

Message Content in Canadian Automotive Advertising: A Role for Regulation?

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L'objectif de cette étude était de déterminer si la publicité, dans le domaine de l'automobile, répond aux besoins des différentes parties concernées, et s'il y a nécessité de la réglementer davantage; pour ce faire, nous avons examiné les messages qu'elle véhicule. Une analyse de contenu réalisée à partir de 200 publicités télévisées et imprimées a révélé que 18 % des messages publicitaires montrent des situations de conduite non sécuritaire ou agressive, et que 25 % font mention de certaines questions de sécurité. Les publicités télévisées (27 %) montrent plus souvent que les publicités imprimées (10 %) des situations de conduite non sécuritaire ou agressive; et les premières (21 %) ont moins tendance que les secondes (29 %) à faire mention de certaines questions de sécurité. Chaque année, les dépenses en publicité automobile se chiffrent à 550 millions de dollars au Canada; il serait donc peut-être nécessaire que l'industrie se dote de mesures d'autoréglementation ou que le gouvernement impose une réglementation plus serrée pour restreindre la présentation de situations de conduite dangereuse dans cette publicité.

Mots clés : publicité automobile, réglementation, dangereux, sécurité, environnement, analyse de contenu

The message content of automotive advertising was examined to determine whether automotive advertising is meeting the needs of its stakeholders, and whether there is a need for it to become more highly regulated. A content analysis of 200 Canadian television and print advertisements revealed that 18 percent of ads demonstrate unsafe or aggressive driving, while 25 percent of ads feature safety mentions. Television ads are substantially more likely than print ads to feature unsafe or aggressive driving (27 percent vs. 10 percent, respectively), while TV ads are less likely than print ads to mention safety (21 percent vs. 29 percent, respectively). With nearly \$550 million spent annually on Canadian automotive advertising, either industry self-regulation or government-imposed regulation may be needed in order to reduce advertising depictions of unsafe driving.

Keywords: automotive advertising, regulation, unsafe, safety, environment, content analysis

INTRODUCTION

Formal regulation of advertising content is driven by multiple stakeholders with potentially conflicting views (Polonsky and Hyman 2007). Advertising regulation tends to be instigated when an industry does not meet consumer needs at either market or societal levels. To avoid mandatory regulation and meet market demand more effectively, it is often in an industry's best interest to make voluntary changes to its advertising content (Boddewyn 1989). This can be accomplished, for example, when major companies create their own advertising policies that address societal concerns or, alternatively, through the creation of an industry-wide voluntary code of conduct for advertising.

Over the last few years, several radical changes have taken place in the Canadian automotive market. Shifts in market demand, as well as social values that demand increased safety levels, have occurred in tandem with complementary innovations in motor vehicle technology (Byron 2003; Deep 2000). It is anticipated that significant shifts may have similarly occurred in the content of automotive advertising. It is proposed that these recent shifts in stakeholder interests have resulted in a change of direction in automotive advertising content away from unsafe and aggressive driving themes (Sawyer 2007), and toward more safety-oriented messages.

While no directly comparable or Canadian studies exist, studies from the United States have shown that as many as 25 percent of all television commercials for motor vehicles contain speed-related content (Ferguson, Hardy, and Williams 2003; Shin et al. 2005). The automotive industry is currently facing international pressure to eliminate unsafe driving content, such as portrayals of speeding and aggressive driving, from its advertising (Power 2007). A study of Australian advertising conducted before and after the introduction of a voluntary code of conduct for automotive advertising demonstrated that industry self-regulation was relatively successful in eliminating depictions of unsafe driving (Schonfeld,

Steinhardt, and Sheehan 2005). Some countries, like Belgium, have gone even further and require automotive ads to include a warning that motorists are responsible for safe driving (Burt 2002).

The present study considers the extent to which Canadian automotive advertising content reflects the growing consumer interest in safety. Specifically, recent automotive advertising messages are analyzed to examine the extent to which messages focus on unsafe and aggressive driving versus safety. Results are analyzed in aggregate and compared across television and print media. Message frequency is then translated into advertising dollars spent per year in Canada to illustrate overall impact. Implications for public policy and advertising regulation are discussed.

Stakeholder Influence on Regulation of Advertising Content

Social contract theory, which claims that firms are accountable to many stakeholders (Donaldson 1982), has been shown to be valuable in assessing marketing communication (Dunfee, Smith, and Ross 1999). There are multiple stakeholders with an interest in minimizing the negative consequences of advertising; however, these stakeholders often differ with respect to what they consider to be inappropriate (Polonsky and Hyman 2007). There are four sets of stakeholders that can respond to a perceived failure in the advertising market: (a) consumers themselves as a free market, (b) society as a whole and the groups that uphold its cultural norms, (c) the industry in question and its associated representatives, and (d) government and its elected or appointed officials. Any of these four types of stakeholders can respond to inappropriate content resulting from a perceived failure in an industry's advertising standards (Boddewyn 1989).

Consumers exert control over acceptable message content by demanding content that reflects personal interests and market demand. Activists and lobby groups, such as Pollution Probe or Mothers Against Drunk Driving, speak out on behalf of society to

encourage automotive advertisers to reflect collective cultural values of polluting less and not driving while impaired, respectively. An industry can also exert self-regulatory force over its message content through its own member-driven regulatory bodies like the Canadian Vehicle Manufacturers Association and the Alliance of Automotive Manufacturers in the United States. In lieu of all else, government departments like Transport Canada or Natural Resources Canada, or organizations like the Advertising Standards Council, can work together to externally regulate advertising content. Consistent with the classic principle of the marketing concept (Levitt 1960), it is in any advertiser's best interests to address market demand by providing message content that addresses its consumers' primary interests and needs. However, the logical course of action for industry is less obvious when the interests of stakeholders are at odds. It is when individual consumer interests and needs conflict with overall social values, or when social values do not match government public health concerns, that an industry's advertising regulation becomes an issue.

The Purpose of External Advertising Regulation

Traditionally in Canada, advertising restrictions have been limited to industries and markets in which false claims could seriously threaten the health, safety, or well-being of consumers (Vladeck, Weber, and Gostin 2004). Advertising regulation (including self-regulation) serves four key purposes.

