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Connecting world youth with tobacco brands: YouTube and the internet policy vacuum on Web 2.0

Lucy Elkin, George Thomson, Nick Wilson

Department of Public Health,
University of Otago, Wellington,
New Zealand

Correspondence to
George Thomson, Department
of Public Health, University of
Otago, Wellington, New
Zealand;
george.thomson@otago.ac.nz

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ABSTRACT

Background The internet is an ideal forum for tobacco marketing, as it is largely unregulated and there is no global governing body for controlling content. Nevertheless, tobacco companies deny advertising on the internet.

Objective To assess the extent and nature of English language videos available on the Web 2.0 domain 'YouTube' that contain tobacco brand images or words.

Methods The authors conducted a YouTube search using five leading non-Chinese cigarette brands worldwide. The themes and content of up to 40 of the most viewed videos returned for each search were analysed: a total of 163 videos.

Results A majority of the 163 tobacco brand-related videos analysed (71.2%, 95% CI 63.9 to 77.7) had pro-tobacco content, versus a small minority (3.7%) having anti-tobacco content (95% CI 1.4 to 7.8). Most of these videos contained tobacco brand content (70.6%), the brand name in the title (71.2%) or smoking imagery content (50.9%). One pro-smoking music video had been viewed over 2 million times. The four most prominent themes of the videos were celebrity/movies, sports, music and 'archive', the first three of which represent themes of interest to a youth audience.

Conclusions Pro-tobacco videos have a significant presence on YouTube, consistent with indirect marketing activity by tobacco companies or their proxies. Since content may be removed from YouTube if it is found to breach copyright or if it contains offensive material, there is scope for the public and health organisations to request the removal of pro-tobacco content containing copyright or offensive material. Governments should also consider implementing Framework Convention on Tobacco Control requirements on the internet, to further reduce such pro-tobacco content.

Approximately a quarter of the world's population has access to the internet, and this number continues to grow rapidly.^{1 2} Tobacco is well suited to internet marketing, as brands convey sufficient information for marketing to consumers via a computer screen.³ The internet provides a brand 24 h, worldwide exposure for minimal cost,³ with interactive websites adding to the attraction for users ('Web 2.0').⁴

The internet is generally not well regulated.⁵ The original developers of the internet intended a universal resource, which would develop in a decentralised manner and not be hindered by regulations.⁶ They have succeeded to some extent, given that border controls are difficult and there is no universal regulatory body for content control. Media information (including that used for marketing) that is banned in the conventional

media of one country can often be uploaded from websites based in another.^{5 7}

The tobacco industry has historically been prompt to alter the form and character of their marketing in response to social and policy changes.⁸ Advertising control policies are often applied to one medium at a time. This often simply changes where a company advertises,⁹ or the extent to which it focuses on marketing alternatives such as packaging design, product placement and sponsorship. The WHO's Framework Convention on Tobacco Control (FCTC) treaty currently obliges its 168 national parties to ban all forms of tobacco advertising and sponsorship. This is leading to increased restrictions on traditional forms of tobacco marketing, and tobacco companies may be making greater use of internet-based media to advertise their products.^{10 11}

Few studies have looked at tobacco marketing on the internet. Jenssen *et al* found that adolescents were consistently exposed to tobacco content on the internet.⁵ Ribisl found pro-smoking material and cigarette advertising often appeared on the internet pages of people who claimed to have no affiliation with a tobacco company.¹² These authors suggested that the internet has created a new virtual world, accessible to teenagers, where smoking is normal. A number of authors have detailed the potential for tobacco marketing to youth on the internet.^{11–14}

YouTube is a website where any internet user can upload video content. These videos can be watched, shared or commented on.¹⁵ YouTube was founded in 2005, initially as a site for the sharing of consumer generated videos. It has since become an extremely popular entertainment destination.¹¹ To our knowledge, there have only been two other studies that have looked at tobacco content on YouTube. These concluded that smoking imagery was prolific and accessible on YouTube, and suggested that tobacco control opportunities on YouTube be explored and evaluated.^{11 14} The researchers found that many videos with smoking content were clearly amateur but felt that some may have been covert advertisements. Several historical cigarette ads were also found. Again, they could not tell whether these ads were placed on YouTube independently or by tobacco companies.

