

Advertising Agrarian Unreality: College Students' Preferences for Agricultural Commodity Advertising Content

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Abstract

Critics of agricultural commodity groups claim the advertising strategies used by those groups promote unrealistic perceptions of modern agricultural practices. To answer this question, the researchers sought to investigate young consumers' preferences for realistic versus unrealistic agricultural video content. Using an online survey questionnaire, the researchers compared undergraduate students' affective responses to content from the "Happy Cows" advertising campaign to those elicited from viewing educational video content pertaining to modern dairy husbandry practices. Subjects reported similar levels of liking for both video sets, while the informational videos scored higher for realism and perceived quality of animal care. Students with less familiarity with agriculture reported greater liking for the educational content. The researchers recommend a movement away from purely entertaining advertising content for agricultural products in favor of more realistic, fact-based promotions.

Key Words

Uses and gratifications; visual imagery; schema congruity; advertising; dairy

Introduction

In 2000, the California Milk Advisory Board (CMAB) introduced American television viewers to a herd of talkative Holstein cows — and the pitch "Great cheese comes from happy cows. Happy cows come from California" — via an advertising campaign aimed at raising awareness of the state's large dairy industry (Glenn, 2004; Sherman, 2002). The award-winning campaign was a success, and by 2002, California was moving closer to Wisconsin in cheese production. The "Happy Cows" expanded into the online realm in 2008 with an *American Idol*-style contest that allowed consumers to choose the newest "spokes-cow" for the brand ("Consumers," 2008). By 2013, CMAB was inviting television viewers to "make [cows] part of your family," depicting the same chatty Holsteins as members of suburban households ("Make Us Part of Your Family," 2013).

Entertaining television commercials are vital to the success of commodity sales, but CMAB was roundly criticized for presenting an unrealistic portrayal of modern dairy husbandry to the public ("Happy Cows," 2009; Meyer, 2009). The commercial's hyper-realized settings — lush green pastures and rustic barnyards — draw upon traditional views of farming and may encourage audiences to associate animal "happiness" with restraint-free "lifestyles," though the majority of dairy cattle in the United States are raised in some type of confinement system (Von Keyserlingk et al., 2013; Goodwin & Rhoades, 2010; Rollin, 2009).

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Television advertisers do not “claim to picture reality as it is but reality as it should be” (Richins, 1991, p. 71; Schudson, 1984). Nonetheless, many scholars believe the images presented in advertising content impact the way audiences perceive the world around them (Botta, 1999; Lodish, Abraham, Livelsberger, Lubetkin, Richardson, & Stevens, 1995; Moschis & Moore, 1982). Understanding the mechanisms that construct consumers’ reality and the fulfillment they derive from watching commercial advertisements should offer some insight into the effects of advertising images on consumer perceptions. The theoretical framework for this study, therefore, is built upon visual imagery, schema congruity, and uses and gratifications (U&G) theory.

Visual Imagery in Television Advertising: Stereotypes and Animal Unreality

Television advertising represents a distorted “mirror” of society that promotes the idealization of reality — an idealization incongruent with the world experienced by audiences (Scharer, 2013; Gulas & McKeague, 2000; Hirschman & Thompson, 1997; Richins, 1991). This “constructed unreality” is rife with stereotypes that advertisers use to communicate to target audiences: Women are placed in domestic settings, such as kitchens or bathrooms, to promote housekeeping products while men drive automobiles and peddle gasoline (Kim & Lowry, 2005; O’Donnell & O’Donnell, 1978; Weimann, 2000). Researchers have demonstrated heavy television viewership tends to correlate positively with acceptance of conventional perceptions of masculinity and femininity in agreement with traditional family values among subjects of all ages (Scharer, 2013; Kim & Lowry, 2005; Kimball, 1986; Ross, Anderson, & Wisocki, 1982; Volgy & Schwartz, 1980).

