagree	Slightly Agree	Agree
I would enjoy sex more	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would feel moody	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be more courageous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be clumsy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be loud, boisterous or noisy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would feel calm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be a better lover	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would act aggressively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It would be easier to talk to people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would feel guilty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be more brave and daring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would feel peaceful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would take risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would feel dizzy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would act sociable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The following questions focus on why you have drank alcohol in the last 12 months. Remember we are interested in why YOU drank, not others. Please be open and honest in your responding.

Please read the statements to the left and indicate to what extent you agree using the scales to the right.

	Never	Sometimes	Almost Always
In the last 12 months I drank to be liked.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last 12 months I drank because it improves parties and celebrations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last 12 months I drank so I wouldn't be left out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last 12 months I drank because I like the feeling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last 12 months I drank to fit in with a group I liked.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last 12 months I drank because it helped me enjoy a party.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last 12 months I drank to forget about my problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last 12 months I drank because it helps me when I feel depressed or nervous.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last 12 months I drank to get high.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last 12 months I drank to cheer me up when I was in a bad mood.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last 12 months I drank because it make social gatherings more fun.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last 12 months I drank because it was fun.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



All done! Thank you for participating in our questionnaire.

The purpose of this investigation was to explore the role the internet plays in encouraging increased alcohol consumption in young people in the UK. Previous research has suggested that alcohol marketing is strongly linked to increased alcohol consumption in young people, and this research has sought to extend this understanding to digital marketing and the role of underlying psychological processes. It is important to further acknowledge that a lot of the content on the internet is generated by us as users. Therefore, this study has further looked at how exposure to user generated content also influences consumption, expectancies and motives to consume.

The findings of this study will be used to help researchers find new ways help reduce the amount of information about alcohol on the internet, and suggest new ways to help make the internet as safe as possible. The findings will be published as part of a PhD research thesis as well as professional reports for the Salvation Army.

Remember all the information you have provided in this study is completely anonymous and confidential. No individual details will be published in any form, nor will any information be used to offer an assessment of a specific individual or be shared with a third party.

You are, of course, free to withdraw your data from this investigation. In order to allow you the opportunity to withdraw your data at a later point please specify a code (unique to you) in the box below. This code must include both numbers and letters, is not case sensitive (e.g. lik09), but should be something which you can easily remember. If you want to remove your data please let any members of the research team know, no later than 30th March 2015.

Remember alcohol consumption is a choice. You should never feel any pressure to consume alcohol if you do not want to.

If you would further information on alcohol, or the effects of alcohol please click on any of the links below;

[NHS Live Well Information](#)

[Talk to Frank!](#)

[The Salvation Army Addiction Support](#)

[DrinkAware](#)

If you would like to discuss your participation in the this study with a member of the research team please contact either the primary researcher (Nathan Critchlow: critchln@roehampton.ac.uk)

You are under no obligation to either start or complete the questionnaire. You can withdraw your participation from the questionnaire at any point without needing to justify your decision and with no consequence to your studies or place in the ballot. You can also request for your data to be withdrawn at any time after completing the questionnaire. In order to do this, please contact the investigator with your participant number, which you will receive at the end of the questionnaire. Please be aware, however, that data may already have been published in aggregate form at the time of request. Finally, if you are a student who is volunteering for course credits as part of an undergraduate module, please be advised that there will be no adverse consequences in relation to assessment for your degree if you decide to withdraw.

Prize Draw Ballot and SONA Credits

As a thank you for taking part in this research every participants has the chance to enter a ballot to win 1 of 5 £10 Amazon Vouchers.

If you would like to take part in the ballot to win one of 5 £10 Amazon vouchers then please click yes below. Once you have clicked yes you will be 'redirected' to a new webpage where you will be asked to submit an e-mail address. You will be redirected to this new webpage to ensure your e-mail address is received separate to your questionnaire response to ensure the anonymity of your data.

The ballot will take place at the end of the data collection, to ensure all participants have the chance to take part. This is scheduled to take place in March 2015.

If you have taken part in this research as part of The University of Roehampton's SONA participant recruitment scheme then please also select 'Yes' below. You will be redirected to this new webpage to ensure your e-mail address is received separate to your questionnaire response to ensure the anonymity of your data.

Yes, I want to take part in the ballot or receive credits as part of the SONA scheme. No, I don't want to take part in the ballot or receive credits as part of the SONA scheme.