First, it protects consumers from misleading and deceptive advertising message content (Polonsky and Hyman 2007). While all advertisers, including automotive manufacturers, must meet this universal advertising standard, some industries face more rigorous compliance verification. Burns, Ferrell, and Orrick (2005) have reported on potentially misleading advertising safety claims made by automotive advertisers in the United States, suggesting a potential need for advertising regulation in the automotive industry. While examination of the veracity of safety claims in Canadian automotive

advertising is beyond the scope of this study, it may warrant future investigation.

Second, the regulation of advertising content protects vulnerable consumers from advertising messages that they may not have the capacity to fully understand (Langenderfer and Shimp 2001). While the majority of consumers who purchase vehicles are adults considered to have advanced reasoning ability, there is general evidence to suggest that much advertising directed toward seniors is seriously misleading (Schutz and Casey 1981). While the current study does not attempt to segment target audiences by age, Canada's population is aging, giving rise to the potential for this concern to increase over time.

Third, advertising regulation is used to ensure that the associated health risks of products that can cause personal physical harm are fully disclosed. Manufacturers of vehicles equipped with air bags, for example, are required to post warnings about the possibility of physical harm to children and pregnant women sitting in the front seat during a collision. Torres, Sierra, and Heiser (2007, 51) argue that social contract theory requires such "explicit, clear information about any potentially adverse effects of products for consumers." This disclosure serves to ensure that consumers are able to make fully informed decisions that are consistent with both their own demands and social values. While Belgium requires such warnings in automotive advertising, there is no current regulation in Canada and no such analysis is conducted for the purposes of this study.

Finally, the regulation of advertising content serves to protect the public interest by restricting message content that is associated with anti-social behaviour or illegal activity. It is for this latter reason that the automotive industry has recently been brought under regulatory scrutiny—for encouraging anti-social or illegal behaviour through depictions of speeding and aggressive driving. Interestingly, this scrutiny is arising after decades of social acceptance of such message content, possibly in response to an

increasing concern for road safety among government organizations. For example, to highlight this growing concern, the World Health Organization made road safety the theme of World Health Day on 7 April 2004 (Short 2004). Message content relating to speeding and aggressive driving provides the initial context for this research.

External Automotive Advertising Regulation in Canada

Within Canada, the Canadian Code of Advertising Standards does not specifically address automotive ads in terms of depicting dangerous acts. However, Clause 10 does deal with the issue of safety more generally. It states, “Advertisements must not without reason, justifiable on educational or social grounds, display a disregard for safety by depicting situations that might reasonably be interpreted as encouraging unsafe or dangerous practices, or acts” (Advertising Standards Canada 2007, 4). This clause has clear implications for unsafe and aggressive driving content in automotive advertising. Until recently, the automotive industry had not come under serious scrutiny for these depictions. In its *2006 Ad Complaints Report*, Advertising Standards Canada released an advisory regarding increasing consumer complaints about automobile advertising believed to depict unsafe driving or driving at excessive speed. The advisory provided a list of guideline questions used by the Advertising Standards Council to determine if an automotive ad, in its attempts to demonstrate handling and performance, contravenes Clause 10. Since 2006, automotive advertising has ranked in the top three complaint product categories and has maintained the highest ratio of complaints upheld by the Council.

In December 2007, the Quebec National Assembly passed legislation that gives the Société de l’assurance automobile du Québec (SAAQ) the task of creating advertising guidelines “aimed at prohibiting any advertisement that portrays a road vehicle and conveys a careless attitude with respect to road safety by presenting situations that encourage reckless, dangerous or prohibited practices or

behaviour” (Éditeur officiel du Québec 2009). This is the first such legislation in Canada, with authority having come into force on 1 April 2008. With this new authority comes an excellent opportunity to monitor changes in advertising content that may result from the SAAQ advertising guidelines.

SAFE AND UNSAFE MESSAGE CONTENT IN INTERNATIONAL MOTOR VEHICLE ADVERTISING

While no studies have been conducted in Canada that are directly comparable to this one, several studies have been conducted in other countries to examine automotive advertising for the existence of unsafe or aggressive driving content (Ferguson, Hardy, and Williams 2003; Schonfeld, Steinhardt, and Sheehan 2005; Shin et al. 2005) and safety messages (Burns 1999; Ferguson, Hardy, and Williams 2003; Schonfeld, Steinhardt, and Sheehan 2005; Shin et al. 2005). Shin et al. (2005) evaluated both Canadian and American television commercials aired between 1998 and 2002 and found no significant difference in the prevalence of unsafe message content by country. Thus, there is some limited empirical support for the notion that results from previous US studies may be generalizable to Canada. However, the studies discussed here use different sampling frames in different countries with different time frames and different coding interpretations, all limiting the likelihood of external validity of their results. Thus, any aggregate comparisons must be approached with this understanding and interpreted with caution. In lieu of directly comparable research, these studies may provide an initial benchmark for empirical expectations in this investigation.

Ferguson, Hardy, and Williams (2003) longitudinally analyzed both unsafe and safety-related American television commercial message content in the years 1983, 1988, 1993, and 1998. Shin et al. (2005), building on the work of Ferguson, Hardy, and Williams, evaluated both Canadian and American television advertising content aired

between 1998 and 2002. Schonfeld, Steinhardt, and Sheehan (2005) performed a longitudinal analysis of the effects of Australia’s voluntary automotive advertising guidelines on motor vehicle advertising content. The authors did not specify the media investigated, but used Ferguson, Hardy, and William’s (2003) television-focused study as a foundation for comparing the incidence of safe versus unsafe message content before and after the introduction of the Australian voluntary automotive advertising code (pre-2002 and post-2004, respectively). Burns’s (1999) American study of ad content in car-related magazines published in 1998 is unique in that he considered only safety-related messages and is the only author to explicitly study printed advertising.¹ Table 1 summarizes relevant key findings resulting from this body of research.

