A Semiotic Analysis of a Texas Cooperative Extension Marketing Packet

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Abstract

Semiotic analysis in agricultural communications / education and related fields is largely unexplored territory. This study used semiotics, a theory of the production and interpretation of meaning based on images, to evaluate a Texas Cooperative Extension marketing packet. Photographic and logo images throughout the packet were analyzed by employing descriptive methodology and quantitative content analysis methods to "identify the symbols used in the image and determine their meaning for society as a whole" (Lester, 1995, p. 126). The purpose of the study was to interpret the messages directed to the audience and determine if they matched the perceived meanings. The findings revealed five repeating themes within the 81 images included in the marketing packet. The themes were: messages portrayed, diversity, relationships, exchange of information, and stereotypes. Each image was analyzed for denotative and connotative meaning. Results showed the images portrayed predominately positive messages while logos were neutral. Adult Caucasian females were depicted as the primary age, ethnic, and gender group. The most reoccurring relationships depicted were that of families and a student / mentor relationship. For information exchange, more images portrayed hands-on learning than dialogue instruction. Findings also indicate visual stereotypes were present. Additionally, no messages regarding individuals with disabilities were discovered. This research focused solely on visual analyses, further research is recommended to evaluate Extension's marketing tactics both visually and in print to determine if marketing materials are meeting the needs of the organization and their publics. Additional visual marketing assessments should continue.

Keywords

visual communications, semiotics, Texas Cooperative Extension, marketing, visual literacy

Introduction

The mission of Texas Cooperative Extension is to "improve the lives of people, businesses, and communitities across Texas and beyond through high-quality, relevant education" (Texas Extension, 2010, para 3). Materials and information provided by the Extension service are disseminated to publics through various mediums including newspapers, radio, workshops, direct order, or in-person at county Extension offices. At the time of this research, an Extension office was located in every county in the state, with 250 offices and 1,400 personnel.

Research previously presented at the Southern Region AAAE conferences in the poster session.

Extension's research-based information addresses relevant community issues from a wide variety of areas, including but not limited to: agriculture and natural resources, family and consumer sciences, 4-H and youth development, and community development. The targeted audiences for Extension materials are broad and diverse; spanning all ethnicities, age-groups, genders, and geographical locations represented in Texas. While Extension has traditionally been linked to agriculture, over the past several decades' rural farmers and ranchers have become less of a focus as the primary audience (Schauber & Castania, 2001). In Extension, varying and ever-changing programs bridge the gap between rural and urban, and traditional and non-traditional agriculture. Over the years, Extension's focus has shifted to address all relevant issues within every Texas community.

Nationally, Cooperative Extension programs are experiencing challenges to continued survival, due to changing legislative priorities and budget cuts in these ever-changing economic times (Varea-Hammond, 2004). Challenging times have pushed Extension, in recent years, to look closer at their audiences and to determine how to best market to the diverse publics. Marketing Extension and its services requires diverse methods to reach current and potential clients to broadly increase visibility and understanding of the value of Extension (Varea-Hammond, 2004).

In the mid 1990s, research focused on the Cooperative Extension program noted three areas of focus necessary to increase its marketing potential: client-orientation, coordination of all client-related activities, and goal-orientation (Chappell, 1994). Client-orientation was defined as meeting the wants and needs of constituencies, and Chappell outlined the need for Extension professionals to shift from an internal organizational perspective to the client's viewpoint. The research focused on the coordination of client-related activities; specifically that all Extension persons become aware of client needs and work diligently to determine needs, wants, and interests of its constituencies. Under of the auspice of client-related activities, after needs awareness has occurred, Extension agents must adapt programs to fulfill the needs of the audience as individuals. Chappell's focus on the three cornerstones of marketing-orientation also included goal-orientation. In this area Extension personnel must ensure that clients' goals are being met. Overall, Extension's focus is to meet the needs of its clientele (Boldt, 1988).

