

Troubling thoughts about tobacco promotion in the on-line environment

Lynne Eagle¹, Stephan Dahl², David R. Low¹ and Tracey Mahony¹

¹School of Business, James Cook University, Townsville QLD 4811, Australia

Email: lynne.eagle@jcu.edu.au ; david.low@jcu.edu.au ; tracey.mahony@jcu.edu.au

²University of Hull Business School, Cottingham Road, Hull, HU6 7RX, England

Email: s.dahl@hull.ac.uk

Abstract:

This paper reviews tobacco and smoking mobile phone applications (“apps”) in light of recent concerns about their proliferation and potential impact on young people. The paper highlights a number of pro-smoking apps as well as weaknesses in current legislation restricting tobacco promotion and questions the legal obligations of organizations such as Google and Apple in providing access platforms for pro-smoking apps. The paper concludes with recommendations for research into the actual impact of apps and other forms of social and user generated content activity.

Keywords: *business ethics, tobacco promotion, phone apps, regulatory effectiveness*

Track: *01 Marketing Communication and Promotion*

Introduction

The tobacco industry has faced increasing restrictions on promotion since the 1960s as concerns about the health impacts of smoking and the impact of tobacco promotion on young people's decisions to commence smoking have grown amongst the public and first became accepted by legislators (Brown and Moodie, 2009). The tobacco industry has a long history of denial, firstly of adverse health impacts and then of the impact of promotional activity on primary demand among young people (Hoek, 2004). The industry has also responded to restrictions by developing promotional activity that evades restrictions placed on traditional mass media (Elkin et al., 2010). The WHO's Framework Convention on Tobacco Control (FCTC) was introduced in 2005 (WHO, 2005) and banned all forms of tobacco advertising, promotion and sponsorship within its 168 signatory countries Thompson et al., 2012. However, the USA is not a signatory due to the existence of the Master Settlement Agreement (MSA) between the major tobacco companies and most, but not all of, the individual US states (National Association of Attorneys General {NAAG}, 1998). The MSA included provisions for restricting advertising and promotional activity but fails to provide explicitly for non-standard advertising.

Recent Concerns

While direct advertising is now banned in many countries, concerns remain regarding the impact of the portrayal of smoking in entertainment media such as movies (Wellman et al., 2006). These portrayals normalize tobacco use and portray smoking as aspirational behavior (Chapman, 2008). The industry has recently expanded activity into Internet-based social media channels including Facebook and YouTube (Ribisl and Jo, 2012). There is a policy vacuum regarding Internet-based promotional activity that should be addressed to ensure that the intent of the FCTC and other legislation is applied to all communications channels (Elkin et al., 2010). Recently, the use of mobile phone apps to promote a variety of pro-smoking apps has been criticized (BinDihm et al, 2012). It should be noted that there are also a variety of anti-smoking and smoking cessation apps available. This medium lacks explicit regulation.

Evidence of impact of tobacco promotional activity on young people

Direct causal effects between exposure to tobacco advertising and smoking imagery have been difficult to verify (Di Franza et al., 2006). Strong associative effects have been found in numerous studies; exposure to smoking imagery in movies during early adolescents has been found to be a significant predictor of progression to smoking through observational learning and pro-smoking reinforcement messages. A systematic literature review suggests that there is now "considerable evidence for a causal link" between pro-smoking imagery and smoking commencement (Wellman et al., 2006: 1293). This link may be stronger for apps-based exposure due to the amount of control users have over what messages to attend to, how long to do so and how often they return to the material. Jenssen et al. (2009: 181) suggest that sites with the highest appeal are "devoted to smoking as part of culture, often with interactive features designed to create online discussion and pro-smoking communities".

Context –multiple influences

Exposure to pro-smoking (or anti- smoking) messages via media channels needs to be seen in the context of other potential influences, such as family, friends and peer groups; where smoking is seen as normal and important to social identity, people are likely to smoke (Amos et al., 2006). Any attempt to use the same media channels to discourage smoking will be hampered by conflicting messages (Bernthal et al., 2006). Additionally, it has been recognized for more than two decades that, when there is a perceived conflict between injunctive norms (portrayal of what people ought to do) and descriptive norms (what people

actually do), message effectiveness will also be hampered (Cialdini et al., 1990). There is considerable evidence that “if smoking behavior does not commence in the teenage years, it is unlikely to occur later in life” (Coombs et al., 2011: 655). The evidence of the use of communication channels popular with young age groups such as electronic games and phone apps must therefore be of concern as it can be argued that these are targeted at children.