Non-human characters are not excluded from this taxonomy of stereotypes. Animals have long held great material, emotional, and symbolic value for humans, and the strong bond between man and beast is often exploited (Phillips, 1996; Spears, Mowen, & Chakraborty, 1996). Animals symbolize mankind’s qualities, and they provide an “inexhaustible repository which novelists, poets, artists, dramatists, film makers, and even advertisers draw on ... when they wish to evoke an immediate yet profound response” (Spears et al., 1996, p. 188; Rowland, 1973). There are more than 69 million pet owners in the United States, the majority of whom view companion animals as possessing altruistic, nurturing qualities (Lancendorfer, Atkin, & Reece, 2008).

Non-human characters are used in advertisements as “social symbols” to increase brand awareness and for good reason: Consumers are more familiar with and have more positive attitudes toward brands that utilize animal-based advertising than brands endorsed by celebrities (Aggarwal & McGill, 2007; Lancendorfer et al., 2008; Phillips, 1996; Spears et al., 1996). Animals serve two primary symbolic functions: representing valued and desired qualities, such as loyalty and strength, or demonstrating the human-animal connection and enjoying human attention (Brown, 2010; Beirão, Lencastre, & Dionísio, 2007; Lerner & Kaloff, 1989). Advertisers often portray animals as loved ones, as tools, as nuisances, or as part of nature (Lancendorfer et al., 2008).

Humanization, or the attribution of human abilities like cognitive thought, speech, and discrete emotions to animals, is another tool used by advertisers to appeal to consumers (Aggarwal & McGill, 2007; Lerner & Kaloff, 1989; Spears et al., 1996). Examples of humanized animal mascots include Borden’s famous Elsie, a Jersey cow with a daisy necklace, wide smile, and nuclear family that has become a “symbol of wholesome country living and freshness” (Spears et al., 1996, p. 88). In a similar manner, the California Milk Advisory Board’s (CMAB) “Happy Cows,” a herd of witty talking Holsteins, represent a connection between superior products and traditional production practices (Sherman, 2002).

Schema Congruity and the Agrarian Myth

According to researchers at the W.K. Kellogg Foundation, Americans perceive rural America as “serene and beautiful, populated by animals and livestock, and landscape covered by trees and family farms” (Kellogg, 2002, p. 1). A content analysis of television programs and large-market newspapers revealed] frames in news coverage of rural issues “linked ‘rural’ with an agricultural or farmstead life-style” and an abstract, symbol-laden “idealized past” (Kellogg, 2004, p. 25; Rhoades & Irani, 2008).

Such symbolism is inherent in agriculture-related entertainment media, as well. Reality television shows like *The Simple Life* and *Farmer Wants a Wife* reinforce stereotypes about agriculture and professionals in the food and fiber industry, yet were popular among audiences when they aired in 2003 and 2008, respectively (Ruth, Lundy, & Park, 2005, p. 28; Rogers, 2003). The producers of *The Simple Life* staged scenes to represent a desired “look” for rural Arkansas: A dairy replaced its plastic jugs with old-fashioned glass bottles, and the show’s stars, Paris Hilton and Nicole Richie, were shown filling them with unpasteurized milk (Paulsen, 2003). These “reality-based” portrayals of agriculture as outdated and simple could reinforce inaccurate perceptions about the industry (“Farmers fret,” 2005; Lee, Bichard, Irey, Walt, & Carlson, 2009; Ruth et al., 2005).

While agricultural stereotypes are used as a comic backdrop for reality programming, modern industry practices are often portrayed negatively in entertainment media (“TV shows,” 2009). In 2009, two highly rated television dramas — Fox Network’s *Bones* and CBS’s *CSI: Miami* — aired episodes centered on large-scale production agriculture (“Bones,” 2009; “CSI: Miami,” 2009). The *Bones* episode “The Tough Man in the Tender Chicken” offered narrative criticism of confinement housing, de-beaking, animal slaughter, waste pollution, and farm worker health. *CSI: Miami*’s “Bad Seed” followed an illness outbreak caused by runoff contamination and the consumption of genetically modified corn. Both shows lead their timeslots with a combined audience of more than 20 million viewers (Gorman, 2009; Seidman, 2009).