Tobacco companies vehemently deny advertising on the internet.^{16–19} British American Tobacco and a number of other tobacco companies agreed to implement a set of voluntary tobacco product marketing standards by the end of 2002. They stated:

'No advertising is to be placed by or on behalf of any group company on any website unless:

Research paper

Access to that advertising is restricted to verified adults; and

Access is restricted to countries where such advertising is not prohibited by law'.¹⁸

Philip Morris was reported in a 2007 news article as stating:

'We don't use the web to advertise or promote our products or smoking at all... and we don't think people should be able to advertise or promote tobacco on the internet'.¹⁹

In the same article, a Philip Morris spokesperson confirmed that their firm's marketing strategy does not include online videos. However, a November 2009 tobacco exposition in Bangkok was reported to have been discussing 'how to use the internet to market brands to young smokers'.¹⁰

YouTube does not actively censor videos but will take down any video that infringes its standards if they receive complaints from viewers. Videos uploaded to YouTube must contain original content and will be taken down if found to breach copyright. Copyright is defined by YouTube as occurring:

'when a copyrighted work is reproduced, distributed, performed, publicly displayed, or made into a derivative work without the permission of the copyright owner'.²⁰

Given this background, we aimed to expand the understanding of tobacco marketing on the Web 2.0 internet by investigating the tobacco brands content of English language videos on YouTube. We assumed that portrayal of brand imagery, as opposed to general smoking references, would better inform considerations of the direct or indirect role of tobacco industry marketing in this new media.

METHODS

Sampling

We limited our sample to videos from YouTube, as they hold a significant (43%) share of the online video market, far ahead of the nearest rival.²¹

Selection of videos in a brand search

We chose five leading non-Chinese tobacco brands worldwide for 2009 (Marlboro, L&M, Benson and Hedges, Winston and Mild Seven).²² These are marketed by Philip Morris (Marlboro, L&M), British American Tobacco, Gallagher (both market Benson and Hedges), Japan Tobacco and Reynolds (both market Winston and Mild Seven). Marlboro, L&M, Winston and Mild Seven are the top four brands by world sales.²² As two of these brand name searches yielded a large proportion of videos unrelated to tobacco (L&M and Winston), we combined these terms with the word cigarette within quote marks in the search term. Therefore the final specific search terms used were: 'Marlboro', 'L&M cigarettes', 'Benson and Hedges', 'Winston cigarettes' and 'Mild Seven'.

During December 2009 we searched through the first 20 pages of videos within the YouTube 'relevance' option for each search term (ie, through 400 videos for each term, or through as many pages as the search returned, if it returned less than 20 pages). From those pages we selected the 40 'most viewed' videos (or all the videos, if there were less than 40). We selected the most viewed within the relevance option, in order to find those videos that were more likely to have an impact on the viewing population.

We analysed predominately English language videos (ie, without majority non-English audio or within video text).

Data collection

Data on 12 aspects of the selected videos were recorded by 1 observer (LE) with periodic checks by another (GT): the title,

URL, duration, access date, the number of views the video had had, the gender and number of people portrayed, the presence of any smoking in the video, the presence of any tobacco brand content, the presence of any pro/anti-tobacco content, the content theme and the 'user name' of the person/people who uploaded the video onto YouTube (the 'uploader').

Data classification

Whenever any ambiguities were found in data classification, two authors (LE, GT) discussed the criteria and process to produce a consensus decision. We defined smoking as when anyone was holding a cigarette or cigar, or had it in their mouths (it was not possible sometimes to tell if it was lit). Some videos contained images of people smoking what may have been cannabis. These videos were counted as having the presence of smoking in the video, as it was often difficult to distinguish cannabis cigarettes from tobacco cigarettes (and indeed cannabis users may often consume mixtures of both in the same cigarette).

We defined brand content as the presence of the brand (in audio, text, or as a logo), but did not include as brand content a brand name as part of the video title. This was because some titles appeared to be unrelated to the video itself; for example, brand names that were also place names or the names of people.

