"Cease and desist?" The persistence of Marlboro brand imagery in racing video games

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Word count: 4119

Number of references: 76

Key terms: Philip Morris Marlboro branding Truth Tobacco Industry Documents Video games adverse effects Health policy

ABSTRACT

Background: Since 1972, Philip Morris (PM) has sponsored motorsports. Racing video games are a popular genre among youth and often emulate the branding of their real-life counterparts, potentially exposing youth to tobacco imagery. We examined racing video games for the presence of Marlboro imagery and explored the history of efforts to remove or regulate such imagery.

Methods: We searched the Truth Tobacco Industry documents for relevant documents and used information from video game-related websites and game play videos to identify racing video games that contained Marlboro trademarks and imagery. We also collected information on the Entertainment Software Ratings Board's (ESRB) tobacco-specific and overall game ratings. **Findings:** In 1989, negative publicity surrounding the presence of Marlboro logos in racing games led PM to threaten legal action against two game makers for copyright infringement. PM also launched a media campaign promoting this intervention as evidence of its commitment to youth smoking prevention. Nonetheless, we identified 219 video games from 1979-2018 that contained Marlboro trademarks and/or Marlboro-sponsored drivers and livery. Among the games in our sample with an ESRB game rating, all but one received an "E," indicating appropriateness for everyone, and all but three lacked tobacco content descriptors.

Conclusion: Racing video games have been and continue to be a vehicle for exposing adolescents to the Marlboro brand. Because voluntary efforts by PM and the video game industry to prevent youth exposure to tobacco brands in video games have been ineffective, US and international policymakers should prohibit tobacco content in video games.

INTRODUCTION

For American adolescents, playing video games consumes a significant portion of leisure time, an average of 81 minutes per day.¹ In the United States in 2018, 90% of all teens (and 97% of teen boys) reported playing video games, with 84% claiming access to a gaming console at home.² In 2016, driving games represented 6.4% of the \$29.1 billion gaming market.³ The genre has been enduring, representing some of the first video games published and some current bestsellers.^{4 5}

Driving games frequently draw upon their real-life counterparts in motorsports, putting players in the virtual driver's seat in games ranging from Formula One to Grand Prix motorcycle racing. These sports have a history of tobacco company sponsorship. For example, Philip Morris's (PM) Marlboro brand has sponsored motorsports since 1972,⁶ including Formula One cars, Indy cars, rally cars, Championship Auto Racing Teams (CART), and Grand Prix motorcycle racing. Motorsports continue to be popular in the US and worldwide, with the 2018 global television audience estimated at 1.76 billion viewers; 36% of new fans are under 25 years of age.⁷ In 2019, Phillip Morris International (PMI) is the title sponsor for two racing teams: Ferrari Formula One and Ducati MotoGP.⁸

Originally, Marlboro-sponsored racing vehicles were painted with the "red-roof" trademark, using the red and white colors associated with the brand, and the word "Marlboro."⁶ Drivers and support teams wore Marlboro trademarked livery, and many racetracks were branded with trademarked red roofs (also known as "chevrons") and the word "Marlboro."⁹ However, as concerns were raised about the influence of tobacco sports sponsorship on youth smoking attitudes and behavior,¹⁰ tobacco industry motorsports sponsorship became increasingly restricted (Table 1). Overt use of the red roof trademark and the word "Marlboro" was replaced

by less obvious "alibi" branding, in which a brand is distilled to its essential components.¹¹ In the case of Marlboro, alibi branding consists of red and white barcoding, red rectangles over white rectangles, or simply using the color red, associated with both Marlboro and Ferrari.⁶ For example, when Marlboro became the title sponsor of Ferrari F1 in 1996, Ferrari changed its traditional *rosso corsa* shade of red on F1 cars to Marlboro red.¹² Adolescents have no difficulty identifying tobacco brands even when the brand name is removed from advertisements,¹¹ and the same may be true of alibi branding. Indeed, when shown a picture of a Ferrari painted Marlboro red without any other branding, smokers had tobacco cravings triggered greater than those triggered when shown a logo or cigarette pack.¹³