In later discovery that applied Chappell's cornerstones of marketing-orientation, researchers discovered the need to train Florida Extension marketing personnel on specific areas. The marketing areas included "how to establish a marketing / promotions program, how to design displays/exhibits, and how to design brochures" (Telg, Irani, Hurst, & Kistler, 2007, para 36). Skelly (2005) outlined five Ps to consider when establishing effective marketing in Extension: product, price, place, promotion, and people / partnerships. Effective and consistent marketing materials and messages can provide an opportunity for Extensions' continual efforts to attract new and retain current target audience groups.

This study looked closely at promotion, using the 2006 Texas Cooperative Extension marketing packet. Agricultural communications researchers (Doerfert, 2003; Miller, Stewart, & West, 2006; Tucker, 1996, 2004) have noted the need to examine literature in an effort to improve research. Marketing research focused on Extension publications is largely unexplored territory. Yet, marketing plays a critical role in program longevity and success.

"Visual images are powerful in their occupation of the publics' time and the shaping of how we process [meaning]" (Sadler-Trainor, 2005, p. 9). Additionally, visual images play an important role in society due to the messages these images can portray, both positive and negative, regarding social class, cultures, etc. (Rhoades & Irani, n.d.). Photographs influence viewer's emotions more often than

words, and pictorial stereotypes can be perceived as fact (Lester, 2005). In marketing packets, photographs and visual components can strengthen a message beyond what words can describe alone. However, visual messages can also communicate inaccurate information.

Due to the impact images have, not only on market branding (Park, Jaworski, & MacInnis, 1986) but also on customer appeal and satisfaction (Jenkins, 2003), there is a need to complete research focused on images associated with marketing agriculture and agricultural programs. Customer satisfaction with a company's products or services is often seen as the key to a company's long-term competitiveness and success. Research indicates that customer satisfaction begins at the marketing phase prior to purchase (Hennig-Thurau & Klee, 1998). Therefore, it is important for Extension to assess its marketing techniques to ensure customer satisfaction, continued longevity, and future growth.

Guiding Models and Theory

"What you experience and what you remember are products of a mind that actively thinks, with images and words, the mental, direct, and or mediated visual messages you imagine or experience in your life" (Lester, 2005, p. 69). Images are essential to developing an understanding, and can be read, construed, and used in both different ways and multi-functions, like words (Weber, 2006). An image is a visual form that takes on meaning through the perception and interpretation of the viewer. Semiotics is one method of quantifying this process via a visual content analysis. "Images can be used to lie, to question, to imagine, to critique, to theorize, to mislead, to flatter, to hurt, to unite, to relate, to narrate, to explain, to teach, to represent, and to express the full range of human emotion and experience" (Weber, 2006, p. 1).

Semiotics is a theory of the production and interpretation of meaning. The basis of semiotic theory focuses on meaning as a result of acts and objects, which is a function of "signs" in relation to other signs (Chandler, 1994). The system of signs is comprised of meaning-relations that can exist between one sign and another. In simple terms, a sign is anything that stands for something else, or even simpler it is a sign if it has a meaning beyond the object itself (Lester, 1995). Sign relations can be identified within images and can be used to add meaning and analysis to photographs or images. Signs are indications of how the message is communicated to the viewer.

Although signs were first proposed by Greek philosopher and linguist Augustine in A.D. 397, the theory of Semiotics is credited to F. de Saussure and C.S. Peirce. However, many subsequent theorists have added to semiology and semiotics: L. Hjelmslev, R. Barthes, G. Bateson, J. Lacan, S. Freud, B. L. Whorf, B. Malinowski and others (Lemke, 2006). Of those, Roland Barthes is the most well-known for bringing semiotics into the visual communications field.

Charles Sanders Peirce formulated three different types of signs: iconic, indexical, and symbolic. The easiest to interpret of these signs are iconic signs, also known as icons. An example of an iconic sign is the image of a girl or boy above a restroom, signifying which gender uses the facility. Images that represent a logical, commonsense connection to the thing or idea they represent are known as indexical signs. An example of an indexical sign could be smoke released from a smokestack above an industry building, the smoke then represents the pollution generated by company. The most abstract of the signs are symbolic signs. Symbols have no logical or representational connection between the image and the thing they represent. These connections must be taught and vary due to social and cultural interpretation. Also, symbols usually evoke a deeper emotional response from viewers than do iconic or indexical signs. Flags, gestures, and religious images are examples of symbols (Chandler, 1994, 2002; Lester, 1995).