Such portrayals of agriculture may be dangerous because they violate society’s long-held beliefs about the industry and its practices (Holt & Cartmell, 2013; Fraser, 2001; Wachenheim & Rathge, 2000). Modern operations, relying on science and advanced technology, hardly resemble the pastoral images consumers associate with agriculture and rural life (Holloway, 2004; Kellogg, 2004; Fraser, 2001). These schema, or cognitive memory structures, “actively process and store information and generate expectations about future events and actions” and are used by belief systems to process, store, and organize information and produce perceptions of social reality (Allen, Dawson, & Brown, 1989, p. 83; Smith, Houston, & Childers, 1985).

Images and ideas that correspond to consumers’ schema or beliefs are said to be “congruent” (Feiereisen, Broderick, & Douglas, 2009). Advertising portrayals consistent with a viewer’s schema tend to elicit more positive responses than incongruent portrayals, though incongruent messages are also used to increase consumer interest (Yoon, 2012). Advertisers, therefore, capitalize on consumers’ tendency to humanize products and brands by introducing spokes-characters that tap into schemas related to the products, characters, or commercial context (Aggarwal & McGill, 2007; Feiereisen et al., 2009; Orth & Holancova, 2004).

Uses & Gratifications of Television Advertising

Researchers have long sought to understand how and why audiences use media (Cantril, 1942; Herzog, 1944; Ruggiero, 2000). Uses and gratifications (U&G) theory was developed to “study the gratifications that attract and hold audiences to the kinds of media and the types of content that satisfy their social and psychological needs” and their possible influence on audience’s perceptions of that

content (Ruggiero, 2000, p. 3; Cantril, 1942; Cooper & Tang, 2009). Theorists who study U&G believe audiences are aware of their needs, evaluate potential media channels and content, and choose media they believe will fulfill those needs (Joo & Sang, 2013; Nabi, Stitt, Halford, & Finnerty, 2006; Rubin, 2002; Katz, Blumler & Gurevitch, 1974).

Motivation typologies are a product of U&G research. Early television scholars identified surveillance, entertainment, personal identity, escape, and companionship as the needs fulfilled by TV consumption, while contemporary researchers have added diversion, social utility, and attitude and belief reinforcement (Kang & Atkin, 1999; Ruggiero, 2000; Weimann, Brosius, & Wober, 1992; Zaichkowsky, 1994). O'Donohue (1994) developed a television advertising uses-and-gratifications typology based on young people's "attitudes, interpretations and uses of advertising," (p. 57). This typology included marketing uses information, enjoyment, scanning the environment, and self-affirmation.

Other researchers suggest attitudes toward advertisements correlate positively with perceived levels of entertainment and are associated negatively with irritation (Parreño, Sanz-Blaz, Ruiz-Mafé, & Aldás-Manzano, 2013; Lee & Morris, 2010; Wang, Zhang, Choi, & D'Eredita, 2002; Ducoffe, 1996). Consuming advertising content for educational or informational purposes has been identified as a gratification sought by consumers with high need for cognition, such as college students (Kwak, Andras, & Zinkhan, 2009; Hallahan, 2008; Wang et al., 2002; O'Donohue, 1994).

Purpose of the Study

Idealization in advertising has plagued industry ethicists for decades (Drumwright & Murphy, 2009; Gulas & McKeague, 2000; Childs & Cater, 1954). In an era when less than 2% of the population produces food and fiber for consumers with limited knowledge of and experience in the industry (USDA, 2009; Frick, Birkenholz, Gardner, & Machtmes, 1995), it is vital that commodity groups and other organizations understand the need for realism in product advertising. By propagating the "agrarian myth," the industry has opened itself to criticism from animal-rights and consumer advocates, who argue such advertising qualifies as deceptive and untrue, thus undermining agriculture's integrity in the eyes of the buying public ("Happy Cows," 2009; Meyer, 2009; Sherman, 2002). To protect agriculture's reputation and role in society, these groups should assess the content of their marketing and advertising material and find a happy medium between entertainment and education (Meyer, 2009).

This study addresses Priority 1 of American Association for Agricultural Education's 2011-2015 National Research Agenda: public and policy-maker understanding of agriculture and natural resources. The purpose of this study is to identify preferences for agricultural video content among a specific demographic: college students enrolled in General Education Curriculum (GEC) courses at a large Midwestern public university. The objectives of the study were:

1. To describe the affective response elicited by exposure to commercial advertising content — namely, the "Happy Cows" campaign — regarding perceived quality of dairy husbandry, likability, and realism; and
2. To compare participants' affective responses to the television campaign to those generated by images associated with modern dairy husbandry practices.