>>

Appendix 8: PCA and CFA of B-CEOA

Analysis

A Principal Component Analysis (PCA), with oblique rotation (direct oblimin), was used to explore whether the previously suggested four-factor structure of the B-CEOA was also applicable for the current sample of 18-25 year olds in the UK (Ham et al., 2005). The suggested PCA structure was also tested through a Confirmatory Factor Analysis (CFA). Both analysis were conducted using SPSS version 21 and AMOS version 23. The Comparative Fit Index (CFI, ≥ 0.95), Root Mean Square Error of Approximation (RMSEA, ≤ 0.07), and Standardized Root Mean Square Residual (SRMR, ≤ 0.08) were used as model fit indices (Hooper, Coughlan and Mullen, 2008; Hu and Bentler, 1999). These indices mirror those used in previous validations of the B-CEOA (Ham et al., 2005; Ham et al., 2012). The internal consistencies were tested using Cronbach's Alpha.

Exploratory factor analysis

The Kaiser-Meyer-Olkin measure verified the sampling adequacy for analysis, KMO = 0.82 ('good', Field, 2013). Bartlett's test of sphericity indicated the correlations between items were sufficiently large enough for the PCA, $\chi^2(105) = 2171.10$, $p < 0.001$. Four components had initial eigenvalues over Kaiser's criterion of one and explained 62% of the variance. The scree plot showed inflexions which justified either a two or four-factor model. This was expected, as the B-CEOA scale can also be divided into two higher order groupings (positive and negative) as well as four thematic groups (Ham et al., 2005; Ham et al., 2012). Given this thesis focused on the thematic scales (see 4.6.5.h), the four components highlighted by the Kaiser criterion were used. The four factors suggested largely matched the original B-CEOA and included subscales of Risk/Liquid Confidence/Sociability (R/LC/Social, six items, $\alpha = 0.87$), Cognitive Behavioural Impairment and Self-perception (CBI/SP, four items, $\alpha = 0.56$), Sexual outcomes (two items, $\alpha = 0.76$), and Tension reduction (two items, $\alpha = 0.74$) (Ham et al., 2005).

Differences in items loading compared to the original B-CEOA

Compared to the original four-factor structure suggested for the B-CEOA (Ham et al., 2005), the current exploratory PCA showed two differences in item loading. First, the item '*I would be clumsy*' loaded onto the R/LC/Social subscale, not CBI/SP. This item, however, did also show significant loading onto both subscales in the original validation

(Ham et al. 2005), and therefore this is not considered a significant departure from previous research. Second, the item '*I would be aggressive*' loaded onto the CBI/SP subscale, as opposed to the Sexuality or Risk and Aggression subscale (Fromme et al., 1993; Ham et al. 2005). Research has shown, however, that aggression is sometimes grouped with Self-Perception items in the evaluation subscales of the B-CEOA and longer CEOA scale, thus providing a rationale that it could also do so for the outcome component of the B-CEOA in different populations (Ham et al., 2005; Valdivia and Stewart, 2005). Aggression is also thematically similar to the other items in the subscale suggested in this PCA (as they all infer a change in emotional state) and the item also had comparable factor loading to the traditional CBI/SP items (e.g. feel moody). Aggression is also grouped with the CBI/SP items when the B-CEOA is grouped into higher-order positive and negative categories (Ham et al., 2012). Given the possible theoretical explanations for both variations, the items are therefore retained on the subscales suggested in the CFA and main thesis (Chapter 7).