The use of semiotic theory is one way an image's "message" is evaluated to determine the reality it portray. A person lives in a world shaped by decoding signs found within images, actions, and words (Saussaure, 1959). The use of signs was further refined by Ferdinand de Saussure who theorized the idea that signs are used to communicate messages. Saussure divided signs into signifiers — the drawing, sound, or direct or indirect image (an image where a sign can be expressed), and the signified — the meaning communicated by the signifier. Social and cultural rules, established by a society, over time dictate the concept or emotion portrayed by a sign. When looking at the way signs are communicated we need to look at both the emitter and the receiver. The emitter is the person who sends (encodes) the sign and the receiver is the person who translates (decodes) the sign. Successful communication occurs when the transmitter decodes the sign the way the emitter intended (Chandler 1994, 2002; Lester, 1995).

The categorization of images through their connotative and denotative values can be attributed to Roland Barthes (Leeuwen & Jewitt, 2001, p. 94). Barthes contributions have focused on "the chain of associations or signs that make up picture's narrative" (Lester, 1995, p. 65). Signs in an image are often dictated by the style of the photographer. Signs in images are presentational and are often not as controlled as text. When combined with text, images dominate words and are processed in the brain to create perceptions about the subject (Barry, 1997).

The interpretation of messages from images is an active process. Lester (1995) wrote that the viewer must actively concentrate on the subject of the photograph rather than just observing the photograph in order to find the meaning or the message. Semiotic methodology is used to provide researchers with information about the content of images and provide an understanding of how the audience would interpret the image and the effect it could have on building perceptions (Norwood, 2005).

This study examined how photographs were used by the Texas Cooperative Extension service to market their organization. A visual content analysis, framed by semiotic theory, to determine the types of messages the photographs may suggest about the Extension program guided the study.

Purpose and Objectives

The purpose of this study was to assess the images and visual intentions of the photos used in the 2006 Texas Cooperative Extension marketing packet. The analysis of image meaning was necessary to determine possible intended messages sent to Texas Cooperative Extension audiences, and if the intended meanings of the photos were appropriate for the audience. The objective of the study was to identify specific messages created in the Texas Cooperative Extension marketing packet.

Research Methods and Procedures

Semiotic analysis is a content-driven approach to assessing visual images and their potential impact on individual perception. A method of assigning complex meaning to the objects we see daily. Furthermore, "analysis of a picture involves identifying the symbols used in the image and determining their meaning for the society as a whole" (Lester, 1995, p. 126).

This study employed quantitative content analysis methods based on semiotic theory to analyze photographs in the Texas Cooperative Extension marketing packet. The marketing packet included two glossy brochures, an educational booklet regarding programs, and miscellaneous stationary.

Institutional semiotics retains the meaning of artifacts by recognizing the heritage and cultural influences employed in imagery by organizations and businesses (Arnold, Kozinets, & Handelman,

2001). Institutional semiotics recognizes that meaning and interpretation are social constructions influenced by the understanding of the researcher. It is the understanding of the organization that gives context to the images used in marketing materials and provides the frame for analysis.

There are several ways to categorize photographs within the theoretical framework of semiotics. This study focused on the denotative and connotative aspects of images to determine meaning. Denotation is the first layer of analysis. It is what you immediately see when looking at the image (Lester, 1995). It is fairly straightforward. For example, the denotative values of a photo of a house are the house, painted white, the landscape, a flagpole, and anything else apparent in the image. The denotative value can also be thought of as the sign of an object (Lester, 1995).

The second layer of analysis is connotation. This is what the "objects in the photo 'stand for'" (Leeuwan & Jewitt, 2001, p. 94). This is the associative value, the meaning people gain from the image. In the previous example, the connotative values of the photo could be that the house in the image is the White House, a symbol of our president and our national government and it represents democracy. The connotative value is also known as the signifier of an object (Lester, 1995).

Additionally, this study employed a content analysis design, which can be used to give researchers insight into problems or hypotheses that can then be tested by more direct methods. Content analysis is a systematic, replicable technique most known for compressing many words of text into fewer content categories based on explicit rules of coding (Berelson, 1952; Krippendorf, 1980; Weber, 1990). However, it can also be used to analyze images and photographs (Weber, 1990). Content validity was maintained using previous research as a guide.

