To Inform or Persuade?
Communication Strategies in Direct-to-Consumer Prescription Drug Advertisements

Since regulations of direct-to-consumer prescription drug advertising (DTCA) were slackened in 1997, in the US its expenditure has drastically increased from an estimated $47 million in 1990 (Tsai & Lancaster, 2012), to $4.2 billion in 2005 (United States Government Accountability Office, 2006), and to $4.4 billion in 2008 (Kaiser Family Foundation [KFF], 2010), showing a 93-fold increase. Although due to the US economic recession its expenditure decreased to $4.3 billion in 2009 (KFF, 2010), DTCA has been established as the second largest advertising category following the automotive industry (Nielsen, 2009; Tsai & Lancaster 2012). Currently, more than 80% of consumers report having seen at least one prescription drug ad in the past year (Mackert, 2011).

In response to this phenomenon, a vast body of DTCA research has demonstrated its impact on consumer attitudes, beliefs, and behaviors regarding health issues. For instance, the Food and Drug Administration (FDA) found DTCA to increase consumer awareness of new medications (Harker & Harker, 2007). It also promoted the discussion about prescription medicines between patients and their physicians (Block, 2007; Kahn, 2001; Kravitz et al., 2005) and generated sales (Tsai & Lancaster, 2012). The United States Government Accountability Office (2002) reported that heavily advertised drugs recorded a higher number of dispensed prescriptions than drugs that were less advertised (Harker & Harker, 2007; Tsai & Lancaster, 2012).

Given that DTCA affects consumer health perceptions and behaviors, the literature has suggested that to better understand the full influence of DTCA on society one must consider the consumers, the messages, and the marketers (Mackert, 2011; Wilkes, Bell, & Kravitz, 2000). In this regard, the current study focuses particularly on the messages since it is imperative to comprehend what and how DTC marketers communicate with consumers, in order to address a severe controversy over whether DTCA educates or persuades consumers (Avery, Eisenberg, & Simon, 2012; Macias & Lewis, 2004).

To deal with the debate, a line of research has examined DTCA content to determine what health information and message appeals are being employed. For instance, Parker and Delene (1999) examined DTCA message appeals used in magazines and found that problem/solution appeal was most frequently used in their sample (34%), followed by endorsement/authority appeal (27.7%). Bell, Kravitz, Michael, and Wilkes (2000) investigated information about medical condition, reliance on financial inducements, and message appeals of drug's effectiveness, social-psychological benefits, ease of use, and safety. On the other hand, one interesting finding from Woloshin, Schwartz, Tremmel, and Welch's (2001) study was that DTC magazine ads rarely quantified a medication's benefits, and instead utilized an emotional appeal. Considering that one fundamental role of DTCA is informing consumers about medical conditions and their possible treatment options with evidence to help consumers make a sound health decision, however, the subjective nature of an emotional appeal may have a possibility of misleading.

After the FDA's relaxation of regulations on broadcast DTCA in 1997, another notable stream of research has explored the context of television and Internet. A group of researchers (Kaphinst, Dejong, Rudd, & Daltroy, 2004; Macias, Pashupati, & Lewis, 2007) examined medical information and message appeals derived from previous print media studies. However, a remarkable characteristic of television commercials is a time limit and thus researchers coded

unique features of TV ads such as speed, tone, and volume of risk information voiceover. Moreover, in the case of Internet, given the distinct characteristics of its platforms, Macias and Lewis (2003) and Huh and Cude (2004) investigated ease of access to risk information, risk information placement, and message modalities (e.g., rich media elements such as video and sound). Taken together, it is worth noting that most DTCA content research has investigated its compliance with FDA regulations, examining a *fair balance* of risk and benefit information. Although the studies found a relatively moderate fair balance, the authors suggested that more research is needed in terms of not only quantity but also quality of fair balance (e.g., Huh & Cude, 2004).

Nevertheless, most prior studies have focused exclusively on the presence or absence of risk information in comparison with benefit information. Given that the FDA requires risk information disclosure in DTC ads, they must include certain types of medical information such as indications, side effects, and contraindications, called *major statements* (FDA, 1999). Thus, such ads are supposed to be informational to some degree. Without considering this unique aspect of DTCA that is subject to more strict and different types of regulations than other product advertising (Parker & Delene, 1999), examining its content only in terms of the existence of risk information is hugely misleading.

More specifically, presenting an equal number of benefit and risk claims may not gratify true fair balance. Rather, statutory requirement 21 CFR 202. 1(e)(5) states that DTCA must provide both drug benefit and risk information in comparable depth and detail. In line with this, the literature has suggested that consumers are able to make sound health decisions only with a complete understanding of the drugs' benefits and risks (Huh & Cudec 2004; Kopp & Bang, 2000; Roth, 1996). However, critics have noted that the FDA's fair balance statements are somewhat ambiguous to function as a policy. Hence, as an effort to address the depth and detail of fair balance, an alternative approach to content analysis is warranted, by focusing on not only major statements but also message appeals used more intensively, utilizing theoretical perspectives beyond a simple description.

Why is a theoretical analysis of message appeals warranted? Considering that various message appeals have been found to have different effects on consumers' perceptions and behaviors (Frazer, 1983; Laskey, Day, & Crask, 1989), content analytical research can make use of the theoretical perspectives in analyzing message appeals in terms of their purported influences on consumers. With caution, the goal of content analysis is not to examine the actual influences of messages on consumers' responses (Huh & Cude, 2004; Macias, Pashupati, & Lewis, 2007; Tsai & Lancaster, 2012). Nevertheless, by contemplating how different message appeals used are deemed to exert varying influences on consumers, based on theoretically developed message typologies drawn from consumer motivation and decision literature, this study provides a meaningful step for future research that examines the substantive effects.

Thus, the purpose of this study is to assess the current state of DTCA message appeals by conducting a content analysis using Taylor's six-segment message strategy wheel (Taylor 1999) in addition to reviewing a list of medical information and promotional inducements. By doing so, the current study attempts to address a critical question posed by DTCA critics (e.g., Berndt, 2005), "how might FDA oversight of prescription drug advertising and the content of it be improved through evidence-based policy change?" The second contribution of the study is on addressing whether Taylor's message strategy wheel is appropriate to apply to the context of DTCA message analysis. Although a majority of studies using Taylor's wheel concluded that the model is applicable to diverse advertising categories, to the best of our knowledge, no research

has been conducted in the DTCA context to date, except one study by Tsai and Lancaster (2012). Lastly, because recent DTCA content studies have collected ad samples exclusively from TV commercials and Web sites, there has been a void in the literature regarding print media for a while (one of the last print studies was published in 2001 by Woloshin et al.). Thus, this study is an important update in a fast-moving industry. By addressing the above goals, the findings of the current study will provide insights into DTCA theory, public policy, and practice.