Table 1: PCA of the B-CEOA, Obliquely rotated pattern matrix factor loadings

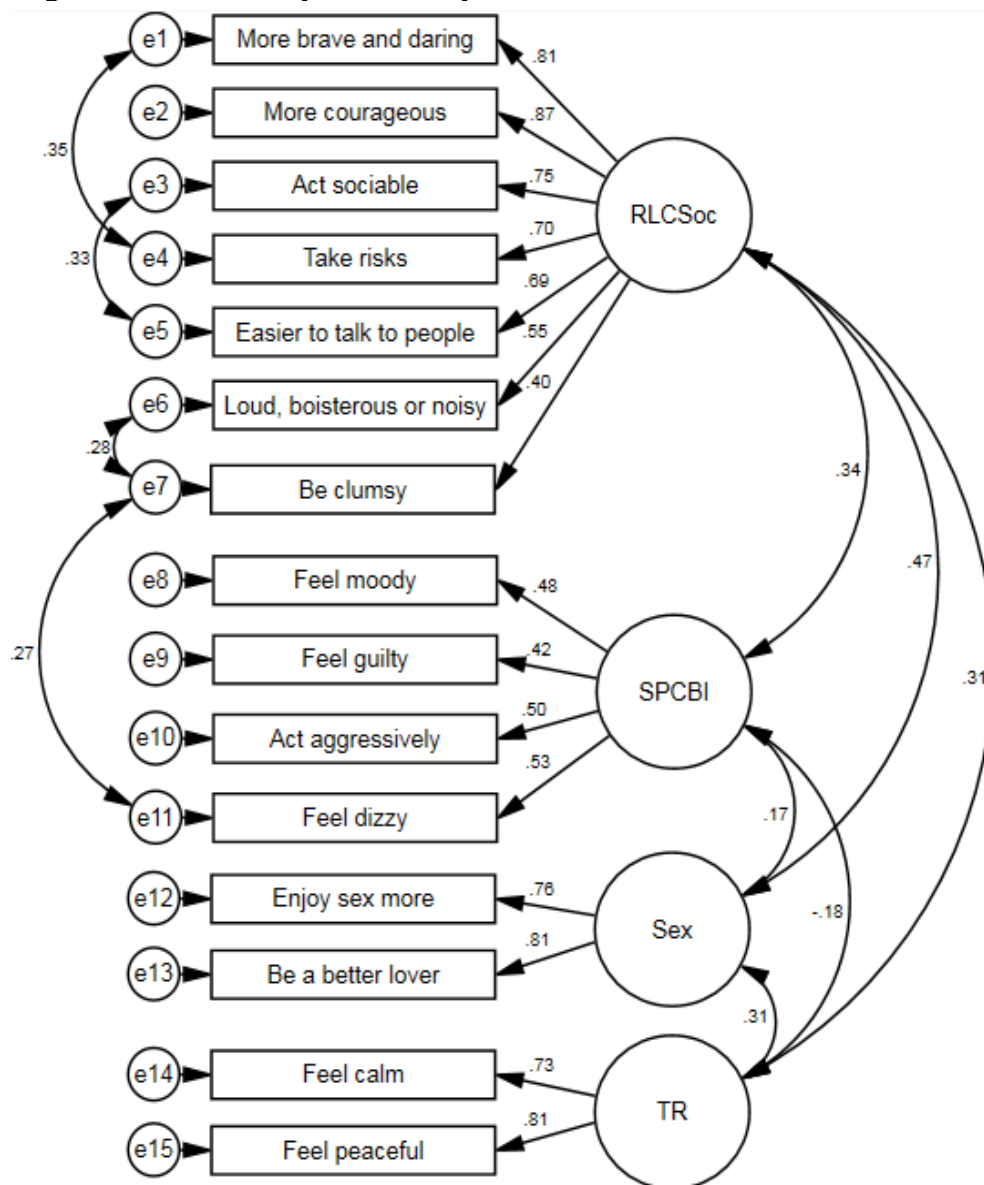
When I drink alcohol I expect I would...	R/LC/Soc	CBI/SP	Sex	TR
Act more sociable	0.81			
Be more brave and daring	0.79			
Be more courageous	0.78			
Find it easier to talk to people	0.74			
Take risks	0.73			
Be loud boisterous and noisy	0.65			
Be clumsy	0.64			
Feel moody		0.71		
Feel guilty		0.71		
Act aggressively		0.66		
Feel dizzy		0.41		
Enjoy sex more			0.89	
Be a better lover			0.87	
Feel calm				0.89
Feel peaceful				0.87
Eigenvalues	4.67	2.06	1.36	1.16
Variance explained	31.16	13.76	9.05	7.76
Cronbach's α	0.87	0.56	0.76	0.74

Confirmatory Factor Analysis

A CFA was conducted to further explore the four-factor structure and item loadings proposed in the PCA (Table 1). The indices for the initial model were slightly lower than required, despite acceptable factor loadings for each item, thus suggesting a moderately substandard model fit (CFI = 0.88, RMSEA = 0.09; SRMR = 0.07). The Modification

Indices (MI), however, suggested that correlating error terms between items could help improve model fit. Allowing MIs to drive model change must be done carefully as the suggested modifications are statistically driven, not theoretically. Moreover, adoption of all MIs can lead to a saturated model which inadvertently achieves a good fit without addressing underlying problems (Brown, 2006). Each MI was therefore individually reviewed and error terms only correlated when there was a theoretical rationale (e.g. thematic similarities between items). The MIs were addressed sequentially based on the size of improvement suggested. The model was re-run after each individual modification was implemented and fit indices considered. An acceptable fit was achieved on the fourth iteration (Figure 1) (CFI = 0.95, RMSEA = 0.06; SRMR = 0.06).

Figure 1: Confirmatory factor analysis of B-CEOA



As the four-factor model with correlated errors possessed superior fit, this was retained as the accepted B-CEOA structure. As discussed, the practice of correlating error terms is frowned upon unless there is a sound theoretical rationale (Hooper et al., 2008). The rationales for accepting the correlated errors in this study were: (1) correlated errors have also been required to achieve acceptable fit in other validations of the B-CEOA (Ham et al., 2005; Ham et al., 2012); (2) all the errors terms correlated in this analysis matched those correlated in a previous validation of the four-factor B-CEOA structure (Ham et al., 2012); (3) all the correlated error terms had a theoretical rationale for being linked (e.g. ‘*Act sociable*’ and ‘*easier to talk to people*’ are expectancies of sociability); and (4) although 40 MIs were suggested, only four of the highest scoring (MI range: 25.23-38.75) were implemented to achieve acceptable fit, thus the model is not saturated.