Photos within the marketing packet were numbered to assist in content analysis. Photo collages were grouped for analysis and single photos were analyzed individually. Connotative values (positive, negative and neutral) for each photograph were noted and denotative descriptions were used to create thematic groups. The principal investigator and a peer independently reviewed and analyzed each image. The researchers then compared analysis notes and reconciled differences via negotiations (Weber, 1990). The study maintained inter-coder reliability and researcher coding was assessed using at least 20% of the analyzed images. Final reliability was calculated using a random sample of 10% of the analyzed images. Reliability was assessed using Spearman's rho. Reliabilities met or exceeded the minimum standard of .70 (Bowen, Rollins, Baggett & Miller, 1990; Tuckman, 1999).

Results – Marketing Analysis

This study was restricted to photographic and image content within the Texas Cooperative Extension marketing packet; the narrative portion of the marketing packet was excluded from the analysis.

Table 1 shows the types of messages portrayed connotatively within the photos and logos of the Texas Cooperative Extension marketing packet. The majority of the photographs were positive whereas the majority of the logos were neutral.

Table 2 depicts the denotative, demographic variation within the photos exhibited in the Texas Cooperative Extension marketing packet. The majority of the people represented in the photographs were Caucasian females. Adults were more prominent than adolescents, seniors, or children. No individuals with disabilities were represented and there were no religious affiliations denoted.

The photographs were classified into the denotative theme of relationships and the relationships they represented: Extension agent, family, friends, and student / mentor. Family and student / mentor were the strongest relationships discovered and these classifications are displayed in table 3. Not all

photographs represented a relationship. Only those exhibiting a relationship were quantified within the table.

Table 1

Messages Portrayed in Photographs and Logos in the Texas Cooperative Extension Marketing Packet

Messages Portrayed in Photographs

Category	*n*	%
Positive	20	60.6
Neutral	12	36.4
Negative	1	3.0
Total Photographs	33	100

Messages Portrayed in Logos

Category	*n*	%
Positive	6	42.9
Neutral	7	50.0
Negative	1	7.1
Total Logos	14	100

Finally the photographs were classified into types of information exchange (denotation). Not all the photographs within the marketing packet represented information exchange. Two categories were developed in this area: information exchanged via teaching and learning and hands-on learning. Table 4 shows the exchange of information, with hands-on learning being the major exchange category.

The researchers identified denotative and connotative signs within the photographs to determine how publics viewing the Texas Cooperative Extension packet could interpret the photograph. The interpretation could then be compared to the intended messages based on the researchers understanding of Extension messages and audiences. Through examination of each photograph, certain signs were identified and common themes emerged. These themes are delineated in the tables above with the exception of stereotypes and are noted here as messages portrayed, diversity, relationships, exchange of information, and stereotypes.

Denotative signs of smiling faces, personal interaction, and group cohesion were interpreted in the positive connotative signs of happiness, confidence, interest, close-knit, encouraged, proud, engaged, in a happy environment, a part of something great, not impoverished, middle to upper class, well-educated, and professional. A viewer would look at these photographs and positively react to the Texas Cooperative Extension program.

Messages portrayed within neutral photographs showed people not smiling but engaged in tasks, involved in activity without emotional facial expressions, working to get a task accomplished – no one is happy but all seem to be working together, and an Extension agent teaching women – but no one in the picture has a facial expression but all seem engaged and involved.

Table 2

*Demographics Represented in Photographs and Logos in the Texas Cooperative Extension
Marketing Packet*

Demographics Represented in Photographs		
Gender Diversity	*n*	*%*
Female	56	69.1
Male	25	30.9
Total	81	100
Ethnic Diversity	*n*	*%*
Caucasian	43	53.1
African American	16	19.7
Hispanic/Latino	14	17.3
Asian	3	3.7
Other (Indian, Middle Eastern, Native American, etc.)	5	6.2
Total	81	100
Age Diversity	*n*	*%*
Senior	15	18.5
Adult	32	39.5
Adolescent	23	28.4
Children	11	13.6
Total	81	100
Disabilities	*n*	*%*
None	0	0.0
Religion	*n*	*%*
None	0	0.0

Negative messages were portrayed including a photograph of what appears to be an older, male Extension agent; it is a side profile face shot but he is not smiling, he looks professional but may not be approachable.

