

**AN EVALUATION OF THE ORGANIZATIONAL AND INTERPERSONAL
COMMUNICATION STRATEGIES USED BY
A MAJOR FOREST PRODUCTS FIRM IN EAST TENNESSEE**

by

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(ABSTRACT)

Fifty-four community leaders from Anderson, Campbell, Cocke, and Scott Counties, Tennessee, participated in two in-depth interviews and a mail questionnaire over a 17-month period aimed at assessing the communication efforts of Champion International Corporation's East Tennessee Expansion Project. The East Tennessee Expansion Project was centered around CIC's purchasing 85,000 acres of forestland and building a chipmill in east Tennessee. The coorientational variables of accuracy and agreement were measured, and the channels most likely to increase scores on these variables were identified. The results indicated that CIC failed to accurately measure the coorientational variables prior to the East Tennessee Expansion Project to determine if the campaign was necessary. In fact, the land purchase and chipmill may have been non-issues. Instead, it appeared that the East Tennessee Expansion Project should have focused communication efforts on the Canton, North Carolina, papermill and Pigeon River issues. The channel type most likely to increase accuracy for community leaders was a combination of interpersonal and mass media channels, while agreement was more likely to occur with an interpersonal channel. While a general level of accuracy and agreement was achieved, a more precise measure of these coorientational variables indicated that agreement and accuracy were generally low.

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DEDICATION

Mr. C. H. Aldridge

R. P. and Elease Lowder

Leo and Mary Plyler

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CHAPTER I

INTRODUCTION AND JUSTIFICATION FOR STUDY

The forest products industry has recently received harsh criticism from environmental groups and the general public. The industry is attacked mainly for what is perceived as the widespread, irreversible desecration of natural resources and the pollution of once-viable streams and rivers with dioxins and other harmful chemicals from pulpmills. As a result, forest products companies have struggled with how and when to respond to such charges. Prout (1983) points out that often the industry does not respond because a response or announcement of new technology or policies signifies an acknowledgement that pollution problems have gone unaddressed or that previous company policies were inadequate at sustaining natural resources. Consequently, many companies have perpetrated an image of being unwilling to communicate, inaccessible, and unresponsive to public concerns.

Environmentalists generally agree that the image of the forest products industry is at an all-time low. The industry is characterized as placing profits before public welfare, practicing non-sustainable forestry, and causing deforestation at an alarming rate (Devall, 1994; Bartlett, 1995). How does an industry recover from such a negative view? Can the industry's response to charges be seen as sincere and proactive rather than as some obscure admission of guilt? If so, what are the ingredients of a successful communication campaign whereby industry's messages are received and, ultimately, changes in attitudes of the public are reported?

Champion International Corporation (CIC) provides an excellent case study as to how a forest products firm is attempting to employ a communication campaign, aimed at community leaders, to overcome a long-standing "bad reputation." This negative public image in east Tennessee is the result of nearly a century of environmentally questionable practices at CIC's Canton, North Carolina, papermill. This communication campaign will serve as the source of data for this study.

The specific objectives of this study were to:

1. Determine whether community leaders were exposed to CIC messages;
2. Determine whether messages were received by community leaders;
3. Determine the degree of accuracy and agreement for community leaders exposed to CIC messages;
4. Determine the communication channel(s) that were most effective in increasing accuracy and agreement; and
5. Recommend communication strategies that can be used in the future by the forest products industry.

Introduction to CIC -- The Pigeon River

In 1908, the CIC Canton papermill was built on the Pigeon River in western North Carolina, 40 miles from the North Carolina/Tennessee border (Figure 1). The Pigeon River forms the Waterville Lake about 30 miles downstream. Prior to flowing into Tennessee, the Pigeon River is diverted through a Carolina Power and Light (CP&L) power plant situated on the state line. CP&L provides energy for the tri-city area in the North Carolina Piedmont. The river passes through Hartford and Newport in Cocke County, Tennessee, before meeting the French Broad River and forming Douglas Lake, which is approximately 30 miles east of Knoxville, Tennessee.

Since 1969, CIC has made significant improvements to air and water quality, and by 1989, the company had invested over \$73 million in environmental projects. In September of 1993, CIC completed the \$330 million Canton Modernization Project (CMP) involving a new technology called oxygen delignification, trademarked OD™ 100, or 100% substitution of chlorine. The CMP significantly reduced chemical discharges into the wastewater and airstream, and decreased water usage and the color, odor, and foam in the effluent¹.

In addition to the CMP, in July of 1994, CIC introduced a pilot project called Bleach Filtration Recycling (BFR). This project is aimed at significantly decreasing chemical discharges by recovering them prior to release into the environment, creating a "closed loop" bleaching process of pulp. If successful at the Canton mill, the new system will be evaluated to determine if other mill sites could benefit from this technology. Currently, the Canton mill is testing two of the major components of BFR. The first two bleaching stages are expected to close in the near future. This system will be tested for an undetermined amount of time to determine the BFR efficiency (Ferguson, 1996).

In the recent past, CIC has been reported as an environmental leader in the pulping process among forest industries (Newport Plain Talk, January 9, 1995). In fact, CIC was selected as "Company of the Year -- 1995" by *American Papermaker* magazine ("The Wire," July/August 1995). In addition, CIC received the Hammer Award from the Environmental Protection Agency in 1997 for completing the "33/50 Program." The goal of this voluntary program was to reduce toxic chemical emissions by 33% in 1992 and 50% in 1995. CIC accomplished both goals ("The Wire," February, 1997).

However, many view CIC not as an environmental leader, but as part of an industry that is described as "documented polluters of the environment" (The Osgood Group Report and American Paper Institute [API], 1992). Activists sharply criticize CIC and its treatment of the Pigeon River. In the late 1980's and early 1990's, several lawsuits were filed against CIC regarding effluent discharges. These lawsuits were either dismissed or settled out of court.

¹ Personal communications with Derric Brown, Director of Environmental Projects, Canton Paper Mill, Canton, North Carolina, May 1994 and August 1994.

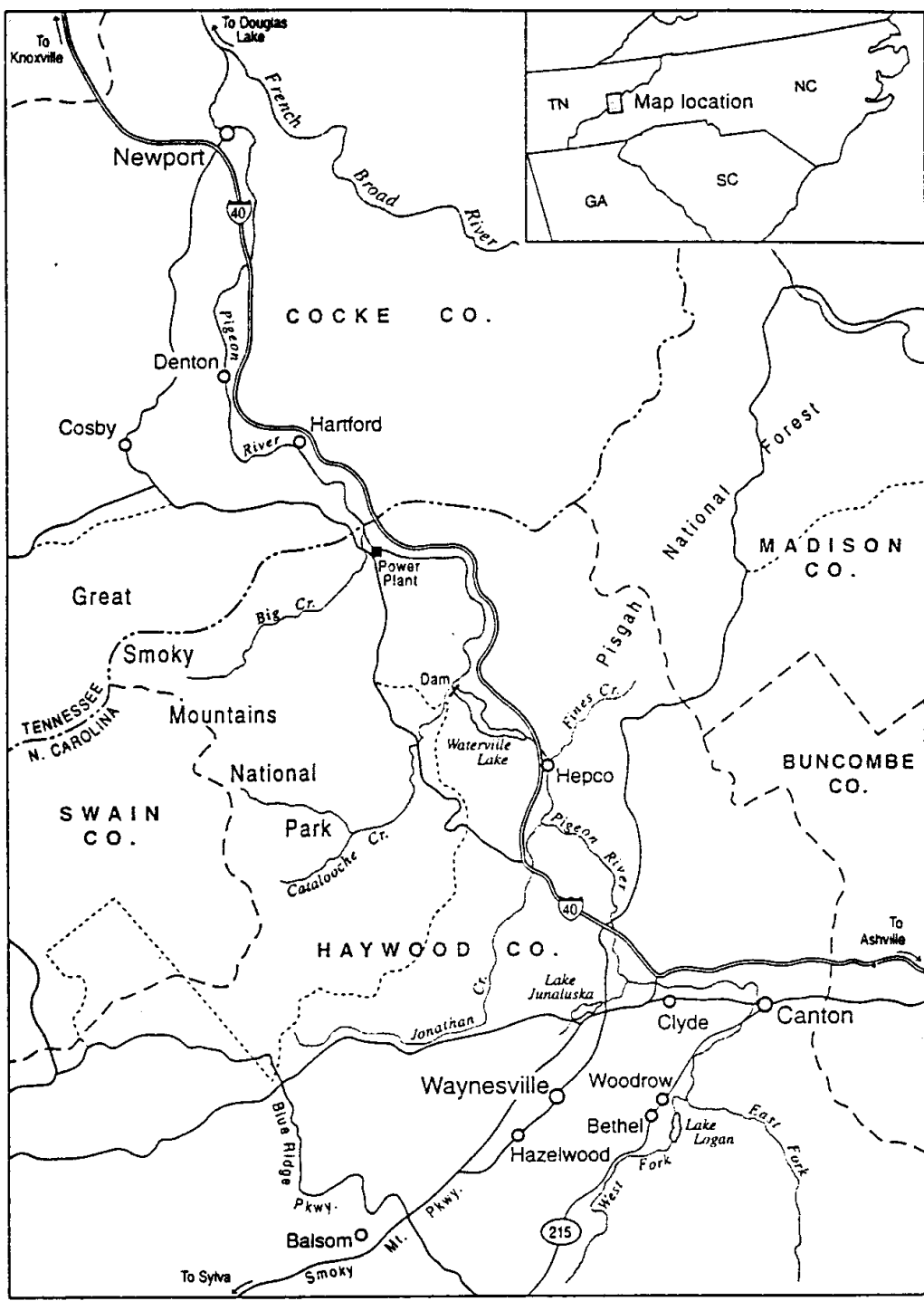


Figure 1. Pigeon River and Canton, North Carolina, paper mill.

The Pigeon River situation has generated heated protests and gained national attention. In January 1995, the Dead Pigeon River Council (Cocke County, Tennessee) organized a memorial service for cancer victims in Cocke County, Tennessee. These deaths were allegedly a direct result of the effluent discharge into the Pigeon River. The main guest speaker was Hollywood actress Park Overall, who is a native of Green County, Tennessee. In addition, Primetime Live filmed this memorial service and televised the story of the Pigeon River on August 30, 1995. Approximately 200 people attended the memorial service (Knoxville News-Sentinel, January 8, 1995; Newport Plain Talk, January 9, 1995). Finally, a book entitled Troubled Waters: Champion International and the Pigeon River Controversy, written by Richard A. Bartlett (1995), was published in August 1995. The author chronicled the history of the Pigeon River through the eyes of east Tennesseans.

In an effort to counter the sharp criticism CIC has received regarding the Pigeon River, the company initiated several mass communication efforts. For example, in the spring of 1996, a series of commercials touting the improvements in water quality of the Pigeon River were aired in east Tennessee and western North Carolina (Knoxville News-Sentinel, May 14, 1996). One commercial showed a young girl fishing with her grandfather in the river, while other commercials focused on the recreational opportunities the river had to offer (Knoxville News-Sentinel, May 12, 1996). These commercials coincided with several key events.

First, the Tennessee Department of Environment and Conservation (TDEC) partially lifted a year-old ban on all consumption of fish from the Pigeon River. Before, it had "warned against eating fish of any kind from the Pigeon River" (Knoxville News-Sentinel, May 15, 1996). Now, TDEC recommends that children, nursing mothers, and pregnant women not consume bottom feeders. To all others, it was suggested that Pigeon River fish consumption be limited to one fish meal per month (Knoxville News-Sentinel, May 15, 1996). While recorded dioxin levels have decreased significantly, the number of species of fish expected if the stream were unpolluted remains low.

CIC asked TDEC and Tennessee Wildlife Resource Agency (TWRA) officials to preview the commercials and offer opinions as to whether they should be aired in the east Tennessee market. Officials strongly suggested that the commercials were misleading and should not be aired. CIC ignored this recommendation. However, after much public debate, CIC pulled two of the advertisements from the east Tennessee market, one of which featured the little girl fishing with her grandfather. Nevertheless, the advertisements continued to run in western North Carolina (Asheville Citizen Times, May 19, 1996).

The second event was the first annual CIC Whitewater Series Slalom Race on the Pigeon River, held April 27, 1996. In addition to the CIC-sponsored commercials, local race sponsors from the Cocke County area appeared in a series of commercials advertising the race. This event featured over 100 athletes from 11 different countries (Newport Plain Talk, April 29, 1996).

Finally and most importantly, not only did the two sets of commercials coincide with the lifting of the partial fish advisory and the whitewater slalom race on the Pigeon River, but CIC was also in the process of renewing a wastewater discharge permit from the North Carolina

Environment Management Commission (NCEMC) to continue operations at the Canton Mill (Newport Plain Talk, May 13, 1996). Basically, the five-year permit was similar to one issued in 1989, with few changes. For instance, CIC is required to implement the BFR system when it comes on line, reduce oxygen wastes by 40% and solid discharges by 70%, and meet a monthly and annual color limit (The Enterprise Mountaineer, January 27 and 30, 1997). The controversy was that some people believed that if standards were not increased, CIC would not continue to make changes in its operations.

Still, many east Tennesseans demanded that tougher requirements be specified so that the water quality would continue to improve and pollution would be addressed. Otherwise, people believed that CIC would stop at the current modernization process and never proceed without being forced to by law (Knoxville News-Sentinel, May 26, 1996).

The main point of contention with the wastewater discharge permit is the color unit requirement. Color units refer to the clarity of the water, which is measured in platinum cobalt units (Bartlett, 1995). Currently, the permit variance requires CIC to meet 50 platinum cobalt units (on a monthly average) 30 miles downstream of the discharge pipe at the Tennessee state line. CIC is in compliance with this requirement, which is North Carolina's standard. However, Tennessee's law concerning color requirements states that there be "no objectionable color." This law is highly subjective, causing many problems for Tennessee. Further complicating the problem, in December 1996, EPA approved North Carolina's decision to allow CIC to exceed standards set by the Clean Water Act at the discharge pipe (Asheville Citizen Times, January 16, 1997).

A meeting for east Tennesseans was held May 29, 1996, in Cocke County. The purpose of this meeting was for TDEC and TWRA officials to gather information and form an agency opinion that would be voiced at a public hearing June 6, 1996, in Waynesville, North Carolina (Newport Plain Talk, May 1, 1996).

The public hearing in North Carolina was held so that NCEMC officials could clarify permit procedures and listen to comments and suggestions about the permit. The public comment period ended July 6, 1996, and an official decision was expected sometime late in 1996 (Newport Plain Talk, May 13, 1996). However, Tennessee officials protested the permit in its current form.

In December 1996, North Carolina approved the permit without any amendments. However, Tennessee vehemently protested this approval, and in January 1997, EPA intervened. Currently, EPA's public affairs department is mediating a series of meetings between CIC and North Carolina and Tennessee state public officials. In the meantime, Tennessee has decided to withdraw an appeal of the permit pending the outcome of these meetings (Newport Plain Talk, February 7, 1997).

In summary, much of the criticism surrounding the Pigeon River and the Canton, North Carolina, mill is centered around the perception that CIC was allegedly aware of the health hazards created by the mill's effluent discharge and intentionally ignored the problem. In addition, critics believe that the only reason CIC initiated the CMP was increased pressure from

environmental groups and the numerous lawsuits filed. The opposition was further infuriated when CIC later claimed to "voluntarily clean up the river." Then, many felt CIC wanted a "pat on the back" for what the company perceived as environmentally responsible and proactive management (Bartlett, 1995; Knoxville News-Sentinel, January 8, 1995; Newport Plain Talk, January 9, 1995).

CIC continues to be the recipient of sharp criticism. Opponents contend that CIC can make further improvements in the papermaking process. Critics assert that unless they continue to pressure CIC (i.e., through the mass media, lawsuits, or permit appeals), improvements will never materialize. Further, environmentalists strongly advocate the use of alternative fibers such as hemp and chlorine-free paper as a method of improving the water quality in the Pigeon River and sustaining forest resources. CIC officials respond by saying that they are researching new technologies, but until these methods are deemed cost-effective and practical, they continue to defend their current operations (LaFollette Press, December 14, 1995).

Introduction to CIC -- The Cumberland Forest and Chipmill

Today, CIC is one of the world's leading producers of paper and wood products. CIC estimates its annual sales in 1995 at \$7 billion. The company employs more than 24,000 people worldwide (Champion International Corporation, 1995). CIC owns and controls more than 5.3 million acres of forestland in the United States, making it one of the nation's largest private landowners. In Tennessee, CIC owns 245,000 acres of forestland. This ownership dates back over 60 years with the "Gulf Tract" in Cocke County, Tennessee.

CIC is currently seeking additional hardwood forestland. In the past, a portion of the hardwoods CIC used in the papermaking process were obtained from public lands. However, recent regulations limiting harvesting, endless lawsuits, and multiple appeals on public lands in the Southeast have resulted in a dramatic decrease in timber availability (Knoxville News-Sentinel, June 6, 1993).

For example, an average 28% decrease in timber availability on national forest lands in the South occurred from 1977 to 1992, despite the fact that timber volumes have more than doubled on national forest lands in the South since 1952 (Powell et al., 1994). Although timber harvesting continues on these national forests, a current proposal would require that all timber harvesting cease by 1996. If adopted, this proposal will affect harvesting on the Pisgah, Nantahala, and Uwharrie National Forests in North Carolina, the Cherokee National Forest in east Tennessee, and the Daniel Boone National Forest in Kentucky (Knoxville News-Sentinel, June 6, 1993). Currently, an Environmental Impact Statement (EIS) is being conducted to determine the impact of such a proposal. The EIS is not expected to be released until 1998 (Knoxville News-Sentinel, April 4, 1996). Consequently, CIC wants to secure a hardwood resource land base by acquiring additional forestland (Champion International Corporation, 1993).

In July of 1994, CIC purchased 85,000 acres of primarily hardwood forests in Anderson, Campbell, Fentress, Overton, and Scott Counties in east Tennessee, north and west of Knoxville (Knoxville News-Sentinel, July 27, 1994). The lands will be managed to provide timber for the

Canton, North Carolina, and Courtland, Alabama, papermills as well as private sawmills in the area. This new forest land acquisition is called the "Cumberland Forest." Figure 2 contains a location map of CIC Cumberland timberland ownership in east Tennessee.

The history of the Cumberland Forest includes mining, timber production, and gas and oil extraction. In the past, timber harvesting has been accomplished primarily through "high-grading." "High-grading" is harvesting the largest and highest-quality trees and leaving the malformed, low-quality trees to parent future generations. Thus, without professional forest management, future generations of hardwoods will likely consist of low-quality pulpwood (i.e., malformed, small [less than 18 inches in diameter], and disease-prone). Currently, there is not an adequate or cost-effective market for hardwood pulpwood in east Tennessee.

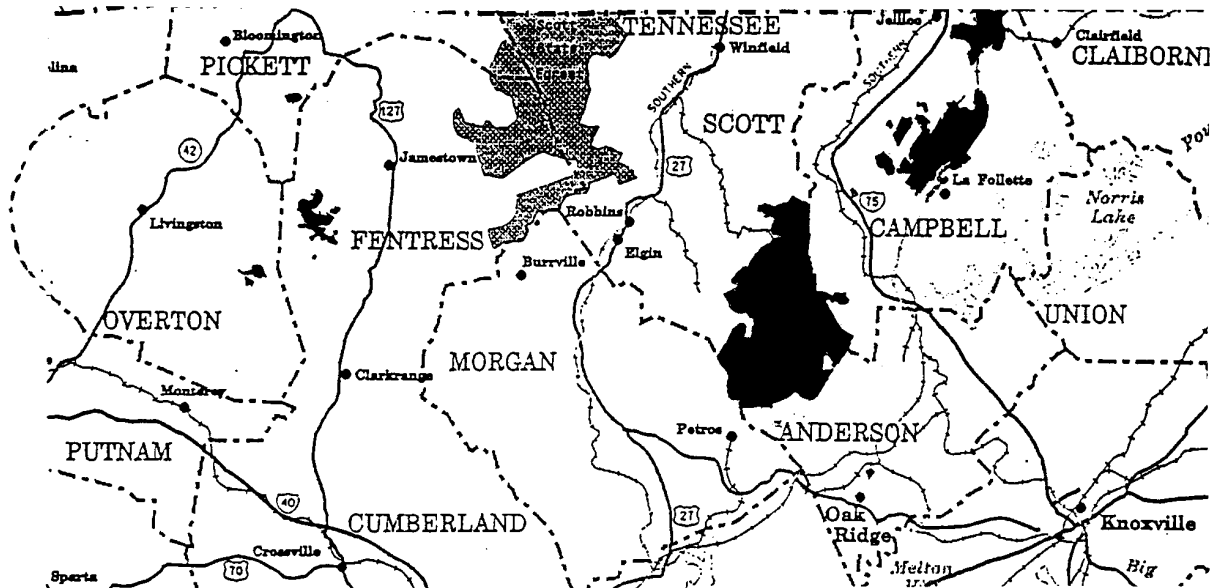


Figure 2. Champion International Corporation Cumberland Forest Timberland location map.

A Report of the Governor's Conference on Forestry (1989) addressed forestry issues in the State of Tennessee. The executive summary reported that an "abundance of low-quality hardwood timber for which there is no market is the most serious problem facing timber producers in Tennessee." The low demand and prices paid for low-quality timber are currently not an adequate economic incentive for landowners to harvest the defective trees and re-establish higher-quality growing stock trees.

CIC plans to create a market for low-quality hardwoods in east Tennessee by building a chipmill (Knoxville News-Sentinel, March 25, 1994). A chipmill is a wood processing facility in which whole cull logs, low-quality, low-value timber, and tops of sawtimber trees which are unsuitable for lumber quality products are reduced into wood "chips." The chips are then transported to a papermill and used to produce a variety of paper products. CIC estimates that a chipmill operation would create several jobs, both direct and contract, and generate an annual economic benefit of \$12 million to the local region².

The Cumberland Forest will be managed primarily for hardwoods. The small, malformed trees will be harvested for pulpwood, while higher-quality trees will be harvested and sold to area sawmills. Site quality, slope, aspect, and other ecological factors will determine whether a particular forest site will be managed for sawtimber or pulpwood. This is one of the underlying reasons behind the "high-grading" that has historically taken place.

CIC follows a history of exploitation of resources and people by the coal industry in the Cumberland Forest region. CIC faces a unique opportunity to overcome past abuses to the land by coal companies and create a healthy forest environment. However, local people are all too familiar with the history of coal companies, and many view newcomers as practicing the same corporate philosophy -- "make money at any cost."

CIC announced its intent to purchase land in east Tennessee in the fall of 1993. Rumors circulated prior to this announcement that CIC was seeking additional forestland in Tennessee. These rumors were confirmed in a news article that appeared in a local paper (LaFollette Press, December 2, 1993). A grassroots organization, Save our Cumberland Mountains (SOCM), and an environmental group, Tennessee Citizens for Wilderness Planning (TCWP), responded quickly by organizing small groups of local people to oppose the CIC land acquisition.

A communication campaign was designed for CIC's East Tennessee Expansion Project (ETEP). The ETEP involves forest land acquisition and start-up of a chipmill operation in east Tennessee. Communication efforts to counter grassroots activists' and environmentalists' claims were initiated by CIC, in cooperation with the Tennessee Forestry Association (TFA), the Tennessee Division of Forestry (TDF), The University of Tennessee Agricultural Extension Service, and forestry professionals such as loggers and sawmill owners. These groups and individuals attempted to inform local elected officials, community leaders, and the general public about the benefits of sound forest management, and the positive effects of Champion's ETEP.

CIC communication strategies included company officials meeting with groups and individuals, tours of CIC's forestlands, workshops, presentations at local civic organizations, a whitewater canoe and kayak event sponsored by CIC on the Pigeon River, and countless phone calls and personal visits to community leaders in the local area. Forestry professionals from other agencies also spoke with concerned individuals about forestry issues in general. Coordinating

² Personal communication with Tucker Hill, Director, Public Affairs Printing and Writing Papers, Timberlands, Courtland, Alabama, March 24, 1994.

these efforts was extremely difficult, given the number of people and the diversity of the issues involved. There were meetings, but these were often scheduled in conjunction with a public hearing or county commission meeting. Otherwise, foresters and CIC officials communicated via telephone and personal visits.

Several salient messages were present in these communication efforts. People external to CIC mainly addressed forestry issues such as Best Management Practices (BMPs) (guidelines for forestry practices aimed at protecting water quality), clearcutting, wildlife management, and hardwood regeneration. CIC developed a set of key messages that were disseminated by company employees.

In the six months preceding the land purchase, several "anti-clearcutting" city ordinances and county resolutions were introduced proposing the prohibition of clearcutting or regulation of logging practices on private lands (County Clerk, Campbell County, 1994; County Clerk, Anderson County, 1994). These regulations, with the exception of one city ordinance, were never passed. The State Attorney General issued a decision in October 1994, stating that it was illegal for a county to pass a resolution that superseded state law (Knoxville News-Sentinel, October 8, 1994). The State of Tennessee continues to study logging practices to determine whether more stringent regulations are warranted.

In November 1994, a small group of activists announced a nationwide boycott against CIC products and the sellers of these products. Organizations supporting the boycott included Global Sustainability Clean Water Project (Tennessee), Native Forest Network (NFN)-Montana, NFN-Eastern North America, Southern Appalachian Biodiversity Project (North Carolina), Student Environmental Action Coalition (Tennessee), several Earthfirst! organizations nationwide, Tennesseans, Alabamians, and Georgians for Environmental Responsibility (TAGER), The Ecology Center (Montana), Hancock County Greens (Maine), Mt. Blue Coalition (Maine), and others (as of March 1996). However, information is unclear as to the actual numbers these groups represent. The impact of this boycott is unknown (flyer handout, 1995).

In February 1995, a protest criticizing CIC was held outside the winter meeting of the Kentucky-Tennessee Society of American Foresters in Chattanooga, Tennessee. Approximately 15 to 20 protesters, dressed in wildlife costumes, publicly charged CIC and other forest products companies with placing profits before human health, massive deforestation resulting in decreased tourism, and placing corporate greed over environmental health. The flyers and news releases generated at this protest were specific to CIC. The event was said to be sponsored by the "Society of American Forest Advocates." However, other environmental groups were represented, such as TAGER and EarthFirst! (personal observation, 1995).

What began as the involvement of two local activist groups to address the issues of CIC land acquisition, chipmill construction, and Canton papermill operation has expanded, reaching environmental groups nationwide. The future impacts of such actions are unknown. Although activists have had little impact on the ETEP, their protests are constant reminders of the industry's need to communicate with the public to counter negative messages. CIC officials continue communication efforts with community leaders.

CIC applied for an air quality permit through the Tennessee Department of Environment and Conservation (TDEC) for the chipmill facility in November 1994. On January 31, 1995, the air quality permit was approved. However, CIC found it necessary to amend the original permit on May 23, 1995, proposing to increase the acceptable tonnage level. The amended permit was approved in July, 1995. A series of public hearings appealing the state's approval of the air permit were conducted in November and December of 1995 (LaFollette Press, October 19, 1995). In the end, TDEC's decision was upheld.