We categorised the video content, using categories from *Jenssen et al*,⁵ as:

- Pro-tobacco (containing a positive description of tobacco use, or tobacco company promotion).
- Anti-tobacco (containing a negative description of tobacco use).
- Complex (containing positive and negative descriptions).
- Unclear (containing no clear tobacco message).
- Neutral (tobacco content which was statistical or historical).

For table reporting, the last three categories in the above (c, d, e) were combined into 'other'. Where possible sponsorship videos (videos of events, sports people or teams that had been sponsored by a tobacco company) were only indicated by brand colours as opposed to brand images, we conservatively defined them as having an 'unclear' tobacco message, because we judged that their message was sometimes not overtly pro-tobacco.

In order to better understand the nature of the videos, and their possible effects for youth, we then classified the video content matter in the sample into categories (videos could be in more than one category), using six groups of terms derived from a previous internet study by Hong and Cody.¹³ These were sports, celebrities/movies, freedom/rights, adventure/thrill, travel/vacation and romance. Other categories (party lifestyle, relaxation, outdoors/nature, how to (eg, blow smoke rings), consumer information, antisocial/rebellion, music, animation content, comedy, archive and R18 content) were added as they emerged, in response to videos that did not fit into the Hong and Cody categories. Music content videos included commercial music videos, audio tracks containing references to tobacco brands, amateur video of people dancing and smoking, tobacco-sponsored music events and the theme songs of historical advertisements (either being played during the advertisement itself or by musicians for amateur video). We defined 'archive' videos as containing material made before the year 1980 (ie, 10 years before the birth of someone aged 19 in 2009) on the arbitrary assumption that for teenagers, material more than 30 years old would not appear to be contemporary.

A single Winston video (an advertisement featuring the Flintstones smoking Winston cigarettes) was uploaded by 10 different users. We ran analyses with the 10 videos as separate videos, and as

a single video. The latter process did not significantly change any results, so the 10 are reported as separate videos.

RESULTS

A total of 163 videos were analysed, comprising the 40 most viewed videos from the searches for Marlboro, Winston cigarettes and Benson and Hedges, the 24 English language videos found for Mild Seven and the 19 for L&M cigarettes. Over 20 of the videos examined appeared to be very professionally made.

Videos associated with Marlboro had the most views (mean=103 932 views) and the single highest viewed video: *Cypress Hill & Damian Marley: Ganja Bus (With Lyrics)*,²³ which had over 2 million views (table 1).

Content of videos

A majority (71.2%) of the content was classified as being 'pro-tobacco', while 3.7% was classified as 'anti-tobacco' and 25.2% as 'other' (table 2). The variation by brand in 'pro-tobacco' content was large (from 47.5% to 100%) (table 2). 'Other' content was all classified as 'unclear', except for 35% of Benson and Hedges and 10% of Mild Seven, which was 'neutral'.

We found 70.6% of the sample videos contained brand images or people smoking branded tobacco products (table 2). The majority of videos for every brand except Marlboro contained brand content. Of 40 Marlboro videos, 39 had the name Marlboro in the title and (estimating conservatively) 33 of 40 appeared to be related to the Marlboro brand (for instance, containing a man on a horse, a Marlboro advertisement theme). Most videos related to Marlboro, L&M cigarettes and Winston cigarettes contained smoking content.

For the 163 videos analysed, archive, celebrity/movies and sports were the most prominent content matter themes (present in 13.3% to 17.8% of the videos), followed by music (at 9.6%) (figure 1). A further 27% of the videos were classified as animation, comedy, sex/romance, thrill/adventure, antisocial or party lifestyle.

The top theme of Marlboro related videos was music (30%) followed by celebrities/movies (25%). Over half of L&M cigarettes and Winston cigarette videos were archive videos. Most (54%) of Mild Seven videos and 45% of Benson and Hedges videos had a sports theme.

Videos featuring celebrities/movies were mainly historic, and comprised videos from the 1950s and 1960s featuring The Flintstones, The Beverley Hillbillies or The Beatles. A notable exception was *Johnny Depp Smoking L&M cigarettes!*,²⁴ (which showed actor Johnny Depp smoking L&M cigarettes in the movie *The Secret Window*). The 'archive' theme was the top theme of videos overall. These videos were mainly television advertisements from the 1950s to the 1970s.