Methods

Subjects

The researchers sought a target demographic familiar with the “Happy Cows” campaign. Because undergraduate students between the ages of 18 and 30 watch an average of 2.5 hours of television per day and utilize television as a source of education and entertainment, they offered an ideal level of familiarity for the purposes of the study (Loechner, 2009; Student Affairs Administrators in Higher Education [NASPA], 2008). Participants self-selected into the study and were recruited from a population of students enrolled in three introductory GEC courses: Introductory Biology, Introductory Chemistry, and Contemporary Issues in American Agriculture, a GEC writing course.

The goal of subject sampling was to develop a pool of varied ethnic and socioeconomic backgrounds. The campus from which the sample was collected reported a 14.4% minority student enrollment in 2009, and 19% of the 2008 freshman class were first-generation college students (“Ohio State,” 2008; Kloeppe & Feder, 2009; “Statistical summary,” 2009). Additionally, drawing a student sample from GEC courses allowed for a wide variety of academic majors, as those courses constitute the core curriculum required of all university students.

Instrument

The instrument selected for this study was an online questionnaire deployed through survey engine SurveyMonkey.com. The researchers used the questionnaire to gather demographic information, including age, gender, description of hometown (urban, suburban, rural), and academic area of interest. Subjects described their television consumption in hours watched per day. Participants also described their uses and gratifications for television viewership by responding to eight items regarding the “surveillance” and “entertainment” gratifications on a five-point Likert-type scale (see Table 1), with 1 indicating strong disagreement and 5 indicating strong agreement (Kang et al., 1999).

Table 1

Sample questionnaire items for television uses and gratifications

Use	Questionnaire Item
Surveillance	“I watch television...”
	...to learn more about the world around me.
	...because it shows me what society is like nowadays.
Entertainment	“I watch television...”
	...because it is enjoyable.
	...because it is amusing.

The questionnaire also was used to assess specific uses and gratifications related to television advertising consumption. Four of O’Donohue’s (1993) advertising uses were selected as foci for the study: marketing uses information, surveillance, enjoyment, and self-affirmation (see Table 2).

Table 2

Sample questionnaire items for advertising uses and gratifications

Use	Questionnaire Item
Marketing uses information	<p>“I pay attention to commercials...”</p> <p>...to learn about products and services.</p> <p>...to keep up with new trends and styles.</p>
Surveillance	<p>“I pay attention to commercials...”</p> <p>...to live vicariously through other people’s shopping habits.</p> <p>...to understand what is fashionable or preferred.</p>
Enjoyment	<p>“I pay attention to commercials...”</p> <p>...because they are entertaining.</p> <p>...because they tell a story I am interested in.</p>
Self-affirmation	<p>“I pay attention to commercials...”</p> <p>...to reinforce my beliefs about the world.</p> <p>...because they resonate with my own situation in life.</p>

During the survey, participants were asked to view five video clips linked to the questionnaire from video-sharing website YouTube. The first set of clips consisted of two videos from the “Happy Cows” campaign (“Alarm Clock” and “April”) that presented images related to dairy housing. Subjects were then shown a clip featuring housing in the context of a tour of a large modern dairy farm. The third video shown was “Jenn,” a “Happy Cows” commercial depicting natural calf-rearing, which was followed by a second farm-tour video explaining how calves are raised on a large-scale dairy. (Both videos of the dairy farm tour were intended for educational purposes.) For each video, subjects were asked to explain their initial reactions to the clips. Subjects then responded to statements on a seven-point semantic differential scale to rate the commercials as closer to one or the other of two bipolar adjectives. Participants judged the commercials on three dimensions:

1. Realism, or the congruence between what is presented in the video and the subject’s pre-conceptions of agricultural reality;
2. Likability, or the subject’s affective response to the commercials’ content; and
3. Quality of perceived animal treatment, or the nature of how animals are fed, housed, and tended.