Conclusion and interpretation

The results indicate that the current sample of 18-25 year olds in the UK do conform to a four-factor structure of outcomes expectancies which closely mirrors the original B-CEOA (Ham et al., 2005). All the dimensions had acceptable internal consistency, except for CBI/SP which had questionable internal consistency (although this low estimate is consistent with previous validations of the scale). Most the items subscribed to the same subscales as the original CEOA (Fromme et al., 1993) and revised B-CEOA (Ham et al., 2005). There were only two exceptions compared to the original B-CEOA design (‘*act clumsy*’ and ‘*act aggressive*’), although there was theoretical rationale to explain both. These differences may also indicate that the grouping of perceived expectancies differs between young people in the UK and USA, where all previous research using the B-CEOA has been conducted. As both items had acceptable loading and model fit within the CFA, they are retained under their suggested subscales for the main thesis (Chapter Seven). Given the minor differences to previous validations, however, there is a need for further research into the B-CEOA scale with young adults in the UK to better understand differences in factor loading and structure compared to US samples (discussed in 7.5.4).

Appendix 9: Confirmatory factor analysis of DMQ-R SF**Statistical analyses**

A Confirmatory Factor Analysis (CFA) was conducted to assess whether the commonly reported four-factor DMQ-R SF structure also applied to the current sample of 18-25 year olds in the UK (Kuntsche and Kuntsche, 2009). The analysis was conducted AMOS version 23. An exploratory PCA, as reported for the expectancy scale in appendix 8, was not deemed necessary as recent research has shown that the four-factor structure is likely to be a suitable fit for young adults in the UK (Mackinnon et al., 2017). The onus was therefore on confirming this structure as opposed to exploring whether an alternative layout existed. Within the CFA, the Comparative Fit Index (CFI, ≥ 0.95), Root Mean Square Error of Approximation (RMSEA, ≤ 0.07), Tucker Lewis Index (TLI, ≥ 0.95) and Standardized Root Mean Square Residual (SRMR, ≤ 0.08) were used to evaluate the model fit (Hooper et al., 2008; Hu and Bentler, 1999). These indices mirror those used in previous validations of substance use and abuse scales (Canfield, Gilvarry and Koller, 2015), including research on drinking motives (Mazzardis, Vieno, Kuntsche and Santinello, 2010). The internal consistencies of the subscales were tested using Cronbach's Alpha.

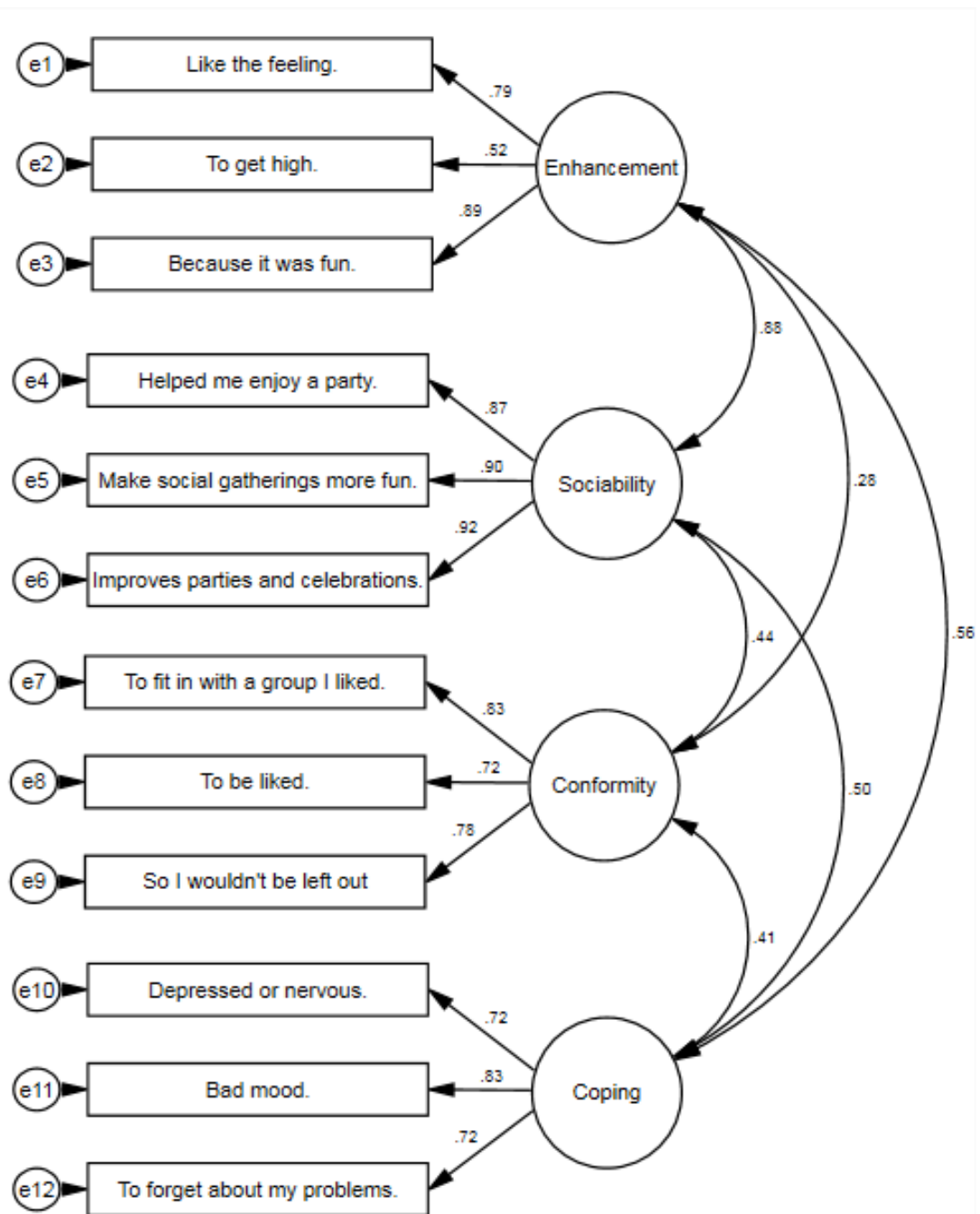
Confirming the four-factor structure of the DMQ-R SF