Chipmill construction was slated to begin on April 18, 1995, but was delayed one week due to a protest held near the chipmill construction site (Asheville Citizen-Times, April 19, 1995). The "start-up" date of the chipmill was August 19, 1996.

In April, 1996, residents of the New River Valley in Anderson County, Tennessee, introduced a private act to levy a severance tax on pulpwood cut in the county. The act is seen as a way to control clearcutting by CIC. Although county executives from Campbell and Scott Counties deny such an act in their respective counties, the New River Valley residents claim that similar proposals will be considered in those counties, which, with Anderson, comprise the sourcing area for the chipmill. However, State Attorney General Charles Brown issued an opinion on the severance tax stating that "such a zoning amendment is illegal." The Anderson County Commission is expected to review the proposal (Knoxville News-Sentinel, April 7, 1996).

Because of growing public involvement in private land issues, CIC has made internal organizational changes related to public affairs issues. CIC's recognition of its "bad reputation" in east Tennessee related to the Pigeon River has led company officials to reevaluate management approaches. While communication efforts remain fairly constant, CIC has made several changes related to management practices during the past five years.

For example, CIC formed partnerships with federal agencies and national organizations such as the United States Fish and Wildlife Service, the United States Department of the Interior (National Biological Survey), and the American Forest and Paper Association. In addition, CIC invested time and money in developing "Master Logger" training programs, hired wildlife biologists, and initiated sustainable management and stewardship programs. Thus, it appears that CIC efforts are not only directed at external communications but also involve operational changes.

The question remains: Do these communication efforts, messages, and channels change attitudes and improve the image of the forest products industry regarding forest management and papermill issues, or do communication efforts need to be reevaluated and changed? The ways in which specific firms respond to public attitudes and concerns will offer insight into some of these pressing questions.

Regional Attitudinal Surveys

Several attitudinal studies regarding forestry and the forest products industry in the Southern Appalachian Region have been completed (American Forest Council and Southern Forestry

Associations 1986; Alabama Forestry Commission 1992; Tennessee Valley Authority [TVA] and Auburn University 1993; Plyler 1994). Results from these regional attitudinal surveys provide a context for understanding the environment in which the industry must operate and why communication with the public should be a priority for the industry.

Two quantitative studies specifically addressed public attitudes about forest management practices on industry-owned forest lands. The Gallup Organization conducted a study in cooperation with TVA and Auburn University (1993). Quantitative studies refer to research based on empirical observations in which numerical values are assigned to observed variables. In social science research, the variables are often opinions or concepts that are assigned numerical values in order to determine a relationship (Krueger, 1988).

Telephone interviews with 987 adults in the Tennessee Valley Region were completed by the Gallup Organization. Attitudes, knowledge, and behaviors regarding forest practices and policies were addressed in the telephone interviews (TVA and Auburn University, 1993). The study revealed that residents of the Tennessee Valley generally accepted management of forests for the production of forest products. This general support for forest management was tempered by strong concern over environmental issues. Consequently, the majority of respondents supported a balance between protecting private property rights and maintaining environmental quality (TVA and Auburn University, 1993).

Overall, the survey results highlighted three major points:

1. Environmental concerns are extremely important and temper residents' views of forest practices.
2. In general, the public approves of harvesting timber for forest products but is concerned about the environmental impact of forest management activities.
3. The views of people who own forest lands are indistinguishable from those of the general public.

In an unpublished thesis, Plyler (1994) conducted a series of attitudinal surveys related to the forest products industry in the southern Appalachian region. In this study, a series of 23 civic, church, professional, and environmental organizations and their members completed two questionnaires -- one prior to a 30-minute slide presentation about the forest products industry and the other immediately after the slide show.

Results indicated that attitudes were more favorable toward the forest industry after the slide presentation. Additionally, while environmental groups indicated the least favorable attitudes toward the industry, they also showed the greatest shift in attitudes toward more favorable. In general, pre-presentation attitudes of other groups were fairly favorable toward the industry, but information efforts can result in more positive attitudes (Plyler, 1994).

Three recent qualitative studies addressing public attitudes have been conducted: (1) Defining Perception Gaps, conducted by The Osgood Group and API (1992); (2) Public Opinion Study, conducted by the Alabama Forestry Commission (1992); and (3) Public Opinion Study, sponsored by the American Forest Council and Southern Forestry Associations (1986). Qualitative studies are conducted to provide insight into the attitudes, perceptions, and opinions of the participants without the benefit of numerical values (Krueger, 1988).

The Osgood Report and API (1992) was a qualitative study about perception gaps between forest industry managers and environmental activists. Interviews with leaders of environmental groups, forest industry, federal organizations, and federal legislators indicated large perception gaps between forest industry managers and activists regarding environmental protection.

Additionally, forest industry representatives believed that their organizations received little credit for industry progress in the area of environmental protection. On the other hand, environmentalists believed that the goal of industry policy is to "frustrate, rather than support environmental protection." It seemed that a gap existed between how the industry perceived itself and how others perceived it (The Osgood Report and API, 1992).

In 1992, the Alabama Forestry Commission sponsored a survey of residents in Alabama regarding clearcutting and the forest industry's right to manage land. A total of 4,191 people were polled via telephone to determine public opinion of clearcutting and private landowners' rights. The confidence interval of these surveys was determined by the authors to be $\pm 2\%$. Further details explaining the methodology were unavailable (Alabama Forestry Commission, 1992).

The significant finding was the contrast between attitudes toward industry-owned forest lands and "family"-owned forest lands. Respondents expressed negative views toward management practices (i.e., clearcutting) on industry-owned lands, while they had positive feelings toward the same forest management practices conducted on "family"-owned lands. This study identified an apparent "perception gap" that labels the forest industry as the "bad guys" (American Forest Council and Southern Forestry Association, 1986; Alabama Forestry Commission, 1992).

The only qualitative study containing pertinent information on public attitudes toward forest industries in the Southeast was conducted in 1986 by the American Forest Council and Southern Forestry Associations (American Forest Council and Southern Forestry Associations, 1986). The study area included Alabama, Arkansas, North Carolina, Tennessee, Georgia, Florida, and Mississippi. Since the methodologies used were not documented, the study's reliability cannot be evaluated (American Forest Council and Southern Forestry Associations, 1986).

The key findings were stated as follows:

1. Southerners are inclined to support use of forests for "productive" purposes.
2. Younger, more educated, urban people are less supportive of industry's promise for stewardship than older, less educated people.

3. Respondents generally support government regulation and intervention.
4. Individual ownerships of forested lands are viewed more positively than industry ownerships (American Forest Council and Southern Forestry Associations, 1986, p. 1).

Although many attitudinal studies report varied results about the image of the forest products industry, there is still general agreement among forest industry leaders and legislators that the forest products industry has done a poor job in communicating to the public as well as responding to the environmental concerns expressed by the public (Osgood Group Report and API, 1992). Nevertheless, a few companies and/or professional forestry associations have responded to the unfavorable attitudes expressed by the certain publics by implementing communication campaigns. Results from these campaigns will be presented to illuminate the current status of communication efforts within the forest product industry.

Forestry-Related Communication Campaigns -- Results

The forest products industry readily recognizes that documented communication efforts with diverse public groups and community leaders are extremely limited at the present time (Blank, 1994). Previous limited research focused on print and mass media channels and neglected an objective evaluation of interpersonal approaches such as conversations, speaking at meetings, or tours. Regardless of channel, the impact of messages delivered is not widely distributed or known. Yet, the industry continues to employ these channels and messages (Georgia Forestry Association [GFA], 1995; Weyerhaeuser, 1994; Knoxville News-Sentinel, March 25, 1994; American Forest and Paper Association [AF&PA], 1993; and The Osgood Report and API, 1992). If the industry wants to replicate effective channels and messages, it needs to invest time and energy in documenting communications efforts and outcomes and evaluating messages.

In an effort to identify communication initiatives by the forest products industry, a series of informal telephone interviews were conducted by the writer with forest industry personnel and forestry association representatives³. Foresters and forestry association representatives report using such communication efforts as letter writing campaigns, newspaper submissions regarding natural resource issues and wildlife management, roundtable discussions with diverse community groups, public speaking, tours of company-owned and managed forests or papermills, radio advertisements, and personal visits to community leaders.

In addition to these efforts, industry and state forestry associations sponsor and/or support community outreach programs such as Project Learning Tree (PLT), Arbor Day and tree planting, and Log-A-Load for Kids. Donations of educational materials to teachers and schools in the local community are also viewed by industry as positive public relations.

³ Personal communications with: Craig Earnest, Bowaters External Public Affairs Forester (March 2, 1995); John Woods, Westvaco Cooperative Forest Management/Public Affairs Manager (March 6, 1995); Ken Stacey, Georgia Pacific Manager of Three Rivers Logging and Fiber Supply, South Central Region (March 2, 1995); Candice Dinwiddle, Tennessee Forestry Association Executive Director (March 1, 1995); and Jean Ash, Alabama Forestry Association Communications Director (March 8, 1995).

Print advertising, radio, and television commercials are also popular ways of communicating with a large number of people at a relatively small expense. However, advertising seems to be used primarily by forestry associations, not the forest industry. Forest products companies continue to use the media to communicate, but there seems to be a shift to more personal and community-oriented ways to disseminate information. John Woods, Westvaco Cooperative Forest Management/Public Affairs Manager, stated that Westvaco would rather give money to local schools, thus improving education in the community, than invest in commercials.

Weyerhaeuser Corporation (1994) recently launched an innovative communication effort using a "town hall meeting" format. Town hall meetings were held in Portland, Oregon, and Seattle and Tacoma, Washington. Jack Creighton, President and Chief Operating Officer, and Charley Bingham, Executive Vice President of Weyerhaeuser, provided the public and interested parties an opportunity to ask questions about Weyerhaeuser and its operations. The goal of these meetings was not explicitly stated. However, it can be inferred from the report that Weyerhaeuser hoped to create a dialogue with the public while also influencing the attitudes of the public. The company reported that 73 individuals voiced their views and that 144 comment cards and 52 letters were received by attendees.

In a "Report to the Community," Weyerhaeuser stated that a great deal was learned from these interactions and that the company planned to schedule more town hall meetings in the future. However, the impact of the town hall meetings on attitudes was not evaluated. Nevertheless, according to Janice Freibaum⁴, Resource Manager for the Oregon State Department of Natural Resources, these town meetings were viewed as a step in the right direction. This format gives the public an opportunity to develop relationships with industry that only improve information exchange, and ultimately the overall dialogue, within the forest community.

Regardless of the method of communication, industry personnel and forestry association representatives contacted reported that communication efforts have rarely, if ever, been evaluated to determine the impact on influencing attitudes. GFA (1995), AF&PA (1993), and The Osgood Group Report & API (1992) offer exceptions to this rule.

GFA (1995) commissioned an extensive documented study of communication efforts by the forest products industry in Georgia while simultaneously evaluating a three-year public relations campaign (1990-1993) and reviewed media (print and TV) coverage from 1990-1994. GFA targeted elected officials and a series of communication channels that they felt were most influential on public officials, the news media, and environmental opinion leaders. Three key messages were identified to counter emotional reactions to environmentalists' claims. These messages included: (1) the forestry community is environmentally sensitive; (2) the forest community is a leading economic contributor in Georgia; and (3) the forestry community produces products that enhance all our lives.

⁴Personal Communication with Janice Freibaum, Resources Manager for the Oregon State Department of Natural Resources, December 19, 1994.

Messages were delivered using various channels of communication, including letters, meetings, booklets, print media, commercials, tours, attitude surveys, focus groups, and membership campaigns. Additional seasonal programs were initiated, including Arbor Day celebration, PLT, and Olympic tree-planting. Newspaper and media coverage of forestry issues (quantity and tone), focus groups, and attitude surveys were used to evaluate the messages. Results were presented in the form of descriptive statistics (i.e., percents and frequencies). However, the study lacked sophisticated statistical applications or qualitative analysis; therefore, the results must be interpreted with caution.

The overall tone of print and TV coverage of the forest products industry changed drastically from 1990 to 1994. In 1990 and 1991, 50% of the coverage was negative in tone compared to 14.8% in 1994. By the end of 1994, GFA reported 0% negative coverage. However, negative and positive tones were never operationally defined, making it difficult to determine what constituted a change in tone and degree of change. In addition, media coverage was the only indication of campaign success. Finally, channels of communications were not evaluated. Therefore, it is unclear as to which communication effort had the most influence in changing the tone of coverage. Nevertheless, GFA's public relations campaign provides one example of how the forest products industry may be communicating successfully with the communities in which they operate.

The Osgood Group Report and the API (1992) offer a less optimistic viewpoint than GFA (1995) regarding communication efforts of the forest products industry. The report defined perception gaps between the industry and others which are important to the public policy debate. An extensive series of interviews was conducted with the industry leadership, leaders of environmental groups, and federal regulators and legislators.

It appeared that there was a large discrepancy between how the industry perceived itself and how others viewed it. For example, the industry believed that it was technologically advanced, had done a good job cleaning up the environment, and was using technologies to balance economic growth and environmental demands. Environmentalist organizations took the opposite view on virtually every point. Environmentalists charged industry with being polluters, lagging in employing environmental technologies, and frustrating rather than supporting environmental protection, and they believed that industry must be forced into a position of environmental responsibility (The Osgood Group Report and API, 1992).

While negative media coverage may have disappeared in the GFA (1993) study, other studies show that a serious credibility problem still exists. The industry may report itself as being a protector of natural resources. However, until the public is convinced otherwise, the forest products industry will continue to face conflicts over land use, increased regulations, and policies that the public feels do not adequately address the needs of the industry, the public, and the forest resource. In summary, it appears that the industry's perception of itself and the public's perception of the industry are inconsistent, resulting in a faulty analysis of the communication situation (McLeod and Chaffee, 1973).

AF&PA (1993) recently released the results of a study which focused on the persuasiveness of specific messages from the forest products industry and the credibility of the industry. The authors offered a set of results that seemed to reflect a more balanced perspective of the industry. AF&PA (1993) conducted a series of focus groups in metropolitan areas in the Pacific Northwest, the Midwest, and the Northeast.

The credibility of the forest industry was ranked behind that of the U.S. Department of Agriculture Forest Service and environmental groups. Even the methods used to gain support were said to be ineffective. For example, the authors concluded that presentations of positive information and supporting evidence did not generate public support. In addition, public debates of forest management issues did not yield supportive public policy forums.

Although the messenger may have poor credibility and the method of delivering the message may be flawed, the industry does have some messages that are termed "solid performers." Solid performers are messages that tend to be persuasive and credible. Verification of performances by an important third party and reforestation successes are two themes echoing throughout each solid performer. In fact, to convince the public that the industry is environmentally responsible, a "breakthrough behavior" would be that the industry voluntarily abide by and enforce a code of forestry principles (AF&PA, 1993). This is the wisdom driving the recently initiated AF&PA Sustainable Forestry Initiative (SFI) (Wallinger, 1995).

On October 14, 1994, the AF&PA Board of Directors approved a set of guidelines and principles related to forestry practices. The SFI guidelines and principles established clear and agreed-upon forest management objectives for forest managers, private landowners, forest industry-owned forestland, loggers, and forestry contractors to follow. The intent of the SFI is to have a "third party" set and enforce guidelines that improve the overall health of the resource as well as produce a sustainable resource. Ultimately, AF&PA and its members hope that the SFI will visibly improve industrial forestry practices and build public trust. By January 1, 1996, AF&PA membership will be contingent on support of, commitment to, and implementation of these principles (Wallinger, 1995).

Until the SFI is fully operational and publicized, the industry is still challenged to find effective ways to address the public and justify corporate decisions. The research presented thus far has illuminated several key points.

First, regional attitude studies indicate that the forest products industry has low credibility, resulting in unfavorable attitudes expressed toward the industry. Secondly, documented communication efforts are minimal, but of the ones reported, results show that the industry is not effectively communicating its messages. Finally, despite the optimistic results reported in GFA (1993) and the industry's perception of "doing good" (The Osgood Group Report and API, 1992), an overwhelming body of research suggests that serious image problems persist (TVA and Auburn University, 1993; Devall, 1994; Bartlett, 1995).

CHAPTER II

LITERATURE REVIEW -- COMMUNICATION CAMPAIGNS

Analyzing the Issue Environment Prior to Communication Campaign

Planning a public relations program has been the topic of many communications papers and book chapters. This section reviews strategies suggested prior to campaign development. Grunig and Repper (1992) suggested a seven-step strategic management of public relations that helps define the issue environment prior to launching a communication campaign. The first three components, stakeholder, public, and issue stages, are considered stages, not steps, in that they are used to define the history behind the issues as well as their current status. The last four suggestions are steps in that they are actual guidelines to follow when planning any communication campaign.

The stages are defined as follows:

1. *Stakeholder stage* -- Stakeholders are viewed as the most important audience in strategic management. Thus, great care should be given to identifying this population and building relationships with these people and organizations. Stakeholders are defined as audiences that are directly affected by an organization's actions or decisions. Therefore, stakeholders may be "the public," but generally, stakeholders or segments consist of smaller, more definitive, or encapsulated audiences. If an organization knows its effect on stakeholders and how they can impact the organization, there is some advantage when a conflict does arise. By having ongoing communication, the organization is able to build a support system so that when disagreement does occur, communication lines are open.
2. *Public stage* -- This stage is formalized when a stakeholder recognizes a problem and seeks the support of the public when initiating a plan of action. If an organization has invested time and energy in developing a relationship with the stakeholders, then the organization will know if something is amiss. Still, if this situation occurs, the organization can segment the group, communicate with them, and involve them in the decision-making process. The key is to manage the conflict before a public relations campaign is necessary.
3. *Issue stage* -- If the organization is unable to contain and resolve the conflict created in the public stage, the public will organize and create "issues" out of problems they perceive. It is now the job of the organization to manage the issues. In other words, the organization should anticipate these problems and manage its response to these problems.

In the issue stage, the mass media can have a detrimental effect on the organization's efforts at issue management. The media usually aggravate the situation or sensationalize it well beyond the control of the organization. At this stage, the public should be segmented, and interpersonal communication and the mass media should be used to negotiate some resolution (Grunig and Repper, 1992).

According to Grunig and Repper (1992), the last four steps precisely address actions that should be applied to the different stakeholder groups and publics mentioned in stages 1-3.

4. Objectives should be identified, including coorientational variables such as accuracy, agreement, communication, and understanding (i.e., congruency).
5. Formal programs should be planned to address the stated objectives.
6. The public relations program and campaign should be implemented.
7. The effectiveness of the programs should be evaluated based on the objectives to determine if the issues that brought about the conflict are resolved.

Grunig and Repper (1992) suggested that several steps be taken prior to implementing any communication campaign. Knowing the environment and issues in which a company operates helps determine if and when a communication campaign is necessary. Thus, the first step is research, according to Grunig and Repper (1992).

The applicability of Grunig and Repper's strategic management plan can be demonstrated by examining the CIC and Pigeon River issue. For example, CIC claims that in the mid- to late 1980's, the company began exploring modernization of the Canton papermill. At that time, stakeholders included landowners adjacent to the river in North Carolina and Tennessee. Other stakeholders may have included environmental groups, elected officials at the local and state levels, community leaders, and even the general public.

Identifying stakeholders would have allowed CIC to develop relationships with these individuals and groups, creating ongoing communication so that problems did not move to the public stage. However, this was not done, and problems perceived by the stakeholders escalated to the public stage. Stakeholders sought support from the community, particularly Coker County, and organizations were formed to "fight" CIC. Still, CIC had an opportunity to manage the conflict by segmenting the stakeholders and communicating with the various segments. Effective communication did not occur, and the conflict moved to the issue stage, where the public created issues out of perceived problems.

Still, CIC could have communicated with the groups using interpersonal communication and the mass media to deliver messages as a way to negotiate some resolution. However, the issues escalated and CIC was now in the position where a full-fledged public relations campaign was imminent. Grunig and Repper's (1992) steps (i.e., identify objectives, measure coorientational variables, devise a plan of action, implement program, and monitor progress) were now necessary in order to counter stakeholders' messages. This was actually the inception of the East Tennessee Expansion Project.

CIC and the Pigeon River is a classic example of a public relations problem defined by Broom and Dozier (1990) as the "undesirable in need of change" (i.e., a gap between what is

perceived and what is desired). Strategic planning uses research to define the problem and objectives, then indicate appropriate communication strategies and tactics.

Atkin (1981) cited an information campaign that failed because of a lack of direction or specific objectives. The campaign released a flood of radio, television, and newspaper ads for a lengthy amount of time. The focus was on quantity, not quality. Output was seen as success when, in fact, audiences saw little or no reason to attend to the messages. The segments were simply uninterested. Had the designers stated a set of objectives, assessed the segments, devised a plan of action, and evaluated the program, the success rate should have been much higher.

In contrast, Atkin (1981) also offered an excellent example of a successful campaign. A Stanford heart disease field experiment was conducted. Messages were carefully crafted to be persuasive and appeal to the segment targeted. Additionally, messages were devised in a way to capture and engage the audiences. The planners obviously researched the segments, had a set of objectives that they felt were addressed by the messages, and had a method of evaluation that confirmed the positive results.

However, even seemingly well-planned campaigns can fail due to unrealistic or unjustified objectives. For example, The Center for Disease Control under the direction of C. Everett Koop launched a nationwide public information campaign regarding AIDS. The goal was to change attitudes about unsafe sex, influence behavior, and decrease the number of reported AIDS cases. Although knowledge was gained and awareness raised, engaging in risky behaviors did not decrease given the number of new AIDS cases each year. The authors concluded that knowledge gain does not lead to changes in attitudes or behavior. In fact, they contended that there is a huge gap between information and attitude and behavioral changes (Singer et al., 1991). Keep in mind, the authors assumed that those "at risk" saw the campaign, when in fact members of the high risk groups may not even have been exposed to the messages.

Singer et al. (1991) reported that prior attitudes were responsible for the failure of their information campaign to alert the public about the danger and prevention of AIDS. Although concern about AIDS and condom sales increased (based on pre- and post-attitudinal results), attitudes were basically unaffected by the information presented. For example, the same trends (i.e., attitudes) that existed prior to the campaign persisted after the campaign. The authors concluded that prior attitudes predisposed individuals to respond in certain ways contrary to the desired results.

Major (1993) reinforced the conclusions of Singer et al. (1991). She concurred that public relations campaigns designed to increase awareness are far more successful than ones aimed at changing attitudes. She noted that the relationship between cognition and communication is much stronger than the association between effect and communication. Thus, a change of attitude is very difficult to achieve in communication campaigns, as demonstrated by the Singer et al. (1991) findings.

These findings suggest that campaigns based on empirical research and driven by clear objectives will more likely reach the targeted audiences and produce desirable results. Campaigns

lacking direction and a theoretical and empirical foundation will generally fail to effectively communicate the desired messages.

As the range of outcomes and failed communication campaigns reveals, communication problems are not simple, nor is there a set of one-size-fits-all communication campaigns available to organizations seeking to influence public perceptions. A body of theoretical literature is available to inform public relations managers about communication campaigns. That literature is the focus of the next section.

Coorientation Model

One especially useful analytic tool, the coorientation model, provides a framework for identifying a range of public relations problems. The key assumption in this communication model is that people's behavior is not based solely on their private cognitions of the world. Behaviors are the result of people's perceptions of the "orientations" held by others around them and their orientation to them. Stated differently, under certain conditions of interpersonal interactions, actual cognitions and perceptions of others will influence one's behavior (Pierce and Stamm, 1973; McLeod and Chaffee, 1973; Tan, 1981; Cutlip et al., 1985; Broom and Dozier, 1990; Dozier and Ehling, 1992).

Coorientation was developed by Chaffee and McLeod as an extension of two earlier models of communication by Newcomb and Carter (Tan, 1981). Newcomb's ABX or psychological model discusses the social relations between two people and their orientation to some object. Usually orientation is in the form of attitudes, either positive or negative. The Carter paradigm of affective relations also focused on a dyad, yet he assessed the value that the two people assign to some object. He suggested that pertinence and salience are keys to understanding the value of some object to each member. The coorientation model explains the influence that the members of the dyad exert on each other (Pierce and Stamm, 1973; McLeod and Chaffee, 1973; Tan, 1981).

McLeod and Chaffee (1973) expanded the earlier models to include social systems and distinct groups of people. They were still interested in attitudes and values assigned to objects, but also sought to understand cognitions and behaviors. Consequently, McLeod and Chaffee introduced a different set of dependent variables which could be used to address what people think and why they act in certain ways (Pierce and Stamm, 1973; McLeod and Chaffee, 1973; Tan, 1981).

Broom and Dozier (1990) applied the original coorientation model developed by McLeod and Chaffee (1973), which focused on interpersonal communication, to organizational communication. The model was framed in the context of organizational and public communication, not interpersonal communication. Consequently, when references are made to "others," "one," and "persons," those terms are used interchangeably with "organizations." Although organizational communication is the primary focus in the coorientational model, interpersonal communication is still a dominant feature of this model and is not to be minimized.

In the coorientation model, how one is oriented to others, or "cooriented," determines one's behavior. The word "coorientation" appropriately indicates that cognitions and behavior do not occur in a vacuum, but that they are subtly influenced and directed by those around us, often without our awareness. "Coorientation" also implies that communication flows between and among people, not merely from one source to a receiver (Pierce and Stamm, 1973; McLeod and Chaffee, 1973; Tan, 1981; Cutlip et al., 1985; Broom and Dozier, 1990).

In the coorientation model, four salient questions direct the research:

1. How does the organization (CIC) define and evaluate the issue?
2. How does the organization (CIC) think community leaders define and evaluate the issue?
3. How do community leaders define and evaluate the issue?
4. How do community leaders think the organization (CIC) defines and evaluates the issue?

In Figure 3, the top two boxes are CIC's and/or community leaders' view of the issue, while the bottom two boxes indicate CIC's and/or community leaders' estimate or prediction of community leaders and/or CIC's views of some issue. Additionally, the figure includes three dependent variables or coorientation variables of interest. These variables include agreement or cognitive overlap, congruency or perceived agreement, and accuracy. They provide the conceptual foundation of the coorientation model in which communication research is based (Pierce and Stamm, 1973; McLeod and Chaffee, 1973; Tan, 1981; Cutlip et al., 1985; Broom and Dozier, 1990; Dozier and Ehling; 1992).

The boxes indicate that measures should be made on each person or organization. Therefore, the boxes actually represent cognitions and perceptual orientation, not the persons or organization. The arrows connecting the boxes determine relationships between the coorientational measures, not the measures themselves. However, the arrows also indicate which boxes should be compared after the data are collected (McLeod and Chaffee, 1973).

According to Pierce and Stamm (1971), McLeod and Chaffee, 1973; Wackman (1973), Cutlip et al. (1985), and Broom and Dozier (1990), *agreement*, or *cognitive overlap*, is defined as the similarity of two persons' cognitions about a common object. In the context of a social system or primary group, agreement is concerned with the extent to which the organizational definition of the issue is congruent with the public's assessment. Thus, agreement can be evaluated by looking at the similarity of the organization's view of the issue and community leaders' view of the issue.