Data Analysis

To test validity, the questionnaire was pilot-tested in a GEC writing course with 47 students. Over one week, the questionnaire was e-mailed to students three times, resulting in 20 viable responses or a response rate of 44.68%. Cronbach's alpha (α) was calculated as a statistical measure of reliability. Items measuring *surveillance* ($\alpha = .707$) and *entertainment* ($\alpha = .975$) as impetus for television consumption fared well on the reliability test. Scales measuring uses for viewing television advertising included *marketing uses* ($\alpha = .893$), *surveillance* ($\alpha = .726$), *enjoyment* ($\alpha = .69$), and *self-affirmation* ($\alpha = .89$). The three scales for video *likability*, *realism*, and *perceived quality of animal care* were also given a Cronbach alpha score. The Cronbach alpha for the *liking* scale was determined to be $\alpha = .846$. The *realism* scale scored $\alpha = .459$ overall; the removal of one item raised this score to $\alpha = .549$. The scale for perceived *quality of animal care* received a Cronbach alpha score of $\alpha = .912$.

The general survey was conducted in two sessions: One round of surveys was sent to an introductory biology class of 604 undergraduate students during the last two weeks of the spring academic session. The second round of surveys was sent to an introductory chemistry class with an enrollment of 107 students during the first two weeks of the summer session. These efforts resulted in 56 valid responses. The low response rate necessitated the inclusion of pilot-test data: Because no significant demographic differences were found between pilot-test respondents and general survey respondents, the responses to the pilot test were incorporated to the general survey for a total of 78 responses and a response rate of 9.72%.

Low response rates are increasingly typical of surveys of college students, especially for email- or Web-based surveys: In a 2003 study, Sax, Gilmartin, and Bryant found only 17.1% of college-aged survey takers responded to a Web-only questionnaire with an incentive for completion. Falling response rates for student surveys have increased the number of studies reporting rates of less than 40% (Dey, 1997). To counter the high non-response rate, the researchers compared demographic data gathered from the sample to the same characteristics of the target population — undergraduate college students — to determine if the resulting data were indeed generalizable. According to Miller and Smith (1983), this method of dealing with low response rates allows researchers to generalize from a small sample to a larger population if the characteristics of the sample are typical of the target population.

Results

Of the 78 respondents, 57 reported their gender. Males constituted 45.6% of the sample ($f = 26$), and 54.4% of respondents ($f = 31$) were females. Respondent ages ranged from 18 to 41 years, with a mean age of 21.4 years and a mode of 20 years ($f = 16$). The majority of respondents (91.2%; $f = 52$) were under 24. Participants' hometowns were largely suburban (61.4%, $f = 35$), with rural-farming (19.3%, $f = 11$), rural-non-farming (10.5%, $f = 6$), and urban (8.8%, $f = 5$) trailing behind. The majority (82.2%, $f = 60$) of respondents who indicated their television viewing habits reported watching between 1-4 hours of programming per day.

Though the sample size was small, it was representative of the general population of undergraduate students at the university: The gender breakdown (45.6% male to 54.4% female students) skewed only slightly from the university population (51.9% male to 48.1% female students) ("Statistical summary," 2009). The sample also represented 13 colleges and the university's exploration program. Most prevalent among those were social and behavioral sciences, which include psychology, sociology, communication, political science, and the business college, while eight respondents were enrolled in a major related to food, agricultural, and environmental sciences. Responses to class rank

were fairly evenly distributed among the four categories: Of the 56 subjects who indicated their rank, 11 were freshmen (Rank 1), 18 were sophomores (Rank 2), 13 were juniors (Rank 3), and 14 were seniors (Rank 4).

Subjects were asked to respond to four Likert-type items, on a scale of 1 to 5, to gauge their use of television for *surveillance* and *entertainment*, the two primary uses. The mean scores for those items were collapsed into composite means for each use. Respondents were slightly more likely to watch television for *entertainment* than *surveillance* (see Table 3).

Table 3

Descriptive statistics for uses of television viewership

	<i>N</i>	Minimum	Maximum	Mean	<i>SD</i>
Surveillance	71	1.00	4.75	2.77	.96
Entertainment	73	1.00	5.00	3.84	1.09

To assess subjects' uses of television advertising, similar methods were used for *marketing uses* (six items) and *surveillance*, *entertainment*, and *self-affirmation* (three items each). Based on those scales, respondents use advertising for *entertainment* more than *marketing uses*, *surveillance*, and *self-affirmation* (see Table 4).