With regard to media, this study focuses on consumer magazines. Magazines are appropriate channels to generate and increase awareness of a particular drug and medical knowledge (Davis, Cross, & Crowley, 2007). Macias et al. (2007) noted that print advertising is regarded superior to other types of media in terms of its ability to communicate information. In line with this, consumers also consider magazines the best sources of prescription drug information (Kahn, 2001; Morris et al., 1986). Further, the FDA requires TV DTC commercials to make reference to a concurrently running magazine ad or a website, to direct consumers to the complete risk information called *brief summary*, abided by the FDA *adequate provision* requirement, due to limited broadcast advertising time (Huh & Cude, 2004; Kaphingst, Dejong, Rudd, & Daltroy, 2004). Taken together, magazines are considered a proper medium for the purpose of the current study.

Literature Review
There are three types of DTCA: (a) health-seeking advertising that only provides information about a medical condition but does not mention a specific branded product; (b) reminder advertising that mentions the brand name but does not product claims regarding efficacy and indications; and (c) product-specific advertising that indicates a drug's name and medical condition, efficacy, and indications (Macias et al., 2007; Parker & Delene, 1999; Tsai & Lancaster, 2012). In particular, to inform consumers about sufficient drug information, product-specific advertising is required to provide major statement (Kaphingst et al., 2004; Tsai & Lancaster, 2012). Fair balance is viewed as one of the most essential aspects of FDA regulations given that consumers are able to make appropriate decisions only when there are provided complete information of the advertised drug's benefits and risks (Davis, 2000; Huh & Cude, 2004). Kopp and Bang (2000) noted that any ad may be considered misleading if it does not provide the risk information in the same scope, depth, or detail as that of benefit information.

The current study proposes that examining various message appeals shed new light on understanding the scope, depth, and detail of information. To better analyze messages, categories should be mutually exclusive, parsimonious (Laskey, Day, & Crask, 1989; Parker & Delene, 1999), and comprehensive (Taylor, 1999). In that regard, previous studies were unsatisfactory in meeting the criteria because their coding categories were often overlapping or redundant, leading coders to code improperly. For instance, Parker and Delene's (1999) six coding categories included authority/endorsement, education, humor, news/feature, solution to a problem, and testimonial. Although the six categories provided a starting point, there may be many other appeals used in DTCA. In a similar vein, Bell et al.'s (2000) four categories consisting of effectiveness, social-psychological enhancements, ease of use, and safety may also not capture all aspects of appeals. In addition, Woloshin et al.'s (2001) focused only on an emotional appeal.

Expanding upon these studies, Macias et al. (2007) developed a more comprehensive code sheet. However, it also failed to offer a mutually exclusive and parsimonious profile. For instance, they categorized message appeals into two broad dimensions: informational and emotional. In the informational dimension, *slice of life* was included. However, the current

study's coders stated that the variable can be also regarded as an emotional appeal to some degree. On the other hand, *endorsement by celebrity or authority* was located in the informational dimension. However, dual-processing perspectives have viewed a celebrity appeal as biased and non-rational techniques because the sort of message appeal might be more effective when consumers process information through peripheral routes rather than central routes under low-involvement or low-ability conditions (Petty, Cacioppo, & Schumann, 1983). Put simply, for consumer to process information in a more rational manner, it would be suggested to present quality information as opposed to peripheral cues such as celebrities. In the same vein, *security* located in the emotional dimension may also be included in the rational/informational dimension depending on coders' judgment because considering security would be considered a rational decision-making.

In sum, although Macias et al.'s (2007) comprehensive list made up for the weak points of previous studies, its excessively specific level of coding variables (less parsimonious) may result in coders' confusion and thereby leading to low coder reliability that worsens a study's value. To address this problem, the current study returned to the original message literature base to determine whether recent empirical tests can shed light on message strategies used in DTCA, as suggested by Taylor (1999). In the following section, the theoretical background of Taylor's model is addressed.

Messages Appeals and Taylor's Six Segment Message Strategy Wheel
Communication message appeals are aimed at motivating the individuals to make a cognitive change such as awareness or attitude change, and/or behave including seeking more information or purchasing (Macias & Lewis, 2004). One classical study by Puto and Wells (1984) categorized message appeals into two broad groups: informational and transformational. Informational appeals present factual data in a cognitive and logical manner; in contrast, transformational appeals associate the experiences of using the brand with a unique set of psychological attributes such as emotions or senses (Puto & Wells ,1984). Kim, McMillan, and Hwang (2005) stated the former type emphasizes product attributes and benefits, while the latter focuses on user- or brand-image creation. Although the labels for the two constructs vary across studies, informational, rational, and cognitive appeals can be regarded as similar concepts. In the same vein, image, transformational, or emotional appeals can be viewed as similar notions (Kim et al., 2005). However, Puto and Wells (1984) pointed out that the two categories are not necessarily mutually exclusive.

Around the same time, Vaughn (1980) proposed a four-quadrant classification of advertising message strategies, known as the FCB grid. In 1986, he suggested a revised version of the model that delineates four advertising message strategies: informative, affective, habitual, and satisfaction (Vaughn, 1986). Indeed, this model has been one of the most presented advertising typologies in textbooks for decades (Kim et al., 2005). This model implies that there could be more elaborate advertising typologies beyond the simple informational-transformational dichotomy (Vaughn, 1983). Thus, the literature raised the need for building more comprehensive advertising message typologies.

In response to the need, Taylor (1999) returned to the prior literature of message strategies and consumer purchase motivation and decision-making. The major portion of the literature includes: James Carey's *transmission* and *ritual* models (1975), Vaughn's (1980) *FCB Grid*, Kotler's buying models (1965), the *Elaborated Likelihood Model* (Petty & Cacioppo, 1983), the *Rossiter-Percy Grid*, Donovan's strategy model (Taylor 1999), etc. Furthermore, to

address creative strategies, Taylor consulted Frazer's (1983) creative strategy summary and Laskey, Day, and Crask's (1989) typology of TV commercial message strategies to strengthen the usability of the wheel. As a result, Taylor (1999) suggested a dichotomy as an overarching typology of message strategies, as conceptualized by Carey (1975): transmission and ritual view. He further sub-divided the two views into three sub-segments, respectively, for a total of six strategies, by adding insights from his qualitative research (Kim et al., 2005; Taylor, 1999). Consequently, within the transmission view, the three segments include *Ration*, *Acute Need*, and *Routine*, while the ritual view is composed of *Ego*, *Social*, and *Sensory* segments (Taylor, 1999)**.**

It is worthwhile examining the six segments more closely because Taylor's wheel contributes to the message literature by adding insights of consumer purchase motivation from the social science literature (Kim et al., 2005). In the transmission view, the Ration segment is based on the *Marshallian* economic model. This segment assumes that consumers are rational and they get product information from advertising, which is a critical function of advertising. On the other hand, Acute Need emphasizes a consumer's specific need to buy a product. In this situation, advertising should remind a brand name to help consumers satisfy the need (Kim et al., 2005). Meanwhile, the Routine segment is derived from the *Pavlovian* learning model (Kotler, 1965). This segment assumes consumers do not always deliberately judge a product's functional benefits. Rather, they may follow their purchase routine. In this segment, due to consumers' low involvement in the purchase decision, the role of advertising is to make a product prominent through such a technique as a hyperbole message appeal.