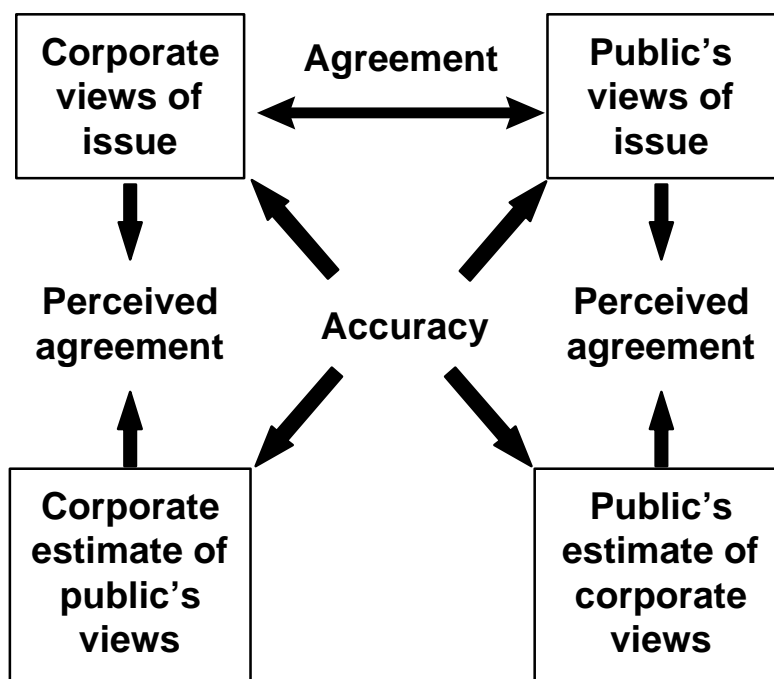


Figure 3. Coorientation model by McLeod and Chaffee (1973).

Congruency, or *perceived agreement*, is a situation common to the organization's view of the issue and the perception of community leaders' view of the issue. In other words, the organization holds certain views about an issue and also estimates the public's view of the same issue. Congruency is a monadic term, since it refers only to the relationships of cognitions held by a single person or organization (i.e., an organization seen as a single entity). Further, congruency is not a true interpersonal variable since it is unrelated to interpersonal communication. The actual position of the other person is irrelevant when assessing congruency (McLeod and Chaffee, 1973; Dozier and Ehling, 1992).

Accuracy is often used to determine whether interpersonal communication has occurred. Accuracy refers to the "similarity between one person's estimate of another's cognitions about an object and that other person's actual cognitions about that object" (Wackman, 1973). Unlike congruency or perceived agreement, accuracy is a dyadic variable, given that changes toward increased accuracy can be attributed to interpersonal communication (McLeod and Chaffee, 1973; Dozier and Ehling, 1992).

McLeod and Chaffee (1973) contended that accuracy should be the first order of business when initiating communication programs. They stated that:

... "perfect communication" between two persons, totally free of constraints, would not necessarily improve agreement, and might reduce congruency. If the two are motivated to coorient, it can facilitate understanding. But it should always

improve accuracy, even to the absolute point where each person knows precisely what the other is thinking; this would be perfect communication in quite a literal sense. And yet they might disagree (and know they disagree), and even choose not to coorient to the same things in the same degree (p. 487).

In summary, by evaluating accuracy, an organization can perhaps improve its communication strategies and justify more fully the need (or lack of a need) for such programs.

Coorientation variables go beyond simply estimating the distance between views held by the organization and the public. These variables can be used to identify circumstances such as true consensus, false consensus, and false conflict. True consensus occurs when the organization and the public actually agree and accurately perceive that agreement. False consensus, on the other hand, indicates disagreement that is inaccurately perceived as agreement. Finally, false conflict occurs when there is actual agreement that is perceived as disagreement.

Each situation calls for different objectives. Broom and Dozier (1990) used a wildlife group and a paper company to illustrate these situations common to the coorientation model. A public relations audit conducted by a forest products firm revealed that the company and a specific public, a wildlife group, held similar knowledge and views about the protection of bald eagle habitat. The organization and environmental group both believed that precautions should be taken when harvesting tracts adjacent to the habitat.

True consensus results if both groups accurately perceive this agreement. The communication objectives appropriate to this situation might be twofold: (1) to reinforce the positive relationship between the company and the environmental group; and (2) to increase recognition of the positive relationship with broader publics. The first objective might be reached through interpersonal communication; the second through a simple media effort or special event. Communication would be appropriate, but not essential.

If, however, the paper company implements only a "cosmetic" program to demonstrate concern for the bald eagle, a policy far weaker than the wildlife group believes the company follows, their relationship is a false consensus. Disagreement is accurately perceived by the wildlife group as agreement. Usually a critical event will expose this deception and the wildlife group is left feeling disappointed and suspicious of the company in any future exchanges (Broom and Dozier, 1990).

In this case, the company has created significant problems. Not only is the initial problem, bald eagle protection, now an issue, but the company's credibility and sincerity are at stake. The first problem requires a change in policy and then communication of that change to stakeholder publics. Unfortunately, the issue of trust subverts any message the company might create.

A third scenario raises yet another set of communication challenges. Suppose the paper company has developed extensive policies and management strategies for bald eagle habitat but failed to advertise these plans. If the wildlife group thinks the paper company was not committed to protecting bald eagle habitat, then the group inaccurately perceives disagreement. This would

be an example of "false conflict," in which the wildlife group fails to perceive management's commitment to protecting bald eagle habitat (Broom and Dozier, 1990). In this case, the key is communication of the policies already in place. Presumably, once the wildlife group is informed of the company's action, true consensus will result.

This final scenario seems most similar to CIC's analysis of its situation. The company and the concerned public are committed to conserving forest resources and protecting the environment where necessary. However, the public appears to have inaccurately perceived CIC's commitment to environmental protection and thus, false conflict results. Otherwise, CIC would not have such a low credibility rating. Consequently, CIC's communication plans were based on the company's commitment to improving operations and environmental quality and informing the public of these policies and changes.

The mere fact that CIC launched a communication campaign indicates that perceived congruency was low. If CIC had perceived that the public was supportive and accepting of their move into the east Tennessee area, then the communication initiatives would have been unnecessary. However, it appears that CIC perceived, accurately or inaccurately, that congruency was low.

Failure to fully research and analyze the public's perception of an issue and to develop communication objectives appropriate to the situation and to the public predicts almost certain campaign failure. At best, companies communicate when unnecessary, wasting organizational resources, and at worst, exacerbate existing problems and creating new ones. If companies communicate when unnecessary, they waste organizational resources at best, and at worst exacerbate existing problems and create new ones.

CHAPTER III

THEORETICAL FOUNDATIONS

Wackman (1973) indicated that coorientation theory actually refers to the prediction of change toward increased accuracy. A major assumption of coorientation theory is that information is exchanged, and the major result of interpersonal communication is that greater knowledge of another's cognitions is achieved. Communication leads to changes in cognitions by both the organization and community leaders toward an object, thus increasing accuracy. Consequently, depending on the degree of agreement, understanding of the other's cognitions, and change in cognitions, accuracy may occur whether changes in cognitions take place or not.

As mentioned earlier, three measurements from the coorientation model can be taken, including agreement, congruency, and accuracy. Each of these measurements reflects a different theory and various degrees of communication effectiveness. For example, congruency is not a true interpersonal variable since it is defined as a person's cognitions of an object and his or her estimate of others' cognitions of the object. Consequently, congruency is often not a reliable measure of communication effectiveness, depending on the goals of the communication campaign. In addition, congruency is mainly limited to conflict and dissonance theories, which are not of concern here (McLeod and Chaffee, 1973; Wackman, 1973).

Nevertheless, agreement and accuracy are interpersonal and "public" or organizational in nature (as defined by Broom and Dozier, 1992), and can be used to more precisely explain communication effectiveness. Agreement is often used as a measure of communication effectiveness. A simple method of calculating agreement is to count the number of shared attributes divided by the total number of attributes used by both parties. In the CIC project, a rough measurement of agreement could be generated by comparing the number of common messages (i.e., the number of accurate messages repeated) to the total number of messages repeated. However, as McLeod and Chaffee (1973) point out, agreement is not a particularly satisfactory criterion for communication.

This model is further complicated by extraneous, antecedent, and intervening variables difficult to control even in a laboratory setting (Grunig and Stamm, 1973). Personal values and beliefs may influence the cognitions of people even more than the communication program. In fact, Wackman (1973) indicated that persuasion is often difficult to achieve (and measure) in social interactions. A solution to this problem is that community leaders can be asked directly if their cognitions about CIC changed as a result of the communication. This straightforward question allows for at least self-report of the degree of agreement (Cutlip et al., 1985).

Accuracy, the degree to which one person's estimate of another's cognitions matches the other's actual cognitions, is an ideal criterion for evaluating communication effectiveness, especially since it is achievable through communication alone (McLeod and Chaffee, 1973; Tan, 1981; Dozier and Ehling, 1992). As stated earlier, "perfect communication" does not necessarily increase agreement and may even decrease congruency, but it should always improve accuracy.

In other words, communication can clarify *A*'s cognitions as well as improve understanding of *B*'s cognitions and reflect how similar or different they are to *A*'s cognitions. However, accuracy does not address *A*'s view of *B*'s cognitions and vice versa (i.e., arrows are not drawn between the two bottom boxes in Figure 3). The problem lies in how to measure accuracy (McLeod and Chaffee, 1973).

Coorientation theory states that the focus is on information exchange, not persuasion. Simply asking people if new information was obtained is one method of looking for accuracy. In the case of CIC, information exchange was predominantly one-way, not a dialogue. In addition, the focus of the project was external, and any measurement of changes in cognitions of CIC or new information gained by CIC was not included. Still, an asymmetrical measurement of the information gained by community leaders can be obtained (McLeod and Chaffee, 1973).

Accuracy also involves some degree of extrapolation, meaning that *A* must make a subjective judgment about *B*'s cognitions when determining similarities. However, if people communicate, then accuracy should increase, according to the coorientation theory. Perhaps the messages disseminated by CIC and the correctness with which community leaders repeat messages in structured interviews can serve as an prediction of accuracy. If communication was successful, then correct message repetition should be high. On the other hand, if messages are repeated incorrectly, then communication was unsuccessful. It should be kept in mind, however, that message repetition does not necessarily indicate agreement or persuasion, only communication. In other words, community leaders may have been aware of CIC's messages but may not have agreed with the content (McLeod and Chaffee, 1973; Wackman, 1973; Dozier and Ehling, 1992).

Further elaboration of the communication aspect of the coorientation theory indicates that if messages are not only correctly repeated in the interviews but correctly repeated to others (i.e., primary group or diffused to others), then accuracy can be assumed. Again, if community leaders accurately represent the messages disseminated by CIC, then communication has occurred, which is the driving principle behind coorientation theory. Notice that coorientation and consistency theory is also applicable to and provides a theoretical foundation for understanding Grunig and Repper's (1992) strategic management of public relations. The nomenclature is different but the general message is the same. Incongruity, inaccuracy, and disagreement among stakeholders, the public, and the organization all cause conflicts and problems that snowball into "hot issues" (i.e., issue stage). Again, interpersonal communication as suggested by coorientation theory is seen as a viable solution (Wackman, 1973; McLeod and Chaffee, 1973).

In summary, the research question often dictates the type of theory used, which in turn justifies the methodology and data collected. In this project, coorientation theory was relied upon when designing the interview questionnaires and data to be collected. In addition, Rogers' Source-Message-Channel-Receiver Effectiveness (SMCRE) model (Cutlip et al., 1985) was used to structure the interview questions and provide a method of examining the various factors of a communication campaign.

Source-Message-Channel-Receiver Effectiveness Model

The bulk of the literature related to the SMCRE model that will be presented is based on persuasion, not communication or increased understanding, as a targeted goal. The theoretical difference is that coorientation theory focuses on information exchange and accuracy, while consistency theory is associated with persuasion (i.e., changing cognitions and behavior). This is not to say that the characteristics of the different aspects of the SMCRE model are irrelevant to coorientation theory. Instead, the literature reflecting the research to be discussed is situated in a context where the goal is to influence cognitions and ultimately change attitudes and behavior of receivers.

The SMCRE model offers a way of organizing communication campaigns into manageable parts and a method of evaluating each part to determine where success and failures occurred. A plethora of literature is available on the different aspects of the SMCRE communication model and characteristics that make any communication campaign a success.

Channels of Communication

The theoretical foundation for this project was grounded in communication theory, specifically coorientation theory and two-step flow and diffusion of innovation theories. Two-step flow and diffusion of innovation provide an interpersonal component to the coorientation and consistency theories that was not present in Broom and Dozier's (1992) organizational interpretation of coorientation theory. Although tracking the actual flow of information was not of interest, identifying the channels used to disseminate information was important. Consequently, two-step flow and diffusion of innovation provided a theoretical framework for understanding how information flows from organizations to community leaders to the general public using various channels.

Two-Step Flow Theory

The two-step flow theory was developed by Paul Lazarsfeld and Elihu Katz in the 1940 presidential election campaign. Prior to this election, researchers assumed that the "hypodermic needle" model was the way in which information flowed from the mass media to the general public. In other words, they assumed that the mass media directly influenced and even controlled much of human behavior. The all-powerful media was thought to shape the way in which people viewed historical events, political issues, and consumption of goods and services (Katz and Lazarsfeld, 1970; Rogers, 1971).

The hypodermic needle approach was demonstrated by the 1938 radio broadcast of H. G. Wells' "War of the Worlds," which inadvertently looked at the effects of mass communication. The radio broadcast implied that New York City had been invaded by aliens and that the world was coming to an end. Panic set in and people were terrified, even though they had been warned that the broadcast was only a radio play (Cantor, 1994).

According to Lowery and DeFleur (1988), researchers concluded that given the widespread hysteria, the media had an "immediate, powerful, and direct influence on their audiences." However, researchers also considered the idea that the effects might be explained equally well by personal influences and interpersonal relations (Rogers, 1971; Lowery and DeFleur, 1988).

The perception that the media has direct influence was challenged when Katz and Lazarsfeld (1970) analyzed the role of the mass media in political decisions. The researchers were surprised to discover that voting choices were almost never influenced by the mass media. Instead, interpersonal relations appeared to be responsible for most of the influence exerted on voting behavior. However, since the two-step flow model was not conceptualized as part of the original design, the data to support it were not well-documented. Subsequent researchers tested this theory and determined that it provided a valid context in which to test mass communication efforts (Lazarsfeld et al., 1968; Katz and Lazarsfeld, 1970).

The interpersonal nature of the two-step flow model can be dichotomized into personal contact of the passive nature and contact which is deliberate and intentional (i.e., social reinforcement). Lazarsfeld et al. (1968) explained that people are often subjected to conversations in which they do not intentionally choose to be included. For example, a patron in a coffee shop is discussing the government shutdown due to the impasse of budget talks. The customer in the next booth overhears the conversation that was not intended for him. This type of passive communication informs the customer of the different viewpoints of others and also of what the patron or people in general think.

The communication is passive, and the participant or customer overhearing the conversation is usually caught unprepared and unable to insulate himself from such subtle influences. Passive communication adheres to the two-step flow model, since information is likely gained from the mass media and disseminated to others (i.e., the patron) via opinion leaders or, in this case, the customer in the adjacent booth. Although the passive communication is not likely to be as persuasive as deliberate and premeditated communication, it is nonetheless a viable method in which information is transmitted from the mass media to the general population. Here, opinion leaders are the intermediate source of news (Lazarsfeld et al., 1968; Lowery and DeFleur, 1988).

On the other hand, intentional communication between opinion leaders and their peers has some distinct advantages which are not inherent in passive communication. Face-to-face communication allows one to debate issues, ask questions, and respond to points of confusion or disagreement. A dialogue or exchange of information that is characteristic of direct communication is unlikely to occur in a passive situation. On the other hand, talking with someone directly may also be met with resistance and suspicion, especially if the person is aware that he is being persuaded to support information that he previously rejected. In the example of passive communication, the customer in the adjoining booth had no reason to be defensive or to arm himself against influence. The role of the media, then, is to provide information that initiates this process (Katz and Lazarsfeld, 1970; Rogers, 1971).

Influence and persuasion are also salient goals of the mass media and communication. Politicians, commercials, stories of interest, and even public service announcements aim to have

us behave in ways that the sponsors feel desirable. Behaviors may be in the form of buying a certain product, endorsing a candidate or issue, or practicing safe sex. The expectation is that the public will be persuaded in some way and that ultimately behavioral changes will occur. The best method of reaching this goal is through direct, deliberate communication supported by the mass media's context of information and argument as demonstrated by Singer et al. (1991). This is something the mass media cannot complete; it is only able to provide the necessary information to initiate this process according to the two-step flow model (Katz and Lazarsfeld, 1955; Rogers, 1971; Lowery and DeFleur, 1988).

Referring to Grunig and Repper's analysis of the issue environment, stakeholders could also be viewed as an organization's primary group or opinion leaders. For example, when one's behavior impacts others and vice versa, a stakeholder relationship is established. The same can be said for the two-step flow theory, whereby opinion leaders are the catalyst for communication to the larger population.

Again, the critical link in the two-step flow theory is opinion leaders and interpersonal communication between those leaders and their peers (i.e., stakeholders). Opinion leaders are provided with information and this information is disseminated to the public. But who are these opinion leaders, how are they defined, and does their status change from opinion leader to passive listener depending on the issue? Katz and Lazarsfeld (1970), Rogers (1971), and Lowery and DeFleur (1988) offered insight into these questions.

According to Rogers and Shoemaker (1962), the two-step flow model implied that the opinion leaders actively sought new information and knowledge from a variety of sources, the mass media being one of the primary ones. The remainder of the public was seen as passive participants. Opinion leaders provided the main thrust in initiating the communication process. Again, the media's role was to feed information.

Katz and Lazarsfeld (1970) attempted to identify characteristics of opinion leaders and their roles in communities. They originally thought that opinion leaders were dispersed throughout the population and that some people had qualities such as being influential, persuasive, and leaders. However, they soon discovered that opinion leaders were not a distinct group possessing these desirable traits. Instead, "opinion leadership is an integral part of the give-and-take of everyday personal relationships" (Katz and Lazarsfeld, 1970). Stated differently, all members of the primary group potentially play a key communication role depending on the issue at hand.

Primary groups were once thought to be limited to social ties among family and friends. However, social psychologists rediscovered primary groups and their roles in society. The Hawthorne studies illuminated the reemergence of the influence of primary groups at the turn of the century (Lowery and DeFleur, 1988).

Lowery and DeFleur (1988) report that piece rate systems intended to motivate greater worker productivity were ineffective due to the strong personal relationships that co-workers had with each other. Individuals working to maximize their rewards at the expense of their co-workers were not desirable. In fact, employees tended to regulate their output so that it was

consistent with that of their co-workers. In this study, the importance and influence of the primary group was revealed.

Primary groups were no longer thought of as just family and friends but were extended to social situations dominated by strong emotional ties. Consequently, one can have several primary groups in which social ties are developed and strengthened over time. Primary groups can also range in size from the United States Army to the Friday Night Bridge Club. The important distinction is that primary groups are found within the larger formally organized social structure of society (Lowery and DeFleur, 1988).

Member characteristics vary widely depending on individual personalities, attitudes, interests, morals, values, likes, and dislikes. Members make unique contributions depending on past experiences and areas of interest. For example, one member may be well-versed in contemporary art, while another member may be attuned to the intricacies of clock making. Each member relies on others to provide information about their areas of expertise (Lowery and DeFleur, 1988).

Diffusion of Innovation Theory

The two-step flow model was further elaborated upon and developed by Rogers (1962) and Rogers and Shoemaker (1971) into the diffusion of innovation theory. This theory has contributed significantly to the understanding of how new agricultural practices are adopted by farmers. The diffusion of innovation theory states that new ideas are disseminated to the general population by people called early adopters. Innovators or early adopters of ideas are similar to the opinion leaders specified in the two-step flow model.

Early adopters actually try new ideas and inventions, whereas opinion leaders do not necessarily try new products but endorse or support innovations based on what they have learned from the mass media. Stated differently, the mass media appears to be a more salient feature in the two-step flow model than in diffusion of innovation. Nevertheless, diffusion of innovation does offer a different perspective on interpersonal communication that is not found in the two-step flow theory (Rogers, 1962; Katz and Lazarsfeld, 1970; Rogers and Shoemaker, 1971).

According to Rogers (1962), diffusion of innovation theory has four principal stages before an idea is accepted and adopted. These stages are awareness, interest, evaluation, and trials. Awareness is simply the discovery of a new idea or technique about which the person has very little knowledge. Next, an interest develops and the person is motivated to seek information about the new idea. The person generally looks to others and educational materials for new information. The mass media may be sought, but the media do not generally serve as a significant source of information for most people.

The person then evaluates the new idea to determine its value. Additional information may be obtained at the evaluation stage. Finally, the person actually tries the idea or practices it on a small scale. If the product or practice is successful, then the person accepts and adopts the new practice on a grander scale. However, if success is not attained, then the person may try again

after seeking more information or may abandon the idea altogether (Rogers, 1962; Katz and Lazarsfeld, 1970; Rogers and Shoemaker, 1971).

During the process of adoption, others actively watch to determine if the idea being tested is one which they want to try. Diffusion occurs when others adopt the practice after seeing its success demonstrated and endorsed by an early adopter. Again, interpersonal communication is critical. If early adopters fail to communicate with others after obtaining information, then the diffusion process is rendered ineffective (Rogers, 1962; Katz and Lazarsfeld, 1970; Rogers and Shoemaker, 1971).

Although CIC is not selling a new product *per se*, they are trying to persuade community leaders to support and tout certain forest management practices and policies of the company. The stages related to diffusion of innovation theory are applicable to the CIC communication program and provide a different method of evaluating communication channels that are not dependent on the mass media. For example, community leaders were made aware of the CIC land purchase and the construction of the chipmill by both CIC and environmental groups. Given community leaders' positions in the various counties, they then sought information about CIC plans and perhaps made an evaluative judgement. In summary, the assumption is that community leaders serve as opinion leaders.

The trial stage was accomplished when community leaders spoke about CIC to select people such as their primary group of family and friends. Feedback was given to the early adopters and new information may have been gained. This information could have caused a person to abandon the ideas previously supported or strengthen the ideas expressed. If the trial stage is met with relative success, then the community leaders will accept and adopt the ideas and practices disseminated by CIC (or an environmental group).

A method of determining whether CIC principles or environmental groups' ideas are adopted is to examine the messages that community leaders repeat during the interviews. Message repetition in the interviews only indicates the type of messages received. Determining if messages are diffused to others (i.e., repeated to primary group members) may be one method of evaluating the frequency of adoption.

In summary, the two-step flow theory and diffusion of innovation theory complement each other and offer different perspectives of interpersonal communication and the influence of mass media communication. Although the actual flow of information or diffusion of innovation will not be evaluated directly, these theories provide paradigms and a theoretical context in which the CIC communication program can be situated. With an understanding of how information can flow, it is necessary to examine the channels used to disseminate information.

The two-step flow and diffusion of innovation theories offer insight into the roles that interpersonal relationships, primary groups, and the mass media play in communication research. According to Bob Turner, CIC Vice President of Public Affairs, Stamford Connecticut⁵, the

⁵Personal communication with Bob Turner, Vice President of Public Affairs, Stamford, CT, Jan. 19,

ETEP was not systematically based on any communication model or theory. Instead, the plan of action was based on past experiences in other regions that provided to be successful in building relationships with local communities.

For example, the selection of community leaders was not consciously based on the two-step flow model. The two-step flow theory was imposed for this research project as a method of understanding the ETEP and explaining the results. CIC's ultimate goal was to gain the confidence and support of community leaders and rely on their credibility as a way to gain broader support from their primary group members.

However, the purpose of this study is not to trace the flow of communication but to assess the effectiveness of communication, and where the successes and failures occurred along the way. The two-step flow model provides a conceptual framework by which we can start to understand how CIC communication efforts were structured. In addition, this model offers a practical guide as to the importance of interpersonal ties and primary groups and will be used to explain the successes and failures more fully. Ultimately, the key to any communication effort is found in interpersonal communication and how well this deceptively simple task is executed. In conclusion, the two-step flow theory and diffusion of innovation theory complement each other and offer different perspectives of interpersonal communication and the influence of mass media communication.

Channel Characteristics

A channel refers to any medium used to disseminate information or foster communication. Examples of channels include television, radio, and print (i.e., newspapers, journals, or magazines), which are frequently referred to as mass media channels (Perloff, 1993). Other channels include personal or face-to-face communication, group contact (i.e., lectures), telephone interaction, and written communication (i.e., letters or correspondence). However, the bulk of communication research addressing channel effectiveness looks at the mass media, since it is more accessible and it is often easier to manipulate and evaluate its impacts (O'Keefe, 1990; Perloff, 1993).

O'Keefe (1990) discusses the difficulty of conducting empirical research about the differential effects of media on persuasive outcomes. The major obstacle is that many variables, not just the independent variables being manipulated, may be responsible for the changes observed. If differences are found in the effects of various media, how can these results be explained? More than likely, the effects were a consequence of an interaction of variables, not just of one channel alone.

Chakrabarti (1972) reviewed literature that looked at the different types of channel usage as a function of cognitive dissonance theory in the context of organizational communication. He

framed his paper by saying that "communication channel usage" can be defined in one of two ways: from the point of view of the receiver or the perspective of the sender.

The importance of this distinction is that it acknowledges that communication is a two-way process involving both a sender and a receiver. For example, *A* wants to communicate something to *B* via a channel. *B* must have access to the channel in order for communication even to occur. Thus, communication channel usage is of utmost importance for both the receiver and sender. In the literature that follows, channel usage is defined mainly from the viewpoint of the receiver's needs.

Yep (1993) focused on channel credibility when disseminating AIDS/HIV information to Hispanic communities. In general, the literature suggested that non-television channels were perceived as more credible than television channels. Specifically, he discovered in the analysis of three electronic media (a radio commercial, a television commercial, and a soap opera on TV), five printed media (a newspaper essay, a pamphlet, a book, a poster, and a "fotonovela" -- a photo-illustrated novel), and two other mediated channels (a lecture group meeting and an AIDS hotline), that the majority of respondents rated the AIDS hotline as most credible. The book, pamphlet, and newspaper article followed in order of credibility. The least credible sources were the TV soap opera and the fotonovela.

Yep (1993) also explored the channels through which Hispanics were likely to receive their information about AIDS/HIV. He found that the broadcast media (i.e., radio, commercial, television program) was relied on more heavily for information than the print media (i.e., pamphlets, newspaper articles). This finding may be a consequence of the widespread availability of and access to television. Pfau (1990) compared television with radio, print, interpersonal, and public address communication and studied how each exercises influence. It appeared that television was more concerned with relational issues as opposed to content-oriented messages, which confirms Yep's (1993) findings.