Given tobacco company sponsorship of real-life motorsports, it is perhaps unsurprising that racing video games have been found to contain tobacco imagery.¹⁴ The impact on game players of this source of exposure to tobacco marketing is unclear, as research exploring the relationship between viewing tobacco imagery in video games and subsequent tobacco-related behavior is limited and the results inconsistent.^{15 16} Some studies, for example, have found an association between exposure to tobacco imagery in video games and smoking, while others have not; however, most suffer from methodological flaws, such as grouping video game playing with television or internet use, and small or non-representative samples.¹⁷ However, there is an established causal relationship between exposure to tobacco marketing in many different media (e.g., film, print advertisements) and youth smoking initiation and progression to regular smoking.¹¹ Even limited exposure to tobacco marketing can create positive perceptions of smoking and smokers and influence intentions to smoke among youth.¹¹

Tobacco control advocates first brought attention to the potential danger of youth exposure to tobacco imagery in video games in 1989.¹⁸ Although a game manufacturer at the

time described the use of Marlboro imagery as an "innocent" reflection of real-life motorsports, PM instructed the manufacturer to remove such imagery.¹⁴ However, to date, no research has examined whether Marlboro imagery persists in racing video games. In this paper, we examine that question, and also explore whether Marlboro imagery in racing video games has changed over time as advertising restrictions have forced PM to modify its motorsports sponsorship strategies. We also explore what steps, if any, PM and/or the video game industry have taken to monitor, remove, or regulate this imagery.

METHODS

Using standard tobacco industry document search strategies,^{19 20 21} we systematically searched the Truth Tobacco Industry Documents online database for documents relevant to PM's enforcement of its trademark in relation to motorsport-themed video games. We started with broad search terms ("game*," "trademark") and used retrieved documents to identify more specific terms ("see you in court"). We stopped searching when additional searches yielded no new documents. We identified 155 documents that were relevant to our focus on PM's monitoring of and response to the use of its trademarks in video games. We reviewed this material iteratively, identified themes, and constructed a timeline of events.²².

We searched for Marlboro imagery in driving and racing video games using a search strategy modified from Forsyth and Malone.²³ We defined Marlboro imagery as any imagery that contained Marlboro branding (red roof, Marlboro barcoding, or red over white rectangles in place of the red roof); the word "Marlboro" or an easily identified misspelling (e.g., "Marlbobo"); or drivers, teams, or vehicles substantially similar in name or appearance to those sponsored by Marlboro at the time in which the video game was set, with drivers wearing livery similar to Marlboro-sponsored livery. To identify motorsport-themed video games, we searched the

website *Mobygames.com*, an online database where users categorize video games by title, date of publication, designers and distributors, summaries, platforms, genre, covers, promotional screenshots and user screen shots. Within Mobygames.com we searched the "racing/driving" genre by date, starting in 1954. As of 1/5/19, there were 3,931 games in this category. All game titles and game summaries were assessed. Games that appeared related to the motorsport genres that PM sponsors in real-life, currently and historically, were selected for further inquiry (n= 505), including: Formula One, CART, Grand Prix, motorcycle Grand Prix, rally racing, superbike, and Le Mans. Figure 1 outlines the search strategy.

We relied on four websites to help us identify Marlboro imagery in each game. First, we searched for Marlboro imagery in all game-related pictures (screenshots, promo art, and cover art) in *Mobygames.com*. Second, for each game, we searched the *Internet Game Cars Database* (http://www.igcd.net), a user created list of car-based video games that catalogues screenshots of game cars, for in-game vehicles with Marlboro imagery. We also entered each game name into the Google Images search engine to identify game-related images containing Marlboro imagery. Finally, we searched *Youtube.com* with each game name to view user-created videos of game play. We selected for viewing videos that focused on car selection, driver choice, and game play.