The CFA indicated all 12 items loaded significantly onto the latent constructs as per the commonly reported four-factor design (Figure 1). The fit indices further suggested that this four-factor model was an acceptable fit (CFI = 0.98; RMSEA = 0.05; TLI = 0.97; SRMR = .05). Each subscale also returned an acceptable Cronbach's Alpha above the recommended threshold of 0.7 (Field, 2013) (Enhancement $\alpha = 0.77$; Social $\alpha = 0.92$; Conformity $\alpha = 0.81$; Coping $\alpha = 0.80$).

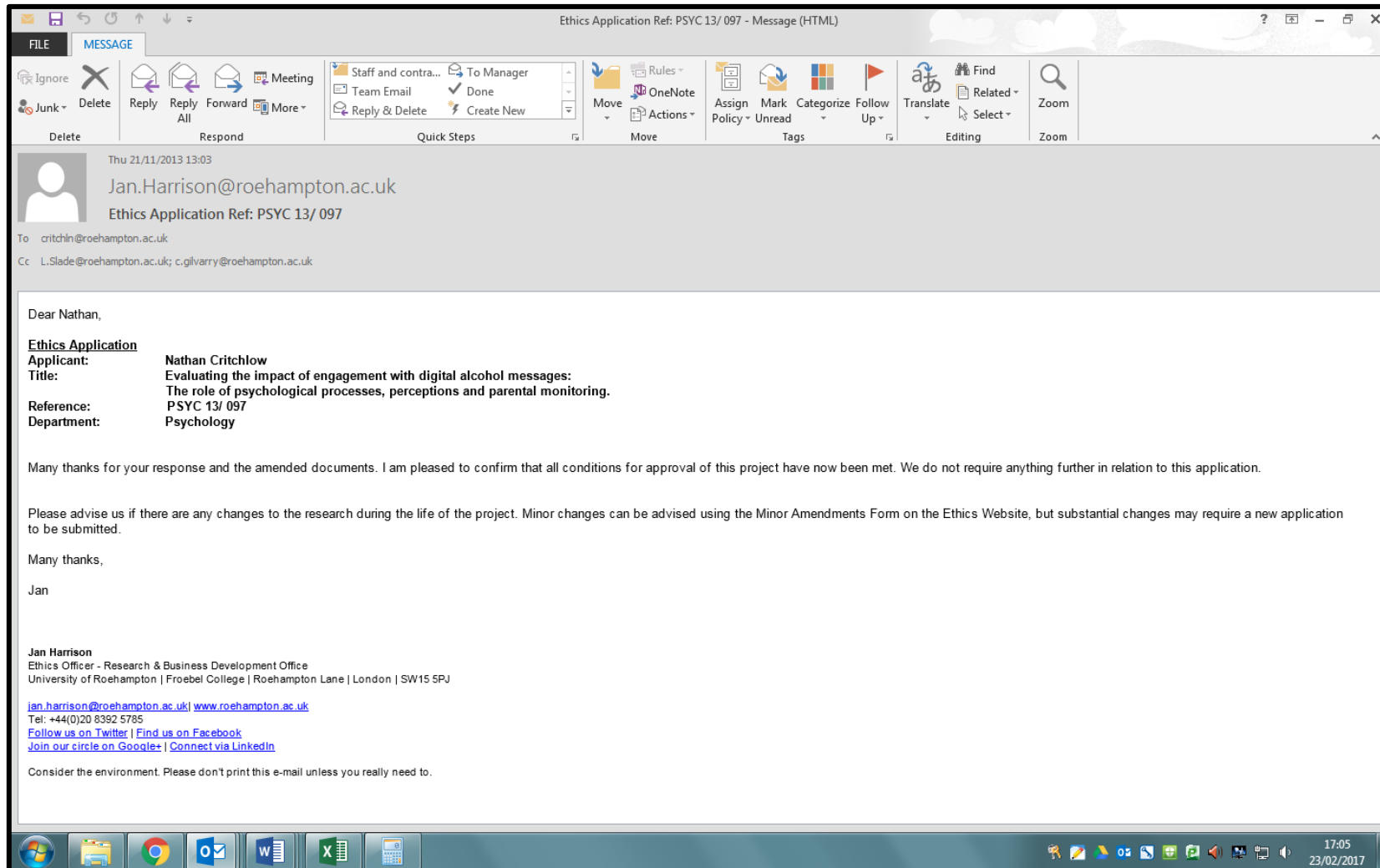
Conclusion and interpretation

The results indicate that the current sample of 18-25 year olds do conform to a four-factor structure of drinking motives which is identical to the original DMQ-R SF (Kuntsche and Kuntsche, 2009). This is consistent with other recent validations of the scale in adolescents and young adults (Kuntsche et al., 2014; MacKinnon et al., 2017). All the dimensions had acceptable internal consistency. This four-factor structure is therefore used in the main thesis.

Figure 1: Confirmatory factor analysis of DMQ-R SF



Appendix 10: Ethical approval for cross-sectional survey




Appendix 11: Criteria used to validate social media accounts as marketing

Website	Valid cases (n)	Authentic cases supported by at least one of the following characteristics....
Facebook	72	<ul style="list-style-type: none"> • The account had been independently verified by the website (e.g. 'blue tick'). • Link to the page from the official brand website. • There was a statement in the 'About Us' or 'Biography' section that says that the Facebook page represents the official page of the alcohol brand. • Copyright or trademark statement highlighting ownership of content to the alcohol brand or parent company.