Perloff (1993) offered evidence about the relative effects of videotapes and print in persuasive communication. He suggested that in contrast to the popular belief that "seeing is believing," there is little empirical evidence that supports this hypothesis. Instead, print tends to be more effective when communicating complicated messages, while videotapes can be equally persuasive if the message is simple and can be conveyed through the use of pictures. Channel effectiveness appears to depend on message complexity, receiver traits, and accessibility of the channels.

With the invention and refinement of the computer, electronic communication is no longer limited to television and radio. In recent years, computer-generated messages such as electronic mail, information systems, and voice mail have been added to the available channels of communication and are now common names.

Some researchers have looked at the comparative effects of this relatively new medium in persuasive communication (Reinsch and Beswick, 1990). In general, despite the popularity of and obsession with computer and technological growth, people still prefer to use conventional

channels of communication. Face-to-face interactions were the most frequently reported channels used by a group of professional, administrative, and technical workers from a North American industrial company. Other methods of communication, in order of popularity, included telephone, written (typed or handwritten), and voice mail (Reinsch and Beswick, 1990).

It is clear that the literature available on channel effectiveness is unlimited. Nevertheless, some conclusions can be drawn. First, a channel is only effective if used by the receiver. For example, printed material is totally ineffective with an illiterate target public. Secondly, it appears that face-to-face communication is the preferred method of communicating and perhaps the most effective. Further, assuming the channel is the primary function of connecting senders and receivers, channel choice is the key factor in communication effectiveness. It seems that receiver traits, source credibility, and message strength may be more critical in predicting attitude changes than the medium used.

The channels selected by CIC to disseminate information were again based on past successes, rather than empirical research. Channels used by CIC could be categorized as interpersonal (phone calls and personal visits), group (tours and speaking engagements), print media (newsletters and CIC-submitted news articles to local papers), and mass media (commercials). These channels will be evaluated to determine which one was most effective at increasing accuracy and agreement.

Receiver Characteristics

Throughout the discussion of channel characteristics and the coorientation model, receiver perceptions, choices, and concerns have been a feature. Much attention has been devoted to receiver traits, and in many instances they seem to have an overwhelming effect on the success of persuasive messages. Receiver characteristics can be divided into three areas, including receiver involvement or monitoring behavior, prior experiences or initial position, and segmentation.

Receiver involvement is one way to determine possible routes that lead to persuasion. High involvement is generally thought to be a central route in which the individual is externally focused and acts in ways that are consistent with the situation at hand. In contrast, low-involved people are internally oriented and their actions are based on their beliefs, values, and feelings. Often involvement is used interchangeably with monitoring behavior (DeBono and Harnish, 1988; Chebat et al., 1989).

Perloff (1993) stated that "self-monitors differ profoundly in their susceptibility to persuasive messages." The differences lie in the functions of their attitudes. Attitudes of high self-monitors are said to be social-adjustive in that their attitudes have been formed on the basis of how well they fit the social situation.

In contrast, low self-monitors' attitudes serve a value-expressive function, since their attitudes are formed on the basis of how well they allow people to express their underlying values. Perloff's (1993) earlier statement about the differences in susceptibility to persuasive messages can

be supported using empirical research from DeBono and Harnish, 1988; Chebat et al., 1989; and Marzursky and Schul, 1992.

Marzursky and Schul (1992) studied the interactive effects of related attitudes, message quality, and source traits in the context of understanding the mediating role of involvement. They suggested that degree of involvement was influenced by strength of related attitudes which were based on personal experience.

The researchers hypothesized that when weak attitudes were held (i.e., a lack of personal experience), the effect of message quality became more pronounced when involvement increased. In other words, a high self-monitoring subject with weak attitudes will likely be more persuaded by a strong message since an internal reference is lacking (i.e., the subject has weak attitudes). In contrast, the researchers expected that someone who holds strong attitudes and is a low self-monitor would make an evaluative judgement about the product without regard to message strength (Marzursky and Schul, 1992).

The results indicated that when subjects held weak related attitudes (i.e., no personal experience), high involvement increased message effectiveness. On the other hand, strong related attitudes (i.e., increased personal experience) and high involvement detracted from message persuasiveness. It appears that little or no direct experience allows the person to focus more on the external environment or the advertisement and the message relayed. However, if the person has some experience that conflicts with the ad, the ad may be ineffective (Marzursky and Schul, 1992).

Under low involvement, subjects tended to use the source as a barometer for acceptance or rejection and considered it independent of the message. Low-involved subjects were able to rely on their internal values and beliefs, not the message presented. The authors concluded that marketing strategies should take into account the targeted audiences and that advertisements should be tailored accordingly, if effectiveness is to be maximized (Mazursky and Schul, 1992).

DeBono and Harnish (1988) also studied involvement issues, source attractiveness (i.e., likeable appearance and character), and source expertise (i.e., someone well-educated and knowledgeable in a particular area). Again, high self-monitoring individuals agreed with the expert, regardless of the argument. However, these same individuals agreed with the attractive source only when a strong argument was presented. In contrast, low self-monitors agreed with the attractive source regardless of the quality of message, while they agreed with the expert only when a strong argument was offered (DeBono and Harnish, 1988). The data suggest that differences can be explained by examining the type of cognitive processing associated with each monitoring behavior. Only high self-monitors listening to an attractive source and low self-monitors who heard the expert source systematically processed the content of the message (i.e., used a central route). In these circumstances, persuasion seemed to be a function of the quality of the arguments presented and how they were processed. On the other hand, high self-monitors who listened to an expert source and low self-monitors who witnessed the attractive source used heuristical processing (i.e., a peripheral route) to understand the message (DeBono and Harnish, 1988).

The difference between these two cognitive processes is that systematic processing and persuasion are a result of self-generated thoughts stimulated by the message, whereas attitude change is unrelated to self-generated thoughts with the heuristic process. Instead, the peripheral route allows the person to be more attuned to the source (something peripheral to the message) and not the message content (DeBono and Harnish, 1988).

Due to the contrast in cognitive functions at work, differences in message acceptance and persuasion and attitude changes were expected between the low and high self-monitors. In summary, the authors agreed with Mazursky and Schul (1992) that understanding the importance of cognitive processing related to receiver involvement or monitoring type is critical to influencing attitudes and implementing persuasive advertisements. As a result, communicators should first assess receiver traits such as message-related past experiences, involvement, and attitude strength. Then a message should be tailored accordingly.

The final body of research that addresses involvement issues was conducted by Chebat et al. (1989). The results showed that credibility had an effect on message acceptance in situations of both high and low involvement. This finding contradicts earlier research discussed by DeBono and Harnish (1988) and Marzursky and Schul (1992). In the above discussion, the data suggested an interactive effect (i.e., low involvement interacting with credibility effects) between credibility and involvement. However, Chebat et al. (1989) did not confirm this finding. They did concur that high involvement enhanced message acceptance, which did support earlier findings.

While receiver involvement, or self-monitoring behavior, has received a fair amount of attention in persuasive research, the majority of the research offered is based on "laboratory" experiments that seem difficult to actually implement in the real world. Questions such as, "How do you assess the involvement and self-monitoring behavior of a market such as New York City?" are difficult to answer. Once this information is known, "How do you then address the diversity which would be expected in large metropolitan areas?" At present, research suggests that a combination of strategies should be used.

These are compelling questions, and determining reasonable procedures to shift from the laboratory to real life seems to be a major challenge in marketing and communication research. As we leave the topic of receiver involvement and self-monitoring behavior, keep in mind that these questions will continue to be relevant in the discussions to follow on receiver positioning and past experiences and segmentation.

Receiver Position

Receiver position can be defined as the initial position which the receiver holds toward the issue. This position is usually polarized in that the person is either supportive or unsupportive of the views advocated by the source. Chebat et al. (1988) stated that a recipient's initial position toward the object can predict attitude changes. For example, Chebat and his colleagues hypothesized that receivers who hold views highly discrepant with the source are likely to report more significant changes in attitudes. In other words, the greater the discrepancy between the source and the receiver regarding the position supported, the greater the attitude change.

Plyler (1994) demonstrated this hypothesis in her thesis study. As reported, environmental groups had the most unfavorable attitudes toward the forest products industry prior to an educational program about the industry. However, post-program attitudes revealed that attitudes of this group not only changed, but changed more profoundly than those of other study groups. They actually shifted to an overall position that was more favorable than those of the other groups. In other words, the most adversarial group proved to be the most susceptible to change when presented with a counterattitudinal argument.

Chebat et al. (1988) also tested this hypothesis by looking at the views of Canadian business students regarding free trade between the United States and Canada. They discovered that there was a significant interaction between initial position and level of expertise. For example, higher expertise was more persuasive with the opposed group than was the lower-level expert. Conversely, the lower-level expert reinforced the supportive group's attitudes more so than did the higher expertise. The only exception to the higher expertise being more persuasive was in the situation where the message was one-sided and the number of arguments high (Chebat et al., 1988).

Holtgraves and Bailey (1991) explored a slightly different issue than Chebat et al. (1988) when they looked at premise acceptability and message effectiveness. They hypothesized that subjects would maintain consistency between beliefs about the premise and message content. If the message did not conform to the premise, then the message would be rejected.

As expected, premise acceptability had a significant effect on message agreement. People with high premise acceptance prior to the message indicated greater message agreement than those who had a lower premise acceptability. The results, based on two experiments with totally different messages and issues, confirmed that people who read the message with an acceptable premise were significantly more supportive of the proposal outlined in the message. It appears that people strive to reduce inconsistencies between their beliefs and messages they encounter.

Although Chebat et al. (1988) did not mention acceptability, it still could be a function of initial positioning. Both impact message acceptability and attitude changes seem to be based on the postulate that cognitive incongruencies are resolved by agreeing with the message presented. But what happens when the person has some direct experience with or knowledge about the message? Do attitudes still change in the direction of the position advocated? Wu and Shaffer (1987) and Manfreda and Bright (1991) offered insight into these questions.

Wu and Shaffer (1987) had students evaluate "new consumer products." Some students came in direct contact with the products (i.e., tasted them), while others had only an indirect experience (i.e., heard taste preferences of other consumers). Other variables manipulated were source credibility and message type (proattitudinal and counterattitudinal).

Attitudes based on direct experience were more resistant to counterattitudinal arguments than attitudes formed by indirect experiences. In addition, proattitudinal arguments strengthened attitudes formed by direct behavioral experience. The authors offered an interesting interpretation of their findings. They suggested that attitudes that were a function of direct experience were less

likely to change than attitudes based on indirect experiences. Thus, the attitudes based on direct experience were less susceptible to an attitude-based persuasion appeal (Wu and Shaffer, 1987).

The processing of the message would be as follows: The direct-experience person would hear a testimony about X product. A quick reaction would take place, either positive or negative, depending on the message tone (i.e., proattitudinal or counterattitudinal). These initial reactions would cause the person to either (a) discount the message or (b) scrutinize and elaborate on the message content and then organize this material into a cogent position. Consequently, the person's final attitudes are more likely to be based on relevant cognitive thought processes. The significance of this is not the position of the final attitude, but the fact that the attitude was formed thoughtfully, rationally, and with input from the source (Wu and Shaffer, 1987).

Manfredo and Bright (1991) focused on the effects of communication on recreationists and how this information could enhance future management plans of the Boundary Waters Canoe Area Wilderness. They found that hikers with a familiarity of the area were less likely to attend to informational brochures suggesting hiking trails for a variety of reasons.

First, experienced hikers found the information brochures useless and a waste of time. Secondly, if existing knowledge was adequate in past visits, then users did not feel a need for new information or they felt confident in their current level of knowledge. Thirdly, repetition or repeated exposure to the brochures did not have an effect on users, especially if they were highly knowledgeable. Thus, the researchers suggested that park managers know the experience and knowledge level of users so that the effect of informational brochures is maximized.

Hyman and Sheatsley (1947), in their historical and widely-cited article entitled "Some Reasons Why Information Campaigns Fail," eloquently articulated that, "Even if all physical barriers to communication were removed, there would remain many psychological barriers to the free flow of ideas." They specifically addressed how prior experiences or initial position influence receiver attitudes.

Hyman and Sheatsley (1947) described a number of psychological barriers under headings such as the chronic know-nothings, role of interest and exposure, selective exposure determined by prior attitudes, selective interpretation based on prior attitudes, and differential changes in attitudes after exposure. These psychological barriers, receiver traits, will be discussed below (Hyman and Sheatsley, 1947).

The "know-nothings" are the uninformed group in the population. What makes them uninformed is that no matter what level or nature of information or what frequency of distribution, they are almost impossible to reach. The lack of exposure may be due to the inaccessibility of media. However, this group may also be apathetic, which is not something that the authors explore.

"Interested" people are more likely to acquire the most information due to the psychological process of motivation to achieve and learn. Wide distribution of and exposure to information is possible, but unless the audience is interested or the information is relevant, the material will be

generally ineffective. The authors suggested that exposed people become interested and people not exposed become apathetic. However, individuals that are motivated to learn will seek out new information, implying that there is a predisposition to be interested. A person who lacks motivation is not likely to care whether he is exposed or not (Hyman and Sheatsley, 1947).

Mendelsohn (1973) concurred with Hyman and Sheatsley (1947) and stated that thirty years of prior research strongly supported the hypothesis that people with prior interest or experience are more likely to respond to mass-mediated information messages. With this knowledge in mind, it is necessary to develop a different set of communication strategies and tactics that acknowledges different levels of interest. In general, Mendelsohn asserted that public information campaigns are relatively successful if they are based on the assumption that most audiences are only mildly interested or not interested at all.

In general, people seek information that is congruent with prior attitudes and experiences. Prior exposure causes people to have different attitudinal reactions than the reactions of people who have not experienced any exposure. Selective exposure is the likely culprit responsible for these attitudinal differences. For example, segments attend to details that reinforce attitudes that resulted from prior experiences (Hyman and Sheatsley, 1947).

It goes without saying that if the information is inconsistent with their current position, people are less likely to attend to the content of the message. Therefore, "merely increasing the flow of information is not enough, if the information continues to flow in the direction of those already on your side" (Hyman and Sheatsley, 1947). In other words, another strategy must be developed to reach people with attitudes contrary to the message presented.

Similar to the importance of prior knowledge, people often interpret the same message differently. Uniform interpretation of material is almost impossible to achieve. Psychological processes and memory often distort information presented, causing segments to have numerous interpretations. Consequently, mere exposure is not always sufficient to produce desired attitude changes (Hyman and Sheatsley, 1947).

The final topic that Hyman and Sheatsley (1947) discussed was that "information does not necessarily change attitudes." The assumption here was that if people only had the information, then they would support the messages disseminated. Underlying this principle is the erroneous and arrogant belief that people are mindless and void of critical thought or evaluative judgment. The best we can expect is that segments carefully and intelligently scrutinize the message and make an informed decision that may or may not be the desired effect (Hyman and Sheatsley, 1947).

Researchers in the area of communication campaigns widely agree that the relative success and failure of these campaigns may have little to do with the actual source and messages delivered (Salcedo et al., 1974; Mackie, Worth, and Asuncion, 1990; Krendel, Olsen, and Burke, 1992; Ledingham, 1993; Perloff, 1993; Yep, 1993). Instead, receiver traits may have a profound effect on the outcome of persuasive communication campaigns. This research reinforces Broom and Dozier's (1990) insistence that all comparisons start with a thorough understanding of public

attitude, value, and position. Only then can the media be selected and messages created and adapted to the public's traits.

As stated earlier, it is difficult to assess receiver traits such as receiver involvement or monitoring behavior and prior experiences or initial position. Mendelsohn (1973) and Douglas et al. (1970) suggested that audiences should not be treated as monolithic masses if information campaigns are to have some success.

Mendelsohn's key point was that potential audiences require different communication strategies. Interest levels vary widely and organizations need to adjust their campaigns accordingly. Society is not "one big lump," yet mass media campaigns in particular often treat it this way. He suggested developing different strategies that address the heterogeneity of the audiences. Consequently, planners need to acknowledge that audiences are segments with unique characteristics that may influence the impact of communication campaigns.

Segmentation

The issue of segmentation was mentioned throughout Grunig and Repper's (1992) analysis of the issue environment and necessary stages prior to implementing a communication campaign. Grunig (1989 and 1992) and Salmon (1989) asserted that segmentation of audiences is crucial to the success of an information campaign. Segmentation refers to the division of a population into relevant comparable categories. Criteria used to segment populations may include behavior, cognitions, attitudes, genotypic characteristics, region, or cultural and social upbringing, for example. The idea is that audiences are segmented based on something called their "differential responsiveness." In other words, different combinations of values based on the criteria listed above often predispose a person to respond in a way that is different from the behavior of some other segmented group (Grunig, 1989).

In communication, planners want to select segments that are more open, accepting, and supportive of the organization's messages. Further, campaign goals are often intent on changing segments' cognitions so that greater accuracy and understanding is achieved. Still other campaigns may focus on behavioral changes. The point is that segments differ in their responsiveness to behavioral, cognitive, and emotional cues. Therefore, based on audience demographics, the planner wants to create a message to which specific audiences are more likely to respond.

Populations can be segmented based on objective or inferred objectives. Inferred objectives simply refer to perceptions, attitudes, and cognitions. They are inferred since in many cases we estimate, assume, or rely on self-report to determine the nature of these variables. On the other hand, objective variables include demographic or location type variables. We can directly measure these variables without making any interpretive judgments. For example, a person is either male or female. In general, researchers prefer inferred variables because they are proven to be better predictors of communication effects such as behavioral and attitudinal changes.

Prior to launching the CIC communication campaign in east Tennessee, extensive polling was completed to determine the current disposition of the targeted audiences. This polling was similar to that used in political campaigns in that specific "blocks" (i.e., segments) were identified. The main interest was in demographic characteristics or objective categories as a way to block audiences with certain traits.

Specifically, CIC was interested in targeting white blue-collar males and homemakers. Based on past experiences, these audiences seemed most likely to listen to and be open to CIC's messages. Further, attitude changes were more likely since these blocks had probably not been exposed to the issue (based on past experiences of these blocks) or had not yet formed an opinion. This strategy was only used for mass media communication (i.e., commercials).

However, the Pigeon River added a new dimension to the ETEP that had not previously been experienced in other regions. This added dimension, (i.e., long-standing history) caused many receivers to question CIC's credibility. Consequently, CIC wanted to improve its image in Tennessee. In addition to receiver traits being potential barriers to an effective communication program, source issues also presented problems.

Source Characteristics

Although a communication campaign is a set of preconceived procedures aimed at reaching an organizational goal, the sincerity of the organization seems to be secondary for some organizations. Up front, the organization is intent on selling a product, policy, or image, but inherent in this "sell," the customer, consumer, or community leader must answer the question, "Is this person or company authentic and sincere?"

Communicators such as John F. Kennedy, Martin Luther King, Billy Graham, and Jesse Jackson are said to capture their audiences because of their charismatic, dynamic, and eloquent speeches and sermons. But most people do not possess the qualities of these great men. Still, there is compelling evidence to suggest that some basic qualities can be developed to transform ordinary people into great communicators and persuaders (O'Keefe, 1990; Pratkanis and Aronson, 1992; Perloff, 1993).

According to Perloff (1993), in the 4th century B.C., Aristotle first identified the concept of communicator credibility when he wrote that "man's character may almost be called the most effective means of persuasion he possesses." Aristotle laid the groundwork for academic work on persuasion. Since his time, communication researchers have expanded Aristotle's earlier convictions to include several new dimensions of the source (i.e., the person responsible for the creation and delivery of the message).

Perloff (1993) suggested that credibility of the source consists of three dimensions: safety, qualification, and dynamism. O'Keefe (1990) argued that factor analytic research identified competence (sometimes referred to as expertise) and trustworthiness (referred to as character or safety) as dimensions of source credibility. Still others (Bloom and Hautaluoma, 1987; O'Keefe, 1990; Yep, 1992; Roskos-Ewoldsen and Fazio, 1992; Wilson and Sherrell, 1993; Perloff, 1993)

looked to race, physical attractiveness, and gender as valid source characteristics that deserve attention. The majority of the research focused on the source dimensions of credibility such as trustworthiness and expertise (Bloom and Hautaluoma, 1987; Chebat et al., 1988; Lui and Standing, 1989; O'Hara et al., 1991; Mazurcky and Schul, 1992; DeBono and Klein, 1993; Wilde, 1993; Wilson and Sherrell, 1993; Chaiken and Maheswaran, 1994).

Source credibility is defined as the attitude toward the speaker held by the receiver (Perloff, 1993). Wilson and Sherrell (1993) offered a variation of Perloff's definition of credibility, stating that it is the global believability of the message source. Differences in credibility definitions can be found. Nevertheless, the basic idea is that credibility includes characteristics such as trustworthiness and expertise. Both of these qualities have received much attention in persuasion research.

Many studies compare trustworthiness and expertise effects on cognition and attitude changes. The majority indicate that expertise has the greatest impact in changing cognitions and attitudes. For example, Wilson and Sherrell (1993) conducted a meta-analysis of source effects. They reported that analysis of 745 journal articles indicated that overwhelming expertise had the greatest effect on persuasion. Other plausible mediating factors were examined, such as individual differences and message factors, which will be discussed shortly. In summary, expertise interacts with these two issues.

O'Hara et al. (1991) used Fishbein and Ajzen's Theory of Reasoned Action to determine the relative effects of expertise, trustworthiness, and likability on receiver attitudes. The results indicated that expertise influenced source ratings more than trustworthiness and likability. Essentially, their study showed that the three constructs were related, but that different levels of importance were placed on each when evaluating the sources.

One study that countered those of O'Hara et al. (1991) and Wilson and Sherrell (1993) was conducted by Lui and Standing (1989), who evaluated communicator credibility when a persuasive message concerning AIDS was presented to a group of nuns. The message was presented either by a trustworthy source (a priest), an expert (a doctor), or a neutral source (an unidentified citizen). The researchers discovered that the trustworthy source (i.e., the priest) was assigned the highest credibility rating.

Yep (1992) also evaluated the credibility of sources related to information about AIDS. Sources included four entertainment personalities (a TV-movie star, a popular recording artist, a sports commentator, and a radio disc jockey), three from the United States government (a politician, the surgeon general, and a government official), four from well-known professions (a teacher, a priest, a well-known union leader, and a medical doctor), two from the local community dealing with the AIDS epidemic (a counselor from an AIDS clinic and a person with AIDS), and lastly, three from the receiver's social network (a friend, a relative, a spouse or significant other).

The researchers found that the majority of the respondents rated sources directly involved with the AIDS epidemic as most credible. These sources included a medical doctor (96%

credibility rating), a clinic counselor (94%), and a person with AIDS (92%). Yep (1992) also stated that the surgeon general and the teacher had high ratings, while the politician was perceived as the least credible.

Although the methodologies and samples used in Yep's (1992) and Lui and Standing's (1989) studies differ, some preliminary results can still be stated. The involvement in the issue on the part of the receivers could be responsible for the discrepancies in results. The Catholic church, nuns, and priest are probably insulated from the ravishing of the AIDS virus, while an Hispanic community is more than likely inundated with AIDS cases. Consequently, each responds differently to sources regarding AIDS information. Further, nuns are not exactly a high risk group, whereas many Hispanic communities have witnessed a noticeable increase in AIDS cases in recent years. Again, the relevancy of the issue seems to influence source credibility.

When comparing the results from the Lui and Standing (1989) study with O'Hara et al. (1991) and Wilson and Sherrell (1993), some interesting observations regarding differences in reported results can be offered. One possible explanation for the discrepancy among these studies is that a prior and significant relationship existed between the source and the receivers, particularly the priest and the nuns. Thus, it is not surprising that the nuns would select the priest as the most credible source. The church and religious servants of the church place greater importance on virtues such as values, morals, and trustworthiness, and not on expertise. Nevertheless, Lui and Standing (1989) unknowingly touched on an important variable related to the source which addresses prior relationships and similarities between the source and receivers.

The content of the message heard by the nuns could have influenced their choice of credible sources. For example, the message presented dealt with AIDS transmission, which inherently touches on moral and ethical issues for most people. In addition, the message perhaps stimulated an emotional response rather than a cognitive one. Stated differently, the message forces one to "feel" rather than "think." Consequently, trustworthiness may well be a trait associated with emotional response, whereas expertise is associated more with cognition.

Heesacker and Petty (1983) tested a similar hypothesis when they looked at whether source credibility could alter message-relevant thinking. Factor analysis of source credibility (i.e., low vs. high) and message strength (i.e., strong vs. weak) indicated that a highly credible source caused changes in attitudes by invoking the subjects to thoughtfully analyze the message at hand. The researchers concluded that source credibility played a key role in engaging subjects in cognitive evaluation of messages, which does not ordinarily occur. Manfreda and Bright (1991) concurred with Heesacker and Petty's (1983) results when studying communication techniques used in recreation management.

These authors used path analysis to analyze the results of on-site interviews in the Boundary Waters Canoe Area Wilderness and mail questionnaires to determine situations where recipients were expected to engage in thoughtful analysis of information presented. The situation that mediated cognition was the presence of a credible source. Again, it appeared that source traits had some direct effect on whether a receiver engaged in thoughtful evaluation of messages. In summary, although the above research did not specifically address the issue of an expert versus a

trustworthy communicator, the results still implied that credibility (of which expertise and trustworthiness are dimensions) enhances cognitive functions more so than emotional responses (Manfredo and Bright, 1991).

An important aspect of interpersonal communication is being illuminated here. It appears that source credibility does not act in isolation, but that other factors such as message content, receiver characteristics, and the prior relationship and similarity between the source and the receiver may very well influence the perceived credibility of the communicator. In addition, social networks (i.e., the similarity of source and receiver) may influence source credibility and message acceptance, as demonstrated by Ledingham (1993), Krendal et al. (1992), and Mackie, Worth, and Asuncion (1990).

Ledingham (1993) studied a United Way and Contribution Public Information Campaign and discovered that demographics such as gender, income, educational level, and union membership were often better predictors of attitudes and behaviors than exposure to the information campaign or communication or message itself. Specifically, the distinction between givers and nongivers was not necessarily related to exposure to the campaign, but more to interpersonal contact and endorsement by peers.

In an attempt to gain support for a recycling program in a small Midwestern city, Krendal et al. (1992) evaluated a publicized information campaign. It appears that social networks and peer support, more than information, produced changes in attitudes and behavior regarding curbside recycling programs. The community was providing a service that was responsive to the personal needs of the individuals. In reality, given the needs of the community, the same success could have been achieved without advertisement. Making the public aware of recycling alternatives could have been sufficient to produce support for the recycling program.

Although similarity to source was not explicitly stated or studied in Krendal and her colleagues' study, the mere fact that social networks facilitated an increase in curbside recycling behavior illustrates this point. Social networks are usually composed of people who share a common bond. We tend to value their opinions and observe their actions so that we can model their behaviors if we find them acceptable and desirable. This same evaluative process occurs in the context of sources and receivers (Krendal et al., 1992).