Using an iterative process, we developed a codebook to refine inclusion criteria and categorize any Marlboro imagery (Supplemental table 1), including overt and alibi branding. We did not search or code for instances of game characters smoking or imagery related to other tobacco brands. Once both authors agreed upon the codebook, we applied the refined codebook definitions to all data. SF performed all initial searches and coding. PAM repeated the coding process for a random sample of 10% of the games identified as containing some type of Marlboro imagery. There were 5 discrepancies in 53 codes (9.0%) that were resolved through

discussion. PAM also reviewed the evidence for the codes assigned to all of the games (Supplemental table 2), a process that revealed 3 coding errors, which were corrected. With all data sources, we considered whether the end-user had modified the game to insert Marlboro imagery not in the original. We compared imagery among sources, and if the Marlboro imagery appeared to be modified or we were unable to reasonably ascertain that the imagery was original to the game, we excluded it. We also collected information on the *Entertainment Software Rating Board* (ESRB) game rating and related tobacco content descriptors from the website *esrb.org*.

RESULTS

Philip Morris responds to public awareness of Marlboro imagery in video games

In late 1989, after surveying video game arcades in three states, two doctors from the activist group Doctors Ought to Care (DOC) alerted Ohio Representative Tom Luken, chair of the House subcommittee on Transportation and Hazardous Materials, about the presence of tobacco imagery in numerous video games.²⁴ They noted that "A child playing *Super Monaco GP* is literally exposed to hundreds of Marlboro ads during the game if he is good."²⁵ On November 13, 1989, Representative Luken invited PM's chief executive officer (CEO) Hamish Maxwell to a hearing to discuss "the use of the Marlboro logo on racing car games and in arcades patronized mainly by children."²⁶ In December 1989, DOC filed a formal complaint with the Federal Trade Commission (FTC),²⁴ which began making inquiries the following month.²⁷

Two days after PM received the letter from Representative Luken, PM lawyer Barry Krivisky, walking through a New York video game arcade, reportedly noticed Marlboro trademark infringement in Sega's *Super Monaco GP*.²⁸ On November 20th 1989, PM sent a "cease and desist" letter to Sega, demanding the removal of Marlboro trademarks and the recall of all games containing the Marlboro trademark.²⁹ PM then responded to the FTC, stating that the company had "taken action, prior to your inquiry, to require Sega to discontinue its infringing activity."²⁷ In early 1990, PM and Sega reached a confidential settlement in which neither party admitted liability, and Sega agreed to produce decals to obscure trademarks on *Super Monaco GP* game cabinets and provide conversion kits to remove trademarks from game play.³⁰ The agreement stated that, "Sega intended and believes that all the alleged use of the marks in the Game was for the sole purpose of adding realism in the background of the game to simulate real-life locations or racing cars."³⁰

Once the agreement was in place, PM used it as evidence of its commitment to youth smoking prevention. In a March 1990 letter to Representative Luken, PM vice president David Greenberg stated that PM never authorized the use of its trademark in any video game, and, "in fact...PM took action to require Sega to discontinue its infringing activity immediately on discovering it."³¹ In July 1990, PM launched its "See you in court" campaign to warn manufacturers that misuse of PM trademarks would lead to litigation (Figure 2).³² The initial press release featured a picture of the Marlboro billboards in *Super Monaco GP*, and cited the legal action against Sega as evidence of seriousness.³³ The campaign received positive press, including a *USA Today* article that included the following statement from John Nelson, PM's vice president of corporate affairs: "We want to demonstrate to everybody we are committed to stopping kids from smoking."³⁴

On February 13th, 1991 an Associated Press news story revealed the continued presence of Marlboro imagery in *Super Monaco GP* games a year after it was supposed to have been removed.³⁵ On February 21st, 1991, PM announced that it was filing a trademark infringement lawsuit against Sega,³⁶ resulting in national press coverage.³⁷ The lawsuit was settled in March 1992 with Sega agreeing to pay arcade owners \$200 to convert all remaining *Super Monaco GP* games.³⁸ A DOC spokesperson described the settlement as "one more of PM's cruel hoaxes," noting that it only applied to *Super Monaco GP* and not to four other games with Marlboro trademarks that DOC had identified.³⁹ A PM spokesperson responded that PM was only aware of the misuse of Marlboro trademarks in *Super Monaco GP*, and disputed DOC's claim: "We have looked at the Sega games as well as other video games. Whenever we have seen a misuse, we have taken action."³⁹