The ritual view has three segments as well: Ego, Social, and Sensory (Taylor, 1999). First, the Ego segment is associated with the *Freudian* psychological model that assumes consumers' emotional appetites are satisfied by ego-related product consumption (Kim et al., 2005; Taylor, 1999). In this case, advertising needs to suggest how the use of a product can enhance consumers' self-esteem. For instance, consumers sometimes purchase a product to express their social status or class. Second, the Social segment is derived from the *Veblenian* social psychological model (Taylor, 1999). In this segment, consuming a product may be to gain social approval, thus advertising needs to be directed to being noticed, engaging in the social experiences through product consumption (Kim et al., 2005; Taylor, 1999). The final segment is Sensory. Within this segment, advertising needs to appeal to consumers' five senses such as taste, sight, hearing, touch, or smell based on *Cyrenaics*' philosophy (Golan & Zaidner, 2008; Taylor, 1999). For instance, food or restaurant advertising utilizes vivid food image to attract consumers. In this case, the role of communication is show how use of the product or service contributes to sensory pleasure (Taylor, 1999).

Taylor (1999) further provided a list of creative strategies located in each message segment, to offer useful communication strategy options for advertisers in practice. For example, he adopted Frazer's (1983) creative typology including seven strategies: Generic, Preemptive, Unique Selling Proposition (USP), Brand Image, Positioning, Resonance, and Affective. However, because of its application difficulty to the television context, Laskey, Day, and Crask (1989) suggested a refined typology. In this classification, there are five segments within the informational dimension: Comparative, USP, Preemptive, Hyperbole, and Generic-Informational. On the other hand, there are four segments within the transformational dimension: User Image, Brand Image, Use Occasion, and Generic-Transformational (Laskey et al., 1989). Taylor (1999) attempted to fit the creative typologies to the wheel though there have been some modifications, and finally suggested a comprehensive message and creative strategy model.

The literature has reported that this model successfully captures diverse consumer advertising contexts (Tsai & Lancaster, 2012). For instance, Kim et al. (2005) investigated the model's utility in Super Bowl advertising using content analysis and found that a transformational approach was used more than an informational one. Golan and Zaidner (2008) applied it to analyze message strategies in viral advertising and found almost half of the sample used ego-based appeals that are approximately twice ration-based appeals. More recently, Lee, Taylor, and Chung (2011) reviewed financial services advertisements using it and found that message strategies have been changed over time in response to economic situations. Lastly, Tsai and Lancaster (2012) examined its applicability to DTC TV commercials and concluded that the model provides insight into how pharmaceutical advertisers inform and appeal to consumers to promote their products. All the findings indicate the flexibility and utility of the model.

In particular, regarding DTCA , Tasi and Lancaster (2012) found that most DTC ads used a combination approach, providing consumers with medical information, while simultaneously emotionally persuading them. However, their descriptive discussion did not address how the combination approach can be misleading from a motivational perspective. Further, they analyzed Taylor's six segments in regard to Bell et al. (2000) and Macias and Lewis's (2003) typology of drug-specific claims, but did not analyze the association of the message strategies with Taylor's creative strategies. Because they did not provide any explicit reason why Taylor's creative strategies were not analyzed associated with his message strategies, it would be informative to analyze the relationships, as they were originally conceptualized in the model. In that sense, this study fills a void in the DTCA literature and provides a broadened perspective for Taylor's model.

The current study will evaluate whether current magazine DTCA is mainly informing or persuading consumers. In addition, from a motivational perspective, the findings will be discussed in terms of FDA fair balance guidelines. Lastly, the theoretically conceptualized association between Taylor's message and creative strategies will be examined. Based on the above conceptual framework, the following research questions are posited:

RQ1: Which types of medical information is most included in the sample?
RQ2: Which types of promotional inducements are most used in the sample?
RQ3: Which types of message strategies of Taylor's six-segment message strategy wheel are most used in the sample?
RQ4: Which types of creative strategies of Taylor's six-segment message strategy wheel are most used in the sample?
RQ5: Are the relationships between message and creative strategies of Taylor's six-segment message strategy wheel significant in the sample?

Method
Sampling Procedure
To answer the research questions, this study employed content analysis of magazine DTC ads over a recent five-year period (January 2006 to December 2010), from five magazines with a large distribution and varied readership in the US: *House Beautiful*, *Southern Living*, *US News and World Report*, *Vogue*, and *Smithsonian*. The study focused on product-specific advertisements. The current study attempted to utilize a convenience (e.g., purposive) sampling to select a more appropriate ads samples following previous studies' approach (Parker & Delene, 1999). A number of magazines were reviewed in terms of circulation, demographics, and probability for finding DTC drug advertisements. According to Audit Bureau of Circulation

(ABC) statistics, the selected magazines were with relatively high circulation. In addition, the 2009 Experian Simmons National Consumer Study (NCS) Data were used to determine which magazines were popular among people who have taken certain prescription drugs within the past 12 months.

More specifically, participants in the NCS were mailed self-administered booklets covering a wide range of information regarding consumer behavior, media use, and other lifestyle patterns such as health behaviors, while providing nationally representative data (Experian Simmons, 2009). The readers of the sample magazines were asked "have you taken any prescription drugs during the past 12 months?" The magazines that had more than 60% of readers who took any prescription drugs during the period were selected for analysis.

The magazines consist of various genres such as home (*House Beautiful*), news (*US News and World Report*), and fashion (*Vogue*). In addition, to represent the high education and income audience group, *Smithsonian* (culture) was added, along with one of the popular lifestyle magazines, *Southern Living*. Both also met the aforementioned selection criteria.

The sample universe consisted of all prescription drug ads from the magazines ($N = 777$), for the period January 2006 to December 2010. All ads were hard-copied from the magazines, and ads for the same brand were counted if they were different in formats or designs. The same ads and ads which were differed in non-substantive ways were coded as a single case. The unit of analysis was primary advertising appeals found in the front page(s) of the ads and major statements. Specifically, Taylor's message and creative strategies, and promotional inducements were coded from main ad copy elements such as picture, headline, subhead, main text, and slogan/tagline (Sumpradit, Ascione, & Bagozzi, 2004). On the other hand, medical information was coded from major statements to assess the purported educational value of DTC ads. The contents of the brief summary written in small print on the back page of ads, however, were not analyzed because it must be presented by FDA regulations but is designed for use by healthcare professionals, and few consumers read or understand it (Woloshin et al., 2001).