Table 3

Relationships Represented in the Photographs in the Texas Cooperative Extension Marketing Packet

Relationships	n	%
Extension educator	6	19.4
Family	9	29.0
Friends	7	22.6
Student/Mentor	9	29.0
Total Pictures	31	100

Table 4

Exchange of Information Represented in the Photos of the Texas Cooperative Extension Marketing Packet

Information Exchange	n	%
Teaching and Learning	16	47.0
Hands-on Learning	18	53.0
Total Pictures	34	100

Diversity is another major denotative theme developed in the research. Diversity was quantified into five additional areas: gender, ethnicity, age, disability, and religion. Analysis of the photographs showed that the Extension program attempts to portray support of more female than male involvement; using photographs that maintain female involvement almost 70% of the time. The marketing packet also uses predominately Caucasian individuals; sending the message that Extension still mainly deals with Caucasian individuals while purporting to be a diversity-rich organization. Messages within ethnic diversity were multicultural, ethnic diversity, and ethnicity. Photographs exhibit that age diversity exists, yet Extension deals primarily with the adult populace. Messages within age diversity include child involvement, children and youth are important to Extension, adult involvement, senior citizens learning from agent, all generations and ages, and spanning generations. No photographs were used to represent individuals with disabilities or religious preference, which portrays a message that the Extension program does not support religious preferences or people with disabilities. These could have extremely negative connotations on the publics within Texas.

The third theme emerging from the message analyses was relationships. There were four main categories of relationships maintained in the photographs: Extension educator, family, friends, and student / mentor. Within the Extension educator relationship category messages represented were dependable, knowledgeable, teaching, overseeing, providing hands-on knowledge, exemplifying agriculture, working with an agent, and anyone can be an Extension agent. Messages portrayed within family relationships were family (mother and children), mother / child, sister / brother, father / mother / children together, and a man who could be someone's dad. A viewer would look through

these photographs and decipher that Extension values family, assists families, encourages family involvement, and offers programs to meet the needs of all family members. Messages were also portrayed within friend relationships such as building relationships, connecting people, supporting relationships - regardless of ethnicity, friends, close-ties, close associates, friends or associates who enjoy working together, and trusting. The last category is the student / mentor category and there was some overlap in this category with the Extension educator categories. However, in this category a person depicted in the photograph exhibited no signs they were an Extension agent, merely there were signs of a student / mentor relationship. Messages portrayed in the student / educator category were learning / teaching, knowledge exchange , learning, educating, teaching, involving, engaging, supporting, enjoying learning and participating as well as teaching, encouraging, and scholarly, but not formidable, men teaching woman, and expertise-oriented.

The fourth delineated theme was exchange of information. In this theme two distinct categories were noted: dialogue instruction and hands-on learning. Messages within dialogue instruction were knowledgeable, information exchanging, teaching, learning, engaging, learning and teaching occurring, demonstrating, books-learning, encouraging classroom environment, education is the centerpiece, and men conducting while children are receptive. Messages identified in the hands-on learning category were hands-on knowledge gaining, getting your hands dirty, using your hands while learning, physical involvement with the learning, boys building, outdoor lawn educating, working with animals, working with plants, working with vegetation, working in the yard, working with feed rations, outside learning, and volunteer and help while learning.

The last identified theme in the analysis was stereotypes. Messages portrayed in this category were family portrayal including gender roles (a father teaching the son and a mother teaching the daughters) and men teaching women (male Extension educator teaching two women). Stereotypes also included ethnicities: African-American woman with the appearance of gossiping at a rummage sale (two African-American women conversing while looking through a box with miscellaneous items), agriculture being taught by a man to women, and a mother feeding a child. Additionally, a photograph of an older Caucasian male Extension agent was the only Extension employee represented in the packet (seven photographs). Therefore, no women Extension agents were represented. However, women were present in the photographs including: a woman in a greenhouse working with plants and a woman teaching young children. Lastly, a final stereotype was noted in a photograph of young adult males wearing cowboy boots and starched pressed jeans working with a lamb while a woman stands in the background watching (providing the assumption that working with livestock is a man's job).