We found only one additional example of Philip Morris contacting a video game company regarding inappropriate trademark use. On August 2, 1990, Philip Morris notified Namco/Atari that the 1987 game *Final Lap* contained red-roof trademarks.⁴⁰ PM subsequently negotiated an agreement similar to the Sega agreement in which Atari provided conversion kits to arcade game owners.⁴¹

In 1995, PM announced an initiative against youth smoking. James Morgan, PM USA's CEO (and former Atari CEO), stated that it involved increased "efforts to prevent the use of Philip Morris cigarette brand names or logos on any item marketed to minors or in any video game."⁴² Accordingly, PM created a program wherein "activist" customers and employees could report incidents of trademark infringement and receive \$100 or a gift if PM successfully eliminated the infringement.^{43 44} PM was notified by an employee about Psygnosis's *Formula One* video game, designed for Sony's Playstation, which had "a race car driver wearing a helmet with a Marlboro trademark."⁴⁵ It is unknown if PM followed up on this lead or if the employee received a reward. However, during this time PM used similar racing games in bar night promotions,⁴⁶ including *IndyCar II*, a game with red roof trademarks and Marlboro sponsored racing teams.⁴⁷

Marlboro imagery in racing games

Of the 505 games with Formula One, CART, Grand Prix, motorcycle Grand Prix, rally racing, superbike, and/or Le Mans playing themes published from 1975-2018, 43% (219/505) contained Marlboro imagery (table 2) (Figure 3). The first instance we identified of a racing video game that contained a Philip Morris trademark was the 1979 game *Monaco GP*. The cover art for this Sega/Gremlin game featured the red roof design on a billboard and a branded car with "Marlboro" written on its side, and game play featured a red and white chevroned car.⁴⁸

Between 1975 and 1984, only 13% (4/32) of racing games reviewed contained Marlboro imagery (table 2). These four games had covers displaying the red roof and/or the word "Marlboro," and/or had in-game Marlboro billboards with the red roof and the word "Marlboro." These billboards could be ubiquitous: within the first 10 minutes of gameplay, *Pole Position 2* exposed players to at least 21 Marlboro billboards.⁴⁹

Between 1985 and 1994, 56% (70/125) of the identified racing games contained Marlboro imagery (table 2). This decade marked the first appearance of two types of alibi branding, the barcode (on a game cover, flyer, or equipment and in the game itself, both in 1989), and red over white rectangles (within the game, in 1993). With game graphics improving, this decade also marked the first appearance of in-game and cover use of a vehicle/driver and/or team substantially similar to one sponsored by Marlboro. The red roof and the word "Marlboro" were the most common type of branding employed both in game and on covers, flyers, or equipment, with the red roof appearing in the gameplay of 80% of all games containing some form of Marlboro imagery. For example, *Super Monaco GP*, published in 1989, featured multiple Marlboro ads during game play. The opening sequence showcased a car and driver in full Marlboro livery. In the 45-second preliminary race, there were 15 individual red-roof billboards around the track and one large red-roof banner with "Marlbobo" emblazoned across it.⁵⁰ Red roofs continued to appear during the entire cycle of play. In the deluxe arcade game, players even sat in a red roof branded cabinet.⁵¹ Promotional material included pictures of Formula One style cars with the red roof design.⁵¹

Between 1995 and 2004, 44% (78/178) of all motorsport games reviewed contained some form of Marlboro imagery (table 2). Compared to the previous decade, there was less use of the red roof (19% versus 60%) and/or the word "Marlboro" on game covers, flyers, or equipment (3% versus 26%). While this type of Marlboro branding was more evident during game play than on covers, alibi branding in the game was becoming more popular, with 18% of games with Marlboro imagery featuring the bar code and 22% featuring red over white rectangles. In-game use of drivers, teams, or vehicles substantially similar to those sponsored in real life by Marlboro also increased compared to the previous decade (87% versus 60%).