Coding Categories

The coding categories of medical information and promotional inducements were derived from previous DTCA content analyses (e.g., Bell et al., 2000; Huh & Cude, 2003; Kaphingst, Dejong, Rudd, & Daltroy, 2004; Macias & Lewis, 2004; Macias et al. 2007; Roth 1996; Woloshin et al. 2001) and those of message and creative strategies were adopted from Taylor (1999), Frazer (1983), Laskey et al.'s (1989) operational definitions (see Appendix A and B). It is worthwhile noting, however, that because the current study focuses exclusively on product-specific advertisements, which are the only objects of FDA fair balance regulation, there were slight modifications in the categories. Specifically, Laskey et al.'s (1989) Generic-Informational and Generic-Transformational creative strategies were not appropriate for using in this study because Generic focuses on a product class rather than a product per se.

To fine-tune the problem, two different categories were created instead, by consulting Frazer's (1983) creative strategy summary. In the summary, Generic refers to "straight product or benefit claim with no assertion of superiority" (p. 40) and Affective refers to "attempts to provoke involvement or emotion through ambiguity, humor or the like, without strong selling emphasis" (p. 40). The two notions include appeals for product class, but not limited to them. Thus, the current paper's researchers considered the two definitions are more suitable to the this study and thus Generic and Affective substituted for Generic-Informational and Generic-Transformational, respectively. However, to avoid any confusion due to the same label with

previous categories, new labels were applied. As a result, *General-Informational* represents informational message appeals that are not clearly included in other creative strategies. In the same manner, *General-Transformational* represents transformational message appeals that are not clearly included in other creative strategies. The current study tests whether the modified coding schemes work well in the DTCA context. In doing so, the study can extend the scope of Taylor's model. In addition, to facilitate coding, the trainer and coders closely cooperated on the modifications. Consequently, specific coding categories included medical/treatment information, promotional inducements, Taylor's six message strategies, and modified creative strategies.

Almost all variables were measured with a binary scale ("1" = yes and "0" = no) because it allows the coders to record all categories that apply (Kim et al., 2005). As Taylor stated, any ad may include either a single or multiple message appeals (Hwang, McMillan, & Lee, 2003). Thus, the dichotomous coding scale is deemed appropriate for this study. In addition, codes involved in a determination of the presence or absence of a word or phrase is known to maximize reliability (Bell et al., 2000).

Regarding medical information, in addition to previous studies' variables, three variables were added: *side effect incidence rates, side effect severity, and number of side effects*. The added variables may be useful to determine the educational value of DTCA. The health communication literature generally suggests that *perceived severity* and *perceived susceptibility* are significant predictors of consumers' health perceptions and behaviors (Davis, 2000; Davis, 2007). Number of side effects was added to capture how many side effects are typically presented in the ads. Davis, Cross, & Crowley (2007) examined the number of side effects presented in pharmaceutical websites and found that the websites do not completely present risk information. Given that only complete risk information may educate consumers appropriately, examining number of side effects may cast light upon how well DTC marketers are communicating risk information with consumers (Davis, 2009; Davis et al., 2007).

When it comes to promotional inducements, Bell et al. (2000) and Woloshin et al.'s (2001) coding schemes were adopted to review what promotional techniques are used to promote sales such as consumer support information, additional information (e.g., in print, audio, or video form), and financial inducements (e.g., free product trial, discount, or rebate). Moreover, two exploratory variables were added to see whether FDA's adequate provision is met by marketers. Parker and Delene (1999) noted that because marketers are increasingly include information about DTC Websites or 1-800 numbers in advertisements it is appropriate to review the presence of the information. Their study did not found any Website information in their sample from 1992-1995. However, given that FDA's regulations on broadcast DTCA (e.g., TV and Internet) were relaxed in 1997, one needs to provide an update regarding Website information as well as 1-800 numbers. Lastly, from a public health perspective, examining the presence or absence of *instruction of side effect report* may help to review the quality of DTCA information. The current study attempts to extend previous studies by not only replicating but also refining their coding schemes.

Procedure and Reliability
Following the recommended content analysis procedure by Neuendorf (2002), a codebook guided the analysis (Macias et al., 2007). Two coders independently coded the sample using the same code sheet. To pretest the sheet, they coded 20 DTC ads that were not drawn from the sample. The trainer worked together with the coders in a series of sessions to clarify the coding instructions to ensure reliability. Confusions or disagreements between the two coders were

resolved in a two-step procedure (Kim et al., 2005). First, the coders discussed the specific items on which they disagreed. Some disagreements were easily resolved at this stage. Second, the trainer who was familiar with both the message and creative typologies reviewed items that remained unresolved and helped the primary coders come to agreement. Inter-coder reliability was established through Cohen's Kappa. An overall average Cohen's Kappa was 0.86, ranged from 0.59 to 1.00. Given a typically suggested Cohen's Kappa minimum, .75 (Macias et al., 2007). Items scored below the level were excluded. Disagreements were resolved through discussions until 100% agreement was achieved.

For instance, although Taylor (1999) located the Brand Image segment within Acute Need, using a modified label (e.g., Brand Familiarity), the present study included Brand Image within Ego. It is because the researchers and coders agreed that Brand Image appear to be a logical fit to Ego as a concept that represents emotional brand associations (e.g., brand personality and symbolic consumption) rather than simply familiar brand name recall. In line with this, Laskey et al. (1989) originally defined Brand Image as "message strategy involves differtiating a brand on the basis of psychological or intangible characteristics" (p. 37). By referring back to the literature, locating brand image in the ego segment is deemed reasonable. Hence, it would be possible to leave Brand Familiarity within Acute Need as Taylor (1999) conceptualized. However, in the current analysis, Brand Familiarity was excluded. In the final code sheet, a total of 10 message appeals remained including General-Informational, Comparative, Preemptive, USP, Brand Image, Hyperbole, General-Transformational, User Image, Resonance, and Use Occasion.

Results

The two coders located 777 DTC ads from more than 60 issues of the selected magazines. Each issue included between one and 43 ads. Issues that did not contain any DTC ads were excluded. After aggregating identical ads, approximately 300 unique ads covering 79 brands remained.