Table 4

Descriptive statistics for uses of advertising viewership

	<i>N</i>	Minimum	Maximum	Mean	<i>SD</i>
Marketing	69	.67	4.67	2.52	.86
Surveillance	70	.00	5.00	2.50	.90
Entertainment	68	1.00	5.00	3.13	1.04
Self-affirmation	69	1.00	4.67	2.33	1.01

Affective Responses Elicited by Exposure to the “Happy Cows” Campaign

The “Happy Cows” videos received an average *liking* score of 3.12, an average *realism* score of 3.49, and an average *quality of care* score of 3.61. A moderate positive correlation was found between

hometown types (higher scores indicated less rural hometowns) and liking for the farm-tour videos ($r = .404, P = .004$). Viewers' initial reactions to the video echo the sentiment displayed in the statistics. Responding to the "Happy Cows" videos, subjects commented on the videos' entertainment value and eschewed the realism of their content. One participant wrote: "They were pretty cute commercials. If I were watching this on tv [sic] I'd probably remember those because of their humor. I was more focused on the humor and the animals though and nearly forgot it was [a] commercial for cheese or milk products." Another said that the commercials "are creative and I [sic] love the personification of the cows."

One respondent commented: "These clips are funny and amusing however they depict a false vision of the dairy industry. Many cows are not raised in old wooden barns today and I believe that the public should know this and why animals are raised this way." More negative reactions included statements like "I am a vegetarian and loathe the commercial exploitation of animals" and "Cows cannot actually talk, so it is not a factual advertisement." After watching the first farm-tour video, one respondent stated that "its [sic] harder to think that [the third commercial] is funny after knowing the truth about the cows."

Affective Responses Elicited by Exposure to Farm Tour Videos

The farm tour videos scored 3.40 for *liking*, 4.51 for *realism*, and 3.87 for *quality of care*. A paired-samples *t* test for each variable indicated that though the difference between the video sets' *liking* scores was not statistically significant ($t(47) = -1.76, P = 0.085$), the farm tour videos' mean scores for *realism* and *quality of care* were significantly higher ($t(47) = -8.66, P = 0.001$ and $t(43) = -2.99, P = .005$) than those for the television commercials. In their open-ended responses, subjects praised the videos' "accurate and honest" depiction of dairying. Others called the videos "informative" and "realistic." One respondent commented, "I would buy products from this company ... Room for cows to lay down and the cows looked healthy. I liked this clip way better." Similar comments included "it was good to see that animals were being treat[ed] humanely and were healthy" and "it is clear that they really do take care of these cows and treat them really well."

Other respondents, however, noted the free-stall housing and calf hutches seemed "crowded" and "unnatural" and doubted the humane treatment portrayed, especially the "smaaaaaallll [sic] cages." One stated, "I may have liked to see the cows outside the barn grazing." Another wrote, "It was depressing to see them all being fed that dusty grain and being so pressed together." One referred to the videos as "fake," and another said: "I now know how calves are cared for. I also kind of feel bad for them."

Discussion

Television and Advertising Uses and Gratifications

The results of this study strengthen the notion that young people consume television content and television advertising for entertainment purposes. Entertainment received the highest mean scores for both television viewership ($M = 3.84$) and advertising uses ($M = 3.13$). However, young people still watch televised programming for educational or informational purposes. The results of this survey reveal that media content aimed at informing audiences — versus selling a product — was as entertaining to participants as the advertisements featuring humanized dairy cattle ($t(47) = -1.76, P = 0.085$). Those participants from less rural backgrounds actually found greater enjoyment watching the informative farm-tour videos than those subjects with more regional familiarity with agriculture and dairy farming, as indicated by a moderate positive correlation between *hometown* and

liking for the more realistic video content ($r = .404, P = .004$). This finding supports Kaufman, Israel, and Irani's (2008) conclusion that consumers from regions with less agricultural activity perceive the industry in a more positive manner than those from agriculture-intensive areas.