All messages in this category detract from the credibility of the marketing packet and leave the viewer questioning Extension's motives, programs, and capabilities. There is also credibility lost with the reuse of photographs. One specific photograph can be seen four times within the Texas Cooperative Extension marketing packet. This photo and others were also graphically transposed, which diminishes the credibility to the publication and organization because logos on shirts appear backwards to the viewer.

In conclusion, the Extension marketing packet exhibits mostly positive messages to its publics. The contents of the packet represent diversity in gender, ethnicity, and age. Yet, it lacks messages identifying their service to individuals with disabilities and/or religious preference. The images used in the packet send messages that Extension values a variety of relationships as well as an exchange of information. However, messages are limited and no identification is made to information being

disseminated from land-grant institutions to the citizens of Texas, to meet their identified needs. Lastly, stereotyping is prevalent throughout the marketing packet. These images and messages have the potential to hurt relationships and may not be sending a positive message about Extension.

A summary of each of the three main brochures found within the packet follow. Stationary consisted of the Texas Cooperative Extension logo and three photographs, the analysis on these images were completed within the context of the three main brochures since the images were repeated in other print media.

Real Learning for Real Life Brochure Summary

The Real Learning for Real Life glossy brochure was overwhelmingly representative of the themes relationships and learning / teaching. Eight of the twelve photos used in this brochure depict families, friends, or mentors and students representing a variety of age and ethnic groups. The diversity among the photos supports Extension's claim to being "open to all people without regard to race, color, sex, disability, religion, age, or national origin," with the exception of peoples with disabilities or varying religious preferences.

The family and friends photos create a positive message because all subjects are smiling, hugging, and interacting with each other in a supporting manner. The images are representative of different types of relationships: friends, parents, grandparents, grandchildren, husband and wife, brother and sister.

The educational photos have a formal tone creating a neutral message. The educators in the photos are portrayed as knowledgeable and professional by their dress, environment, and position in relation to the students. The educators are typically dressed in either collared, button-up shirts or polo tees with a professional logo on the chest. Unlike the personal family and friends photos, the Extension educator is portrayed either alone or with a certain amount of space between themselves and the learners, adding to the formality of the photo and the neutrality of the message. When learners are present, they seem to be listening attentively to the educator. One educational photo breaks the trend because it portrays an adult woman with two young children in a classroom environment. In this case, the educator breaks the barrier between the teacher / students by sitting between the students with her arms around them as she demonstrates coloring.

Growing People, Ideas and Yourself in Extension Brochure Summary

The Growing People, Ideas and Yourself in Extension glossy brochure presents photos of happy adults interacting with nature, kids and animals. Three of the five photos depict a student and educator relationship. The subjects are diverse in ethnicity and gender. In this brochure, most photograph subjects are adults.

The overall message portrayed by the brochure via the photographs is that the average well-educated man or woman can be happy and confident working for Extension. This is shown through denotative signs: such as well-dressed people smiling in photos assessed as positive. The majority of the photos in the brochure are positive. The connotative signs include positive, exchanges of information from confident educators to receptive students.

In this brochure, the educators are all male. Women are presented as confident and interested, with the exception of one woman in a photo of young men fitting a lamb for show. She is not shown completely, and appears to have no purpose for being in the photo. There is one photo of an adult man (educator) interacting with children, and the children appear receptive to the educator.

Real Learning for Real Life Educational Booklet Summary

The Real Learning for Real Life educational booklet is a matte two-color document used to provide information regarding Texas Cooperative Extension's educational programs and offerings. Although the book provides valuable information regarding Extension's programmatic offerings, it has the appearance of low cost and continues the theme with haphazard placement of photographs and images. The colors used are neutral and not distracting, yet they are boring and offer little encouragement to open the booklet and examine its contents. In some areas, logos are distracting and confusing because of awkward and random placement, and the publication leaves the reader questioning the programs, and, therefore, Extension as a whole.