Motor vehicle manufacturers have traditionally made the performance-related features of their vehicles the primary focus of their advertising efforts. Across the above-mentioned studies, approximately 50 percent of all advertising content

contained performance-related content. In the Ferguson, Hardy, and Williams (2003) study measuring primary themes of automotive advertising in four different years (1983, 1988, 1993, and 1998), performance was a primary theme in 41–62 percent of ads. This number is also consistent with Australia’s preregulation result of 49.4 percent (Schonfeld, Steinhardt, and Sheehan 2005). Performance encompasses such attributes as speed, power, manoeuvrability, traction, and stopping ability (Ferguson, Hardy, and Williams 2003). These features are directly associated with unsafe or aggressive driving activities such as excessive speed and acceleration, racing, high speed cornering, risky off-road driving, skidding, and sudden braking not associated with accident avoidance (Shin et al. 2005). Speed-related messages are the most common infraction, occurring in approximately 25 percent of all advertisements. Shin et al.’s (2005) study of unsafe driving is a representative example that encompassed not only aggressive, but also inattentive, driving. It found that 45.2 percent of messages contained demonstrations of unsafe

TABLE 1
Frequency of Message Theme Occurrences in Previous Content Analyses of Motor Vehicle Advertising

Studies	Medium	Message Content and Frequency			
		Performance-Related Content (%)	Unsafe or Aggressive Content (%)	Speed-Related Content (%)	Safety-Related Content (%)
Burns (1999)	Magazine				22.8
Ferguson, Hardy, and Williams (2003), 1998 results	Television	50.0	n/a	25.0	8.0
Shin et al. (2005)	Television	n/a	45.2	25.2	12.0
Schonfeld, Steinhardt, and Sheehan (2005), pre-code	Not specified	49.4 ^a	25.6 ^a	n/a	10.1 ^b
Schonfeld, Steinhardt, and Sheehan (2005), post-revision		21.7 ^a	12.4 ^a	n/a	5.2 ^b

Notes: n/a = not applicable. ^aDefined as a dominant theme, that is, the primary theme that was considered most central or prominent in each ad. ^bDefined as a primary theme. Primary themes referred to major themes in the ads; there could be multiple primary themes per ad.

Sources: Authors’ calculations based on Burns (1999); Ferguson, Hardy, and Williams (2003); Schonfeld, Steinhardt, and Sheehan (2005); and Shin et al. (2005).

driving, of which 84.8 percent involved aggressive driving (or 38.3 percent of the total number of ads). The study also found that 60 percent of all depictions of driving violations (amounting to 25.2 percent of all ads) were speed related. Thus, aggressive driving comprises a subset of performance content and, according to previous research, speeding-related content alone accounts for half of all such messages.

In Australia, prior to the introduction of voluntary automotive advertising guidelines, the incidence of safety and performance themes was similar to that in North America (Schonfeld, Steinhardt, and Sheehan 2005). After the introduction in 2002 and subsequent revision in 2004 of the Australian Voluntary Code of Practice, the percentage of performance-based ads was reduced by more than half, from 49.4 percent to 21.7 percent. Since performance-based ads appear to frequently depict speeding, a reduction in these ads would also result in a reduction in ads depicting speeding. As such, it seems that the Australian industry's response to government pressure is having the desired effect; self-regulation has been successful. The longer-term effect of regulation on Australia's cultural norms related to driving remains of significant interest, and will undoubtedly be the subject of future research (Schonfeld, Steinhardt, and Sheehan 2005).

In 1999, 84 percent of American consumers reported safety to be "extremely important" or "very important" when purchasing a vehicle; however, motor vehicle advertisements of the day were not reflective of that level of concern (Ferguson, Hardy, and Williams 2003). In an interesting paradox, society condones speeding (EKOS Research Associates Inc. 2007) while emphasizing safety in the form of accident prevention (Lahey 1997). In balancing these conflicting societal demands, the automotive industry has clearly placed a stronger emphasis on the consumer's love of fast cars. In stark contrast to the 25 percent of 1998–2002 automotive advertising content that depicted speeding, only 8–12 percent of North American automotive television commercials

included safety messages. On the other hand, many more (22.8 percent) print ads of that era contained safety message content of some kind; however, 85 percent of those mentions occurred in the fine print (Burns 1999). It should be noted that Ferguson, Hardy, and Williams (2003) found an anomalous result in 1993, when airbags were first introduced and automotive manufacturers were using them as means of market differentiation. In that year, a full 34 percent of automotive ads included safety information, 75 percent of which related to airbags. Occurrence of other safety-related message content (8.5 percent) was otherwise consistent with other years. What is consistently clear through review of these content analyses is that safety is underadvertised relative to its social importance and relative to consumers' reported perception of its importance as a product feature (Burns 1999; Ferguson, Hardy, and Williams 2003; Schonfeld, Steinhardt, and Sheehan 2005; Shin et al. 2005).

AUTOMOTIVE ADVERTISING INDUSTRY RESPONSE TO STAKEHOLDER INTERESTS

In general, there is little incentive for an industry to move to self-regulate unless pressure is placed on it by any of the three relevant sets of external stakeholders (consumers, society as a whole, or government). Automotive advertisers must continue to comply with all three external stakeholders in order to avoid imposed regulation. However, this may be particularly difficult when stakeholder priorities are in flux or are dissimilar.

International studies have shown that the most popular message content when promoting motor vehicles in some other countries has dealt with vehicle performance issues, including such features as acceleration, speed, power, and handling (Ferguson, Hardy, and Williams 2003; Schonfeld, Steinhardt, and Sheehan 2005; Shin et al. 2005). These same studies show that automotive advertising in other countries often uses depictions of unsafe

and aggressive driving practices to demonstrate vehicle performance. North American culture has been shown to actively support anti-social and illegal behaviour in the form of speeding (Harsha and Hedlund 2007). Unsafe and aggressive driving messages in motor vehicle advertising, situated in the context of a culture where speeding is considered acceptable, may serve to reinforce false perceptions of the acceptability of these types of driving behaviours. In cases where advertising failure has occurred but society has shown no objection, some other stakeholder must raise concern if change is to occur. In this particular case, where neither the consumer market nor social activist groups have taken strong action against irresponsible advertising content, government departments like Transport Canada and the Advertising Standards Council remain the only stakeholders left to take action against industry failure.

Growing Societal Concern for Safety

Today's risk society, in which safety has become a growing concern, has grown out of human advances in science and technology (Beck 2000). In this risk society, governments are responsible for managing risks to their citizens that arise from the "manufactured uncertainties" of such advances. While Beck's (2000) thesis was originally driven by environmental damage, it has been expanded to include such other sectors as health, security, and technology (Isin 2004). Moral panic occurs when some "new" threat to social values or interests emerges, and when this perceived threat becomes hyped by the media and opposed by right-wing social leaders. Socially accredited bodies then propose, implement, and regulate a solution before the issue fades into the background (Cohen 1972). Furedi (1997) argues that consumers have inflated risk perceptions that are being exacerbated in today's risk society, thus making these panics more common. According to Wood (2004, 609), "on occasion it is clear that the biases and misperceptions of the public, filtered through the media and magnified through the political process, result in bad policy."