Twitter	65	<ul style="list-style-type: none"> • The account had been independently verified by the website (e.g. 'blue tick'). • Link to the account from the official brand website. • There was a statement in the 'About Us' or 'Biography' section that indicated the Twitter account represents the official page of the alcohol brand. • Copyright or trademark statement highlighting ownership of content to the alcohol brand or parent company.
YouTube	59	<ul style="list-style-type: none"> • The account had been independently verified by the website (e.g. 'grey tick'). • Link to the channel from the official brand website. • There was a statement in the 'About Us' or 'Biography' section that indicated the channel represented the official channel of the brand. • Copyright or trademark statement highlighting ownership of content to the alcohol brand or parent company.

Appendix 12: Stella Artois beer and cider brands included in the same marketing

Stella Artois UK
17 August

A pear-fect weekend choice. Why not 'Share' with your friends?




Like · Comment · Share 86

499 people like this. Top Comments

Stella Artois UK
21 August

Bon appétit!




Like · Comment · Share 36

400 people like this. Top Comments

StellaArtoisUK
@StellaArtoisUK

"C'est Cidre", not cider. Say it perfectly for your voucher bit.ly/1d8eYyQ 18+ T&Cs bit.ly/1btKtmB




RETWEETS: 27 FAVORITES: 99

2:00 AM - 26 May 2015

StellaArtoisUK
@StellaArtoisUK

3 days off is just enough time to explore somewhere new. Where are we going? [#BankHoliday](#)



RETWEETS: 5 FAVORITES: 7

12:02 PM - 1 May 2015

The screenshot displays the YouTube interface for a channel named 'Stella Artois'. The main content area is titled 'Uploads' and shows a grid of 20 video thumbnails. Each thumbnail includes a video preview, a title, a view count, and an upload date. A red rectangular box highlights two specific videos in the second row:

- Be Legacy Stella Artois - Sebastian Artois Legacy | :15s**: 1,708,455 views • 7 months ago
- Perfectly Composed for Your Palate | Stella Artois Cidre**: 1,635 views • 8 months ago