Sample Description

Regarding selected magazines, *U.S. News and World Report* was the most heavily used advertising vehicle, this magazine comprised approximately 64% ($N = 501$) of the sample, followed by *Smithsonian* ($N = 123$, 15.7%), *Southern Living* ($N = 78$, 10.0%), *Vogue* ($N = 49$, 6.3%), and *House Beautiful* ($N = 27$, 3.4%). With regard to brands, the most frequently observed brand name was *Vytorin* ($N = 16$, 5.3%), followed by *Crestor* ($N = 14$, 4.6%), *Advair/Lunesta/Plavix* ($N = 12$, 4%) and *Celebrex/Lyrica/Nexium* ($N = 11$, 3.6%). In terms of manufacturers, *Pfizer* ($N = 70$, 9.0%) had the largest number of advertisements for prescription drugs, followed by *Merck* ($N = 40$, 5.1%), *AstraZeneca* ($N = 38$, 4.8%), *GlaxoSmithKline* ($N = 29$, 3.7%), *Allergan* ($N = 17$, 2.2%), *Sanofi Aventis* ($N = 13$, 1.7%), and *Sepracor* (renamed *Sunovion* [$N = 12$, 1.5%]). In terms of medical conditions, treatments for Asthma ($N = 55$, 18%) was most common, followed by hypotrichosis ($N = 28$, 9.3%), acid reflux ($N = 19$, 6.3%), allergy ($N = 15$, 5%), Alzheimer's ($N = 14$, 4.7%), anti-depressant ($N = 11$, 3.7%), and arthritis/atherosclerosis/overactive bladder ($N = 10$, 3.3%).

Research Question 1

The first research question asked what medical information was most included in the sample. There are two sub-categories: medical and treatment information. The former included condition name ($N = 300$, 99.5%), clarification of misconceptions ($N = 22$, 7.2%), disease definition ($N =$

19, 6.3%), and disease prevalence ($N = 12$, 4.0%). The latter consisted of drug name ($N = 304$, 100%), side effects ($N = 274$, 90.1%), contraindications ($N = 250$, 82.2%), side effect incidence rates ($N = 182$, 59.7%), side effect severity ($N = 112$, 36.8%), directions for medication use ($N = 97$, 31.9%), supportive behaviors ($N = 59$, 19.4%), drug's indications and limitations ($N = 51$, 16.8%), treatment duration ($N = 49$, 16.1%), mechanism of action ($N = 27$, 8.9%), time to onset of action ($N = 27$, 8.9%), result of no treatment described ($N = 5$, 1.6%), and number of side effects (3 or 4 side effects were most frequent; 15%). Overall, the range of percentages of each variable substantially varied across the two sub-categories (see Table 1).

Table 1 Medial and Treatment Information

Medical Condition Information	N	%
Condition Name	300	99.5%
Clarification of Misconceptions	22	7.2%
Definition of Disease (e.g., precursors and symptoms)	19	6.3%
Prevalence	12	4.0%
Treatment Information	N	%
Drug Name	304	100%
Side Effects	274	90.1%
Contraindications	250	82.2%
Side Effect Incidence Rates (adopted based on Davis, 2000)	182	59.9%
Side Effect Severity (adopted based on Davis, 2007)	112	36.8%
Directions for Medication Use	97	31.9%
Supportive Behaviors	59	19.4%
Drug's Indication & Limitations	51	16.8%
Treatment Duration	49	16.1%
Mechanism of Action	27	8.9%
Time to Onset of Action	27	8.9%
Result of No Treatment Described	5	1.6%
Number of Side Effects (3 or 4) (adopted based on Davis et al., 2007; Davis, 2007, 2009)	117	15.0%

Percentages do not add up to 100 because each ad could potentially have numerous pieces of information

Research Question 2

The second research question asked what types of promotional inducements were most used in the sample. 47.0% ($N = 143$) of the ads presented customer support service information, while information about drug and/or medical condition in print, audio tape, and video forms was rarely presented ($N = 4$, 1.3%). With regard to monetary incentives, free product trial ($N = 54$, 17.8%), discount ($N = 19$, 6.3%), and rebates ($N = 3$, 1.0%) were observed (see Table 2). Overall, monetary incentives were less frequently used than support services, while customer support services information was moderately used. Free product trial was the secondly most used promotional tool. In addition, regarding FDA's adequate provision information, 93.4% of the sample presented Website information, 1-800 numbers, or other references ($N = 284$) and 36.8% ($N = 112$) included instruction of side effect report such as www.fda.gov.medwatch or 1-800-FDA-1088. The results show that marketers are complying with FDA's adequate provision rule successfully.

Table 2 Promotional Inducements and Additional Information

Promotional Inducements	N	%
Support Services		
Customer Support Service Information	143	47.0%
Additional Information in Print, Audio Tape, and Video Form	4	1.3%
Monetary Incentives		
Free Product Trial Information	54	17.8%
Discount	19	6.3%
Rebate	3	1.0%
Further Information of Adequate Provision (added)		
Website Information, 1-800 numbers or Other References	284	93.4%
Instruction of Side Effect Report (e.g., www.fda.gov.medwatch or 1-800-FDA-1088)	112	36.8%

Research Question 3

The third research question asked which types of message strategies were most used in the sample. In light of the overarching dichotomy, 96.1% ($N = 293$) of the ads included informational message strategies (Interchangeably Taylor's transmission view), while 88.5% ($N = 262$) included transformational appeals (interchangeably Taylor's ritual view). Within these two overarching categories, Ration was most frequently used ($N = 294$, 99%), followed by Ego ($N = 264$, 88.6%), Social ($N = 33$, 10.9%), and Routine ($N = 31$, 10.2%). However, Acute Need ($N = 2$, 0.7%) and Sensory ($N = 2$, 0.7%) were rarely used (see Table 3), consistent with previous findings (e.g., Tsai & Lancaster, 2012). These results suggest that most DTC ads basically serve as information providers, while also utilizing transformational message appeals to persuade consumers (see Table 3). The implications will be addressed in more detail in the discussion section.

Research Question 4

The fourth research question asked which creative strategies were most used. Use Occasion was virtually not used. Of the remaining nine creative strategies, within the informational category, General-Informational was most used ($N = 256$, 86.8%) followed by USP ($N = 44$, 14.9%), Preemptive ($N = 12$, 4.1%), Comparative ($N = 7$, 2.3%), and Hyperbole ($N = 4$, 1.3%). On the other hand, within the transformational category, General-Transformational ($N = 259$, 87.2%) was dominantly used and User Image ($N = 155$, 51.0%) was moderately utilized, while Brand Image ($N = 11$, 3.7%) and Resonance ($N = 1$, .3%) were less often used (see Table 3). Overall, the findings suggest that a majority of sample tended to make use of General-Informational appeals to inform consumers, while simultaneously relied on General-Transformational appeals to persuade consumers, consistent with previous findings (e.g., Tsai & Lancaster, 2012).

Table 3 Message and Creative Strategies

Overarching Message Dichotomy	N	%
Informational Advertisements	293	96.1%
Transformational Advertisements	*263*	88.5%
Message Strategies	*N*	*%*

Ration	294	99.0%
Ego	263	88.6%
Social	33	10.9%
Routine	31	10.2%
Acute Need	2	0.7%
Sensory	2	0.7%
Creative Strategies	*N*	%
Affective	259	87.2%
General-Informational	256	86.8%
User Image	155	51.0%
Unique Selling Propositions (USP)	44	14.9%
Preemptive	12	4.1%
Brand Image	11	3.7%
Comparative	7	2.3%
Hyperbole	4	1.3%
Resonance	1	.3%

Totals for each category are greater than 100% because many ads contained more than one message and/or creative strategies.