As such, Sunstein (2002) proposes a more rational cost-benefit approach to making policy decisions.

This is not to suggest that concern for unsafe and aggressive content in Canadian automotive advertising has reached the point of moral panic. With a growing, but still relatively small, number of complaints being lodged with the Advertising Standards Council, there is reason to believe that unsafe and aggressive driving content in advertising is being perceived as a "new" threat to social values. However, there has not been widespread media hype or associated regulatory reaction. As such, government currently has the opportunity to address this issue proactively. This paper seeks to consider the best approach to assessing and responding to the possible social threat caused by unsafe and aggressive advertising content.

A variety of reasons have been proposed to explain the increased preoccupation with safety-related content in advertising. They include a "larger number of young families and older car buyers with safety concerns, improved safety technology, and the growing need to find ways to differentiate models from their competitors" (Lahey 1997, 20). Thus, there does not appear to be any clear consensus on whether the safety focus is industry or consumer driven.

Successful advertising strategy usually involves communicating a product's most desirable product features. While the advertiser can have some influence, what is desirable ultimately lies in the eyes of the consumer. The presence of safety features positively affects consumers' motor vehicle purchasing decisions (McCarthy 1990). Burns, Ferrell, and Orrick (2005, 135) have observed that "automakers seemingly emphasized automobile safety in the 1990s, arguably in response to consumer concern for safer vehicles." Consumers became more aware of safety issues in the 1990s and reported a willingness to pay a higher price for safety, which encouraged the automotive industry to continue to develop new safety technologies (Lahey 1997).

Evidence in the United States found that, compared to previous years, there was a 25 percent increase in safety-related messages in automotive advertising in 1993 with the advent of airbag technology in motor vehicles (Ferguson, Hardy, and Williams 2003). This increase occurred shortly before airbag technology became mandatory. This finding either could suggest that automakers were responding to increased consumer demand for safety or could lend support to the notion that advertisers respond to external stakeholder influence by trying to avoid the need for intervention. Either way, the result was the same.

The last few years have seen an explosion in innovative new safety technologies, such as ESC (electronic stability control), collision avoidance systems, and automatic crash notification systems. These innovations provide automakers with more means of differentiating themselves from competitors in a way that is meaningful and relevant to their consumer market stakeholders. As such, it is anticipated that the automotive industry in Canada has made extensive use of safety messages in its advertising in recent years, in an attempt to meet the demands of its various stakeholders.

A Residual Lack of Concern for Safety

Because the consumer market is fragmented and social values are slow to change, there is reason to believe that a portion of the consumer market may still support advertising messages that promote aggressive and unsafe driving. However, with the recent shift toward greater concern about safety, one would anticipate a corresponding shift in demand away from unsafe and aggressive driving-related content and toward safety-related content, leading to the following proposition:

Unsafe and aggressive advertising message content will occur less frequently in Canadian motor vehicle advertising than safety-related message content.

Our review of previous content analysis studies has shown that unsafe and aggressive message content, including speeding, occurred approximately 25 percent of the time. Safety-related content was much more highly variable at about 10 percent for television and just over 20 percent for print, leading to an overall average of about 15 percent. Relative to studies conducted in other countries, our proposition would suggest that unsafe and aggressive driving content would appear in less than 25 percent of Canadian advertising messages, leaving safety-related messages to occur in some higher proportion of the remaining messages. This highly oversimplified estimate does not account for differences in consumer cultures, sampled media (e.g., magazine versus television), or analytic definitions (e.g., unsafe and aggressive versus speed). However, with no benchmark in the Canadian literature to draw from, these international studies provided some initial point of reference. The following section describes the present study, beginning with a description of the methodology.

METHOD

Content Analysis

Content analysis was conducted on a random sample of 200 Canadian automotive advertisements purchased from Nielsen Media Research. All advertisements ran during the 12-month period between 28 August 2006 and 27 August 2007. The sampling frame was a database of ads provided by Nielsen Media Research that were aired or published during the identified time frame. As Table 2 indicates, the sampling frame included 342 unique television commercials, 191 unique magazine ads, and 528 unique newspaper ads. Television commercials had been aired on major city TV channels that are part of the CTV, CBC, and Global networks, as well as on specialty channels such as HGTV, CMDY, TSNT, and SHOW. Newspaper ads had appeared in major Canadian dailies, both national and metropolitan, including the *Globe and Mail*, *National Post*,

Toronto Star, *Montreal Gazette*, and *Vancouver Sun*. Magazine ads had appeared in periodicals targeting diverse demographic segments and included a wide range of general interest, women's, sport, lifestyle, and specialty magazines such as *Life*, *Maclean's*, *Canadian Business*, *En Route*, *Canadian Living*, *Style at Home*, *Today's Parent*, *Hockey News*, and *World of Wheels*. Ads that appeared in the database more than once were removed, and a random number generator was used to select lines from the database until the chosen number of ads was collected for each medium.

Contained within the final stratified sample were 100 television commercials and 100 print ads. With no initial expectation of differences in message content across print media, we split the sampled print ads evenly between 50 magazine advertisements and 50 newspaper advertisements. While it may be argued that television was oversampled relative to print media, there was anecdotal evidence to suggest that unsafe message content is more common in that medium. Our comparison of ad content in 100 television and 100 print ads provides the first direct comparison of differences in automotive advertising messages across media. Analysis was conducted by medium, allowing any possible differences between magazines and newspapers to be identified along with any differences between television and print. Because different companies and brands use different media strategies, Table 2 is provided as reassurance that the sample drawn is a good reflection of the distribution of ads placed in traditional Canadian advertising media by company and brand.

Coding Instrument Development

A combination of manifest and latent content analysis was employed, with primary emphasis on denotative interpretation and looking for the most obvious and straightforward meanings being conveyed by the advertisements' message content rather than attempting to uncover more thematic semiotic interpretations of the ads. Although contextual interpretation was not overlooked entirely, the aim was to

achieve objective replicability as much as possible. This approach is deemed acceptable relative to other more interpretive techniques when there is strong natural consensus about coding or when coding categories are denotatively based (Ahuvia 2001).