Therefore, it is not that sources are the same as our peers (although they may possess similar traits), but that the process of identification is similar when selecting social networks and evaluating the credibility of sources. Social networks can serve as a pseudo-source that influences our behaviors and attitudes. This change in recycling behavior is an excellent example of Rogers' (1971) diffusion of innovation theory in action.

Mackie et al. (1990) studied message strength in the context of group processes (i.e., social networks). They discovered that students were persuaded more by an in-group (peer) strong message (message participants strongly agreed with prior to experiment) as opposed to an in-group weak message. In contrast, subjects were equally unpersuaded by the other-group (non-peer) message regardless of message quality. Messages from a peer seemed to stimulate content

processing, unlike other-group messages, where subjects showed little signs of processing the information. From this study, we can extrapolate that sources with similar qualities facilitated greater attention to the messages and an increase in persuasiveness.

As demonstrated by the studies cited, it appears that social relationships direct us to attend to and accept certain messages. In the absence of such profound social reinforcement, a source's credibility may be more carefully scrutinized. The influence of social networks forms the basis for the two-step flow theory in which opinion leaders influence the attitudes and behavior of their related primary group or social contacts, which is precisely what CIC tried to accomplish (Lazersfeld et al., 1968; Katz and Lazersfeld, 1970; Rogers, 1971).

For example, based on prior polling, CIC officials knew that their credibility was at an all-time low in Cocke County, Tennessee. Until the reputation was repaired, messages would be viewed with great reservations and skepticism. However, if broad-based support of community leaders could be created, then CIC could rely on these credible leaders in the community to inform others of CIC messages. Then, CIC could access the social networks of community leaders and perhaps CIC's messages would be more widely accepted. Consequently, assuming broad-based support of community leaders and an improvement of CIC's image because of the credibility of these leaders, the focus could shift to message factors.

Message Characteristics

Perloff (1993) structured the discussion most succinctly by suggesting that message factors include message content variables and message structure. O'Keefe (1990) and Tan (1981) concurred with Perloff's structure of message-related issues and also added some miscellaneous factors that will be mentioned briefly. The discussion of message-related factors will begin with message content, which looks at evidence-based messages versus vivid and negative messages.

According to Perloff (1993), research literature suggests that expert-endorsed messages enhance persuasion. Evidence-based appeals or expert-influenced messages are defined as ones which are supported by scientific research used to increase persuasion. For example, ads which claim that "nine out of ten dentists suggest a baking soda-based toothpaste to prevent tooth decay and fight cavities" use expert and scientific evidence to sell a certain product or message. However, other ads have graphic, vivid message appeals such as pictures and personal anecdotes. So, when compared, which messages are more persuasive?

Communicators often believe that emotional messages using vivid, graphical descriptions are more persuasive. However, this perception is not based on any empirical research, according to Perloff (1993). He suggested that each message's content can be equally persuasive depending on the context. This suggestion implies that the type of message is dependent on the specific situation.

For example, on issues that have an emotional component such as the AIDS plight, vivid messages may be more compelling than a doctor spouting facts and figures. However, if the Center for Disease Control is trying to persuade Congress to grant more funding for AIDS

research, then expert testimony may bear more weight. In summary, it appears that each situation demands appropriate strategies and a decision should be based on the audience and objectives (Perloff, 1993).

Most of the research in the area of message content focuses on strong versus weak messages, not expert and vivid messages. Nevertheless, empirical research offers a different perspective and perhaps more applicable information, since it is supported by actual scientific evidence.

The use of negative messages is also associated with message content. Although negative political campaigns are often loathed by the public and criticized, they appear to be effective (Tinkham and Lariscy, 1993). After analyzing 300 commercials from the Washington, D.C., area, their findings generally supported the effectiveness of negative ads, especially if negative inferences are made about the opponent.

Lord (1993) conducted a study also looking at negative ads and recycling behavior in a northeastern community. Based on 140 households, he discovered that while positive appeals yielded the most favorable results, negatively framed messages conveyed by a personal acquaintance produced the greatest increase in recycling behavior.

Both studies confirmed the advantages of using negative messages in ad campaigns. However, Tinkham and Lariscy (1993) summarized their article by saying that negative political advertisements work some of the time but that no empirically-based consensus has conclusively identified the criteria by which these ads should be evaluated. In other words, until a methodology or strategy is developed, the effectiveness of negative appeals is largely unknown.

The structure of messages perhaps offers the most insight into how messages influence receiver cognitions and behaviors. Structure includes the bias of messages or sidedness, message order, implicit versus explicit messages, and discrepancy. The bias of the message or one- or two-sided messages has received a great deal of attention. In general, research suggests that two-sided messages are more persuasive. However, this decision also depends on the audience, the messages being delivered, and source credibility (Tan, 1981; O'Keefe, 1990; Perloff, 1993).

One-sided messages are defined as messages that focus only on the position advocated, while a two-sided message presents both the position advocated and any plausible rival views. Implicit in message sidedness is how to deal with arguments. Is it better to present both sides as a way to diffuse opposing arguments, or should other perspectives be ignored so that your point does not become diluted (Perloff, 1993)?

O'Keefe (1990) offered a different slant on the definition of two-sided messages. He suggested that two-sided persuasive messages are advantageous, but that the opposition's argument should not merely be presented but should also be attacked. The difference is that Perloff's definition implies that both sides of an argument be presented, while O'Keefe advocates refuting the other message, not merely presenting it. Tan (1981) concurred with O'Keefe and indicated that two-sided arguments are ones in which the opposition's arguments are refuted.

Consequently, when examining research articles, one must understand how the authors define message sidedness so that the results and recommendations can be interpreted accurately.

Other factors such as audience familiarity with the issue, the receivers' educational level, and the audience's initial opinion appear to influence the sidedness of messages. However, only audience familiarity, not unfamiliarity, with the issue seems to have an impact on how the audience evaluates the message delivered. Nevertheless, O'Keefe (1990) suggested the use of two-sided messages regardless of the audience's familiarity with the issue.

Tan (1981) also suggested that audience demeanor (supportive or unsupportive on the source's message) influences the sidedness of messages. As a general rule, if the audience is hostile, then the opposition should be opposed early in the message. On the other hand, if the audience is friendly, then the opposition should be refuted later for better results. Perloff (1993) cited several studies that refute arguments both initially and later in the presentation, independent of audience orientation toward the issue. He did add that two-sided messages tend to acknowledge the receiver's intelligence (i.e., "I know that you are aware of the two sides"), and that two-sided messages allow for counterarguments.

For example, Chebat et al. (1988) reported that two-sided messages were more effective in producing attitude changes with few arguments, and that the converse was true with one-sided messages. In other words, when both sides are presented, fewer arguments are needed than when only one side is presented. If recipients were initially unfavorable, the expert source was more persuasive. When Chebat and his colleagues looked at the interactive effects, they discovered some interesting results.

If the message was one-sided and the number of arguments high, then low expertise was more effective with audiences that were initially opposed. The researchers reasoned that the relationship between number of arguments and type of expertise was compensatory in nature in that the number of arguments offset the level (or lack) of expertise. In addition, they concluded that an increased number of messages and high expertise could be too strong for the receiver and may actually have an adverse effect. Finally, the researchers determined that cognitive processes were much more acute when arguments were two-sided.

Knowing when to refute the opposition is a matter of how messages should be ordered. Should your strong messages be presented first, or should the conclusion be climactic, containing the most compelling arguments last? Perloff (1993) suggests that both climactic and anticlimactic ordering produce noticeable changes in attitudes when presenting a persuasive message.

Tan (1981) defined ordering as the sequencing of agreeable versus disagreeable arguments. He stated that strong and agreeable arguments should be placed at the beginning, when information is learned most. Perloff (1993) and Tan (1981) both concurred that strong messages or agreeable arguments should never be placed in the middle. This is where information is least retained, as opposed to the beginning and the end.

Wu and Shaffer (1987), Pratkanis and Aronson, (1992), and Baker and Petty (1994) looked at the issue of counterarguments in persuasive communication. Wu and Shaffer (1987) offered some insights into the relationship between types of argument and experience. They found that receivers who have a direct experience (of the issue) were more likely to be resistant to counterarguments than receivers with indirect experience. Baker and Petty (1994) offered yet another slant on counterattitudinal arguments.

They suggested that changes in attitudes are more likely to occur if an unexpected or counterintuitive argument is presented. For example, if the source is associated with the "majority" viewpoint and presents a counterargument, then receivers are more likely to be persuaded to believe that source and counterargument, even though they are aware that it is advocating something different than expected. In contrast, if a minority advocates the majority's position, then the speaker and messages are likely to have a greater impact on the attitudes of the receivers. Thus, either minority or majority positions can enhance persuasion if the pairing is unexpected.

Pratkanis and Aronson (1992) offered support for Baker and Petty (1994). They cited the real-life examples of unexpected endorsements by different sources. The heir to the R. J. Reynolds fortune, Patrick Reynolds, has been instrumental in the fight against tobacco companies. His strong position against smoking is widely known, and he has even advocated that smokers should file wrongful death suits against tobacco companies. In addition, one of the most effective nuclear weapon disarmament advocates appears to be J. Robert Oppenheimer, a world-renowned nuclear physicist (Pratkanis and Aronson, 1992).

These two men have several things in common. First, they are experts in their fields of study. Secondly, they have nothing to gain by advocating these positions, many of which are contrary to their respective backgrounds (Pratkanis and Aronson, 1992). As Baker and Petty (1994) demonstrated, people are more apt to believe messages presented by sources who have not succumbed to the pressure of agreeing with their respected colleagues.

O'Keefe (1990) and Perloff (1993) continued their discussions of message structure by addressing implicit versus explicit conclusions and whether to make recommendations to the audience or to allow receivers to draw their own conclusions. Intuitively, there are good arguments for both approaches. Making a point clearly leaves little room for misunderstanding. However, if the communication allows the audience to reason on their own, then they may be more persuaded than if they had been directed toward the intended conclusion.

Both approaches are plausible, but if the audience is highly involved and well-versed on the issue, the implicit conclusion is recommended. The authors reasoned that if the person is educated on the issue, then they can follow the arguments and draw the desired conclusion (O'Keefe, 1990; Perloff, 1993).

In general, communicators should develop messages based on receiver traits and source credibility. For example, if receivers are knowledgeable about the subject matter, then a two-sided message with counter-arguments is appropriate. However, if the audience is not well-

versed on the subject matter, then a one-sided message may produce more desirable results (i.e., attitude changes). The research also suggests that source credibility influences how people attend to messages. For instance, if the source is viewed in a negative manner, then a more credible source presenting the message may prove to be advantageous. The key is to know your audiences and their characteristics so the source and message have a greater impact on the audiences.

Thus far, the various aspects of messages, including message content and message structure, have been discussed. Message repetition is of utmost importance in the evaluation of CIC communication efforts. In fact, one of the objectives is to determine if CIC messages were repeated by community leaders to their peers. In addition, message repetition will be used to measure the degree of accuracy and agreement.

Wilson (1971) looked at the use of various channels and message recall. The overall loss of information was greatest for radio and television as opposed to print (i.e., newspaper). A more plausible explanation is that exposure time and detail is a function of message recall, and channel effectiveness explains the discrepancy in recall. Most television news stories are sensational and serve to attract the viewers' attention, but lack substantial detail due to time limitations. Newspaper stories may lack attention-grabbing headlines in some cases. Nevertheless, once the audience is captured, then the detail of the story holds the reader's attention longer than a 30-second television story.

DeBono and Harnish (1988) briefly mentioned message recall and factors that influence this process. They reported that based on the number of items recalled, there was no significant effect of message strength. However, they did find that low self-monitors recalled more messages when listening to the expert source as opposed to the attractive source. The rate of recall for high self-monitoring individuals did not significantly differ with the type of source. Nevertheless, high self-monitors did recall significantly more information than low self-monitors when they heard an attractive source. These results are supported by Finnegan et al. (1989) and Mick (1992).

Finnegan et al. (1989) and Mick (1992) studied message recall based on a mass media campaign that disseminated information on heart disease risk factors and preventive actions. They conducted four face-to-face interviews or question cycles with 7,158 subjects exposed to the Minnesota Heart Health Program communities from 1980 to 1984. Four "question cycles" were completed with each subject to determine frequency and type of messages recalled.

The results indicated that as the number of cycles increased, the average number of messages recalled decreased. In fact, the majority of the messages (72%) had been recalled by the second cycle. The researchers also looked at various demographic variables such as education, gender, community type, and age in relation to message recall.

When all four cycles were compared to determine if the demographic factors were mediating variables, prediction was poor. So the researchers did an analysis that focused on polar extremes (i.e., the first two cycles versus the last two cycles). This analysis indicated that education was a highly significant predictor for message recall, while community type and gender did not yield

high predictive power. The age of the subjects did predict message recall rates in that older people were less likely to recall messages than younger subjects. Finally, the researchers assessed the frequency of the type of message recalled (i.e., general or specific). They concluded that no evidence supported either general or specific messages being recalled more frequently.

Mick (1992) examined levels of subjective comprehension of consumers in mass media advertising processing and their relations to ad perceptions, attitudes, and memory. The results associated with recall and memory suggested that self-referenced (i.e., personalized) ads were neither conducive nor detrimental to message recall. A threshold effect seemed to be in effect in that personal elaborations had a positive effect up to a certain point and then became dysfunctional. However, the researchers never offered an explanation of these threshold effects on message recall, but stated that further research is needed to clarify these findings (Mick, 1992).

Although these research results related to message recall are based on the messages conveyed via the mass media and not interpersonal channels, they specifically addressed some of the same objectives as the CIC communication project. In addition, the studies offer some guidelines as to what to expect when predicting the results of this project.

CIC Application of the Source-Message-Channel-Receiver Effectiveness Model

In Cocke County, Tennessee, CIC used interpersonal channels to disseminate messages related to the Pigeon River, but in other counties messages were more specific to forestry and CIC's long-standing forest management practices in Tennessee. Simply, CIC wanted to establish itself as a forest products company concerned with forest management. The channels selected to disseminate information were again based on past successes, rather than empirical research. Success seemed to be measured by polling, in which more favorable attitudes were reported.

Once CIC's reputation improved in Cocke County, this paved the way for wholesale message delivery using the mass media. Commercials were based on the premise that print and electronic media continued to focus on CIC's past problems with the Pigeon River, not on improvements in water quality. Consequently, message strategies for the commercials were intent on countering the negative publicity from local newspapers and television coverage.

The first set of commercials was aimed at communicating to the audiences that CIC had something to learn from Tennesseans and was willing to listen. The second set of commercials focused on the Pigeon River and the improvements in water quality. Specifically, the commercials informed the targeted audience that 25,000 people rafted the river in the summer of 1994, for example, and consequently people should conclude that water quality had indeed improved. Additionally, CIC wanted to portray the river as an economic, aesthetic, and environmental resource for Tennessee. Overall, CIC wanted to offer counter-arguments to past and present negative messages disseminated by the print and electronic media.

Source-Message-Channel-Receiver Effectiveness Model -- Conclusions

Stern (1994) discussed traditional communication models by saying that each describes a process whereby a source, message, and recipient are engaged in the art of speech. Many assume that this process is sequential, linear, and flowing in only one direction. Some models appear to ignore the interactive nature of these communication dimensions. This seems to be a common interpretive error.

More accurately, the relationship among the source, message, channel, and receiver is a "dynamic interaction." For example, source credibility and receiver traits influence message acceptance, while message content and receiver traits influence source credibility and channel effectiveness. There are numerous combinations of these dimensions. Paying careful attention to each and realizing their combined effect can enhance the success of any public relations campaign.

CHAPTER IV

RESEARCH METHODS AND PROCEDURES

Evaluation of the ETEP communication program was framed in the context of the SMCRE model measuring variables associated with coorientation and consistency theory (McLeod and Chaffee, 1973; Wackman, 1973; Broom and Dozier, 1990; Ehling and Dozier, 1992). Specifically, in-depth personal interviews and a mail questionnaire were conducted to determine if CIC communication efforts regarding the ETEP increased accuracy and agreement of community leaders in Anderson, Campbell, Cocke, and Scott Counties. Interviews revealed the extent to which community leaders were exposed to CIC messages, whether messages were received by community leaders, the accuracy with which these messages were perceived, and whether messages were accurately repeated to others. Finally, the interviews and questionnaire offered insight into which channel was most effective at increasing accuracy and agreement.

Research Design

A quasi-experimental design using a one-group pretest-posttest was employed for this research. This research design seemed most appropriate since changes in the dependent variables were being measured over time. In addition, exposure to the independent variables could not be controlled. Nevertheless, control was simulated in the data analysis (Manheim and Rich, 1995). The independent variables were the start-up of the chipmill operation, CIC's organizational and interpersonal communication, and the channels used to deliver messages. The dependent variables included degree of accuracy, degree of exposure, and degree of agreement. These coorientation variables were defined as the similarity of CIC's estimate of the issue and the public's estimate of the issue and the similarity of CIC's and community leaders' cognition about issues such as forestry, the Pigeon River, and CIC, respectively.

Three measurements of the dependent variables, accuracy and agreement, were collected. Two in-depth interviews were completed with the same community leaders over a 17-month period. The first interview, the pre-chipmill interview (X_1), was conducted in August 1995, approximately one year prior to the chipmill start-up, and the second interview, the post-chipmill interview (X_3), was completed in January 1997, approximately five months after the chipmill became fully operational.

The third measurement of accuracy and agreement (X_2) coincided with the start-up of the chipmill in August 1996, and was in the form of a mail questionnaire sent to the same community leaders who participated in the two in-depth interviews.

Study Area

The study area was located in four counties in east Tennessee. The majority of the Cumberland Forest and chipmill sourcing area was located in Anderson, Campbell, and Scott Counties. CIC communication efforts were concentrated in these areas, therefore defining the study area. Cocke County was also included in the study area, given the history and notoriety of

the Pigeon River in east Tennessee and the fact that the same communication efforts were employed there.

Population

Participant observations and unstructured interviews were used to identify community leaders in Anderson, Campbell, Cocke, and Scott Counties. Community leaders were defined as visible leaders in a community who, by their official or informal positions, have power and authority (Katz & Lazarsfeld, 1970). Examples of identified community leaders (i.e., sample population) include elected county officials, educators, chamber of commerce board members, industry leaders, environmental group leaders, and civic club leaders. Once community leaders were identified, a purposeful sample was used to define the sample for this research.

A total of 65 community leaders were contacted for this project, with roughly equal numbers from each county. Of those contacted, 58 agreed to participate. When leaders were initially contacted in July, 1995, only three refusals were noted, while four individuals declined to participate due to scheduling difficulties.

Operational Definitions

Operational definitions were decided for the concepts of accuracy, agreement, CIC source-image, and the mass media source image. Identical measures of each concept were included in the pre- and post-chipmill interviews. In addition to the measurement of accuracy and agreement for the interviews, a third measure of these concepts was included in the mail questionnaire.

In the interviews, accuracy was operationalized as the degree of interpersonal communication. The variable, degree of interpersonal communication, was measured by the percentage of correct messages reported to the interviewer when asked to recall CIC messages.

In contrast, agreement was defined as the degree of coorientation that occurred. This variable, degree of coorientation, was measured by the percentage of correct messages repeated to others (i.e. two-step flow theory). In other words, the number of shared attributes reflected agreement. Shared attributes in this case are messages. I assumed that if community leaders repeated CIC messages to others, then they likely attended to the source and had a somewhat favorable opinion of the source before repeating messages from it. Consequently, I assumed that repeating CIC messages to others was some indication of coorientation or a coincidence of common messages. The messages just happened to be CIC messages.

On the mail questionnaire, measures of accuracy and agreement were included. The questions used to assess these concepts are found in Appendix F (page 3, questions 3a-3d, and page 4, questions 4a-4d). These measures differed from the pre- and post-chipmill interviews in that they were a more generic evaluation of the degree of interpersonal communication and coorientation. Both indices for accuracy and agreement were calculated by averaging statements that I believed had face validity in measuring these concepts. Pearson Product Moment Correlation Coefficients were then calculated for the overall average with each statement used to

calculate this average. Correlation coefficients greater than .60 were determined to be strongly associated with the concepts of accuracy and agreement. An additive index was then used to measure the degree of accuracy and agreement for statements strongly associated with these variables. This same process of developing indices for accuracy and agreement on the mail questionnaire was applied to the concepts of trust in CIC as a company (Appendix B, questions 1-3 and 5-7, pre- and post-chipmill interviews), and the mass media-source image (Appendix B, questions 1-2, pre- and post-chipmill interviews).

CIC Communication Messages and Channels -- Overview

Several key CIC employees⁶ were interviewed regarding the operational goals and communication strategies of the ETEP. Employees were asked to identify operational goals, communication goals, and salient messages. There were slight variations in responses, but answers were generally consistent across interviews. The goal of the messages was to inform community leaders of CIC operations in hopes of gaining support for the chipmill, the Pigeon River policy, and the company in general.

CIC initiated the ETEP in the summer of 1993. CIC understood the atmosphere in east Tennessee given the Pigeon River issue and other cultural underpinnings (i.e., the history of the coal industry) and believed that these issues would be difficult to overcome. Originally, the operational goal was to purchase timberland in east Tennessee and build a chipmill. The communication goal in east Tennessee did not materialize until the time of the Anderson County conflict (i.e., the introduction of the resolution making BMP's mandatory in Anderson County). At this time, CIC realized that it was crucial to identify community leaders in Anderson, Campbell, and Scott Counties and deliver a series of salient messages to these leaders.

In the meantime, from 1992 to the present, Jim Carraway, CIC Director of Environmental Projects, contacted and informed community leaders in Cocke County about operational changes at the Canton, North Carolina, papermill, with some success at gaining support. Identifying and contacting community leaders then became the CIC communication strategy in the Cumberland Forest area. Ultimately, CIC wanted to create broad-based support of opinion leaders and the community in general.

CIC Channel Descriptions

Several communication channels, both interpersonal and mass media, were used to deliver key messages. Interpersonal channels included mill and woodland tours, river float trips, speaking engagements, phone calls, personal visits, and newsletters. Mass media channels included

⁶Personal interviews with: Adlai Platt, Operations Manager, Cumberland Forest, Powell, Tennessee, April 27, 1995; Jim Carraway, Director of Environmental Projects, Stamford, Connecticut, April 27, 1995; Tucker Hill, Director, Public Affairs Printing and Writing Papers, Timberlands, Courtland, Alabama, April 27, 1995; Carlton Owen, Director of Wildlife and Forest Resources, Greenville, South Carolina, May 1, 1995; Bob Turner, Vice President, Public Affairs, Stamford, Connecticut, January 19, 1996.

submissions to newspapers, commercials featuring community leaders from Tennessee, sporting events, and print media ads initiated by CIC. Each channel will be described briefly.

Direct Experience/Interpersonal: Tours

Mill tours consisted of a brief introduction to the Canton papermill operations, usually conducted by Derric Brown, Director of Environmental Projects. Guests were outfitted with hardhats, earplugs, and disposable oxygen masks in compliance with Occupational Safety and Health regulations.

Mr. Brown typically showed guests the pine and hardwood fiber lines and the central operation of both of these lines. Additionally, the new scrubber installed as part of the \$350 million modernization project was highlighted. Next, guests were shown the final product -- enormous rolls of paper. The discharge pipe located in the center of the Pigeon River below the mill was also shown so that comparisons could be made between water color upstream of the effluent to that below the discharge pipe. The mill tour culminated at the water treatment facility which also serves the city of Canton. Total length of time for the mill tour was approximately three hours.

In some instances when the guests had time, a mill tour also included a whitewater rafting trip down the Pigeon River. CIC hired a local outfitter from Hartford, Tennessee, to take groups down the river as a way to show the improvements in water quality. Usually a CIC representative accompanied the guests on the river trip to answer any questions.

The trip started approximated 30 miles downstream from the Canton mill, just inside the Tennessee state line below the Carolina Power and Light Electric Generation Plant. The trip was approximately four and one-half miles, ending in Hartford and lasting about one hour and fifteen minutes, depending on water flow.

Travel arrangements for mill and river tours were usually made by CIC, since most participants were travelling from Tennessee. Transportation was provided by CIC unless interested parties wanted to meet at the mill site or river location.

Woodland tours were conducted on the Gulf Tract, located in Cocke County, and the newly acquired Cumberland Forest north of Knoxville. Travel in CIC vehicles was prearranged by a company representative. On the Gulf Tract, guests were shown an overview of the property from Max Patch, North Carolina, including the general property boundaries. Other scheduled stops included stands of various ages, ranging from recent clearcuts to mature forests that had been previously harvested. Recreational spots, including a primitive campground and trout streams, were also pointed out to visitors.

The tour on the Cumberland Forest highlighted a variety of site conditions and previous harvests. However, this tour differed somewhat from the Gulf Tract tour due to the extensive coal mining history. Cultural impacts from mining as well as human impacts (i.e., solid waste) were shown as a way of explaining the challenges that CIC faces in managing this property. Both

woodlands tours typically lasted all day, with shorter tours available depending on time constraints.

Interpersonal: Speaking Engagements and Phone Calls

Speaking engagements were arranged with civic, professional, and environmental groups. Either CIC would contact a specific organization, or a program chair for a group would contact a CIC representative. The meetings generally lasted one hour. The CIC representative presented a predetermined set of messages and allowed an opportunity for the audience to ask questions. Several different CIC employees made such presentations, but the messages were generally the same for each.

Phone calls and personal visits were conducted on an "as-needed" basis with community leaders. Messages for these channels were probably inconsistent, given the range of possible issues that could be discussed and the number of CIC employees engaging in this channel.

Interpersonal: Newsletter

The newsletter was written by Jim Carraway, CIC's Director of Environmental Projects. It highlighted recent operational and policy changes in east Tennessee and western North Carolina. Specifically, the content of the newsletter focused on the Canton mill, the Pigeon River, the Cumberland Forest, and the new chipmill. It was sent to approximately 300-400 community leaders, primarily in Tennessee. The frequency varied but generally it was distributed two to four times a year.

Mass Media: Newspaper Submissions

CIC also submitted forestry and wildlife-related news articles written by Carlton Owen, Director of Wildlife and Forest Resources, Greenville, South Carolina, to local newspapers in east Tennessee. These articles presented CIC messages in addition to other company and professional (i.e., forestry and wildlife) information.

Mass Media: Television Commercials and Whitewater Events

Television commercials were shown in the east Tennessee market. These commercials focused on both the Pigeon River and the Gulf Tract. Various community leaders from Tennessee appeared in the commercials and discussed CIC-related environmental policies and management practices. In addition, some of the Pigeon River commercials showed a family camping beside the river, a group of teenagers swimming in the river, a member of the United States Canoe and Kayak Team (USCKT) kayaking, and a family fishing on the river. Commercials started in the spring of 1994 and continue to appear periodically.

The USCKT Whitewater Shootout was a slalom racing event held in 1993 and 1994 on the Pigeon River. CIC was involved with the event as a corporate sponsor of the USCKT. Local

recreational paddlers were given an opportunity to race against top Olympic athletes. Anyone who beat an Olympian's time won \$1,000.