Research Question 5

The fifth question asked about the relationships between message and creative strategies. Based on Taylor's (1999) framework, one would expect General-Informational, USP, Preemptive, Comparative, and Hyperbole creative strategies to be associated with Ration, Acute Need, and Routine message strategies. In a similar vein, one would expect General-Transformational, User Image, Brand Image, and Resonance creative strategies to be associated with Ego, Social, and Sensory message strategies. Although Kim et al. (2005) reported that there were significant relationships between the two level of typologies, the finding was not conclusive. Moreover, no research has examined the relationships in the DTCA context to date. Thus, within each overarching category, separate chi-square tests were conducted. The relationships between informational message and creative strategies were significant, X^2 (4, $N = 335$) = 19.9, $p < .05$. General-Informational, USP, and Comparative were more likely to be associated with Ration. On the other hand, transformational message and creative strategies were also significantly associated, X^2 (6, $N = 377$) = 38.7, $p < .01$. General-Transformational, User Image, and Brand Image were more likely to be associated with Ego (see Table 4). The results support Taylor (1999) and the current study's theoretical frameworks. Further, the modifications were justified based on the findings. Another finding is that marketers used a combination strategy rather than sticking to either an informational or transformational strategy. These findings are consistent with previous findings of Macias et al. (2007) and Tsai and Lancaster (2012) in that informational and transformational appeals were used to a similar degree in DTCA. Moreover, despite the different media contexts (e.g., print and TV), the findings were similar.

Table 4 Relationships between Message and Creative Strategies

	Informational Message Strategies				Transformational Message Strategies		
Informational Creative	Ration *N/%*	Acute Need	Routine *N/%*	Transformational Creative	Ego *N/%*	Social *N/%*	Sensory *N/%*

Strategies	*N/%*			Strategies			
General-Informational	253/94.8%	0/0.0%	14/5.2%	Affective	256/94.1%	15/5.5%	1/0.4%
USP	44/91.7%	0/0.0%	4/8.3%	User Image	71/74.0%	24/25.0%	1/1.0%
Preemptive	12/85.7%	0/0.0%	2/14.3%	Brand Image	8/100.0%	0/100.0%	0/0.0%
Comparative	2/50.0%	0/0.0%	2/50.0%	Resonance	0/0.0%	1/100.0%	0/0.0%
Hyperbole	1/50.0%	0/0.0%	1/50.0%				
	$\chi^2(4) = 19.9, p < .01$				$\chi^2(6) = 38.7, p < .001$		

Percentages reflect the row (within each Creative Strategy). Totals for each row are greater than 100% because many ads contained more than one creative strategy.

Discussion and Implications

This study has begun to fill a void in the DTCA literature that has lacked theoretical research of communication strategies. Based on the findings, the study also helps to illuminate the public policy implications of DTCA message appeals in comparison to medical and treatment information. Given that pharmaceutical marketers' ultimate goal of prescription drug promotion is to encourage consumers to treat their medical conditions through the promoted drugs, DTCA has provided information about potential treatment options for serious social diseases. In the current study, approximately 57.5% of ads were for such life-threatening conditions as arthritis, asthma, acid reflux, cholesterol, COPD, diabetes, heart attack, insomnia, osteoporosis, and overactive bladder. Most of them were common chronic conditions (Bell et al., 2000). In that regard, one positive contribution of DTCA would be helping consumers detect conditions that may not be perceived as pathologic by consumers (e.g., diabetic nerve pain, poor leg circulation, and restless leg syndrome), under-treated ailments (e.g., depression), and conditions not previously treatable with medication (e.g., erectile dysfunction).

Based on the expected contribution of DTCA, its proponents have argued that it has successfully served as an information provider to empower consumers regarding their own health care in the market. On the other hand, critics have contended that pharmaceutical marketers may only attempt to persuade consumers to increase sales. In line with this, the current study's analysis revealed that drug advertisers are utilizing persuasive message appeals to influence consumers rather than simply providing information to consumers.

Given that policy discussions should be based on the evidence of what and how the pharmaceutical industry is communicating with consumers (Bell et al., 2000), the lack of theoretical and empirical analysis of both informational and persuasive communication strategies is surprising. Most prior content analysis studies have focused exclusively on whether DTCA comply with FDA's fair balance guidelines by providing required risk information in comparison to benefit or efficacy information. Thus, the current study utilized Taylor's theoretical communication strategy typology to complement and extend previous studies.

Major findings include: (1) a vast majority of DTC advertisements from 2006 to 2010 have provided required risk information comparable to benefit information, complying with FDA's guidelines; (2) a few such ads provided medical information such as clarification of misconceptions, definition of disease, and disease prevalence; (3) almost half of the ads provided information of customer support service as a promotional tool and a quarter employed monetary incentives to promote drug purchases; (4) more than 90% of the ads provided alternative information sources such as Websites and 1-800 numbers, complying with FDA's adequate provision standards; (5) both informational and transformational message appeals were

simultaneously employed, indicating a combination message strategy; (6) in terms of persuasive approach, General-Transformational and User Image strategies were most used, whereas General-Informational and USP strategies were utilized for the informational purpose. The theoretical, public policy, and managerial implications are addressed below.

Theoretical Implications

This study proposed that researchers and public policy makers should focus on the transformational aspects of DTCA. Sumpradit et al. (2003) contended that examining the motivational themes in DTC ads could help better understand the potential effects of DTCA on consumers. Understanding why and how DTC ads influence consumers to make a health decision has important theoretical implications. First, this study contributes to the literature by examining persuasive aspects of DTCA message appeals. The lack of motivational research in the DTCA literature could be due to insufficient knowledge about an association between the advertising appeals and consumers' prescription drug purchasing behaviors. To the extent that the motivational appeals serve their goals, consumers will be more likely to purchase prescription drugs (Sumparadit et al., 2003).

Second, this study attempted to describe theoretical message and creative typologies in terms of both quantity and quality. To do so, the study sought to address the relative use of transformational message appeals to that of informational ones. Overall, the sample magazine ads from 2006 to 2010 tended to take both informational and transformational approaches simultaneously in the ad. The findings were largely consistent with prior studies in that most DTC ads employ a combination strategy to appeal to consumers (e.g., Macias et al., 2007; Tasi & Lancaster, 2012). Although print media may be a more appropriate channel for information-oriented messages, regarding the way to communicate with consumers, the DTC ads appeared to employ an emotional method actively. This may imply that researchers should distinguish between overarching message strategies (what to say) and creative strategies (how to say) (Kim et al., 2005; Taylor, 1999).