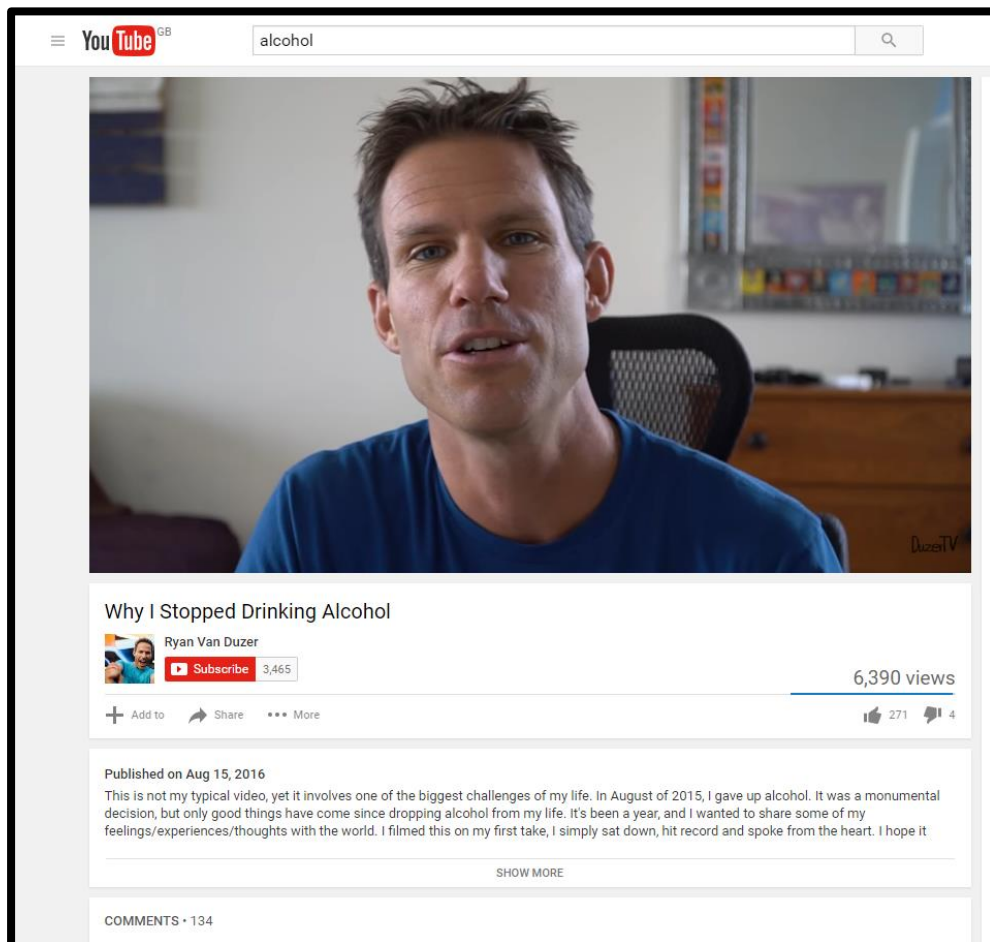
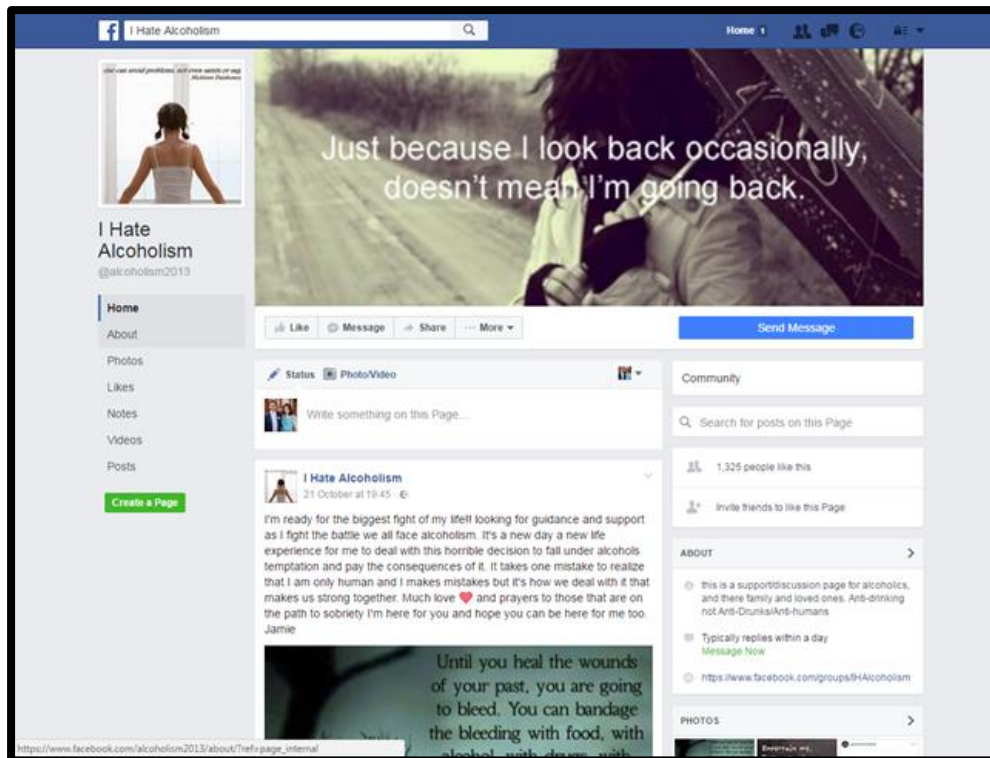
Other visible video titles include 'Stella Artois Holiday 2016: The Delivery', 'Stella Artois Presents Legacy Hosts | Episode 2 | Bompas & ...', 'Science Behind The Music Video You Can Taste /w The Roots', 'Stella Artois hosts Le Savoir - Awaken Your Senses', 'Sebastian Artois | Be Legacy | Stella Artois | :20s', 'Be Legacy Stella Artois - Sebastian Artois Legacy | :60s', 'Stella Artois Water Leaves a Mark Commercial :15', 'Stella Artois Water Leaves a Mark Commercial :30', 'Water Front: Manifesto Film by Crystal Mosele', 'Leave a Mark with Matt Damon and Stella Artois | Buy a Lady a ...', 'See the Difference Water Can Make with Water.Org and Stella...', 'Learn How Water Leaves a Mark | Buy a Lady a Drink | Stella Artois', and 'John Legend & Stella Artois: Under the Stars | Live ...'.