DISCUSSION

Even using a conservative methodology, we found numerous highly viewed videos containing pro-tobacco content, smoking and brand imagery on the YouTube site.

Explaining the presence of brands on YouTube

The number of Marlboro-related videos, and the high viewing of some of them, may be seen in the light of the size of the brand imprint across all media. An earlier study of cigarette advertising in contemporary films showed that the brands that appeared in movies most frequently were the brands that were most highly advertised in the US.²⁵ Marlboro is the most popular cigarette brand in the US and Western Europe,²² and the higher number of videos with Marlboro related content may also partly be explained by the higher number of Marlboro smokers in the population. The high presence of the Marlboro brand on YouTube could be because the Marlboro brand is being marketed more effectively than other brands and is therefore more popular, and/or because there is commercially driven placement of the videos on YouTube.

However, it should be noted that only 47.5% of the Marlboro sample had 'brand content in video'. This appears to be because many of the videos resulting from the term search produced results that only had Marlboro in the title. The other brands searched for were not found in proportion to their world sales volume, although the numbers of videos found for two (L&M and Winston) were restricted by the addition of the word cigarette in the search term (see Methods).

The content matter themes in tobacco brand-related videos

Three of the four most prominent content themes of the videos were music, sports and celebrity/movies, which represent themes of interest to a youth audience. In particular, sports are a traditional and current avenue for effective tobacco marketing to youth worldwide.^{26–30} There is also some evidence that smoking onscreen by movie celebrities influences smoking uptake, at least by girls.^{31–32} The use of music as a marketing strategy is not new to tobacco companies. In 1990 Philip Morris explored how smoking cigarette brands corresponded to 22 kinds of music, and the company RJ Reynolds focused on music in its efforts to reach 18–20 year olds.³³ Between the years 1995–1999 tobacco companies sponsored at least 2733 events in the USA, with performing arts receiving the largest number of sponsorships. For example, US\$ 1 million was donated by RJ Reynolds to the Winston Blues Revival tour in 1998.³⁴ Incorporating tobacco branding with music promotes the brand and has the spin-off effect of incorporating smoking with normal adult life.³⁵ It is a potential strategy for marketing tobacco on YouTube.

Table 1 Number of views reported on the YouTube website per tobacco brand search (see Methods for selection of videos in a brand search)

Search term	World cigarette sales volume (billions) ²²	Videos returned,* N	Videos analysed, N	Mean views, N	Median views, N	Maximum views for a particular video, N
Marlboro	472.7	13100	40	103932	29919	2064574
Winston cigarettes	91.3	126	40	45,944	3437	208599
Mild Seven	111.7	98	24	8440	523	79609
Benson and Hedges	—	101	40	6232	612	102555
L&M cigarettes	106.2	19	19	3219	127	47329
Total		13444	163	33553	6924†	147464†

*English and non-English language video.

†Average.

Research paper

Table 2 Content of relevant videos on YouTube analysed (see Methods for classification system)

Search term	Videos analysed, N	Pro-tobacco content, %	Anti-tobacco content, %	Other,* %	Brand content in video, %	Brand name in video title, %	Smoking content in video, %
Marlboro	40	47.5	2.5	50.0	47.5	97.5	55.0
Winston cigarettes	40	87.5	10.0	2.5	85.0	70.0	82.5
Mild Seven	24	71.0	0.0	29.0	71.0	33.3	4.2
Benson and Hedges	40	65.0	2.5	32.5	65.0	57.5	17.9
L&M cigarettes	19	100.0	0.0	0.0	100.0	94.7	94.4
Total	163	71.2 (95% CI 63.9 to 77.7)	3.7 (95% CI 1.5 to 7.5)	25.2 (95% CI 18.9 to 32.2)	70.6 (95% CI 63.2 to 77.2)	71.2 (95% CI 63.9 to 77.7)	50.9 (95% CI 43.3 to 58.6)

*Complex, unclear and neutral tobacco messages were collated into the category 'other'.