Two of the authors developed the coding instrument and its corresponding decision-making rules, and served as independent coders for the analysis. The coding instrument was primarily based on instruments developed by Ferguson, Hardy, and Williams (2003) and Shin et al. (2005), but it also included categories related to new product standards and awards in the automotive industry. It was designed to objectively measure the simple presence and absence of message content, with minimal subjective judgment relating to intent. The final instrument included some entirely explicit rules and some moderately connotative rules requiring minimal contextual interpretation.

A pre-test of the coding instrument was conducted on 20 randomly selected ads (10 television ads, 5 newspaper ads, and 5 magazine ads) that were not part of the final sample. The two coders independently analyzed each of the 20 pre-test ads and met to discuss any discrepancies in coding. The coding instrument was then modified to improve clarity of some item definitions and eliminate redundancies, thereby enabling the coders to capture information more accurately and consistently. With a revised coding instrument and comprehensive set of coding rules in place, analysis was conducted on the stratified random sample of 200 advertisements.

Message content was broken down into the two general categories of performance-related and safety-related content. Some performance-related message content, such as braking information, may or may not be related to safety. These instances required the most significant coder interpretation. Message content was coded as either a safety issue or a performance issue, not both. Performance-related message content that was overtly linked

TABLE 2
Sampling Frame and Randomly Chosen Sample, by Company and Brand Name

Company	Brand	Television		Magazine		Newspaper		Company Total
		Frame	Sampled	Frame	Sampled	Frame	Sampled	
Bentley	Bentley	-	-	-	-	3	1	1
BMW	BMW	-	-	10	4	27	1	5
Daimler Chrysler	Chrysler	4	1	7	2	6	1	23
	Dodge	17	6	12	3	16	1	
	Jeep	16	3	4	2	8	2	
	Mercedes	-	-	11	1	33	1	
Ferrari Maserati	Maserati					2		0
Ford	Ford	63	23	18	6	31	6	59
	Jaguar	1	-	-	-	5	1	
	Landrover	3	2	3	2	2	-	
	Lincoln	3	2	3	1	2	-	
	Mazda	13	3	4	3	19	3	
	Rangerover	2	-	3	-	2	-	
	Volvo	6	5	4	2	5	-	
General Motors	Buick	-	-	3	-	-	-	34
	Cadillac	6	1	3	1	22	1	
	Chevrolet	27	6	4		11	1	
	GM/GMC	12	4	10	4	28	2	
	Hummer	-	-	1	-	-	-	
	Pontiac	14	3	-	-	4	-	
	Saab	5	2	2	1	6	1	
Saturn	15	6	-	-	7	1		
Honda	Acura	-	-	4	-	34	2	7
	Honda	14	3	13	2	14	-	
Hyundai	Hyundai	18	3	9	2	35	7	12
Kia	Kia	15	3	2	-	7	-	3
Mitsubishi	Mitsubishi	3	1	3	1	12	1	3
Nissan	Infiniti	3	1	4	1	16	1	14
	Nissan	18	5	10	3	16	3	
Porsche	Porsche	-	-	-	-	12	-	0
Subaru	Subaru	4	1	6	1	30	4	6
Suzuki	Suzuki	9	2	1	-	9	1	3
Toyota	Lexus	4	1	5	-	39	-	14
	Toyota	24	8	18	5	13	-	
Volkswagen	Audi	-	-	8	1	38	6	16
	Volkswagen	23	5	6	2	14	2	
Total		342	100	191	50	528	50	200

Source: Authors' calculations.

to accident avoidance was interpreted and coded as safety-related. If no such overt association was present, the piece of message content was interpreted and coded as performance-related.

Performance-related content included the following: (a) demonstration or discussion of acceleration, (b) demonstration or discussion of speed, (c) presence of driving disclaimers, (d) demonstration or discussion of hard stops, (e) demonstration or discussion of braking, (f) power claims, (g) demonstration or discussion of handling, (h) demonstration or discussion of manoeuvrability, and (i) all-wheel drive/four-wheel drive/4 x 4 claims. Hard stops, braking, and handling in the performance measure were not related to accident avoidance.

Acceleration claims were distinguished from more general speed claims by reference to increasing pace rather than maintaining high speed. Examples of acceleration-related content include revving engine sounds, images of spinning tires, and numeric claims about how quickly a vehicle can reach a particular speed. Speed-related content includes images of cars driving an unsafe speed for road conditions, such as television footage of cars driving fast down a winding road or still ads in which lines lifting off the road behind a vehicle or a blurred background imply speed. In order to maintain consistency, if speed was evident but quickening was not overt, content was coded as speed related rather than as acceleration. Acceleration as captured here is tied to aggressive driving, while speeding is illegal and unsafe.

Presence of driving disclaimers refers to the small print warnings that accompany depictions of illegal or unsafe driving. A disclaimer appears in small font and is most often found at the bottom of the screen on a television commercial, or at the end of a print ad. It usually consists of wording to the effect that (a) a professional driver is driving the vehicle on a closed course, (b) the driving sequence is not real (e.g., is computer animated), or (c) the commercial portrays humour and/or exaggerations of reality.

In such cases, disclaimers make it evident that the vehicle manufacturer is aware that the commercial is depicting unsafe or questionable use of the product.

Hard stops are a form of braking that was separated from general braking content for the purposes of this analysis because they are more likely than other braking claims to be related to unsafe or aggressive driving. Hard stops include content related to fast braking that was not overtly linked to accident avoidance. Examples of hard stopping content include a driver slamming on the brakes so that a car skids to a stop sideways or having the front end of a car dip low to the ground as a vehicle comes to a planned sudden stop in front of another object. Braking content unrelated to accident avoidance included such things as direct statistical mentions of braking ability not overtly linked to accident avoidance or demonstrations of braking that did not result in hard stops.

Power claims involved overt mentions of power (e.g., power, powerful) and features such as torque, horsepower (hp), and number of cylinders (e.g., V6, V8). Coding did not include semiotic interpretation of whether or not a car was powerful, as indirect implications of power tended to be made through acceleration and speed-related performance claims. As such, if a power implication was intended but not overtly stated, it was captured through another coded measure of performance.