Between 2005 and 2014, 39% (46/117) of all racing games considered contained Marlboro imagery (table 2). Marlboro imagery on covers, flyers or equipment was mostly absent, aside from the presence of drivers, vehicles or teams substantially similar to those sponsored in real life by Marlboro (22% of games). During game play, nearly every game with any Marlboro imagery featured substantially similar drivers, vehicles or teams (96%); in many of these games, players could select a Marlboro-sponsored driver and vehicle and then play as if they were actually driving for the team. The red roof, barcode, and red over white rectangle also continued to appear in gameplay during this period, although the use of the rectangles was relatively uncommon (7%); the use of the word "Marlboro" was also relatively rare (7%).

From 2015-2018, 40%% (21/53) of all racing games reviewed contained Marlboro imagery. As with the preceding decade, Marlboro imagery on covers, flyers or equipment was largely limited to drivers, vehicles or teams substantially similar to those sponsored in real life by

Marlboro (38% of games with any Marlboro imagery); this was also the most popular type of Marlboro branding to appear within games (95%). The red roof was visible in 43% of games with any Marlboro imagery, while the barcodes and the red and white rectangles were not used at all. Surprisingly, the word "Marlboro" had a resurgence, appearing in 14% of games with any Marlboro imagery, compared to 7% from 2005-2014.

Game ratings

In 1994, in response to congressional concern about video game content,⁵² the ESRB was established by the gaming industry to provide voluntary, age-appropriate ratings for video games, similar to movie ratings.⁵³ Games are also assigned content descriptors to flag substance use, mature behavior, violence, gambling, etc. Two content descriptors that may be assigned are "tobacco reference" and tobacco use." Of the 148 games with Marlboro imagery published after the ESRB was established, 115 received ratings. Ninety-nine percent (114/115) received an "E" rating: game appropriate for everyone. Only 3% (3/115) received a tobacco content rating descriptor, all for "tobacco use" by smoking characters. No game received a tobacco content descriptor for "tobacco reference."

DISCUSSION

Our research demonstrates the persistence of Marlboro imagery in racing video games from 1979 onward. Even in the years immediately following PM's 1990 "See you in court" campaign, game makers continued to use Marlboro imagery in racing games, including the most obvious, a brand name reference (or obvious misspelling). The documents we uncovered revealed one possible reason for the continued inclusion of Marlboro imagery: limited efforts by PM to take legal action against game makers. We found only two examples of PM contacting a game maker regarding inappropriate trademark use, with the first a seemingly belated response to formal government inquiries. It is possible, of course, that PM did take additional legal action that is not reflected in publicly available documents. However, our findings regarding ongoing use of Marlboro imagery in video games suggest that any such action ultimately failed to have a broader chilling effect on game makers. Another potential explanation for the persistence of Marlboro imagery in video games is that, behind the scenes, PM actively promoted the use of the Marlboro brand by game makers; however, we found no evidence to support that line of argument.

The most common type of Marlboro imagery in motorsports-themed video games varied over time. After the 1985-1994 period, which saw substantial use on game covers and within games of the most obvious forms of Marlboro branding -- the red roof and the word "Marlboro" -- more subtle forms of Marlboro imagery took greater precedence, particularly drivers, teams or vehicles sponsored by Marlboro in real life. The most obvious forms of Marlboro imagery also largely disappeared from game covers, flyers, or equipment after 2004. Nonetheless, the use of two types of alibi branding in games (the bar code and red over white rectangles) never exceeded the use of the more obvious red roof design. Game makers' use of this design appears to be a possible trademark violation, as PM has registered in the UK trademarks for the red roof design without words.⁶