Tobacco sponsorship of sports events provides tobacco companies with a way of circumventing television advertising bans.²⁷ Despite a ban on tobacco advertising on television, tobacco companies achieved the equivalent of at least US\$ 410 million worth of television advertising in the US between 1997 and 1999, through their sponsorship of motorsport events alone.³⁵ Motorsport advertising by these companies has been restricted in many countries,³⁶ but remnants of these earlier marketing strategies exist on YouTube. For example videos of Formula One driver (Fernando Alonso) had many Mild Seven images, and videos of car racing videogames still contained tobacco company signage on the cars and on the racetrack. Marketing of the Marlboro brand through the Ferrari and Ducati teams continues.^{37 38}

The further proportion of the videos classified as animation, comedy, sex/romance, thrill/adventure, antisocial or party lifestyle, also indicates potential youth appeal. Other categories such as outdoors/nature and relaxation, while less clearly attractive to youth, may also be effective in youth tobacco marketing.³⁹

Strengths and limitations

This appears to be the only study to date on tobacco content on YouTube that has focused on tobacco brands. We obtained a sample of popular videos, collected a range of data on each and largely used pre-existing classification systems.

Our definition of brand content (the presence of the brand in audio, text, or as a logo, but not a brand name as part of the video title) was conservative. For this reason, brand content in the videos sampled may have been underestimated.

We sometimes found it difficult to categorise videos that might be considered to contain tobacco sponsorship of an event, where no brand images were present. Some videos, for example *Paris Hilton Visit to the Monaco F1 GP 2005*,⁴⁰ featured such

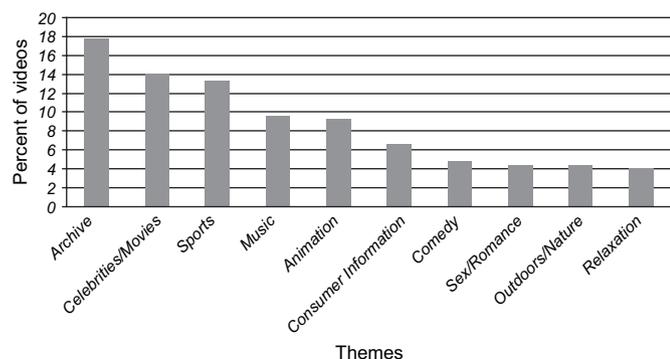


Figure 1 The top content matter themes for 163 YouTube videos related to tobacco brands.

a small amount of brand content (Paris Hilton wore a light blue Formula One jacket, the colour of Mild Seven Renault) that it seemed presumptive to say that this video had a pro-tobacco message. For this reason, our classification of pro-tobacco content was also conservative and may have produced underestimated levels of overall pro-tobacco content.

A small proportion of the videos analysed had neither brand content nor the brand name in the title. There were three reasons that these videos were identified when a brand was searched: either, the username of the uploader contained the brand name, the brand name was written in the uploaders' description of the video, or the brand name had been 'tagged' to the video by the uploader. Tags are keywords that an uploader can attach to a video so that a search for that keyword will return their video.⁴¹ Some videos also had only a brief mention of the brand name (eg, *Cypress Hill & Damian Marley: Ganja Bus*).²³

The lack of systematic inter-rater reliability data is a limitation of this preliminary study, and future similar studies could remedy this. Another limitation was to the comparability of the data found across brands, because only two of the search terms used included the word 'cigarette'.

Policy implications: an unregulated internet with advertising potential

Government, international and non-governmental organisation (NGO) policy options

Comprehensive advertising bans can reduce tobacco consumption, but anything less will tend to encourage tobacco companies to advertise more in any residual media and therefore will be of reduced effectiveness.⁴² The potential for a ban on tobacco advertising on the internet already exists within the FCTC. By late 2009, 168 countries (not including the US) had ratified this treaty.⁴³

The FCTC states that an effective ban on tobacco advertising, promotion and sponsorship should be:

'...Comprehensive and applicable to all tobacco advertising, promotion and sponsorship'. (Articles 13.1 and 13.2).

All parties are obliged by the Framework to undertake a comprehensive ban, unless:

'They are not in a position to do so due to (their) constitution or constitutional principles'. (Article 13.35).