Handling unrelated to accident avoidance was demonstrated by claims regarding traction, cornering, and control related to vehicle handling while driving under regular conditions. Content could include direct references or other depictions. Examples include cars travelling on winding mountain roads or driving through snow. This content measure was treated as distinct from fine manoeuvrability, which refers to a vehicle's turning radius while the driver is parking or attempting to manoeuvre through tight spaces.

Finally, direct mentions of all-wheel drive, four-wheel drive, and 4 x 4 were coded separately, because this content was usually factual and did not clearly link to any other performance-related measure such as manoeuvrability or power.

It is recognized that performance as a key automotive feature is not always tied directly to unsafe and aggressive driving messages, but some types of performance features are more strongly tied to these activities than others. As such, unsafe and aggressive driving messages were interpreted to include four of the eight categories of performance-related content: (a) demonstration or discussion of acceleration, (b) demonstration or discussion of speed, (c) presence of driving disclaimers, and (d) demonstration or discussion of hard stops (not related to accident avoidance). As discussed previously, in cases when depictions of performance-related content such as power, braking, or manoeuvrability were unsafe, the ads tended to also include content in at least one of the above four categories. As such, the number of ads depicting such content was conservatively yet accurately captured through these more overt depictions of unsafe and aggressive driving behaviour.

Safety-related content was coded to include (a) direct references to safety, (b) demonstration or discussion of accident avoidance, (c) driver visibility, (d) airbag claims, (e) side impact claims, (f) crash test claims, and (g) mentions of safety awards. Direct references to safety involved using the word or its derivatives in the ad. Demonstration or discussion of accident avoidance included any and all content overtly associated with accident prevention, such as braking, steering, or traction. Examples include such content as showing a car successfully swerve around an oncoming vehicle on a slippery road or explaining the science behind how a car can stop itself before front impact occurs. Driver visibility involves the ability of the driver to see clearly from inside the vehicle. Airbag claims may involve any mentions or depictions relating to the number and/or types of airbags within a vehicle.

Side impact and crash test claims refer to relevant ratings assigned to a vehicle, with no evaluation of their accuracy or which association bestowed the rating. Safety awards claims include any mentions of relevant awards, without evaluation of the source of the granted award.

Ad Spending Estimates

An advertising expenditure database was purchased from Nielsen Media Research. It included a breakdown of all 2005 ad spending in Canada by traditional medium and brand. These figures were used to estimate annual spending on automotive advertisements representing unsafe or aggressive driving practices, and automotive safety, in this study. Definitions and calculations from the 2006–2007 message content analysis were used as a foundation for these calculations.

RESULTS

Inter-Rater Reliability

Overall inter-rater agreement between the two coders was 97.6 percent. The lowest agreement percentage (89 percent) occurred with the “power claims” variable, while several variables had 100 percent agreement. All inter-coder ratings were significantly correlated, indicating a very high level of reliability, significantly greater than chance. Review of a random sample of disagreements, where coders were not in agreement on a particular item, revealed that differences resulted almost exclusively because one of the coders had missed noting the item; the majority of these missed items occurred in fine print. Therefore, disagreements were easily resolved.

Frequency of Specific Message Content in Motor Vehicle Advertising

Table 3 reports the frequency of occurrence of messages relating to performance (including unsafe or aggressive driving themes) and safety by medium. This is the first study of its kind to compare message content between print and television media.

Performance was a common message theme, occurring in 59 percent of advertisements. Unsafe and aggressive driving was identified in 18 percent of all advertisements, while safety messages occurred in 25 percent of ads. The study proposition that unsafe and aggressive advertising message content would occur less frequently in Canadian motor vehicle advertising than safety-related message content is supported at the aggregate level, but not for television. On the basis of international findings loosely interpreted, this study predicted that less than 25 percent of all ad messages would contain unsafe or aggressive driving content and that safety-related messages would be more frequent than unsafe and

aggressive driving messages. This aggregate ratio is supported, but fails to capture differences between TV and print media. The following sections consider the study’s findings in more detail.

Unsafe or Aggressive Driving Content

Advertisements depicting unsafe or aggressive driving were defined as those that included one or more of the following performance-related messages: demonstration or discussion of acceleration, demonstration or discussion of speed, presence of driving disclaimers, and demonstration or discussion of hard stops not associated with accident avoidance. Using this definition, this study found that depictions of

TABLE 3
Frequency of Message Occurrence by Medium

Message Content Variable	Frequency of Occurrence (%)		
	Television	Print	Average
Total Performance*	49	70	59.5
Demonstration or discussion of acceleration	10	5	7.5
Demonstration or discussion of speed	22	5	13.5
Driving disclaimers	19	1	10.0
Demonstration or discussion of hard stops	5	0	2.5
Total Unsafe or Aggressive Driving*	27	10	18.5
Demonstration or discussion of braking	1	13	7.0
Power claims	23	55	39.0
Demonstration or discussion of general handling (not related to accident avoidance)	17	17	17.0
Demonstration or discussion of fine manoeuvrability	4	11	7.5
All-wheel drive/4-wheel drive/4 X 4	12	29	20.5
Total Safety*	21	29	25.0
Mention of "safety" or "safe"	15	18	16.5
Accident avoidance	2	8	5.0
Visibility from inside the vehicle	0	1	0.5
Air bag claims	3	12	7.5
Side impact rating claims	3	5	4.0
Crash test claims	6	6	6.0
Safety awards	3	9	6.0

Note: * Category totals in bold represent the total number of advertisements containing at least one category-related message item, and do not account for multiple category messages in a single ad. Thus the sums of individual category items do not equate to the reported category totals.

Source: Authors' calculations.

unsafe or aggressive driving practices occurred in 18.5 percent of all advertisements analyzed.

While performance was a key element of print ad content, the types of performance claims were not as likely as television ads to be associated with unsafe or aggressive driving behaviour. Print ads contained more than twice as many power claims as television ads, with the majority being small print references to horsepower or number of engine cylinders.