In 1996 and 1997, the venue was elevated to one of the sanctioned USCKT whitewater series. Olympic paddlers worldwide entered the event and competed for a purse of \$3,000 to \$5,000. Points were also earned which helped each athlete improve his or her overall world standing. Any USCKT member could enter the slalom race. Although the whitewater race was not a traditional channel, it provided CIC an opportunity to answer community leaders' questions or provide additional information to community leaders about CIC and the Pigeon River. In addition, the venue also generated some mass media attention for CIC (i.e., print and electronic coverage), given their role as a corporate sponsor of the USCKT.

CIC Message Description

Messages ranged from general information on CIC to more specific facts regarding papermill operations and forestry issues. Specifically, the following general messages were salient throughout CIC's communication to the community leaders and the public:

1. Come see our forests; don't take our word for it.
2. Come paddle the river and see the improvements.
3. We are inviting people to see the river and then we will be held to standard by those watching for improvements.
4. We acknowledge that we had a problem on the Pigeon River for a long time but we are beginning to address this problem. We are progressing, but we are not where we want to be.
5. We want to be good neighbors and stewards of the forest.
6. CIC was awarded the "Conservation Organization of the Year Award" by the Tennessee Conservation League in 1994, and received numerous conservation awards in 1995.
7. Over 20,000 people rafted the Pigeon River in 1994.

More specific messages included:

1. CIC has been in Tennessee for 60 years and plans to be there indefinitely.
2. CIC plans to manage the Cumberland Forest on a sustained yield basis looking at the whole range of resources, not just timber. Other resources include wildlife habitat, water quality (BMP's), and special places (i.e., threatened and endangered species).
3. Massive site conversion from hardwoods to pine will not occur. A hardwood forest will be maintained.

4. Reforestation will take place, either naturally or planted, depending on the site.
5. The chipmill will provide a market for low-quality hardwood which has not existed in the past. It will provide landowners with the ability to improve the overall health of east Tennessee's forest resource.

The objectives of this research, as stated earlier, were to determine (1) the extent to which community leaders were exposed to some medium and message, (2) whether they received the message(s), and (3) whether they repeated the message(s) accurately to others. In addition, it was important to determine whether attitudes (favorable or unfavorable) of community leaders changed or their original position was strengthened as a result of the messages delivered and media used.

The start-up of chipmill operation was anticipated to be a controversial event. This process provided a framework for evaluating the effectiveness of communication channels and messages delivered over the previous three years by CIC. Community leaders would likely have been called upon by the general public to offer their views about the chipmill operation. The content of messages repeated serve as a criterion for evaluating CIC's communication efforts used in the ETEP. Message accuracy and repetition was evaluated over a 17-month period coinciding with the construction period of the chipmill (pre-chipmill operation), start-up of the chipmill, and the operation of the chipmill (post-chipmill start-up).

Interviews

Interview Questions

All interviews consisted of a predetermined set of questions, yet allowed probing and clarification when appropriate and necessary. Questions adhered to a funnel format. This format starts with broad or non-threatening questions regarding the forest products industry in east Tennessee in general, followed by specific questions about known companies, specifically CIC. Identical interview questions were used for the pre-chipmill operation interview and post-chipmill start-up interview with some modifications.

On the pre-chipmill interview questionnaire, community leaders were given the opportunity to name any forest products company. If CIC was named, then the interview focused on CIC. If not, the interview focused on the forest products company named. In the post-chipmill interview, community leaders were informed that the interview would focus on CIC since the intent of the study was to make comparisons over time.

In addition, the channel exposure was approached differently. Community leaders were reminded of the channels they had indicated exposure to in the pre-chipmill interview. They were then asked if they had been re-exposed to these same channels or any new channels. Message repetition and recall were assessed, but the assessment was cumulative. It seemed impossible to ask community leaders to repeat messages they had only been exposed to since the pre-chipmill interview. Moreover, community leaders were given the opportunity to explain why they named

CIC in the pre-chipmill interview. Finally, demographic information was omitted from the mail questionnaire and post-chipmill interview since this information was unlikely to have changed.

Both open-ended and closed-ended questions were used in each interview. Open-ended questions generally assessed message knowledge and accuracy (see Appendix A for a complete list of CIC messages), respondents' perceptions of communication channels, and attitudes of community leaders. These responses were recorded verbatim by interviewers. Closed-ended questions were also used to determine exposure to specific channels and messages, attitudes toward the mass media and CIC, and demographic information. Closed-ended questions were pre-coded. These questions followed a "yes," "no," or "I don't know" format or a seven-point Likert Rating Scale.

The Likert Rating Scale included responses one to five which followed a "strongly disagree to strongly agree" format. The sixth response corresponded to "not enough information/I don't know" and the seventh response was "no answer." All likely answers to closed-ended questions were generated prior to the start of the interviews. Interviewees were provided with a Likert Rating Scale form to minimize the time spent repeating possible responses. Open-ended questions were used to evaluate channel effectiveness and any changes that community leaders suggested CIC should make in its operations. Content analysis was used to evaluate and quantify these open-ended responses.

Interview questions followed the SMCRE model. An adequate number of questions addressed each step of this model (see Appendix B for complete pre- and post-chipmill interview questionnaires). For example, questions addressed exposure to CIC channels and messages, what messages were received, whether the messages were repeated, how accurately the messages were repeated in the interview and to other respondents, perceptions of the various channels, and attitudes of the respondents. In addition, demographic information was obtained. Finally, questions evaluating the mass media in general were included. The second interview was essentially identical to the first except for the changes noted so that attitude changes could be detected over time. The demographic information was omitted from the mail questionnaire and post-chipmill interview.

Interviewers

The researcher interviewed community leaders that she had not previously met. Additional interviewers were recruited from forestry graduate students at Virginia Tech. Interviewers were trained by the researcher.

Pre-tests

Pre-tests of the interview process were completed with a comparable sample from the east Tennessee area. Community leaders from Knox County were contacted via letter and telephone with a 100% response rate. Seven pre-tests were completed two weeks prior to the pre-chipmill interviews. Changes in interview questions and format were made, but these changes decreased

significantly after the fifth pre-test interview. Pre-tests for the post-chipmill interviews were not necessary, since essentially the same interview questions were used.

Interview Schedules

Selected community leaders in the study area were mailed a letter describing the purpose and nature of the study, time commitment required, and expectations if they agreed to participate (Appendix C). Letters were followed by a phone call from the interviewers approximately a week after mailing. At that time, appointments were made for the interviews.

Due to scheduling difficulties, seven respondents who had previously agreed to participate cancelled the week of the interviews. Subsequent telephone interviews were completed with this group. Methods of contacting community leaders followed Dillman's (1977) suggestions. The same method of contacting community leaders was used for the post-chipmill interviews (See Appendix C).

Interview Content

Interviews were designed to last 15 to 20 minutes. During this time, respondents signed a Virginia Tech Human Subjects Release Form (Appendix D), completed the questionnaire, and asked any questions about the project. Each respondent was given a copy of the release form explaining issues of confidentiality. Each respondent was also mailed a thank-you letter (Appendix E) immediately following the completion of the pre- and post-chipmill interviews.

Respondents were provided with a self-addressed stamped envelope to mail to the principal investigator if they wished to receive a summary of the results. Requests were mailed to community leaders.

Mail Questionnaires

The mail questionnaire (Appendix F) was sent in July 1996 to the same community leaders interviewed. The content of the mail questionnaire evaluated accuracy and agreement. The questionnaire format again adhered to a funnel approach, whereby general questions led to more specific ones. Again, community leaders were asked to identify issues related to the forest products industry in east Tennessee. In addition, respondents were asked to name one forest products company in east Tennessee. Responses to the remainder of the questions were related to the company named earlier.

The same seven-point Likert scale used in the interviews was used to assess accuracy and agreement. Open-ended questions were used to assess concerns, the reason why respondents named specific companies, and the knowledge of environmental practices used by the forest products industry. Content analysis was used to evaluate and quantify open-ended responses.

In general, the intent of the mail questionnaire was specifically to evaluate how community leaders perceived the chipmill issue and what they perceived as CIC's cognition about the chipmill. Finally, the level of concern, if any, regarding the chipmill operation was evaluated.

Pre-Tests

Mail questionnaires were pre-tested with the same group of community leaders in Knox County used to pre-test the pre-chipmill interview questions. Pre-tests were received and minor changes made in the questionnaire content and format.

Mail Questionnaire Format

Subjects were mailed the questionnaire, along with a cover letter (Appendix G) explaining the intent of the questionnaire. A self-addressed stamped envelope was provided so that subjects could return the questionnaire at no cost. Questionnaires were mailed to the 58 community leaders on July 31, 1996.

Thirteen questionnaires were returned by August 13, 1996. On August 15, a reminder postcard (Appendix H) was mailed to community leaders who had not yet responded. Community leaders who had not yet responded were given a courtesy call on August 20 or 21 requesting that they complete the questionnaire and mail it as soon as possible. On August 21, questionnaires were mailed again with a new cover letter (Appendix I) explaining the importance of responding.

By September 18, 1996, 41 community leaders had responded. Community leaders were mailed thank-you letters (Appendix J) immediately after their questionnaires were received. Two community leaders withdrew from the study. They received letters thanking them for their earlier participation and acknowledging their withdrawal (Appendix K).

On September 5, community leaders who had not responded were mailed a letter stating appreciation for their participation in the pre-chipmill interview and containing a reminder to complete and return the mail questionnaire (Appendix L). This letter also stated that they would be contacted in early December of 1996 so that the post-chipmill interview could be scheduled.

Analysis of Results

Content Analysis

Berelson (1971) defined content analysis as "a research technique for the objective, systematic, and quantitative description of the manifest content of communication." However, Krippendorff (1980) and Weber (1990) expanded this definition to not only describe the data but also make valid inferences regarding textual material. In other words, inferences can be made about latent content as well as manifest content.

Krippendorff (1980) pointed out that Berelson's definition fails to explain the importance of number counts and how they can be used to classify, categorize, and count ideas, values, and attitudes, as well as frequencies of words. Carney (1972) expands Berelson's original definition to include larger questions of the process of communication and the effects of communication. He warns researchers that content analysis should be situated in the context of theoretical models as a way to justify its use.

Krippendorff (1980) outlines a number of situations in which content analysis is appropriate, including (1) describing trends in communication content, (2) auditing communication against objectives, (3) reflecting attitudes, perceptions, interests, and values of audiences, and (4) describing attitudinal and behavioral responses to communication. In this project, Krippendorff's (1980) broader view of content analysis will be adopted and applied to the data collected from the pre- and post-chipmill interview questions and the mail questionnaire.

Content analysis for this data set determined the degree of accuracy and agreement among community leaders and illuminated their attitudes, interests, and values related to CIC. Additionally, analysis allowed an accurate description of attitudinal and behavioral responses to CIC communication efforts.

Specifically, the part of the operational definitions of accuracy included frequency of message exposure, accurate message comprehension, and accurate message repetition. Subjective evaluations of accuracy included whether community leaders reported if information was obtained via the channels (i.e., self-report); in other words, the degree of interpersonal communication. Agreement was objectively defined as accurate message comprehension in comparison to the total number of messages repeated. Subjective measures of agreement included self-reported changes in attitudes due to communication efforts. Channel effectiveness was defined as the channel that increased accuracy and agreement most. In addition, channel effectiveness was based on self-report of community leaders (i.e., which channels they reported as most effective and why). Finally, the mail questionnaire specifically evaluated accuracy and agreement based on the operational definition of each of these coorientation variables.

Application of Content Analysis -- Category Definitions

Interview questions and mail questionnaires were based on coorientation variables (i.e., accuracy and agreement) placed in SCMRE constructs. Questions generated both closed-ended and open-ended responses. Content analysis was used to organize and analyze the open-ended questions in both sets of interviews and the mail questionnaire. Comparative analysis of the interview results and mail questionnaire was conducted.

Categories developed included operational definitions that were mutually exclusive. Categories were also based on theoretical foundations reflecting the major components of the coorientation model (i.e., accuracy and agreement). Finally, categories were developed keeping in mind the overall research objectives (i.e., message and channel exposure, determining which channels and messages produced most desirable results -- accurate repetition of messages to interviewers [accuracy] and peers and attitude changes [agreement]).

Initially, a two-step category scheme was developed for the first interview responses. For example, a broad category such as positive response included more detailed responses or condensed categories. This category scheme was abandoned due to low reliability coefficients. Consequently, only broad categories were used for the pre-chipmill and post-chipmill interviews and mail questionnaire. Nevertheless, the detail provided by the condensed categories was then used when interpreting the broad categories. Thus, more concise explanations of responses were offered. A complete list of categories for the pre- and post-chipmill interviews and the mail questionnaire is contained in Appendix M. Community leader responses to open-ended questions for each data collection time can be found in Appendix N.

Reliability and Validity of Content Analysis

According to Krippendorff (1980), reliability can be of three distinct types -- stability, reproducibility, and accuracy. Stability is the extent to which the content analysis process is unchanging over time. Stability is confirmed under test-retest circumstances where the coder is asked to code data twice at different points in time. Krippendorff pointed out that stability is the weakest type of reliability and should not be used alone.

Reproducibility is the degree to which the content analysis process can be duplicated under different circumstances using different coders. Reproducibility was accomplished by having at least two coders, assuring inter-coder reliability. The coders' records were then compared to identify discrepancies in assignment of numerical values.

Finally, accuracy is the extent to which the data collected and codes assigned reflect some known standard. In this case, a known, previously tested standard must be available. Accuracy is the strongest test of reliability, but it is also the most difficult to obtain given that known standards may not exist. In this project, stability and reproducibility were used to test reliability of categories and coding. Initially, only two coders were employed, since condensed categories were used. However, due to the low reliability coefficients, broad categories were used and three different coders were then trained to code the pre-chipmill interview questionnaires. For the mail questionnaire and post-chipmill interview questionnaire, three new coders were trained.

Three coders in addition to the researcher coded the data collected from the open-ended interview and mail questionnaires. Coders were trained by the researcher as to the operational definitions of each category and the associated question. Coders did not collaborate as to what category was most appropriate for each response.

Reliability coefficients were calculated based on Scott's Pi using nominal categories. Variations from the researchers' coding (i.e., percent differences) were generated and the results entered into Scott's Pi equation (Krippendorff, 1980). Coefficients .70 and under were rejected. If a reliability coefficient was .70 or less, then diagnostic devices were employed to determine the problem areas. Once the source was identified and corrective measures taken, recoding was repeated until a coefficient of .70 or higher was achieved.

Validity of content analysis refers to the extent that inferences are true in the face of independently obtained evidence (Krippendorff, 1980). Weber (1992) clarifies this definition by saying that validity in content analysis is concerned with the classification scheme or the extent to which a category represents an abstract concept. In other words, validity addresses the question, "Do the categories derived actually reflect a response and do the categories measure the construct?"

Although several types of validity can be identified, only face validity was satisfied. Face validity is the extent to which a category appears to measure the construct it was intended to measure based on the opinions of experts related to the research (Weber, 1992). In this case, face validity was the extent to which categories reflect perceptions of the public's/community leaders' view of the issue and the public's/community leaders' estimate of corporate views based on the coorientation variables which are framed in the SMCRE model (Broom and Dozier 1990; Cutlip et al., 1985). Face validity was satisfied by having the research committee examine the content of the interview and the mail questionnaire and having the coders scrutinize the categories selected.

Statistical Application to Content Analysis and Mail Questionnaires

Many statistical and interpretive options are available for content analysis. Once the data were coded appropriately, descriptive statistics were calculated. The goal of the analysis was to provide insight into the perceptions of the community leaders regarding salient issues related to CIC and the community leaders' perception of CIC's corporate views. Specifically, descriptive statistics (i.e., frequencies, means, standard deviations, contingency tables, and measures of association) identified the most frequently reported issues related to CIC and common associations. Further, strength of relationships between channels and messages and accurate message repetition were evaluated using contingency tables and measures of association depending on the level of measurement. Finally, changes reported from the pre-chipmill interview to the post-chipmill interview were determined by applying the student t-test to the Likert Scale responses.

CHAPTER V

RESULTS

The specific objectives of this study were to:

1. Determine whether community leaders were exposed to CIC messages;
2. Determine whether messages were received by community leaders;
3. Determine the degree of accuracy and agreement for community leaders exposed to CIC messages;
4. Determine the communication channel(s) that were most effective in increasing accuracy and agreement; and
5. Recommend communication strategies that can be used in the future by the forest products industry.

A total of 54 community leaders participated in this 17-month study, in which two in-depth interviews and a mail questionnaire were completed. Community leaders were chosen by purposeful sample from a population of leaders. This distinction is important, since one dilemma often facing the forest products industry is with whom to communicate.

Community leaders were defined earlier as visible leaders in the community who, by their official or informal positions, have power and authority (Katz and Lazerfeld, 1970). Examples of identified community leaders included elected county officials, educators, chamber of commerce board members and members, industry leaders, environmental group leaders, and civic club leaders.

The gender breakdown of the sample was 19% female and 81% male. According to CIC polling segments, the non-community leader group most likely to be open to change or that had not yet formed an opinion was blue-collar males. This segment was the primary target of the mass media commercials launched by CIC. The gender breakdown reflected the larger segment of people targeted by CIC, but not community leaders. While gender might have been a factor in CIC's choosing groups to target with the commercials, for this study project, more males were not purposefully sampled. Finally, the gender breakdown was likely a reflection of the larger population which accounts for a greater percentage of community leaders.

The occupations of the study population varied from professionals to retirees. Table 1 indicates the breakdown of occupations for the study population. The majority of community leaders were professionals and public officials.

Table 1. Occupations of community leaders.

Occupation	Percentage	Number
Professional	37.7	22
Public official	31.0	18
Business owner	10.3	6
Natural resource	10.2	6
Retired	3.4	2
Other	6.9	4
Total	100.0	58

The largest percentage of community leaders (36.2%) fell into the 50-59 year old age range. Table 2 characterizes the age ranges for the study population.

Table 2. Age ranges of community leaders.

Age Range	Percentage	Number
30-39	19.0	11
40-49	27.6	16
50-59	36.2	21
60 and older	17.2	10
Total	100.0	58

Noticeably missing from the sample were community leaders in the 29-year and younger age range. In general, community leaders, particularly professionals and elected officials, were expected to be older, given the time it takes to establish such a career. Thus, I observed a greater proportion of older leaders comprising the sample population.

Table 3 shows the breakdown of group membership for community leaders. Here, community leaders were asked to indicate their memberships in various groups such as civic, environmental, political, other (i.e., social, religious, etc.), or no group membership. Responses

ranged from one group category being applicable to all membership categories being applicable. However, the table only contains aggregates of the most common responses.

Table 3. Group memberships of community leaders.

Membership Category	Percentage	Number
Civic/Civic and Other	77.6	45
Environmental/ Environmental and Social	10.3	6
Political/Political and Other	8.6	5
No Group	3.5	2
Total	100.0	58

Civic groups only or civic group with some other group (i.e., environmental, political, etc.) captured 77.6% of community leaders' membership patterns. Only 10.3% of leaders belonged to environmental groups. Multiple membership patterns (i.e., membership in more than one group) also confirmed that civic groups were by far the dominant group to which community leaders belonged.

The final piece of demographic information was the percentage of community leaders from each county, shown in Table 4. The majority of land purchased by CIC was located in Anderson, Campbell, and Scott Counties. However, Cocke County was included in this study project due to the history of CIC's Canton papermill and the Pigeon River in east Tennessee. One thought was that the river issue might form many attitudes about CIC as well as its forest management practices. Consequently, throughout the presentation of the analysis of the results, responses of leaders from Cocke County were compared to responses of leaders from other counties to determine if any statistically significant relationships existed.

Table 4. Breakdown of community leaders by county.

County	Percentage	Number
Anderson	32.8	19
Campbell	19.0	11
Cocke	31.0	18
Scott	17.2	10
Total	100.0	58

Interview and Questionnaire Results

The comparison of the pre-and post-chipmill interviews and the mail questionnaire will be structured according to the SCRME model. Within this discussion, areas of differences and similarities will be identified, culminating in a detailed discussion of the two coorientational variables accuracy and agreement, within the context of effectiveness of the information campaign.

The pre-chipmill interview occurred the week of August 6-10, 1995. Fifty-eight community leaders participated in this interview. The post-chipmill interview took place the week of January 6-10, 1997, approximately 17 months after the pre-chipmill interview and five months after the mail questionnaire. Only 54 participated in the post-chipmill interview (four leaders withdrew from the study project during the 17-month period). The interviews were used to assess levels of accuracy and agreement and channel effectiveness.

The mail questionnaires were mailed on July 31, 1996, which coincided with the chipmill start-up operation in Campbell County on August 19, 1996. The mail questionnaire was used to evaluate three factors: (1) whether the chipmill was recognized as a major concern; (2) accuracy; and (3) agreement. Forty-two valid responses (72.4%) were received. The remaining 16 community leaders did not respond.

On the mail questionnaire, community leaders were asked, "Please name one forest products company that you know operates in east Tennessee." Consistent with the pre-chipmill interview, respondents had the opportunity to name CIC or other companies in the area. Of the 42 community leaders who completed and returned the mail questionnaire, 35, or 83.3%, named CIC. Consequently, the mail questionnaire results were based on responses from 35 community leaders of the larger sample of 58. The response rate by county is shown in Table 5.

Anderson and Campbell Counties were highly responsive, while Cocke and Scott Counties' response rates were relatively poor. Cocke County's rate was no surprise, given the history of the

Pigeon River and the fact that many community leaders from Cocke County may have perceived the “forest products study” as a “CIC study.”

Table 5. Response rates for the mail questionnaire by county, based on the total number of community leaders in each county.

County	Percentage
Anderson	89
Campbell	82
Cocke	61
Scott	50

Scott County's lower response rate could be a reflection of community values. Community leaders might not have had concerns about the forest products industry, since the firms were viewed in a similar fashion to familiar coal companies. Consequently, there was no need to respond to something that was a non-issue.

Atmosphere During Interviews and Questionnaire

During the time that the pre-chipmill interview and mail questionnaire were administered, CIC-related issues were visible, but in no way dominated the media or the responses which community leaders offered. In contrast, the atmosphere prior to, during, and after the week of the post-chipmill interview was best described as a barrage of electronic and print media focusing on the discharge permitting process of CIC's Canton Mill located on the Pigeon River. For example, approximately four to five print articles per week appeared in the period before, during, and after the interviews. Up until that time, such prolific publicity was uncommon in the study area, even with the opening of the Cumberland Forest chipmill. Such exposure to the mass media was the focus of many responses offered during the post-chipmill interview.

CIC Name Recognition and Why?

The introduction presented by each interviewer in the pre-chipmill interview explained that the study focused on the communication efforts of the forest products industry in east Tennessee. Community leaders were initially asked to name a forest products company that had a facility and/or land holdings in east Tennessee. Once a company was named, the interviewer focused on that company (CIC, if selected) for the remainder of the interview. At no time did the interviewers prompt community leaders to identify CIC. In fact, if community leaders named a

company other than CIC, then that company was selected and the interview proceeded using it as the focus.

In the pre-chipmill interview, CIC name recognition was 100%. All community leaders named CIC as a forest products industry in and around east Tennessee. Other companies were also listed in addition to CIC, but all pre-chipmill interviews focused on CIC. On the mail questionnaire, name recognition was 83.3%. This finding was significant in itself. I would have been surprised if CIC had not been named, given the mass media attention and CIC's self-imposed visibility in east Tennessee. In other words, name recognition of CIC was extremely high.

In the post-chipmill interview, community leaders were not offered an opportunity to name a forest products company. Therefore, all post-chipmill interviews also focused on CIC. Nevertheless, community leaders were asked why they named CIC as a forest products company in the pre-chipmill interview, and this same question was posed to leaders on the mail questionnaire.

Community leaders were asked twice (in the mail questionnaire and on the post-chipmill interview) why they named CIC in order to determine the level of concern about the chipmill operation. The land purchase and chipmill operation was the centerpiece of the ETEP and the major reason why communication efforts were launched by CIC. Many communication campaigns are initiated without substantial evidence. In other words, "false consensus" occurs where there is perceived disagreement when there is actually agreement (Broom and Dozier, 1990). In this project, CIC assumed that the land purchase and chipmill would be a major issue in the area. Based on this assumption, CIC developed a massive communication campaign. But was it necessary?

On the mail questionnaire, community leaders were asked, "Is there any specific issue or occurrence that caused you to select the specific forest products company you indicated at the beginning of the questionnaire?" Table 6 shows that only 7.7% of community leaders specifically mentioned the chipmill. Furthermore, 26.9% named the land purchase as the reason they listed CIC, but the chipmill was excluded from these responses. The Pigeon River was named as the reason for selecting CIC by 38.5% of the community leaders who responded to the mail questionnaire. Miscellaneous responses comprised 26.9% of the answers. A miscellaneous response was one that addressed issues irrelevant to the question. Miscellaneous responses included, "CIC is a much more responsible company than they are pictured to be," "personal contacts," "they had a bad reputation in Montana," "protection of water supply," etc.

Table 6. Comparison of reasons why CIC was named as a forest products company in the pre-chipmill interview and mail questionnaire.*

Why Named CIC?	Mail Questionnaire (%)	Number	Post-Chipmill (%)	Number
Pigeon River/Canton Mill	38.5	10	20.8	11
Chipmill	7.7	2	20.8	11
Land Purchase	26.9	7	22.6	12
Publicity	not used in mail questionnaire		20.8	11
Miscellaneous	26.9	7	15.0	8
Total	100	26	100	53

*Missing data = 9 in mail questionnaire; 1 in post-chipmill interview.

The majority of reasons offered for naming CIC in the pre-chipmill interview were related to the publicity surrounding the wastewater discharge permit of the Canton Mill or the Pigeon River itself (41.6%). The wastewater discharge permit process was a salient issue in the media and in the minds of community leaders preceding and during the week of the post-chipmill interviews when this question was asked. About one-fifth of community leaders specifically mentioned the chipmill as the reason they named CIC as a forest products company. Finally, 22.6% mentioned the land purchase without mentioning the chipmill specifically. For example, many community leaders indicated that CIC had purchased land but were unaware of the status of the chipmill.

The most noticeable change over time is the presence of the category “publicity,” which was needed in the post-chipmill interview. Many community leaders mentioned the recent publicity of the wastewater discharge permitting process as the reason why they named CIC as a forest products company. While the permitting process was not occurring at the time of the first interview, in the minds of many community leaders this issue was so prominent at the time this question was asked that they reasoned this is why they named CIC 17 months earlier. If the Pigeon River and the publicity are combined in the post-chipmill column, 41.6% named the Pigeon River and the publicity surrounding it as the reason they identified CIC as a forest products company. This is about the same percentage of leaders who named the Pigeon River in the mail questionnaire. The Pigeon River issue was consistently important over time.

The other interesting comparison in Table 6 is the chipmill issue. In the mail questionnaire, which coincided with the start-up of the chipmill operation, only 7.7% mentioned it. However,

this percent increased to 20.8% for the post-chipmill interview. When the chipmill was mentioned, most of the comments were neutral.