Use of Cartoon Characters: The use of cartoon figures to promote smoking in traditional media has been condemned due to their intrinsic appeal to younger age groups (Chapman, 2008; Forsyth and Malone, (2012). While there has been no specific investigation of the effects of cartoon-based electronic games and phone apps, evidence from earlier campaigns gives cause for concern. The cartoon-based “Joe Camel” campaign (see Figure 1) for Camel cigarettes which ran from 1988 – 1997 increased market share among both adolescents and under-aged smokers until growing criticism forced the parent company, RJR Nabisco, to discontinue it (Arnett & Terhanian, 1998). The MSA (NAAG, 1998) bans the use of cartoons “in the advertising, promoting, packaging and labeling of tobacco products” (p.19). One cartoon-based app called “Puff Puff Pass” (also in Figure 1) depicts smoking as a fun activity to do with friends going as far as translating this activity into a game based activity.

Figure 1 Cartoon characters: Joe Camel and Puff Puff Pass



Motivation: App Designers and Users

It cannot be assumed that the tobacco industry is directly involved in the production of the pro-smoking apps or other user-generated activity such as YouTube (Elkin et al., 2010); new electronic media forms make it easy to hide the identifies and affiliations of content providers (Sprague and Wells, 2010). However, previous studies have provided evidence of unofficial support. For example, employees of British American Tobacco (BAT) were found to be “energetically promoting BAT and BAT brands on Facebook” (Freeman and Chapman, 2010: e8). It is possible that some apps represent examples of designer ability as there are no messages within the apps, such as the lighter app shown below. The Virtual Zippo Lighter opens by swiping across the lid and lights with a turn of your thumb and the ‘windproof’ flame stays upright, no matter how the phone is moved. (Figure 3). The app has attracted more than 15 million users and is credited with leading to a US \$2.6 million investment in the designer, Skyrocket to “enhance what it calls its Mobile Entertainment Studio” (Kelly, 2011:1). While this app appears to promote smoking we have observed a group of app users holding the app up at a concert to signal applause, which may explain the high download rate of this particular application. Other more crude apps may be the work of design students hoping to attract the eye of future employers. Other apps allow users to smoke a virtual cigarette by holding the phone near their mouth (Figure 2). Others allow users to set cigarette brands or images as their phone wallpaper, and show a burning cigarette on their phone screen.

Figure 2 Screen shot of ‘Zippo’-type app and virtual cigarette apps.



A motive for both app designers and down-loaders / users may relate to the concept of “forbidden fruit” whereby involvement with a product that many would regard as undesirable leads to excitement and pleasure (Sussman et al., 2010). A second motive related to the concept of forbidden fruit may be reactance. The theory of psychological reactance posits that perceived threats to personal freedom, such as being told to not engage in behaviours like smoking, may be resisted; individuals may be motivated to assert their freedom to make their own decisions (Ringold, 2002). This may result in the behaviour itself becoming more attractive and engaging in the undesirable behaviour becoming a means of re-establishing this freedom (Rummel et al., 2000). Reactance effects explain not only why some anti-smoking interventions may not only be ineffective, but may produce effects contrary to those intended; being advised not to smoke may have the opposite effect as young people seek to assert their independence from authority figures by smoking (Buller et al., 1998). This effect may be further reinforced by tobacco industry youth smoking prevention programmes that purport to delay decisions regarding smoking commencement until adulthood (Wakefield et al., 2006). The use of pro-smoking apps may thus be perceived as adult behavior by children and adolescents using these apps.

Legal and moral liabilities

If this activity constitutes stealth marketing via sponsored product endorsement of any kind, issues of industry and individual liability may arise (Sprague and Wells, 2010). However, to date in the USA: *“Courts have regarded the Internet as being more like a “common carrier,” such as a telephone company, rather than a medium, such as newspaper or television”thus effectively immunizing providers of interactive Web sites, such as YouTube from liability for third party postings”* (Forsyth and Malone, 2010, p. 814). Similar provisions apply in the EU, for example, Directive 2000/31/ Section 4 which *“shields intermediaries from liability unless they have notice of infringing content and fail to act on such notice”* George and Scarri, 2007:10). This paper poses the question as to whether Google and Apple can be regarded as mere passive carriers / publishers of material created by others or whether an implied contract exists where apps are purchased. The Rio Declaration on Environment and Development suggests, under the ‘Precautionary Principle’ that *“regulatory policy should seek to prevent harm before it occurs, and that it should reject the insistence of regulatory targets that a never-ending quest for improved information should indefinitely postpone sensible regulatory measures”*. (Lieberman & Hayward, 2008: 286)

Research Objectives and Methodology

To assess the amount and nature of apps-based activity and to analyze its potential effects against the somewhat fragmented extant literature, a multi-phase research project was undertaken. A search was conducted of Android and Apple mobile phone Apps using the search terms ‘Smoke’ and ‘Smoking’. Both sites were used as iPhone users represent only ¼ of Smart Phone users and tend to be from upper socio-economic groups and to be less likely to smoke than the wider population (Abroms et al., 2011).