Unsafe and aggressive message trends differed substantially by medium. Television commercials were almost three times more likely than print advertisements to include unsafe or aggressive driving content (27 percent of television commercials versus 10 percent of print ads). Television was 50 percent more likely to include demonstrations or discussions of acceleration and 500 percent more likely to include demonstrations or discussions of hard stops than print advertising. Over 80 percent of all television commercials containing unsafe and aggressive driving content involved speed, and 22 percent of all television commercials analyzed included speed-related content. Television commercials were four times more likely to contain demonstrations or discussions of speeding than print ads, where only 5 percent of ads contained content relating to speed. The 19 percent of television ads that accounted for all instances of driving disclaimers in that medium all demonstrated speed. Only one implied demonstration of speeding was identified in print, and was similarly accompanied by a driving disclaimer.

Overall, results indicate a considerable difference in unsafe and aggressive message content types and frequencies by medium. While the aggregate number of ads containing unsafe and aggressive content in this study is 20 percent lower in total than that found in previous international studies, there is no demonstrated reduction for television alone. Television occurrences are consistent with previous studies, while print frequency has no previous benchmark for comparison. Thus, the proposed initial benchmark

of less than 25 percent of ads containing unsafe and aggressive driving content lacks support within the sample of television ads.

Safety Content

Safety messages were more prevalent than unsafe and aggressive driving content in motor vehicle advertisements, occurring in one-quarter of all ads. Message frequency was far more consistent across media than unsafe and aggressive content, with safety messages being only slightly more prevalent in print ads than television commercials. While safety was a prominent theme, most occurrences were general safety mentions (16 percent of all ads) without reference to specific safety features.

While the number of ads containing safety-related content was relatively consistent across media, two key differences in the occurrence of particular safety messages were noted. Airbag information and accident avoidance were each four times more likely to be mentioned in print ads than demonstrated through television commercials. Given the high number of mentions of various performance features (59 percent), there were few ads that used these performance attributes to make claims about the potential for collision avoidance. Only 5 percent of all sampled advertisements, or 20 percent of ads containing safety-related content, emphasized accident avoidance. The remaining 20 percent of all ads, or 80 percent of ads containing safety-related content, focused on crash protection inside the vehicle should an accident occur. Encouraging safer driving through reduction of unsafe and aggressive driving content could be supported by a corresponding focus on accident avoidance rather than crash protection.

The finding that 25 percent of all advertisements contained safety-related content provides a useful benchmark, given that this is the first study to compare this type of message content across media. The present study found that safety content is more common than unsafe and aggressive message content, and that frequency of safety messages is relatively similar when comparing TV and print media, with

the exception of higher occurrences of airbag and accident avoidance claims in print ads.

Estimated Advertising Spending in the Canadian Automotive Industry

Advertising spending in the automotive industry is captured for all traditional advertising media in the aforementioned data from Nielsen Media Research. Almost 93 percent of the \$545.5 million in total advertising spending by automotive manufacturers to promote motor vehicles was in television, newspapers, and magazines. The remaining 7 percent of spending went toward outdoor and radio advertising. Using advertising message content percentages calculated previously, we estimated industry-wide spending for each category of advertising message content in television and print media. Results can be found in Table 4.

It is estimated that of the almost \$505 million spent on television and print advertising by automotive manufacturers, just over \$99 million or 20 percent was spent on ads that included unsafe or aggressive driving practices. It is also estimated, however, that over \$115 million or 23 percent was spent on ads containing safety-related content. These figures, weighted by manufacturer media spending, are relatively consistent with the message content ratios they are based upon, but are less polarized: spending on unsafe and aggressive driving is slightly higher at 20 percent than the prevalence of this content at 18 percent, while spending on safety is slightly lower at 23 percent than the prevalence of safety-related content at 25 percent. This discrepancy is most easily explained by the fact that overall spending on television is higher than that in print media. When looking at spending ratios by medium, results show considerable differences. Ads that contain unsafe and aggressive driving content account for 28 percent of all television spending, but only 4 percent of all print ad spending. There is less variance in media spending on safety-related content, which accounts for 21 percent of all money spent on television and 27 percent of all money spent on print.

Spending on safe and unsafe message content varies considerably by medium and manufacturer. The majority of manufacturers spend considerably more money advertising on television than in print media, while smaller companies with more limited advertising budgets, like BMW and Hyundai, devote proportionally more resources to print media. As the previous analysis demonstrated, print media and television are used to communicate different types of message content. The dynamic nature of television makes it particularly suited to performance demonstrations, while it is difficult to display such active content in print. The static nature of print makes it better suited to delivering information-rich content relating to specific product features. As such, it is not surprising that more money is spent on unsafe and aggressive driving content in television commercials while considerably more money is devoted to safety-related content in print advertising.

Not only do different manufacturers use different advertising strategies in terms of print media versus television, but they also use different product features to position their vehicles relative to their competitors. While sample sizes for several manufacturers are small, making it difficult to draw firm conclusions, looking at spending ratios can provide insight into differences in advertising strategies. Honda, for example, did not spend any money depicting unsafe and aggressive driving practices and spent a considerable amount of its budget promoting safety-related content both in print and on television. In contrast, spending at Mitsubishi and Subaru focused much more heavily on unsafe and aggressive driving content. Larger companies such as General Motors and Ford struck a balance that is more consistent with overall study averages, likely because they produce a wider variety of brands and therefore employ a wider range of advertising strategies.

In common with previous studies, these results are not able to provide an answer to the broader question of whether advertising spending on unsafe and aggressive content and safety-related content is

TABLE 4
 Estimated Spending on Safe and Unsafe Advertising Content in the Automotive Industry in Canada in 2005,
 by Medium and Automaker