Regarding Taylor's six segment, as Table 4 shows, the significant relationships between message and creative strategies were identified. Kim et al. (2005) attempted to examine a similar research question and found relationships in favor of Taylor's framework. The current study affirmed that Taylor's theoretical framework is also applicable to the DTCA context. Informational creative strategies were more likely to associate with informational message strategies, vice versa. For example, General-Informational, USP, and Preemptive were supposed to be located in Ration. The significant chi-square test results support the theoretical relationships. In the same vein, General-Transformational and User Image were expected to be located in Ego and the expectation was confirmed by significant chi-square test results.

Another interesting finding was that Acute Need and Sensory were rarely used. One possible interpretation is that because prescription drugs are purchased through physicians' final agreement, Acute Need that requests immediate actions to take care of the health problem may not be appropriate for prescription drug purchasing decision. In addition, Sensory aims to appeal to viewers' five senses. However, Tsai and Lancaster (2012) noted that given the high-involvement nature of prescription medicine, pharmaceutical products are not consumed for sensory pleasures. This finding is also consistent with Taylor's framework. Taylor (1999) conceptualized Ration and Ego segments are high-involvement domains, whereas Routine and Sensory segments are low-involvement categories. Considering the high-involvement nature of

most prescription medicines, the more frequent uses of Ration and Ego segments and rare uses of Routine and Sensory segments are consistent with Taylor's theoretical speculation.

In contrast, it is worth noting that Brand Image was clearly located in Ego as modified in the current study. In Taylor's model, Brand Image was originally located in Acute Need (e.g., Brand Familiarity). However, the coding ambiguity and theoretical speculation posed the need to relocate Brand Image in Ego. The results suggest that at least in the DTCA context, Taylor's conceptualization should be fine-tuned to better capture the nature of DTCA message strategies.

One more discrepancy with a prior finding was that although Tsai and Lancaster (2012) found that Routine was used in TV DTCA to some extent, the current study revealed that it was rarely used in magazine DTCA. Despite Tsai and Lancaster's (2012) interpretation that TV DTC ads advocated regular use of the drug to cure the medical condition, their discussion missed an important aspect of Taylor's model associated with a creative strategy in Routine. Taylor (1999) suggested Hyperbole appeals may be used in Routine segment to make product claim prominent as opposed to competitors. However, as with Sensory, Hyperbole approach is not suitable to prescription drug promotion and thus the rare use of the creative strategy found in the current study might be more compatible with Taylor's framework.

Public Policy Implications

Most DTC advertisements in the sample provided both risk and benefit information, the results were consistent with Macias and Lewis (2003) and Huh and Cude's (2004) findings despite the media contexts of the studies were Websites. The findings of the current study suggested a concern for public policy. DTCA is subject to FDA regulations; including requirements for a fair balance of benefit and risk information in terms of both quantity and quality. Berndt (2005) noted that many of DTC ads do more than simply inform consumers about medical and drug information; they also attempt to influence consumers to purchase the drug. The current study's review found that a majority of ads give enough information about the possible risks and negative effects of using a drug. However, consumers may not pay attention to risk information enough, while attending persuasive message appeals more.

Communication literature has suggested that transformational message appeals typically have strengths in getting attention compared with rational information. In this regard, the current study found that approximately 90% of the ads are employing emotional appeals to persuade consumers. It is important to understand the nature of DTCA content and message appeals to determine whether the primary goal of the ad is selling or educating (Macias & Lewis, 2003). Emotional appeals may prompt consumers to discount information about medical risk information that is important to their medication use, by swaying consumers in favor of a marketer (Frosch, Krueger, Hornik, Cronholm, & Barg, 2007). In other words, emotional appeals may serve as distracters in terms of comprehension of medical information. In this regard, researchers have been concerned about that DTCA is aimed at the vulnerable with transformational rather than rational appeals (Macias et al., 2007). In the current study, the most dominant creative strategy was General-Transformational (87.2%) and the third technique was User Image (51.0%). Given the expected educational role of DTCA for public health, the excessive use of transformational appeals is not what DTCA is supposed to do (Berndt, 2005). For instance, Avery et al. (2012) noted that the presentation of side effect in the ad is likely to affect perceived severity of side effects and safety or the drug that are important in health

decision making. However, message appeals that could undermine fair balance may harm proper risk perceptions.

As Tsai and Lancaster (2012) found, the paring of Ration and Ego was most dominant in this study. The dominant use of Ration appeals may be because pharmaceutical product advertising must provide the audience with essential medical information such as drug efficacy, symptoms, and side effects. However, recently DeLorme, Huh, and Reid (2009) found a high level of consumer skepticism toward DTCA. Given skeptical consumers, advertisers may want to avoid consumers' reluctance to risk information in DTCA (Berndt, 2005). Regarding a combination approach found in this study, one potential concern is that advertisers may intentionally make use of emotional appeals to avoid message resistance that is hugely misleading. It is imperative that future studies examine the actual influence of the combination approach on consumers' responses such as risk information comprehension and brand recall (Tsai & Lancaster, 2012).

Lastly, the theorized relationship between promotional inducement and coercion to take a drug without fully understanding the medical options implies a concern for public policy (Macias & Lewis, 2003). The current study examined the promotional inducements used to merchandize prescription drugs to consumers. The most common inducement was the offer of consumer support information. Almost half of the ads presented an invitation to the reader to request further information about drugs or conditions. Considering that DTCA has been justified on the grounds that it provides opportunities to educate consumers about diseases and treatments (Bell et al. 2000), this type of inducement may be beneficial to consumers. However, approximately two in five ads offered a monetary incentive such as free product trial, discount, or rebate to the reader. In line with this, Bell et al. (2000) pointed out that such incentives may not be appropriate when promoted to consumers who have not had a diagnosis of the indicated condition. Opponents of DTCA argue that ads misleading consumers may prompt requests for products that are unneeded or more expensive that other equally effective drugs or non-medical treatment options (Frosch et al., 2007). Future research should investigate whether this type of information provides quality education or simply tries to sell the product.

Managerial Implications
Despite a number of public policy concerns derived from the finding of the current study, it is worth noting that "direct-to-consumer advertising correctly done is a great public health tool" (Berndt, 2005, p. 327). On the assumption that DTCA provides a fair balance of benefit and risk information in terms of both quantity and quality, this study also has clear implications to DTC advertisers. The findings revealed that USP (14.9%) and Comparative (2.3%) techniques were less employed in the ads than General-Informational within the informational category. In most consumer advertising categories, the two creative strategies have been largely used to promote products or services. Considering their strategic strength in enhancing consumers' memory of and attitudes toward the brand, these findings are surprising. There may be potential opportunities to make the best use of these relatively unexploited creative strategies depending on the medicine categories or attributes. For instance, USP can strengthen consumers' response to advertising positively, by emphasizing unique product attributes or efficacy compared to competitors. This is the case especially when there is brand parity in a product category. Dominantly used message appeals do not necessarily represent better approaches. By employing under-utilized message appeals, marketers may be able to increase sales and expand their market share in competitive situations. In contrast, although the Hyperbole strategy was rarely used in

the sample, as noted, there may be a possibility that vulnerable consumers are misled by the exaggerated ad appeals and therefore using this strategy may not be appropriate for DTC drug category.