Responses to the “Happy Cows” and Farm-Tour Videos

Subjects analyzed both the television commercials and videos of the dairy farm tour on a seven-point adjective scale for *liking*, *realism*, and *quality of animal care*. The “Happy Cows” videos received moderate mean scores for all three qualities, ranging from 3.12 for *liking*, 3.49 for *realism*, and 3.61 for *quality of care*. The videos footage of a large modern dairy farm received mean scores of 3.40 for *liking*, 4.51 for *realism* (the highest score across all variables), and 3.87 for *quality of care*. The tour videos' scores for *realism* and *quality of care* were statistically higher than those for the “Happy Cows” videos.

The open-ended responses from participants compound the results of the survey items. Subjects indicated the videos they deemed “more realistic” — the farm-tour videos — represented a more accurate portrayal of dairy husbandry than the commercials. Survey-takers were able to differentiate between modern and antiquated dairy husbandry practices, and they even preferred the modern methods of housing and calf care to the “freer” and “more natural” methods presented in the commercials. However, images of modern husbandry practices remained incongruent with several respondents' beliefs about humane animal treatment, indicating today's methods continue to be at odds with traditional images of animal production.

Implications for Dairy Commodity Marketers and Advertisers

The results of this study support movement away from unrealistic, purely entertaining commercial content in favor of more informational, reality-based television advertisements. The college students surveyed indicated they enjoyed watching videos featuring real footage of dairy farming as much as they enjoyed the humorous commercials featuring talking cattle. In fact, those students less familiar with agriculture reported greater liking for the more educational content. The researchers believe educating the public about current trends in animal husbandry while marketing products is a more responsible way to promote both the commodity and its producers.

Socially responsible marketing practices are now being utilized by dairy marketing organizations, including the creators of the “Happy Cows” campaign. In 2010, CMAB debuted a new series of television advertisements based on the Real California Dairy Families documentary series. According to Vice President of Advertising Michael Freeman, the commercials “[dispel] the myth that California farms are run by cold, uncaring ‘corporations’” and allow farmers to debunk myths surrounding the dairy industry (Giambroni, 2009, para. 4). Other states also are making this move. The American Dairy Association Mid-East (ADA) organized a regional campaign in 2009 to promote Ohio dairy farmers and provide resources to consumers. ADA's advertisements feature interviews with producers and information on cow-care practices, including hoof trimming and dehorning (“Campaign gives,” 2010).

Implications for Future Research

Two primary limitations of the study should be corrected in future investigations: survey response rate and generalizability. To increase response rates in future studies of undergraduate students, researchers should take care when timing the distribution of an instrument: End-of-term responsibili-

ties, such as papers and final examinations, may reduce the likelihood of response. The response rate for the third survey round, which was sent at the beginning of the summer academic session, was 20.56%, compared to 7.28% for the survey when distributed at the end of the spring term. Utilizing university registrar records to contact potential participants directly would eliminate the need for an intermediary contact person, in this case, a class instructor.

The study's generalizability constitutes another limitation. To encourage responses across backgrounds and majors, respondents were pooled from introductory GEC courses, which fulfill graduation requirements across a wide array of academic programs. This population selection, while providing greater breadth across a secondary institution, limits the generalizability of the study to undergraduate students aged 18-24. Adult consumers would provide an ideal population for investigation by broadening the pool of potential respondents and allowing researchers to describe the impact of advertising content on consumers who make food-purchasing decisions for themselves and their families.

Though limited in scope to undergraduate students, the results of this study shed light on the advertising-content preferences of an important group of future consumers. In 2009, more than 70 percent of American high school graduates were enrolled in colleges and universities, the latest high point in an upward trend among young people ages 16-24 (Bureau of Labor Statistics [BLS], 2010a). These students also comprise an important part of the nation's consumer market: More than half of undergraduates contributed to the labor force in 2009, and college graduates experience better employment opportunities, higher earnings, and more discretionary spending than non-graduates (BLS, 2010b; Roberts & Jones, 2001). Appealing to an educated consumer demographic could be beneficial to organizations seeking to improve both their bottom line and the public image of their commodities.

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