The Android mobile phone Apps were accessed via the Android Apps site on Googleplay at <https://play.google.com/store/search?q=tobacco&c=Apps&start=0&num=24> . This search returned 476 Android responses and 63 Apple responses. To enable further analysis of the search returns an Application software “Blue Stacks” was downloaded and installed to emulate the Android Operating System and ‘ADW_Mod_Launcher_1.1.5’ designed to run the Apps on Android mobile devices. This was the most accessible way to analyse the Apps on a windows computer rather than viewing downloads on an android mobile phone. The Apple Apps were downloaded onto an iPad2 using the Apple Apps for i-phone store, http://store.Apple.com/au/questions/iphone?st=iphone_Apps . It should be noted that the Apple App store is different on Apple iPhone/iPad App Store to Apple Mac OSX as the same search term produced significantly different search responses. Search returns that did not contain tobacco or drug smoke or smoking references were excluded from the both samples. Search returns that were faulty or unable to be located were excluded from both samples. The total relevant search sample after exclusions was 330 Android Apps and 49 Apple Apps. Non-English language Apps were included if they had a recognised brand in their icon. All Apps in the total relevant search sample were downloaded. We used free Apps as well as trial versions of Apps are sold, were selected for analysis. The Apps were then coded into free, pay, anti-smoking, pro-smoking and neutral categories as shown in Table 1. The large amount of pro-smoking content is a concern.

Table 1 Availability and Stance of Android and Apple iPhone apps

Significant differences between Android and iPhone for both availability and stance p= .001	Android		Apple iPhone		Total	
	n	%	n	%	n	%
Availability						
Free	216	65	43	92	259	68
Paid	114	35	5	8	119	32
Total	330	100	48	100	378	100
Stance						
Anti-smoking	156	47	37	77	193	51
Pro-smoking	137	42	9	19	146	39
Neutral	37	11	2	4	39	10
Total	330	100	48	100	378	100

Design Principles

There is evidence of some success with smoking cessation games, with one (Nicot) improving smoking cessation rates by 13% in a randomised controlled trial (Raiff et al., 2012), but the impact of a wider range of anti-smoking apps has yet to be formally evaluated. We therefore believe that a comparison of pro-smoking and anti-smoking apps may provide insights into how the latter may be strengthened. We then compared the design principles advocated for persuasive strategy (Andrew, Borriello, Fogarty, 2007) to compare pro and anti-smoking apps. The use of strategies by anti-smoking and pro-smoking apps is summarised in Table 2. The key difference is in the use of conditioning to reinforce behaviour by Pro-smoking apps, which would appear to be in breach of the spirit, if not the letter of existing regulations.

Table 2: Design Principles (based on Andrew, Borriello, Fogarty, 2007, from earlier work (Fogg, 2003; Fogg et al., 2003)) Note: columns sum to more than 100% due to use of multiple strategies

Persuasive Strategy	Description	Anti-smoking n = 193		Pro-smoking n = 146	
		No.	%	No.	%
Reduction	Making a complex task simpler	7	4	7	5
Tunnelling	Guided persuasion; giving control over to an expert	13	7	2	1
Tailoring	Customization; providing more relevant information to individuals	70	36	42	29
Suggestion	Intervene at the right time with a compelling suggestion	48	25	13	9
Self-monitoring	Automatically tracking desired behaviour	84	43	6	4
Surveillance	Observing one's behaviour publicly	3	2	6	4
Conditioning	Reinforcing target behaviour	16	8	98	67
Total Strategies		241		174	

Note: columns sum to more than 100% due to use of multiple strategies

Discussion / Future Research agenda

Both the quantity of pro-smoking apps and the extent of the use of conditioning strategies in pro-smoking apps to reinforce smoking behaviour is concerning. The precautionary principle noted earlier, coupled with evidence of the impact of smoking imagery in more traditional media, would appear to give grounds for tighter regulation of this type of activity. The mechanisms for this to occur appear to exist in the WHO's Framework Convention on Tobacco Control (FCTC) but support from countries not currently signatories and effective action by those that are already signatories has already been signaled as needed (Thomson et al., 2012). We would also include in this a review of the status of both Google and Apple as being more than passive carriers of these apps.

There is also a need for transdisciplinary approaches to the development of appropriate future research programmes. These programmes should include investigation of what theory or combination of theories can be used to explain and predict the effects of both pro- and anti-smoking apps and other electronic media-based activity and whether, and in what way, demographic factors impact on the way this activity is used and its influence relative to other forms of communication (Watson et al., 2010).

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