Company	Content Category	Television		Print		Total (Print & TV)	
		\$ thousands	% of total	\$ thousands	% of total	\$ thousands	% of total
Bentley	Total	0.0		223.6		223.6	
	Unsafe	n/a	n/a	183.0	82	183.3	82
	Safe	n/a	n/a	0.0	0	0.0	0
BMW	Total	667.2		7,185.6		7,852.9	
	Unsafe	n/s	n/s	525.2	7	525.2	7
	Safe	n/s	n/s	525.2	7	525.2	7
Daimler Chrysler	Total	31,708.2		17,090.6		48,798.8	
	Unsafe	4,529.7	14	0.0	0	4,529.7	9
	Safe	4,529.7	14	7,336.0	43	11,865.7	24
Ford	Total	49,798.5		30,328.5		80,127.0	
	Unsafe	12,805.3	26	2,485.3	8	15,290.6	19
	Safe	8,536.9	17	8,629.2	28	17,166.1	21
General Motors	Total	81,587.6		28,128.5		109,716.1	
	Unsafe	16,317.5	20	819.4	3	17,137.0	16
	Safe	26,108.0	32	8,829.9	31	34,937.9	32
Honda	Total	27,456.9		10,488.5		37,945.4	
	Unsafe	0.0	0	0.0	0	0.0	0
	Safe	9,152.3	33	2,028.1	19	11,180.4	29
Hyundai	Total	19,209.7		25,096.1		44,305.8	
	Unsafe	6,403.2	33	0.0	0	6,403.2	14
	Safe	6,403.2	33	8,354.5	33	14,757.7	33
Kia	Total	13,330.6		5,360.8		18,691.4	
	Unsafe	4,443.5	33	n/s	n/s	4,443.5	24
	Safe	4,443.5	33	n/s	n/s	4,443.5	24
Mitsubishi	Total	8,225.9		5,236.8		13,462.7	
	Unsafe	8,225.9	100	176.4	3	8,402.3	62
	Safe	0.0	0	0.0	0	0.0	0
Nissan	Total	29,778.4		8,644.2		38,422.6	
	Unsafe	9,926.1	33	1,204.5	14	11,130.7	29
	Safe	4,963.1	17	1,913.0	22	6,876.1	18
Subaru	Total	4,936.9		2,234.6		7,171.6	
	Unsafe	4,936.9	100	742.4	33	5,679.4	79
	Safe	0.0	0	497.4	22	497.4	7
Suzuki	Total	10,363.0		5,082.0		15,445.0	
	Unsafe	5,181.5	50	0.0	0	5,181.5	34
	Safe	0.0	0	5,061.7	100	5,061.7	33
Toyota	Total	42,138.1		21,038.0		63,176.1	
	Unsafe	14,046.0	33	0.0	0	14,046.0	22
	Safe	0.0	0	616.9	3	616.9	1
Volkswagen	Total	13,635.0		5,971.6		19,606.6	
	Unsafe	5,454.0	40	1,082.0	18	6,536.0	33
	Safe	5,454.0	40	2,172.2	36	7,626.2	39
Total	Total	333,369.9		172,109.6		504,945.5	
	Unsafe	92,269.8	28	7,219.1	4	99,488.9	20
	Safe	69,590.8	21	45,964.0	27	115,554.8	23

Notes: n/a = not applicable. n/s = not sampled.

Source: Authors' calculations.

driven by consumer demand, industry competition, or attempts to forestall government intervention through increased advertising legislation.

DISCUSSION

This paper considers whether the automotive industry is responsive to market demand and the social culture in which it operates. Because North American society has been largely accepting of speeding, which is the most commonly seen form of unsafe or aggressive driving practice in motor vehicle advertisements, results suggest that external pressure from government may be required to motivate industry change. Evidence from Australia, on the other hand, suggests that it may be possible to achieve industry self-regulation (Schonfeld, Steinhardt, and Sheehan 2005). Compared to legislation, industry self-regulation would likely be less expensive to implement and maintain, and can often be implemented more quickly.

This study uncovered two findings regarding Canadian motor vehicle advertising content that add to our current understanding of this industry. First, unsafe and aggressive driving content in advertising messages appears to be a problem primarily in television advertising, in particular with respect to depictions of speed. No previous studies of unsafe advertising content have directly considered print advertising, nor compared it to television advertising. Unsafe and aggressive driving content in print advertising is far less prevalent than in television ads. Second, safety messages in automotive advertising were shown to be more common overall than unsafe and aggressive driving content. Unfortunately, the majority of this content related to crash protection rather than crash avoidance. While safety content was less prevalent than unsafe and aggressive content on television, it was far more common in print advertising than unsafe and aggressive driving content. However, due to varying ratios in automotive advertising spending, the amount spent on unsafe and aggressive driving content on television is far

higher than that spent on the same content in print media. Safety-related ad spending ratios are more similar when comparing TV and print advertising. Regardless of motivation, these results suggest that, in aggregate, automotive advertisers favour safety messages over unsafe and aggressive messages as a strategic means of remaining competitive.

In future, government may face pressure to reduce or eliminate unsafe and aggressive content in automotive advertising, either directly by stakeholders or indirectly through moral panic. If this occurs, cost benefit analysis should be used to determine whether regulation of automotive advertising would provide adequate value to Canadians. Study findings suggest that unsafe and aggressive advertising content primarily occurs on television. Therefore, any regulation or self-regulation should pay particular attention to the content of television advertising.

There is currently a unique opportunity to monitor the implementation of advertising regulations in Quebec, where the regulatory body that governs road safety has been charged with working with the automotive industry to develop advertising regulations, in order to determine whether such regulation is effective both in terms of cost and benefit. Several other opportunities for future research also exist. First, a more in-depth investigation of the possible use of false or misleading safety claims would be useful to assess the potential benefit of regulating safety content in automotive advertising in Canada. Second, further study of accident avoidance and crash protection message content in Canadian automotive advertising could be undertaken to assess its potential to encourage safe driving. Third, it would be interesting to identify another industry facing a similar situation to that of the automotive industry, in which anti-social or illegal behaviour is being promoted through industry advertising, in order to determine whether the same stakeholder relationships and corresponding market responses are present. Fourth, methodologically identical analysis of message content in Canadian automotive advertisements could be carried out and compared to

foreign studies to either achieve external validity or identify cross-cultural effects. Finally, longitudinal analysis of advertising content from other countries where motor vehicle advertising is regulated would provide an opportunity to determine whether regulation achieved the same level of success in reducing unsafe and aggressive driving content in advertising as that previously reported in Australia.

NOTES

Since the time that this paper was written, Interpretation Guideline #4 has been added to the Canadian Code of Advertising Standards to clarify the Advertising Standards Council's interpretation of the code when evaluating motor vehicle advertising. It can be found on the Advertising Standards Council's website at <http://www.adstandards.com/en/Standards/interpretationGuideline4.aspx>. Funding for this research was provided by Transport Canada and Natural Resources Canada. The views expressed in this paper do not necessarily reflect those of Transport Canada and Natural Resources Canada.

¹ Burns, Ferrell, and Orrick (2005) conducted a follow-up study using a broader range of consumer magazines from 1999; however, results were reported solely by number of mentions as opposed to the number of ads containing such mentions. Because comparison to other results was not possible, this study was not included in this analysis.

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