Taylor's model suggests what strategies may be available for existing marketers or new entrants into the product category (Taylor, 1999). In addition, by revealing various unexploited strategy options in the magazine DTCA context, this study may provide insights into how practitioners would be able to readily identify the strategic options (Laskey et al., 1989). In that regard, Taylor's typology would serve a useful purpose for practitioners and advertising researchers. As has been demonstrated in previous studies (e.g., Kim et al., 2005), the current study also reaffirmed the usefulness of Taylor's model in the context of DTCA.

In conclusion, the current study attempted to answer whether DTCA inform or persuade consumers, using Taylor's message strategy model. A tentative conclusion is that although the ads provide a fair balance in terms of quantity, there is a potential possibility of misleading regarding the dominant use of transformational appeals. Researchers should pay attention to the emotional and motivational aspects of DTCA contents and formats. If DTCA provide true fair balance then and not till then it will help to empower consumers regarding their own health care management (Woloshin et al. 2001). In that sense, understanding what and how pharmaceutical advertisers communicate with consumers should be a critical endeavor.

Limitations and Future Research Suggestions
As with other studies, the current study also has a number of limitations. First, the current study was interested in a specific advertising category. To enhance the generalizability of the results, it would be useful to examine various other advertising contexts. Although the study attempted to incorporate a systematic purposive sampling using the ABC circulation data and a noted market database (Experion Simmons Media and Market Study), while considering many factors such as audience's previous experiences with taking prescription drugs, magazine coverage, and magazine genre, the nature represent a convenience sampling in essence. A more representative sampling approach is warranted. In addition, this study did not examine other media contexts. Future studies need to explore various media contexts for strengthened external validity. In particular, prescription brand Websites should be examined, while considering their unique media platforms. Thirdly, although content analysis provides systematic and objective measurement of variables (Neuendorf, 2002), it is inappropriate to capture to what extent consumers are affected by different message appeals in reality. Careful caution is required to interpret the findings of content analysis. Future studies need to examine whether transformational or motivational appeals mislead consumers' perceptions and their resulting behaviors using different methodological approach such as surveys or experiments. Evidence-based public policy changes are deemed beneficial to public health. Further, the debate of DTCA should be resolved on that basis.

To address the aforementioned limitations and extend the current study's framework, future research is warranted. Communication literature has suggested that message-related factors may have a critical impact on consumers' responses to ads. Although discussing consumers' perceptions as a result of the message/creative factors found in this study goes beyond the scope of the present content analytic study, this study provided possible message and/or creative factors which need to be examined. Future studies should investigate the effects of dominantly used creative factors such as General-Informational or General-Transformational compared to less frequently used factors to determine whether advertisers are communicating

effectively and efficiently. In addition, providing explanations of why and how a certain factor is more or less effective will contribute to the DTCA literature.

Furthermore, future studies should examine Taylor's model in other media contexts including emerging media (e.g., social media). It has been argued that distinct media have different characteristics and therefore advertisers need to adopt different advertising strategies. Because Taylor's model was largely developed in the traditional media contexts, examining its applicability to diverse contexts would be informative. For instance, the DTCA literature suggests that Websites are characterized by a high degree of multimedia components. Although Tasi and Lancaster (2010) recently investigated TV commercials using Taylor's model, much needed is research on DTC brand Websites, while considering interactive media characteristics. Additionally, whether a certain medium is more educationally effective should be investigated.

Finally, another area for future research is to examine the benefit and risk information in terms of message format effects. For DTCA, the FDA has mandated that advertisers provide a degree of important risk information. However, risk information can be presented in many different formats (e.g., execution factors). For example, advertisers can present benefit information more prominently than risk information using various techniques such as font size, placement, color, and layout. Depending on the techniques, DTCA may mislead consumers by minimizing consumers' perceived risk of the drugs (Macias & Lewis 2004). Thus, future studies should examine the different format effects on consumers risk perception of the drug. Although this content analytic research evaluated current DTCA practices, our understanding is incomplete without the knowledge of how consumers respond to various message presentations. Consumer information-processing and decision making theories may provide meaningful explanations (Liu & Pearson, 2008). Given an understanding of DTCA's full influence on consumers, it will be possible to discuss the controversy of DTCA in a productive way.

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Appendix A
(Kim et al., 2005)

Ego

- Appeal to vanity, self-actualization (Not corporate image but consumer image)
- Emotional needs relating to self are fulfilled
- Image based executions (visual dominance) with little or no factual information
- Unstructured and ambiguous enough so each person can fit him/herself into the ad
- Usual Strategy*: User image, brand image
- Example**: For the computer mania

Social

- Valuing on others' (thoughts, opinions, evaluations, etc.)
- Stating to others, not to self
- Showing social situation motivating consumers (Group identification)
- Showing target market member as socially important to others
- Usual Strategy: User image (in a social situation), Use occasion
- Example: Share it with a friend / Sept. 11 Tragedy, our hearts and minds are burdened

Sensory

- Five senses emphasized
- Sensory gratification
- Pleasurable moments
- Usual Strategy: Moment of pleasure
- Example: Yum! / Feel the speed

Routine

- Habitual purchase / Don't need deliberation
- Serving a cue or a reminder (brand name and package emphasized)
- Appeal to convenience and trivial interests
- Usual Strategy: Hyperbole, Preemptive, Brand Familiarity
- Example: Future of memory / Welcome to Mesa Electronics

Acute need

- Limited time to make decision (timely decision)
- Serving a cue or a reminder in an urgent situation
- Requiring immediate action
- Strategy: Brand familiarity
- Example: Fall/2001 fashion / Call now to process the claim

Ration

- Rational consumers assumed
- Needs a large amount of deliberation (lots of corporate information)
- Problem solving offered
- Emphasizing the differences or competitive advantages
- Usual Strategy: Comparative, USP, Generic
- Example: Get the wider picture / Faster Pentium 4 with 256MB memory under $1,500

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* Usual strategies in each message strategy are not strictly fixed, since the Taylor's message strategy emphasizes the consumer motivation. These "usual strategies" are traditionally common in each cell.

** Examples here are text-based messages only, but coders should consider the visual as well as texts.

Appendix B
(Frazer, 1983; Laskey et al., 1989)

Informational Message Appeals
Comparative
➢ Competition explicitly mentioned
Unique Selling Proposition
➢ Explicit claim of uniqueness
Preemptive
➢ Testable claim of superiority based on an attribute or benefit
General-Informational
➢ Any informational appeal not classified above, with not assertion of superiority
Transformational Message Appeals
User Image
➢ Focus on user
Brand Image
➢ Focus on brand personality and psychological associations
Use Occation
➢ Focus on usage occations
General-Transformational
➢ Any transformational appeal not classified above, without strong selling emphasis