While most game makers' motivations for including Marlboro brand imagery in their games are unknown, one has linked the use of such imagery to an interest in verisimilitude.¹⁴ If realism is a widely shared goal among game makers, our general findings regarding the shift from more to less overt forms of branding may reflect increased restrictions on tobacco company sponsorship of real-life motorsports, particularly in the mid-2000s. A preference for realistic game play appeared to have limits, however, as video games continued to feature red roofs long

after their use was prohibited in motorsports. Adolescents have no difficulty identifying the tobacco brand associated with such imagery.¹¹ It is possible that PMI continues to sponsor reallife motorsports partly in order to encourage the continued appearance of Marlboro brand imagery in motorsport-themed video games, although no evidence has been found to support that claim.⁴⁶

The most common type of Marlboro imagery in motorsports-themed video games has become drivers/teams/vehicles substantially similar to those sponsored by Marlboro in real life. This means that drivers and teams in video games are wearing livery and driving vehicles with decals and color schemes nearly identical to their real-life counterparts. Research demonstrates that children are able to link sports sponsorship to the products the sponsors make,^{54,55} making it highly likely that video game players familiar with real life motorsports would transfer that sponsorship knowledge and understand that similar video game imagery is also associated with the Marlboro brand.

The ESRB might have influenced video game makers' use of tobacco imagery in the same way that the US movie ratings board influences decisions about film content.⁵⁶ But the ESRB gave most games with Marlboro imagery the family-friendly rating of "E" and no "tobacco reference" content descriptors. It is clearly failing its mission to "empower consumers, especially parents, to make informed decisions" about video games, and to "hold the video game industry accountable for responsible marketing practices."⁵³ This is a significant failure. Engaging with tobacco imagery has been found to be a causative factor for smoking initiation among adolescents,⁵⁷ with more exposure resulting in greater likelihood of becoming a regular smoker. Given how frequently adolescents play video games, and how immersive the experience

can be for players,¹⁵ exposure to tobacco imagery in video games may have a powerful influence on youth tobacco uptake and use.⁵⁸⁻⁶²

In light of the serious implications of exposure to tobacco imagery in video games and ESRB's poor track record of giving video games appropriate tobacco content ratings,⁶³ formal regulation banning tobacco imagery from video games, including its more subtle forms, is needed. Such regulation could be advanced under the auspices of the WHO Framework Convention on Tobacco Control, which recommends prohibiting "any form of commercial communication ... with the aim, effect or likely effect of promoting a tobacco product or tobacco use either directly or indirectly." ⁶⁴ In the US, the 2009 Family Smoking Prevention and Tobacco Control Act gives the Food and Drug Administration broad authority to regulate tobacco marketing in order to promote overall public health.⁶⁵ Thus, regulatory frameworks exist for removing tobacco imagery from video games.

Our research has several limitations. First, the document databases we searched are not comprehensive, and documents pertaining to PM's copyright infringement actions may have been destroyed,⁶⁶ or never obtained in the discovery process. In addition, the list we compiled of 505 racing games with motorsport genres that PM sponsors in real life is likely not comprehensive as we used only one source to identify these games. Once we compiled this list, we may have failed to identify some games containing Marlboro imagery, given our reliance on websites containing user-supplied information about cover art and game content. Our study thus likely provides a conservative estimate of the persistence of Marlboro imagery in racing-themed video games over time.

CONCLUSION

Driving/racing video games have persistently exposed players to Marlboro imagery from 1979 to the present day. PM has not effectively prevented the use of its trademark and/or related imagery in racing video games and the ESRB has not given them "tobacco reference" content descriptors. Except for the FTC in 1989/90, we found no evidence of any oversight of Marlboro imagery in video games. Rigorous oversight is particularly important as tobacco sponsorship and branding persists in real life motorsports, the prototype for imagery used in video games. Marlboro has returned to branding its Formula One cars and Ducati motorcycles with the "Mission Winnow" logo, a logo, highly reminiscent of its red roof, that purportedly promotes PMI's interest in cigarette alternatives.^{8 67} British American Tobacco has returned to sponsoring the McLaren Formula One team, promoting its "less harmful" products with a logo similar to the Lucky Strike logo.⁶⁸ Long overlooked as a potential factor in youth smoking initiation, it is time that policymakers consider whether tobacco imagery of any type should have a role in the video games that adolescents play.