Appendix 13: Criteria used to exclude results for user-created promotion

Cases excluded if.....

- Content related to the alcohol industry (e.g. producer's social media account).
 - Content was clearly alcohol marketing (e.g. old adverts uploaded to YouTube to another internet users).
 - Content was a parody, commentary or fan account which displayed, created, paid homage to an alcohol brand.
 - Content was unrelated to alcohol (e.g. venues or bloggers with incidental names).
 - Content clearly represented the personal social media account of an individual.
 - Content represented a fan page, or official page, made by professional mainstream media or its producers (e.g. films or music artists; television shows).
 - Content was aimed at promoting responsible consumption or social action against alcohol-related harm.
 - Content was an uploaded version of professionally produced media without any user alternations (e.g. documentaries, films, television shows, music videos).
 - Content represented the official content of a not-for-profit organisation or public service related to alcohol (e.g. Alcohol Concern).
 - Content was primarily in a language other than English.
 - Content which was protected and could not be accessed without the prior consent of the owner (e.g. private Twitter accounts or private YouTube videos).
 - Content which was a duplication of those already included (e.g. videos re-posted by another YouTube user under a different name).
-

Appendix 14: User-created content promoting lower-risk drinking



Google Play Search

Categories Home Top charts New releases

Apps

My apps Shop Games Family Editors' Choice

Account Redeem Buy gift card My wishlist My Play activity Parent guide

Stop Drinking Alcohol App

Oristats Productivity ★★★★★ 1,003

Unrated

⚠️ You don't have any devices

Add to wishlist Install

9 days sober!

I wonder exactly how much time I have spent just lying down, biologically purging the poison from my body, and actively not thinking about how shitty my life was? Fuck. Literally just lying down was my second biggest hobby (next to drinking). After five months, I can barely even believe that it was such a big part of my life. Literally lying down. What a fucking waste!

5 days sober!

It is easier to stay out than get out.

Mark Twain

3 days sober!

So, right now, look at your life. Look at the mess it's in. Look at all the things that you need to fix. Understand and know that drinking is guaranteed to make them worse.

"A Must-Have Tool For Everyone Serious About Quitting Or Tapering Off"

Whether you're a college student bored of getting shitfaced every weekend or just curious about what life without alcohol would be like, this app is for you.

800+ Quotes About Quitting

Going through a rough patch? Read some inspiring quotes about quitting drinking, all written by

BuzzFeed

News Videos Quizzes Tasty DIY More Get Our App!

Messages Gypsy Contact

Wanna get married if trump wins?

That's promiscuous

PROMOTED

I know I should've married your brother

This Is What I Learned When I Stopped Drinking For A Week

I spent an average week in London without drinking any alcohol to find out if it would really be so hard. It was.

posted on Nov. 18, 2014, at 6:06 p.m.

Hannah Jewell
BuzzFeed Staff, UK

f e p t

Consider the following experiment.

1. Don't drink any alcohol for a week.
2. Don't tell anyone why.
3. If someone asks, just say, "I don't want to."

Appendix 15: User-created promotion in content *without* specific alcohol focus