These results demonstrate that the land purchase and chipmill construction was not a point of contention, as CIC had projected. It appeared that false conflict, or inaccurately perceived disagreement, might have resulted in a communication campaign that was actually more appropriate for the Pigeon River issue than for the land purchase and chipmill.

Exposure

In the pre-chipmill interview, 54 out of 58 community leaders, or 93.1%, indicated that they were exposed to at least one CIC channel. Of this percent, 10.3% were exposed to only one channel and 82.8% were exposed to two or more CIC channels. For the post-chipmill interview, 96.3% of community leaders were exposed to at least one CIC channel. Of this percent, 9.3%, or five leaders, were exposed to only one CIC channel while 87% were exposed to two or more CIC channels. Overall, there was almost 97% exposure to at least one CIC channel.

In the post-chipmill interview, community leaders were reminded of the channels to which they had reported being exposed prior to the pre-chipmill interview. Interviewers then asked community leaders which of these channels they had been exposed to during the time since that interview.

In the 17 months between the two interviews, 89.4% of community leaders were exposed to a CIC channel. Five leaders who were exposed to a CIC channel preceding the pre-chipmill interview were not re-exposed to a CIC channel during the 17-month period between the interviews. In other words, only two leaders were not exposed to any CIC channel throughout the entire study project.

In the pre-chipmill interview, six leaders reported exposure to only one channel, while in the post-chipmill interview, five leaders said they had been exposed to only one channel. Exposure to two or more channels in the pre-chipmill interview was reported by 82.7% (48 of 58 community leaders). In the post-chipmill interview, exposure to two or more CIC channels was 87% (47 of 54). A comparison of channel type exposure for the pre- and post-chipmill interviews, and cumulative channel type exposure, appear in Table 7.

Table 7 shows that cumulatively, most community leaders experienced a combination of channel types -- interpersonal and the mass media. Overall, most efforts were focused on a combination of channel types. At the particular "snapshots" in time, most of CIC's efforts were through the mass media. By far the most frequently reported interpersonal channel was talking with a CIC representative, while the CIC commercials were the most frequently reported mass media channel.

Table 7. Comparison of channel type exposure, based on the pre- and post-chipmill interviews, and cumulative totals for the study project.*

Channel Type	Pre-Chipmill (%)	Number	Post-Chipmill (%)	Number	Cumulative (%)	Number
Interpersonal Only	11.1	6	14.9	7	7.7	4
Mass Media Only	22.2	12	34.0	16	5.8	3
Both	66.7	36	51.1	24	86.5	45
Total	100.0	54	100.0	47	100.0	52

*Missing data = 4 for pre-chipmill interview; 7 for post-chipmill interview; 2 for cumulative total.

Based on the pre- and post-chipmill interviews, 80.8% of community leaders were re-exposed to some CIC channel. In addition, 23.1% of community leaders reported being exposed to a channel they had not previously experienced. Finally, 15.4% of community leaders were not exposed to a CIC channel during the 17-month period between interviews. Yet, 5.8% of these were exposed to a new channel. The breakdown of cumulative exposure types for the study project is listed in Table 8.

The channels to which community leaders were most frequently re-exposed included commercials (18.5%) and talking with a CIC official (9.3%), or a combination of these two. Further, exposure to new channels generally consisted of only a single channel. For example, of the 23.1% of the leaders exposed to a new channel, the most frequently reported channel was the commercials (5.6%), followed by tours of the new chipmill, talking with a CIC official, and the CIC newsletter (3.7% each).

Table 8. Cumulative exposure types for all CIC channels, based on the pre- and post-chipmill interviews.*

Exposure Type	Percentage	Number
Exposed Only	9.6	5
Re-exposed	67.3	35
New Only	3.8	2
Exposed/New Only	5.8	3
Re-exposed/ New Only	13.5	7
Total	100.0	52

*Missing data = 2 (not exposed to a CIC channel)

Exposure types and channel types during the 17 months between the pre- and post-chipmill interviews were also evaluated. Table 9 contains these results. The majority of community leaders were re-exposed to a variety of CIC channels. CIC messages were reinforced with repeated exposure. So, while the mass media not initiated by CIC was hard at work publishing articles about the company, CIC was also disseminating messages to community leaders to counter information in the popular press.

Of the leaders who were re-exposed to channels in this 17-month period, most (83.3%) were exposed to a combination of the mass media and interpersonal CIC channels. However, a relatively substantial percentage (78.6%) were also exposed to a mass media channel only. The majority of these exposures were to a CIC TV commercial. Finally, the only new channel to which community leaders were exposed was the mass media.

Table 9. Exposure types and channel types for the 17-month period between the pre- and post- chipmill interviews for all CIC channels, based on the post-chipmill interview.*

Exposure Type	Channel Type			Total
	Interpersonal	Mass Media	Both	
Re-exposed	20.0	14.3	16.7	
New Only	0.0	7.1	0.0	
Re-exposed/ New Only	80.0	78.6	83.3	
Total	11.6(5)	32.6(14)	55.8(14)	100.0

*Missing data = 7 (2 not exposed to CIC channel and 5 not re-exposed or exposed to a new CIC channel)

The channels CIC used to disseminate messages included both interpersonal and mass media channels. Examples included tours, personal visits, phone calls, speaking engagements, newsletter, CIC-submitted newspaper articles, commercials, and the whitewater shootout. Table 10 summarizes community leaders' potential and actual exposure to specific CIC channels.

Potential vs. actual exposure to tours and civic meetings referred to community leaders who were asked to participate in a tour or attend a civic meeting, which equates to potential exposure. Actual exposure occurred if the leader actually participated in a tour or attended a civic meeting. For the other channels, it was impossible to obtain information on "potential exposure." Civic meetings seemed to have better success for actual exposure compared to tours. This result was expected, given that a tour might last half a day to all day in contrast to an hour-long civic luncheon meeting. However, it was notable that more people were asked to attend the tour. Consequently, making a channel available does not always mean that exposure will occur.

Table 10. Community leaders' potential (invitation to participate) and actual exposure to CIC interpersonal and mass media channels, based on the pre-chipmill interview.

Channel	Potential Exposure (%)	Number	Actual Exposure (%)	Number
Interpersonal Channels:				
Tours	62.1	36	27.6	16
Civic Meetings	55.2	32	43.1	25
Talks with CIC Representative	N/A		75.9	44
Mass Media Channels:				
Commercial - TV	N/A		86.2	50
Newspaper Article Submitted by CIC	N/A		36.2	21
Whitewater Shootout	N/A		29.3	17

In the post-chipmill interview, community leaders were also asked if they had been invited to go on a CIC tour or to a civic meeting where a CIC representative addressed the group in the past 17 months. In other words, potential and actual exposure were assessed for these channels again. Table 11 summarizes community leaders' potential and actual exposure to two or more CIC channels.

Table 11. Community leaders' potential (invitation to participate) and actual exposure to CIC tours and civic meetings (re-exposure and new exposure), based on the post-chipmill interview.

Channel	Potential Exposure (%)	Number	Actual Exposure (%)	Number
Interpersonal Channels:				
Tours	29.6	16	5.6	3
Civic Meetings	5.6	3	1.9	1

Table 11 illustrates that over a quarter of the leaders had been asked to participate in a tour since the pre-chipmill interview. Of this 29.6%, two had never been asked to attend a tour and the remaining 14 were asked a second time to attend a tour. Overall, only three attended the tour (one new leader and two repeats). All the tours were of the new Cumberland Forest chipmill. Scheduling conflict was the most frequently cited reason for being unable to attend a tour.

Civic meeting potential and actual exposure were also evaluated. Only three leaders were asked to attend civic meetings after the pre-chipmill interview. Of this small percentage, two reported that they had never previously been asked to attend such a meeting. The one leader that did attend the meeting had attended a civic meeting previously.

Exposure to mass media channels not initiated by CIC, such as print articles and TV stories, was also evaluated. In the pre-chipmill interview, exposure to the mass media was 100%. During the 17-month period between the two interviews, mass media exposure was 86.2%. Overall, mass media exposure was 100%.

According to the two-step flow theory, other sources of information can be part of the network, both formal and informal, to which community leaders belong (Katz and Lazerfeld, 1970). Community leaders were asked to indicate all sources of information, including peers, friends, environmental groups, family members, and place of employment. With this open-ended question, many leaders neglected to mention exposure to the mass media not initiated by CIC. The difference between the pre- and post-chipmill interview was minimal, with exposure to non-CIC sources reported as 41.4% and 38.9%, respectively. In both interviews, the majority of non-CIC sources were television and print media.

Source Evaluation

Trust in CIC as a company was evaluated, and the comparison of the results from the pre- and post-chipmill interviews appear in Table 12.

Table 12. Degree of trust in CIC, based on the pre- and post-chipmill interviews.*

Degree of Trust	Pre-Chipmill (%)	Number	Post-Chipmill (%)	Number
Low	17.2	10	53.7	29
Moderate	53.4	31	25.9	14
High	29.3	17	20.4	11
Total	100	58	100	54

In the pre-chipmill interview, trust in CIC as a company was moderate to high for a majority of responses. The same was reported on the mail questionnaire, although the question was worded differently. However, a definite shift in trust was observed 17 months later during the post-chipmill interview. This decrease in trust was evident when community leaders qualified responses to source questions by saying, "Up until six months ago, they were doing well. But lately, their fighting the permit has angered many people." Clearly, over time, trust in CIC was decreasing, in spite of CIC's communication program.

In addition, a measure of CIC's sincerity in its communication efforts was evaluated. For example, in both interviews community leaders were asked, "Do you feel CIC has made a sincere effort to communicate with community leaders in east Tennessee?" In the pre-chipmill interview, 74.1% of community leaders reported that CIC's communication efforts were sincere. However, this percentage decreased to 50% in the post-chipmill interview. Comments about CIC's fighting the permit or being wrong to oppose tougher standards reflected that CIC was losing both the trust and confidence of community leaders. Overall, the low sincerity ratings of CIC's community efforts in the post-chipmill interview reflected a need for further dialogue with community leaders. Not only did CIC need to reassure community leaders of the company's commitment to environmental protection, but it also need to be more sincere in these efforts.

The statements used to measure trust in CIC as a company were such that a paired t-test could be used to identify changes across statements. The results of the paired t-test appear in Table 13. Patterns of significant changes (i.e., p-values < .05) and the direction of change are shown. Statistically, there were really no patterns in the sense that all, or even half, of the means shifted. Where means did change (statements 1 and 5), the shift was toward decreased trust.

The atmosphere during the second interview coincided with a proliferation of mass media coverage, and negative attitudes would be expected, since most of the media coverage was negative and mass media exposure was 100%.

Table 13. Results of a paired t-test for statements used to measure the concept of trust in CIC as a company in the pre- and post-chipmill interviews.

Statement	Mean of Likert Scores*		Number	P-value
	Pre	Post		
1. In east Tennessee, for the most part, CIC has been responsive to public concerns.	3.392	2.647	51	<.0001
2. CIC is generally a reliable source of information regarding environmental issues.	3.022	2.689	45	.054
3. CIC cuts more trees than they grow.	2.650	2.450	20	.297
4. CIC does not use erosion control measures when harvesting timber.	2.148	2.185	27	.893
5. CIC is considered an environmental leader in the paper manufacturing industry.	2.686	1.971	35	<.0001
6. CIC papermaking mill endangers water quality.	4.102	4.306	49	.067

*Scale of Likert Scores: 1 = Strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

Mass Media as a Source

Confidence in the mass media's reporting of CIC-related news stories was also compared. These results are presented in Table 14, showing that there was a shift in confidence from low/moderate to moderate/high during the 17-month period. In the pre-chipmill interview, the majority of community leaders had a moderate confidence level, but a significant percentage had a low level of confidence in the mass media's reporting of CIC news stories. In contrast, in the post-chipmill interview, confidence in the media increased to moderate/high levels. An additional question related to the mass media asked community leaders if the stories presented any new information about CIC or information about which leaders had not previously been aware. Most community leaders reported that they had gained some information, but only a small amount.

Table 14. Comparison of confidence level in the mass media's reporting of CIC-related news stories, based on the pre- and post-chipmill interviews.*

Confidence Level	Pre-Chipmill (%)	Number	Post-Chipmill (%)	Number
Low	39.7	23	7.4	4
Moderate	44.8	26	51.9	28
High	15.5	9	40.7	22
Total	100	58	100	54

There may be a relationship between the level of confidence in the mass media and the degree of trust in CIC. Statistically, on the pre-chipmill interview, the correlation coefficient was significant ($p < .05$), but the relationship was weak (-.27). Nevertheless, the inverse (or negative) association indicates that as degree of trust in CIC increased, degree of confidence in the mass media decreased. However, this same relationship was not found in the post-chipmill interview ($p > .05$). Substantially, the influence of the mass media can never be ignored or underestimated. Understanding this relationship is important in that one's perception of the source may also determine whether one seeks information from that source or alternative sources.

A paired t-test was also calculated for the statements used to measure the concept of confidence in the mass media when reporting CIC-related news stories. Table 15 indicates that there was no set pattern of changes. Statistically significant shifts in the mean for statement two reflected an increase in reliability on the mass media as a source for CIC news stories.

Table 15. Results of a paired t-test for statements used to measure the confidence level in the mass media's reporting of CIC-related news stories, based on the pre- and post-chipmill interviews.

Statement	Mean of Likert Score*		Number	P-value
	Pre	Post		
1. The mass media generally does not present a balanced picture of CIC.	3.612	3.326	49	.119
2. TV and newspapers are generally reliable sources of information regarding CIC.	2.735	3.204	49	.002

*Scale of Likert Scores: 1 = Strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

Two other statements were used to address the mass media as a source of information for CIC news stories (Table 16). Again, no patterns in change were detected. However, when change did occur, it was a shift from neutral/negative to a more negative opinion of CIC (statement 2). Over the two-year period of the ETEP, the tone of media coverage varied from extremely unfavorable to equally favorable. However, in recent months and during the week of the second interview, the tone of media coverage was generally neutral-negative. Consequently, in the second interview, there was an increase in unfavorable attitudes toward CIC that could be attributed to the media's reporting of CIC issues, especially since exposure to the non-CIC initiated mass media stories was extremely light.

Table 16. Results of a paired t-test for other statements addressing the mass media's reporting of CIC-related news stories, based on the pre- and post-chipmill interviews.

Statement	Mean of Likert Score*		Number	P-value
	Pre	Post		
1. The TV or newspaper story did not provide me with any new information.	3.042	3.021	48	.926
2. My attitude toward CIC is more positive as a result of watching TV coverage or reading news stories about the company.	2.501	1.887	53	<.0001

*Scale of Likert Scores: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

Channel Evaluation

The channels evaluated were as follows:

Interpersonal: Tours, speaking engagements, talking with CIC representatives, and newsletter.

Mass Media: CIC newspaper submissions, television commercials, and Whitewater Shootout.

The frequency of exposure to channels used to disseminate information has already been discussed in some detail. However, I have yet to address what community leaders thought of the channels and which channel(s) were rated most effective in disseminating information to community leaders, according to the leaders themselves and according to the measures of accuracy and agreement.

In the pre-chipmill interview, of the 54 community leaders who were exposed to a CIC channel and responded to the question, "What do you think of X channel?," 55.6% had a positive comment about the specific channel to which they were exposed, while 18.5% had a negative comment (Table 17). The remainder of the comments were either both positive and negative (7.4%) or miscellaneous (18.5%).

Table 17. Comparison of channel evaluation, based on the pre- and post-chipmill interviews.*

Channel Evaluation	Pre-Chipmill (%)	Number	Post-Chipmill (%)	Number
Negative	18.5	10	18.5	18.5
Negative and Positive	7.4	4	9.3	5
Positive	55.6	30	59.2	32
Miscellaneous	18.5	10	13.0	7
Total	100	54	100	54

*Missing data = 4 for the pre-chipmill interviews, 2 for the post-chipmill interview.

In the post-chipmill interview, of the 52 community leaders who responded to the question, "What do you think of X channel?," 59.2% had a positive comment about the specific channel to which they were exposed, while 18.5% had a negative comment. The remainder of the comments were either both positive and negative (9.3%) or miscellaneous (13%).

Of the leaders who were exposed to two or more channels, evaluations varied little between the two interviews; both evaluations were generally positive. If anything, evaluations of the CIC channels were slightly more negative in the post-chipmill interview, although they were generally positive (55.6% and 59.2%, pre- and post-chipmill positive comments, respectively).

The six respondents who reported being exposed to only one channel in the pre-chipmill interview named the commercials as the most common channel. However, an appraisal of that channel in comparison to others cannot be made, since it was the only one to which they were exposed. Nevertheless, of the leaders who responded, the comments about these single channels were generally positive. For example, they used such descriptors as "informative," "could see operations," and "easy to understand" when discussing the channel. Nevertheless, only two out of the six said that additional information was gained from the channel.

In the post-chipmill interview, the five respondents who were exposed to only one channel named the commercials most frequently. Of the leaders who responded, the comments were divided. For example, two people offered a negative response about the CIC channels, two offered positive comments, and one leader's response was both positive and negative. Further, none of the leaders reported gaining any additional knowledge as a result of the CIC channels. Finally, of the leaders exposed to only one channel, three indicated that the channel was new (i.e., exposure since the pre-chipmill interview), while two reported that they had been re-exposed to the same channel.

Table 18 contains the channel types for leaders exposed to two or more channels based on the pre-chipmill interview and indicates which channels they rated as most effective. Based on the pre-chipmill interview, interpersonal channels were most effective for the majority of leaders exposed to an interpersonal channel, mass media channel, or both. The same was true for the post-chipmill interview in that interpersonal channels were indicated as most effective, even though most community leaders (62.2%) were exposed to a combination of channels.

Table 18. Comparison of channel type for community leaders exposed to two or more CIC channels, by channels rated most effective, based on the pre- and post-chipmill interviews.*

Channel Rated Most Effective	Channel Type					
	Pre-Chipmill Interview			Post-Chipmill Interview		Total
	Interpersonal	Mass Media	Both	Interpersonal	Both	
	-----%-----					
Interpersonal	54.5	83.3	73.3	100	62.2	
Mass Media	36.4	16.7	23.3	0.0	15.6	
Both	9.1	0.0	4.3	0.0	8.9	
None	Not used in pre-chipmill interview			0.0	13.3	
Total	23.4(11)	12.8(6)	63.8(30)	4.3(2)	95.7(43)	100.0

*Missing data = 10 for first interview; 7 for second interview.

It appeared that CIC's efforts shifted over time from individual channels to more of a combination approach. The post-chipmill interviewed indicated that of the 47 community leaders who were exposed to two or more channels, the majority were re-exposed to a channel they had previously experienced. Further, 14.8% were re-exposed to both an old channel and a new channel. The channel type to which these leaders were most frequently exposed was a combination of interpersonal and mass media (95.7%), with interpersonal only accounting for the other 4.3%. This strategy increased the possibility that leaders would hear CIC messages, and repetition is the best offense for wanting someone to learn something -- in this case, CIC messages.

The mass media noticeably decreased in preference, which could be because many leaders viewed commercials aired by CIC in the months preceding the post-chipmill interview as misleading and untruthful. The other noticeable change over time was that none of the channels was effective in disseminating information when 13.3% of leaders had been exposed to both channel types. Community leaders who opted for this response generally felt that regardless of the channel, CIC was untrustworthy, thus rendering any channel ineffective.

Here, I hypothesized that the channels themselves were evaluated positively, but the source was the deciding factor. In other words, if a person cannot trust the source, the channel will be ineffective, independent of its merit. Finally, although CIC used a mixture of channel types,

leaders did not suggest this approach. However, the way the question was worded might have given the impression that only one choice (interpersonal or mass media, instead of both) was appropriate. Consequently, the conclusion that leaders did not prefer a combination of channel types cannot be supported.

Specifically, in the pre-chipmill interview, when asked, “In your opinion, which channel was most effective in disseminating information to community leaders?”, the channel that was most frequently mentioned was personal contact with a CIC representative (20.7%), while the newsletter and commercials each received 10.8% of the vote. These channels were also mentioned as effective in combination with each other or with other channels. For example, 10.8% of community leaders reported that speaking engagements and personal contact together were effective. In the post-chipmill interview, the channel that was reported to be the most effective in conveying information was personal contact with a CIC representative (35.2%).

The information that can be extracted from these channel effectiveness ratings is that interpersonal channels were perceived as the most effective way to disseminate information, as evidenced by community leaders saying that personal contact was preferred. This medium was preferred even though the vast majority of community leaders had experienced a combination of interpersonal and mass media channels.

In both interviews, community leaders rated interpersonal channels as most effective in communicating information. When asked, “Why do you think the channel you selected was most effective?”, 25% and 21.4% in the first and second interviews, respectively, cited the detail and information offered as the most attractive feature of the channel. Using the merit or credibility of another person received 10% and 14.8% of the vote in the respective interviews. However, the majority of responses (52.5 % and 31.5%) were miscellaneous (i.e., the majority of this category answered the question inappropriately).

The exposure types for channels by those listed as most effective are found in Table 19, based on the post-chipmill interview.

Table 19. Exposure types by channels listed as most effective by community leaders exposed to two or more CIC channels, based on the post-chipmill interview.*

Exposure Type	Channels Rated Most Effective			Total
	Interpersonal	Mass Media	Both	
	----- % -----			
Exposed Only	26.7	14.3	0.0	
Re-exposed	60.0	85.7	100.0	
New Only	6.7	0.0	0.0	
Exposed/New Only	3.3	0.0	0.0	
Suggested Channel Not Previously Exposed	3.3	0.0	0.0	
Total	73.2(30)	17.1(7)	9.8(4)	100.0

Of the community leaders who rated interpersonal channels most effective (i.e., interpersonal - talk with CIC), the vast majority (60.0%) had been re-exposed to a CIC channel. In addition, those who rated the mass media or a combination of both channels as effective again had been re-exposed to a CIC channel. Perhaps this second or third exposure influenced community leaders' decisions as to why they selected interpersonal channels as the most effective way to disseminate information. In other words, if someone is not exposed to a particular channel, then there really is no basis on which to judge its effectiveness. However, in the post-chipmill interview, one leader did suggest a channel (i.e., interpersonal - talk with CIC) as the most effective, even though he had never talked personally with a CIC representative.

Message

In the pre- and post-chipmill interviews and the mail questionnaire, accuracy and agreement were evaluated. Message recall reflected the level of accuracy or the degree of interpersonal communication. Community leaders also indicated whether they had repeated messages to others, representing agreement or the degree of coorientation (reference to "message recall" reflected repeating messages to interviewers, while "message repetition" denoted messages repeated to peers).

I first analyzed the channel types on which messages were based for community leaders exposed to any CIC channel. The majority of leaders were exposed to a combination of

interpersonal and mass media channel types. However, a shift in channel type was noted between the pre- and the post-chipmill interviews. It appeared that an increase in exposure to both channel types occurred over time. This information was important in that channel type could have an influence on the degree of accuracy and agreement.

Table 20 indicates the degree of accuracy for the pre-chipmill interview, where a combination of channels were most effective in increasing this coorientational variable. Specifically, interpersonal channels were responsible for 33.3% of specific messages being recalled correctly. The mass media was slightly less effective in specific messages being recalled correctly, with 14.3%, but more successful with general message recall at 14.3%. However, a combination of channel types resulted in 45.2% of correct general messages being recalled.

Table 20. Channel type for degree of accuracy based on the pre- and post-chipmill interviews.

Degree of Accuracy	Channel Type					
	Pre-Chipmill Interview			Post-Chipmill Interview		
	Interpersonal	Mass Media	Both	Interpersonal	Mass Media	Both
	----- % -----					
Incorrect	66.7	71.4	45.2	66.7	0.0	61.1
Correct-General	0.0	14.3	45.2	0.0	0.0	30.6
Correct-Specific	33.3	14.3	9.7	33.3	0.0	8.3
Total	100(6)	100(7)	100(31)	100(3)	100(0)	100(36)

By contrast, in the post-chipmill interview, interpersonal channels were associated with 33.3% correct specific message recall. However, mass media exposure did not result in either correct general or specific message recall. Additionally, a combination of channel types produced only 30.6% correct general message recall.

For agreement, the results of both interviews appear in Table 21. In the pre-chipmill interview, detailed information was more likely to be repeated to others if the leader was exposed to an interpersonal channel (33.3%). Both channel types produced only 19.4% of correct general messages being repeated to others. Exposure to the mass media alone resulted in no correct messages, general or specific, being repeated to others. In short, agreement or persuasion was high with interpersonal channels and even higher with a combination of channels.

By comparison, in the post-chipmill interview, interpersonal channels were related to correct specific messages being repeated to others (33.3%), while mass media alone or a combination of channel types resulted in no correct or specific messages being repeated to others and poor correct general (8.3%) or specific (2.8%) messages being repeated to others, respectively.

Table 21. Channel type for degree of agreement based on the pre- and post-chipmill interviews.

Degree of Agreement	Channel Type					
	Pre-Chipmill Interview			Post-Chipmill Interview		
	Interpersonal	Mass Media	Both	Interpersonal	Mass Media	Both
	----- % -----					
Incorrect	66.7	100.0	74.2	66.7	0.0	88.9
Correct-General	0.0	0.0	19.4	0.0	0.0	8.3
Correct-Specific	33.3	0.0	6.5	33.3	0.0	2.8
Total	100(6)	100(7)	100(31)	100(3)	100(0)	100(36)

The level of message recall of both general and specific messages was highest for interpersonal channels on the first interview, but results of the second interview indicated that interpersonal channels were only effective with correct specific message recall. On the other hand, specific detailed messages being repeated correctly to others was only associated with interpersonal channels. Overall, accuracy was relatively high with exposure to interpersonal channels and higher with a combination of channel types (i.e., interpersonal and CIC mass media), while agreement or coorientation was only achieved with interpersonal channels.

During the pre-and post-chipmill interviews, community leaders were asked, “Do you recall what information was presented in the channel?” Both sets of messages were then compared to the messages CIC disseminated. Table 22 indicates that in the pre-chipmill interview, 44.9% of the messages recalled in the interviews were correct. Of the correct messages recalled, 32.7% were general, while 12.2% were specific. Over 55% of the leaders repeated incorrect messages. In comparison, in the post-chipmill interview, correct message recall, whether general or specific, was acceptable (40%). However, I expected higher accuracy, given that 80.8% of community leaders were re-exposed to CIC channels and messages during the 17-month period between the two interviews. Instead, interpersonal communication decreased over time.

In both interviews, there were a significant number of community leaders who failed to attend to CIC messages (55.1% and 60% respectively). We can also deduce from Table 22 that general messages seemed to be more easily repeated than specific messages. It appeared that there were a significant number of community leaders upon whom CIC's communication efforts made little impression. In other words, accuracy or interpersonal communication was low to moderate.