What this paper adds:

- Philip Morris was singled out in 1989 for the use of Marlboro imagery in arcade racing video games and responded with a trademark infringement claim against the game maker.
- Research has not examined whether Marlboro imagery persists in racing video games.
- We found Marlboro imagery in 219 racing video games from 1975-2018. This imagery became less overt over time but continues to include the well-known red roof trademark.
- We found few instances of action by Philip Morris to enforce its trademark; the video game industry was also ineffectual in alerting players to the presence of Marlboro imagery in racing games.
- Some jurisdictions could eliminate this source of youth exposure to tobacco advertising using existing regulatory frameworks.

motorsports	
Year	Regulation/tobacco industry response
1998	The Master Settlement Agreement (MSA) limits tobacco companies to one brand
	name sponsorship in the United States (US) per year, although it could include
	multiple events, such as a series of races, i.e., the Winston Cup series. ¹⁰
2005	The European Union (EU) Tobacco Advertising Directive (2003) goes into
	effect, resulting in an EU-wide ban on cross-border tobacco advertising and
	sponsorship, including sponsorship of Formula One (F1) races. ^{69 70} Most tobacco
	companies pull out of motorsport sponsorship, except Philip Morris International
	(PMI), which continues to sponsor Ducati motorcycle and Ferrari F1 vehicles and
	teams. ⁷¹ It replaces the Marlboro logo on the sponsored vehicles with a barcode
	design. ⁶
2006	Fédération Internationale de l'Automobile (FIA), the non-profit world governing
	body for motorsport, bans overt tobacco advertising on vehicles and at races. ^{72 73}
2010	The US Food and Drug Administration (FDA) bans all tobacco brand-name
	sponsorships, including sports sponsorships. ⁷⁵ Starting with the May 2010
	Spanish Grand Prix, PMI removes the barcode from vehicles and, in 2011, from
	livery, ^{6 67 76} but continues to sponsor Ferrari Formula One and Ducati motorcycle
	racing, with vehicles painted the trademark red color.

Table 1: Timeline of international regulations governing tobacco company sponsorship of motorsports

Table 2	101011001	omugory	 motorsport		o guines, 1	775 2010						
Year	Total number of motorsport games reviewed	Total number of motorsport games with Marlboro imagery	Cover/flyers/equipment: Red roof	Cover/flyers/equipment: Bar code	Cover/flyers/equipment: Red over white rectangle	Cover/flyers/equipment: "Marlboro"or obvious misspellings	Cover/flyers/equipment: Drivers/teams/vehicles substantially similar	In game: Red roof	In game: Bar code	In game: Red over white rectangle	In game: "Marlboro" or obvious misspellings	In game: Drivers/teams/vehicles substantially similar
1975	1	0	 0	0	0	0	0	0	0	0	0	0
1976	3	0	0	0	0	0	0	0	0	0	0	0
1977	1	0	0	0	0	0	0	0	0	0	0	0
1978	1	0	0	0	0	0	0	0	0	0	0	0
1979	3	1	1	0	0	1	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0	0	0	0	0
1981	1	0	0	0	0	0	0	0	0	0	0	0
1982	5	1	0	0	0	0	0	1	0	0	1	0
1983	9	1	1	0	0	0	0	1	0	0	1	0
1984	8	1	 1	0	0	1	0	0	0	0	0	0
1975-	32	4	3	0	0	2	0	2	0	0	2	0
1984			75%*	0%*	0%*	50%*	0%*	50%*	0%*	0%*	50%*	0%*
1985	3	3	3	0	0	3	0	2	0	0	2	1
1986	7	2	 1	0	0	1	0	1	0	0	1	0
1987	8	5	 4	0	0	3	1	3	0	0	1	0
1988	13	6	 3	0	0	2	2	5	0	0	2	3
1989	13	8 5	6	1	0	1	0	5	1	0	4	1
1990 1991	13 23	5 15	2	0	0	0	<u>1</u> 5	4	0	0	1	4
1991	18	15	 9 7	2	0	4	8	13		0	3	12
1992	18	14 9	5	0	0	4	2	8	1	1	3 1	8
1993	12	3	2	0	0	1	0	3	0	0	0	8
1994	12	5	Z	0	0	T	0	5	0	0	0	5