The images within the booklet are predominately positive; portraying happy, confident, engaged people; focused on diversity depicting males and females, multi-ethnicities, and individuals of all ages; sending messages regarding the importance of relationships; and the exchange of information. However, image stereotyping plagues the booklet, decreasing credibility and trustworthiness of Texas Cooperative Extension. Of the three inserts used within the marketing packet the *Real Learning for Real Life* educational booklet is by far the least professional and demands the most focus for future improvement.

Discussion and Future Recommendations

This content analysis based on semiotic theory to assess the Texas Cooperative Extension marketing packet is inherently incomplete because it excluded the materials text, which would provide additional context. Therefore, the researchers realize it is possible that the narrative portion of the Extension marketing packet may have eliminated some of the weaknesses and stereotypes discovered in this semiotic, content analysis. However, the scope of this research was not to focus on the text, but to focus solely on image analyses.

The findings indicate that even though the Extension marketing packet maintains predominately positive images and logos, the selection of photographs can have a negative impact and place both credibility and trustworthiness at risk. Research notes that individuals base meaning from images (Lester, 1995, 1996, 2005, Barry, 1997; Chandler, 1994, 2002; Weber, 2006); therefore, it is important that agricultural agencies and services send appropriate image-based messages to their audiences.

Based on the results of this study, programmatic and research recommendations can be made. This study found there is a need for the Extension organization to refocus their marketing materials by utilizing photographs that support the organizational mission, values, and audience. Varea-Hammond (2004) noted Extension had an evident need to focus on proper marketing techniques to allow Extension to increase visibility and value. It is more important than ever for Extension to improve marketing techniques, and a part of those improvements should focus on adjustments to photographs and logos used within their marketing packet. As Weber (2006) stated, "Images can be used to … explain, to teach, to represent…" (p.1). Every image used in a publication should explain, teach, and represent Extension to its audiences in a positive and inclusive manner. Additionally, Telg et al. (2007) noted the need to train Extension personnel in how to design brochures and this research supports the need to add visual analysis and understanding on how images communicate meaning to future training.

Furthermore, there is a need for the photographers and graphic designers to be knowledgeable regarding Extension and their subjects and actively choose photographs free of stereotypes to eliminate potential credibility and trustworthiness issues. Not every employee has a background or

extensive knowledge about Extension, therefore it is important to emphasize the institutional mission, values, and goals to be communicated through selected images. Training or additional training in semiotic meaning and analyses would be beneficial to personnel working on marketing, to make designers more aware of the biases portrayed in specific images and logos. Awareness of how signs are interpreted by audiences gives more power to the designers and the organizational message.

Although agricultural communications researchers (Doerfert, 2003; Miller et al., 2006; Tucker, 1996, 2004) have expressed a need to examine the literature in an effort to improve research, little research on visual analysis and more specifically visual analysis in marketing exists. This research was a first step in highlighting the importance of both image-based and marketing assessment research in agricultural communications. Additional, inquiry should continue in these areas.

Because images impact market branding (Park et al., 1986) and customer appeal and satisfaction (Jenkins, 2003) it is important for Extension and other agricultural services and programs to realize the importance of analyzing images used in marketing. An inappropriate, incorrect, or digitally manipulated photograph, including transposing images, could have devastating economic impact on the company and/or agriculture. Additionally, since customer satisfaction begins prior to purchase (Hennig-Thurau & Klee, 1998) it is important for Extension to continue to strengthen their marketing techniques to ensure customer satisfaction.

Future research should continue to look at Extension's marketing tactics both visually and via text to determine if the information is meeting the needs of the organization and their publics. Furthermore, additional image-based research should be completed on all image media produced by Extension, not only in Texas but throughout the United States, to determine if images used are free of biases and meeting the needs in which they were intended.

Research must be conducted to determine the direct effect images, used in Extension publications, have on perceptions. Viewers interpret messages of photographs based on their own experiences, prior messages, and stereotypes. Extension throughout the United States would benefit from determining how different publics interpret visual messages used in marketing their organization. In a larger scope, research to determine visual impact on agriculture and agricultural programs could prove successful in future marketing regimes.

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