This includes crossborder advertising, promotion and sponsorship, including that originating from a Party's territory and that entering a Party's territory from elsewhere. The Article includes the insertion of tobacco products or tobacco use in various media contents. It also covers internet promotion (Article 13.58).

Policy development by governments and/or the WHO is needed to encourage or require website operators to add pro-tobacco imagery or brand content to the material they will remove, so as to reduce youth exposure to such material. The arguments used to limit tobacco imagery in film or TV appear to apply to internet videos.^{44–46}

Even while the USA remains a non-ratified FCTC party, there is considerable scope for that government to counter internet tobacco marketing.^{12–14 47} Extending current tobacco advertising restrictions to include Web 2.0 would require cooperation with search engines owners and Web 2.0 sites. Google (who own YouTube) state that they will not remove a page from their search results simply because it is unpopular or they receive complaints. They will however, remove a page if it violates their webmaster guidelines, if they are required to do so by law, or if the webmaster responsible for the page requests it.⁴⁸ Neither the webmaster guidelines, nor national law in most countries currently require pro-tobacco messages to be removed from the internet.

Policy development by governments (and non-government organisations) could also increase the amount of effective counter-tobacco and 'tobacco-free' content on the internet. This would require the investment of resources (as with social marketing in conventional media) and an increase in the prioritisation of and focus on internet media, within counter-tobacco work.^{12 13 49} A requirement for equal space within websites with pro-tobacco content, for counter-tobacco content, is a further option.¹³

Encouraging the removal of pro-tobacco content

The FCTC suggests that citizens should be involved in the monitoring and enforcement of the advertising ban (Article 13.66). This could work well for YouTube, who rely on site visitors to flag content that is in breach of its policies. The contradictions between tobacco industry codes and statements, and their lack of action to remove the use of their brand imagery and advertisements in YouTube, could be brought to the attention of regulators, along with nations' FCTC obligations.²⁰

Besides citizen feedback to YouTube, tobacco-free organisations and relevant government agencies could also make formal approaches to website operators, based on structured monitoring of the internet for pro-tobacco content. This may encourage self-regulatory action.¹⁴

Further research

It would be useful to extend the current study to incorporate more brands, particularly brands that are known to be particularly targeted at young adults by tobacco companies, or that are known to have a presence on YouTube, such as Camel or Virginia Slims.¹¹ Many tobacco brand videos were of people in ethnic minority groups (such as African-Americans) and this could be further explored. The non-English language video arena also needs research,^{50 51} considering that the expansion of tobacco marketing is largely in non-English speaking countries.

A comprehensive analysis of tobacco-free and smoke-free content on YouTube is also warranted. It would be advantageous for governments and tobacco control organisations to know what content is popular and what is unpopular, in order to further develop Web 2.0 related campaigns.

Conclusions

The findings of this study suggest that there are many highly viewed videos on YouTube that contain specific tobacco brand content, much of it likely to appeal to youth. Even with

What this paper adds

- ▶ This is one of few studies looking at tobacco content on Web 2.0 media and the first focused on tobacco brands in internet-based videos.
- ▶ We searched YouTube using 5 leading tobacco brand names and analysed 163 videos arising from these searches. A majority of these (71.2%) had pro-tobacco content versus 3.7% having anti-tobacco content. Three of the four most prominent themes of the videos were celebrities/movies, sports and music, which represent themes of interest to a youth audience.
- ▶ This paper provides some preliminary insights into how tobacco companies may be marketing their brands on YouTube, and how governments and tobacco control organisations could work with YouTube webmasters to limit pro-tobacco content on the internet.

a conservative methodology, a majority of this content is pro-tobacco and most of the videos analysed contained either someone smoking or tobacco brand content. It is disturbing to note that some of the pro-tobacco videos appeared to be of a professional standard, many followed similar themes within a brand and large numbers contained images or music that may be copyrighted to tobacco companies but have not been removed. This picture is consistent with indirect marketing activity by the tobacco companies or their proxies. Tobacco companies stand to benefit greatly from the marketing potential of Web 2.0, without themselves being at significant risk of being implicated in violating any laws or advertising codes.

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Contributors LE helped design the study, collected and analysed data and wrote drafts; GT designed the study, helped analyse data and wrote drafts; NW contributed to drafts.

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