 Table 2: Marlboro imagery in motorsport themed video games, 1975-2018

Year	Total number of motorsport games reviewed	Total number of motorsport games with Marlboro imagery		Cover/flyers/equipment: Red roof	Cover/flyers/equipment: Bar code	Cover/flyers/equipment: Red over white rectangle	Cover/flyers/equipment: "Marlboro"or obvious misspellings	Cover/flyers/equipment: Drivers/teams/vehicles substantially similar	In game: Red roof	In game: Bar code	In game: Red over white rectangle	In game: "Marlboro" or obvious misspellings	In game: Drivers/teams/vehicles substantially similar
1985-	125	70		42	3	0	18	19	56	5	1	22	42
1994				60%*	4%*	0%*	26%*	27%*	80%*	7%*	1%*	31%*	60%*
1995	19	10	_	6	1	0	1	5	10	2	1	2	7
1996	13	5		2	0	0	1	2	4	2	0	1	4
1997	18 14	5		3	0	0	0	4	5	3	0	1	5
1998 1999	22	5 12	_	1	0	0	0	6	3	2	2	1	3 11
2000	22	12		1	0	0	0	6	3	0	4	1	11
2000	14	7	_	1	0	0	0	2	3	0	4	0	6
2001	21	14	_	0	0	0	0	7	1	0	3	0	13
2002	19	6		0	0	0	0	3	1	0	1	1	5
2004	17	3		0	0	0	0	0	1	0	0	0	3
1995-	178	78		15	2	0	2	35	38	14	17	9	68
2004				19%*	3%*	0%*	3%*	45%*	49%*	18%*	22%*	12%*	87%*
2005	16	8		0	1	0	0	1	3	3	2	1	8
2006	13	3		0	0	0	0	0	0	0	0	0	3
2007	10	5		0	0	0	0	0	1	1	0	0	5
2008	14	4		0	0	0	0	1	0	0	0	1	4
2009	6	2		0	0	0	0	0	1	0	0	0	2
2010	11	6		0	0	0	0	3	2	0	0	0	6
2011	10	4		0	0	0	0	1	2	0	0	0	3
2012	7	3		0	0	0	0	1	1	1	0	1	3
2013	15	6		0	0	0	0	1	3	0	1	0	6
2014	15	5		0	0	0	0	2	1	0	0	0	4

Year	Total number of motorsport games reviewed	Total number of motorsport games with Marlboro imagery	Cover/flyers/equipment: Red roof	Cover/flyers/equipment: Bar code	Cover/flyers/equipment: Red over white rectangle	Cover/flyers/equipment: "Marlboro"or obvious misspellings	Cover/flyers/equipment: Drivers/teams/vehicles substantially similar	In game: Red roof	In game: Bar code	In game: Red over white rectangle	In game: "Marlboro" or obvious misspellings	In game: Drivers/teams/vehicles substantially similar
2005-	117	46	0	1	0	0	10	14	5	3	3	44
2014			0%*	2%*	0%*	0%*	22%*	30%*	11%*	7%*	7%*	96%*
2015	16	9	1	0	0	0	4	5	0	0	3	8
2016	17	6	0	0	0	0	1	0	0	0	0	6
2017	16	5	0	0	0	0	2	3	0	0	0	5
2018	4	1	0	0	0	0	1	1	0	0		1
2015-	53	21	1	0	0	0	8	9	0	0	3	20
2018			5%*	0%*	0%*	0%*	38%*	43%*	0%*	0%*	14%*	95%*
1975-	505	219	61	6	0	22	72	119	24	21	39	174
2018			28%*	3%*	0%	10%*	33%*	54%*	11%*	10%*	18%	79%*

*Percent of total number of motorsport games with Marlboro imagery

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