Table 22. Comparison of accuracy for community leaders exposed to any CIC channels, based on the pre- and post-chipmill interviews.*

Degree of Accuracy	Pre-Chipmill (%)	Number	Post-Chipmill (%)	Number
Low (incorrect messages)	55.1	27	60.0	30
Moderate (correct-general)	32.7	16	32.0	16
High (correct-specific)	12.2	6	8.0	4
Total	100	52	100	50

*Missing data = 6 for the first interview; 4 for the second interview.

Consistent with two-step flow and diffusion of innovation theory, the study also evaluated whether community leaders repeated messages to others. If they did recall the messages they repeated to peers, were they correct messages based on CIC's intended messages? Thus, community leaders were asked not only, "Have you shared the information you know about Champion with others?", but also, "Do you recall the information you shared?" According to the pre-chipmill interview, an overwhelming 90.6% of community leaders exposed to a CIC channel reported that they had discussed CIC with others. However, only 21.7% repeated the correct message (Table 23) when asked by interviewers what messages they repeated to others.

Table 23. Comparison of the degree of agreement for community leaders exposed to any CIC channels, based on the pre- and post-chipmill interviews.*

Degree of Agreement	Pre-Chipmill (%)	Number	Post-Chipmill (%)	Number
Low (incorrect messages)	78.3	36	87.2	34
Moderate (correct-general)	13.0	6	7.7	3
High (correct-specific)	8.7	4	5.1	2
Total	100	46	100	39

*Missing data = 12 in the first interview; 15 in the second interview.

Although a high percentage of messages were recalled, the level of precision was poor. While community leaders may have repeated messages to others, they were not CIC messages. Thus, in the pre-chipmill interview, the degree of coorientation was low.

In the post-chipmill interview, 75% of leaders reported that they had discussed CIC with others. Only 12.8% repeated correct messages, either general or specific. While interpersonal communication occurred, the level of effectiveness (i.e., message repetition) was extremely low. In summary, the data indicated that correct message repetition went from low to lower over time, despite continued exposure to CIC channels and messages.

The coorientation variables accuracy and agreement were also measured on the mail questionnaire. This evaluation differed from the pre- and post-chipmill interviews in that it was a more general and global assessment of these two variables. In many cases, companies would prefer to achieve a high degree of accuracy and agreement as measured in the interviews. However, in reality, what was seen was a more general understanding and support of the issues (Table 24).

Table 24. Degree of accuracy for the mail questionnaire.*

Degree of Accuracy	Percentage	Number
Low	22.9	8
Moderate	42.9	15
High	34.3	12
Total	100	35

The mail questionnaire indicated that there was a moderate to high degree of accuracy or interpersonal communication. According to this measure of accuracy, interpersonal communication was successful. If interpersonal communication exists, then the probability that agreement will occur increases. In other words, one must communicate with another in order for coorientation to occur. Table 25 contains the results of the degree of agreement.

Table 25. Degree of agreement for the mail questionnaire.

Degree of Agreement	Percentage	Number
Low	17.1	6
Moderate	20.0	7
High	62.9	22
Total	100.0	35

Agreement was defined as the degree to which the organization's (CIC's) and the community leaders' perception of an issue were similar. This measure of agreement was fairly high at 62.9%, which indicated that almost 63% of community leaders shared CIC's view on several issues. In order to achieve a high degree of coorientation, CIC had to communicate its issues. According to the mail questionnaire, CIC was quite successful at both.

Community leaders were asked, "In what way, if any, has your opinion of CIC changed as a result of the communication efforts initiated by them?" Responses included "more negative,"

“remains negative but unchanged,” “neutral,” “remains positive but unchanged,” and “more positive.” Responses were collapsed and the results indicated that 51% of community leaders reported having a positive attitude toward CIC. Another 26% said their attitudes were neutral. In contrast, only 23% indicated that their attitudes were negative. Given that this measurement was taken at the time of the chipmill opening, an event expected to provoke negative reactions, CIC was seen in a generally positive manner.

Effectiveness

Effectiveness is the last variable of the SCRME model to be addressed. It has been addressed to some extent in the discussion of the degree of accuracy and agreement. In general, in the interviews, accuracy was low to moderate. Accuracy for the mail questionnaire was judged to be moderate to high. The mail questionnaire resulted in a higher degree of accuracy than the interviews. A similar finding was observed with the coorientational variable degree of coorientation. In both interviews, coorientation was low. On the mail questionnaire, coorientation was fairly high (62.9%). The mail questionnaire indicated that almost 63% of community leaders shared CIC's viewpoints on many environmental issues. The differences in the measurements of accuracy and agreement may be a difference in the precision of the measurement, rather than a question of validity. For example, the mail questionnaire offered a more general assessment of accuracy and agreement compared to the interviews. Thus, the discrepancy between the level of accuracy and agreement for the mail questionnaire and the interviews may have been a result of the level of precision used to measure the coorientational variables, not a lack of validity of one of the indicators.

To explain why accuracy and agreement were low to moderate or low, respectively, or why leaders selected a particular channel to be more effective than others, the relationships among the SCRME variables were examined. For instance, measures of association or correlation coefficients were calculated for channel type, source ratings, and receiver traits. In addition, control was simulated using contingency tables as a way to minimize the effects of other variables that I thought might be influencing the relationships between channel type, source ratings, receiver traits, and accuracy and agreement. For example, the relationship between accuracy and agreement and channel type was examined across various degrees of trust in CIC as a source or differences in receiver traits. However, I did not discover changes in the relationship between accuracy and agreement and channel type across various levels of the third variable. Other logical combinations that may point to an alternative rival hypothesis were also examined, but the results were insignificant, both substantively and significantly. Nevertheless, I did find some significant relationships which will be presented for both interviews.

Receivers -- Pre-Chipmill Interview

County Differences. Accuracy and agreement were generally higher in Coker County than in the other counties combined (Table 26). Although relationships between county and accuracy and agreement were found, the strengths of these relationships were low to moderate (phi coefficient .36 and .47, respectively). The Pigeon River issue has been a part of Coker Countians' lives for at least 30 years. Messages from CIC have been heard frequently through a variety of

channels. Consequently, it would be expected that accuracy would be higher in Cocke County, but the moderate degree of agreement was somewhat unexpected, given the lengthy history of the Pigeon River issue. This level of agreement may reflect CIC's recent communication efforts.

Table 26a. Accuracy by county for the pre-chipmill interview.

Level of Accuracy	Cocke County (n=14)	Other Counties (n=35)
----- % -----		
Low (incorrect messages)	40.0	60.0
Moderate (correct-general)	57.1	22.9
High (correct-specific)	0.0	17.1
Total	28.6	71.4

Chi-square 6.533; p-value = .0381; phi coefficient = .3651; p-value = .0381.

Table 26b. Agreement by county for the pre-chipmill interview.

Level of Agreement	Cocke County (n=14)	Other Counties (n=32)
----- % -----		
Low (incorrect messages)	60.0	84.4
Moderate (correct-general)	35.7	3.1
High (correct-specific)	0.0	12.5
Total	30.4	69.6

Chi-square 10.18; p-value = .0061; phi coefficient = .4705; p-value = .0061.

Receivers -- Post-Chipmill Interview

County Differences. Again, county differences were examined to determine if Cocke County community leaders diverged from the other counties in accuracy and agreement. The only significant relationship was between accuracy and county. Table 27 contains these results.

Correct general message repetition in the interviews was generally higher in Cocke County than in the other counties. Although a relationship between county and accuracy was found, the strength of the association was moderate (phi coefficient .43). Given the longstanding history of the Pigeon River in Cocke County, messages from CIC have been heard frequently through a variety of channels. Consequently, correct message recall has probably been learned through repetition.

Table 27. Accuracy by county for the post-chipmill interview.

Degree of Accuracy	Cocke County (n=13)	Other Counties (n=26)
----- % -----		
Low (incorrect messages)	46.2	69.2
Moderate (correct-general)	53.8	15.4
High (correct-specific)	0.0	15.4
Total	33.3	66.7

Chi-square 7.295; p-value = .0260; phi coefficient = .4325; p-value = .0260.

Gender. In the post-chipmill interview, gender was found to have a statistically significant relationship with agreement. However, the strength of the relationship was only moderate. Table 28 indicates that females appeared to have a higher degree of precision when messages were repeated to others. In contrast, males were generally lower in the correctness of the messages they repeated to others. Based on the post-chipmill interview, females appeared to communicate more effectively than males. While this is a statistically significant result, substantively there were really no patterns observed for gender and other variables.

Table 28. Agreement by gender for the post-chipmill interview.

Degree of Agreement	Female (n=15)	Male (n=37)
----- % -----		
Low (incorrect messages)	66.7	90.9
Moderate (correct-general)	33.3	3.0
High (correct-specific)	6.7	6.1
Total	28.8	71.2

Chi-square 6.766; p-value = .0339; phi coefficient = .4165; p-value = .0339.

End Changes

Finally, when community leaders were asked what changes CIC should make in its future communication efforts, 74.1% and 50% in the pre- and post-chipmill interviews, respectively, suggested that CIC should communicate more frequently. Specific responses included "talk to community leaders when things are going well," "issue periodic updates," "keep up mass media efforts, especially with the river," and "meet with different groups." It appeared that community leaders encouraged and expected frequent contact with CIC, not only when problems arose, but also when operations were running smoothly. In the pre-chipmill interview, the major surprise was that only 6.9% of the leaders made suggestions related to the Pigeon River. Here, comments were mainly limited to "clean up the river." However, on the post-chipmill interview, this percentage increased to 22.2%. This increase in concern expressed for the Pigeon River in the second interview was probably due to the wastewater discharge permitting process that was occurring simultaneously with the second interview.

Content Analysis and Validity of Categories

Content analysis was applied to five questions in the pre- and post-chipmill interviews as well as to three questions on the mail questionnaire. Results were based on phi coefficients that were .70 and greater. In general, Scott's phi coefficient indicated the reliability of the results associated with the content analysis. In the absence of reliability testing, independent coders, and statistical tools, the results and their implications cannot be defended. Assuring reliability helped evaluate the data objectively, identify changes in the dependent variables over time, and ultimately make more definitive statements about the data, sample, and population as a whole (See Appendix O for a complete explanation of content analysis coding procedures) .

The validity of the interview questions and mail questionnaire was determined by the author's research committee. Face validity, the appearance that the instrument was measuring what it purported to measure, was judged to be present.

CHAPTER VI

DISCUSSION

The objectives of this research project were (1) to determine whether community leaders were exposed to CIC messages; (2) to determine whether messages were received by community leaders; (3) to determine the degree of accuracy and agreement for community leaders exposed to CIC message channels; (4) to determine the communication channel most effective in increasing accuracy and agreement; and (5) to recommend communication strategies that can be used in the future by the forest products industry. In general, the discussion of the results and the overall degree of effectiveness of the CIC communication campaign must be considered in light of the Pigeon River issue, which at times dominated the content of responses by community leaders. There is simply no sure method of controlling all extraneous, intervening, or antecedent variables in an applied context. Nevertheless, the results still offered insight into the degree of effectiveness of CIC's communication campaign and the areas in which successes and failures occurred. The discussion of the results will be structured according to the SCMRE model.

Although many forest products firms have launched communication campaigns, a method of evaluating these campaigns is not well-documented. In addition, results have shown that the industry has been ineffective in communicating its messages (TVA and Auburn University, 1993; Devall, 1994; Bartlett, 1995). The SCMRE model provided a communication theory framework for evaluating the CIC communication campaign and allowed me to identify where communication breakdowns and successes occurred.

The coorientation model was a useful analytic tool that offered a structure for evaluating organizational communication. While interpersonal communication is a dominant feature of this model, the "coorientational" aspect describes the flow of information between organizations and the public, not merely sender and receiver (McLeod and Chaffee, 1973). The coorientational variables were agreement, accuracy, and congruency. Yet, agreement and accuracy are the only terms that reflected an interaction between two or more parties (McLeod and Chaffee, 1973; Dozier and Ehling, 1992).

In general, the coorientational variables extend beyond estimating the differences of views held by an organization and the public. These variables can be used to identify situations of true consensus, false consensus, and false conflict (Broom and Dozier, 1990). In the CIC case, the company assumed that the east Tennessee land purchase and Cumberland Forest chipmill construction and start-up would result in great conflict. Consequently, the ETEP was specifically designed to address the land purchase and chipmill operation.

Although there was much publicity about the chipmill, resolutions introduced, and protests planned, according to this research, the land purchase and chipmill never became the main issue of concern for community leaders. For example, on the mail questionnaire which coincided with the start-up of the chipmill, only 26.9% of community leaders mentioned the land purchase and only 5.7% mentioned the chipmill as a reason for naming CIC as a forest products company. When

leaders were asked this same question in the post-chipmill interview, 22.6% discussed the land purchase and 20.8% mentioned the chipmill.

The ETEP had two goals: to purchase land and to build a chipmill. Based on the results, it might be said that one of these issues was far more important than the other, or that community leaders could have followed only the land purchase issue and rationalized that once the land was acquired by CIC, the chipmill was a non-issue. Perhaps the level of interest decreased once the land was purchased. Moreover, in comparison to the Pigeon River issue, which 38.5% (mail questionnaire) and 41% (post-chipmill interview) of the leaders listed as the reason they specifically named CIC, the chipmill appeared to have been a less important issue.

The chipmill issue was not specifically part of the general or specific messages conveyed by CIC. Nevertheless, it was noteworthy to see if any recalled or repeated messages referred to the chipmill. I expected that, if the chipmill was a major concern of community leaders, then recalled and repeated messages would include it. Close examination of the messages recalled and repeated revealed that very few responses in either interview related to the chipmill. Even more surprising was that the few responses related to the chipmill placed it in a neutral to favorable context, such as the additional jobs offered or the economic boost to the area. The low percentage of responses specifically related to the chipmill indicated that false conflict may have occurred. CIC may have anticipated a problem (or the wrong problem) when there was actual agreement.

Broom and Dozier (1990) suggest that when planning a communication campaign, measuring the coorientational variables is the first step to success. CIC's decision to launch the ETEP indicated that the company assumed congruency (i.e., organization's view of an issue and the organization's perception of the community leaders' view of an issue). When planning a communication campaign, a company should analyze the public's view of issues related to the company's objectives (McLeod and Chaffee, 1973; Broom and Dozier, 1990; Dozier and Ehling, 1992).

Receivers

According to Grunig and Repper (1992), there are several stages and steps to planning a organizational communication campaign. They suggest that stakeholders be identified and a dialogue established well before any issue or conflicts arise. A stakeholder is defined as any person affected by an organization's actions or decisions. The planning for an organizational communication campaign can then be traced to the two-step flow theory and diffusion of innovation (Rogers, 1962; Lazerfeld and Katz, 1970; Rogers and Shoemaker, 1971). CIC followed both theory and proven practice.

Extensive polling of the east Tennessee area was completed prior to the ETEP. The goal was to identify blocks or segments of audiences that seemed more likely to listen and be open to CIC's messages. CIC followed Grunig's (1989 and 1992) suggestion of segmentation in which groups or segments were identified that may be more open, accepting, and supportive of the organization's messages. However, segmentation fails to identify initial position or level of interest. Instead, the interest is in determining what predisposes someone to respond differently

than another segment (Grunig 1989 and 1992). It appeared that CIC needed to extend polling beyond simply naming segments and possibly focus on other receiver traits as a way to determine if true congruency was present.

CIC targeted community leaders in the counties that would be affected by the company's actions and decisions. Based on theory, CIC wanted to inoculate community leaders with CIC messages, and hoped that community leaders would then serve as sources of information for others about CIC's practices via messages they had heard. This describes the communication process from organization to community leaders to the public in general.

The fundamental premise of diffusion of innovation and two-step flow theories is that identified leaders associate with many diverse groups and networks, both formally and informally. Otherwise, messages or ideas would never be exposed to a wide variety of audiences. Consequently, community leaders such as professionals and public officials were perfect targets with access to a wider audience (Rogers 1962; Rogers and Shoemaker, 1971).

Granted, CIC unintentionally followed diffusion of innovation or two-step flow theory. CIC relied on the basic premise of selecting people who would have the most authority, influence, power, credibility, and visibility in communities, and these turned out to be professionals and public officials.

Only six percent of community leaders were natural resource professionals. The reasoning here could have been that support from this group as a whole was expected. Therefore, CIC believed its time and energy should be spent talking with people who were uninformed or undecided about natural resource management. Perhaps a more effective strategy would have been to include more resource professionals, since they already have a working knowledge of forest management. More importantly, resource professionals have an established network of peers and probably have firsthand experience of dealing with the opposition. Additional resource professionals might have strengthened CIC's messages and increased the number of people reached.

The memberships of community leaders demonstrated that focusing communication efforts on older community leaders proved to be a good choice in this campaign, given the level of involvement with civic organizations of the target audience. Older leaders proved to be more likely to be members of civic organizations than leaders age 29 and younger. However, targeting younger community leaders might have included more environmental groups, since these groups are generally comprised of members 40 and younger.

Based on the literature reviewed, I would have expected receiver traits such as gender, age, occupation, and memberships to be correlated with the coorientational variables accuracy and agreement (Salcedo, et al., 1974; Mackie, Worth, and Asuncion, 1990; Krendal, Olsen, and Burke, 1992; Aune and Kikuchi, 1993; Perloff, 1993; Yep, 1993). However, of those traits, only gender was moderately associated (.41) with the variable of degree of coorientation for the post-chipmill interview. This association was unfounded for agreement in the pre-chipmill interview or for accuracy in either interview.

The literature also indicated that receiver traits extend beyond mere demographics or objective variables as described by Grunig (1989). Instead, receiver traits often include receiver's initial position, receiver involvement, and inferred objective variables such as attitudes, perceptions, and cognitions (Hyman and Sheatsley, 1947; Debono and Harnish, 1988; Chebat et al., 1989, Marzursky and Schul, 1992; Perloff, 1993). These traits are not measured by segmentation (Grunig, 1989 and 1992). Further, the interviews and the mail questionnaire failed to measure receiver traits specifically. Based on previous regional attitudinal surveys, the forest products industry had credibility problems, resulting in unfavorable attitudes toward the industry (TVA and Auburn University, 1993; Devall, 1994; Bartlett, 1995). Consequently, I had some idea about the initial position of receivers. These inferences must be understood in the context that the results of surveys were often based on random samples and not on a segment of community leaders. In short, we can make some general statements about the impact of previous attitudes and leader traits as a way to understand the level of accuracy and agreement.

The level of accuracy and agreement was fairly stable over time. Accuracy was generally low to moderate, while agreement was low. Could receiver traits have been partially responsible for the lack of improvement? Statistically, there was no pattern of relationships between these variables. Substantively, receivers' initial positions regarding degree of trust in CIC as a company were low to moderate. In the mail questionnaire, leaders reported mostly favorable attitudes toward CIC. However, this rating changed to low in the post-chipmill interview. I speculate that the timing of the Canton Mill Pigeon River permitting process was largely responsible for this shift in attitudes toward CIC. We can begin to understand that the lack of improvement in accuracy and agreement despite repeated exposure may be linked to receiver position regarding the source.

A relationship was observed between a receiver trait and accuracy and agreement by county. Cocke County (closest to the Pigeon River) was separated from the other counties to determine if its community leaders differed in any way from community leaders residing in other counties. The issues differed, with the Pigeon River being more specific to Cocke County and the land purchase and chipmill being related primarily to the other three counties. By far, accuracy was higher in Cocke County than in other counties. However, the strength of the association was only moderate (.36 and .47 in the pre- and post-chipmill interviews, respectively). For accuracy only, a statistical relationship was evident in the pre-chipmill interview. But the strength was slightly higher (.43) than the accuracy coefficients.

The Pigeon River has been an issue in Cocke County for many years. Leaders' exposure to CIC messages extends beyond the two years on which this evaluation was based. The difference may not be in the receivers *per se*, but in the level of exposure. It could be argued that increased exposure over a long period of time increased accuracy and agreement. Wilson (1971) claimed that exposure time and detail were a function of message recall, which would explain the increase of accuracy and agreement (i.e., based on message recall) for leaders in Cocke County. However, Finnegan et al. (1989) and Mackie (1992) reported that message recall was a function of time. In their study, they found that message recall of subjects exposed to a mass media campaign peaked in the second interview. After that, in the third and fourth interviews, message recall dropped

significantly. Their research excluded repeat exposure. In the present study, multiple exposures were the norm, not the exception. In short, it appeared that CIC's progress in achieving accuracy and agreement in Cocke County was more evident, which could possibly be attributed to prolonged exposure and not necessarily to the receiver trait (i.e., residence in Cocke County).

Source

In the ETEP, as with any communication project, source credibility is a critical element in communication effectiveness. The majority of research has focused on trust and expertise (Bloom and Hautaluoma, 1987; Chebat et al., 1988; Lui and Standing, 1989; O'Hara et al., 1991; Mazurchy and Schul, 1992; DeBono and Klein, 1993; Wilde, 1993; Wilson and Sherrell, 1993; Chaiken and Maheswaran, 1994). The basic theory is that if the receivers trust the source and believe they are experts on the issue, then they will more than likely attend to the messages and sources will be more persuasive. In fact, several of these authors claimed that expertise, not trust, has the greatest impact on changing attitudes (Wilson and Sherrell, 1993; O'Hara et al., 1991). However, given CIC's and the forest industry's overall credibility problem, the present study focused on trust, not expertise.

The interviews offered two measures of the degree of trust in CIC as a company. In the pre-chipmill interview, the level of trust was moderate to high, whereas in the second interview, trust was low to moderate. Although the accuracy was never high or even moderate to begin with, a shift was still noted from low (24.1%) to lower (12.8%). Statistically, there was no relationship between accuracy and degree of trust in CIC as a company, but some interaction may have occurred. With overall exposure to CIC channels and messages at almost 97% and re-exposure in the 17-month period at 84.6%, it seemed likely that source credibility had some impact on agreement. As trust in the source decreased, the degree of agreement also decreased from the pre- to the post-chipmill interview (24.1% to 12.8%).

Confidence in the mass media as a source for reporting CIC-related news stories was also measured. Over time, confidence in the mass media increased from mostly moderate to mostly moderate and high. This shift was the reverse of what was observed with CIC as a source. Statistically, there was no relationship between CIC as a source and the mass media. Yet, a negative relationship appeared to be present which may have influenced the level of accuracy and agreement. The literature indicates that receivers will seek sources they find credible, trustworthy, and knowledgeable. Moreover, receivers are more likely to attend to messages presented by these types of sources (Bloom and Hautaluoma, 1987; Chebat et al., 1988; Lui and Standing, 1989; O'Hara et al., 1991; Mazurchy and Schul, 1992; DeBono and Klein, 1993; Wilde, 1993; Wilson and Sherrell, 1993; Chaiken and Maheswaran, 1994). Consequently, in order to be a persuasive communicator, a source must be credible.

Several conclusions can be derived from the results on source effectiveness. Messages should be conveyed by some known and credible source. If the source's credibility is questionable, then someone visible and perceived as credible would be an excellent choice as an alternative source. CIC followed this suggestion when it used professionals or people with similar traits as the audiences in mass media efforts such as the commercials. Relying on the credibility of

another person offered support for the validity of the two-step flow and diffusion of innovation theory (Rogers, 1962; Rogers and Shoemaker, 1971).

Channels

A channel refers to a medium used to convey information or communication (Perloff, 1993). CIC used a wide range of information channels, which could be grouped as interpersonal or mass media under the umbrella of organizational communication. Exposure to CIC was extremely successful, with 96.3% of all community leaders being exposed to two or more channels, and name recognition of CIC was extremely high. The most common channel type was a combination of the mass media and interpersonal channels. Of these types, personal contact with a CIC representative and the CIC television commercials were the most frequently reported CIC channels to which respondents were exposed. A comparison of the advantages and disadvantages of these two channels helps illuminate which channels are most effective at relaying information and increasing agreement.

The expense of producing commercials and buying television time in prime markets failed to yield significantly more exposure among this sample than did personal contact. Mass media efforts were thought to reach much of the general population, including community leaders. This study indicated that a more cost-effective method of reaching a specific population such as community leaders was through personal contact.

The benefits of talking directly with a company representative were that questions could be answered and rapport established. Leaders connected a face and personality to the company. Ideally, this personality was perceived as personable, competent, and concerned about community leaders' ideas and suggestions. These benefits cannot be derived from an impersonal television commercial. The results of channel effectiveness are similar to those in the literature presented.

Finally, personal contact afforded CIC control over who received a message. A commercial targets a monolithic mass, many of whom are unconcerned or apathetic about the message. In general, community leaders possess different attributes than the mass, including influence, power, and/or status in the community. In summary, it seemed that interpersonal contact had the greatest potential to increase accuracy and agreement while enjoying a comparable exposure rate to the mass media efforts at a substantially lower cost to the company.

When community leaders were asked which channel was most effective in communicating with leaders, they overwhelmingly recommended interpersonal (i.e., 70.2% pre-chipmill and 63.8% post-chipmill) and, specifically, personal contact. Commercials ran a distant second (25.5% pre-chipmill and 14.9% post-chipmill). Community leaders' suggestions agreed with the study results of channel type and degree of accuracy and agreement. Here, interpersonal channels, particularly talking with a CIC representative, had a high degree of success in improving accuracy and agreement. In combination with the level of accuracy and agreement improved. Interpersonal channels were more closely related to correct specific message recall and repetition, while the mass media channels usually coincided with correct general message recall and repetition.

Consequently, a combination of channel types appeared to be commonly associated with moderate to high levels of accuracy and agreement.

Yep (1993) also reported that channels relying on interpersonal contact are perceived as far more credible than mass media or impersonal approaches. In the post-chipmill interview, 12.8% said none of the CIC channels were credible because CIC could not be trusted. Given this attitude, community leaders generally had positive comments about the majority of ETEP channels. Nevertheless, we start to see a pattern with source credibility decreasing, strong opinions of channel effectiveness related to the source (CIC), and agreement decreasing.

One of the specific channels used by CIC to reach community leaders was speaking engagements at civic meetings. Here, CIC had a captive audience of leaders in each county which could potentially reach a large number of people. According to the two-step flow theory, a leader hears a message and then communicates that message to others (Rogers, 1962; Shoemaker, 1971). In the case of civic meetings, attendance ranged from a few people to 50 or more. Exposure at civic meetings reached beyond the immediate audience and, according to theory, may have had the potential to reach the most people using an interpersonal channel.

In addition to the CIC channels, there was also high exposure (100%) to non-CIC mass media coverage. The range of sources writing commentaries about CIC was widespread. News articles appeared in local and alternative newspapers as well as the New York Times and Wall Street Journal. Television coverage ranged from local stations to national television shows such as Primetime Live, which reached millions of households. The frequency of exposure to CIC-related issues was significant, especially in the east Tennessee and western North Carolina areas.

The mass media was generally an inconsistent, unreliable source of positive information about CIC. The tone of coverage varied depending on the issue, but more recently the coverage has ranged from neutral to negative. When there are two competing sources of information that rely on similar and different channels of communication, source credibility and message content become critical. Consequently, the channel used may not be as important as the message itself and the source used to convey that message.

A combination of interpersonal and mass media channels appeared to be the most effective way to relay information to community leaders. Specifically, accuracy was greatest for interpersonal channels, but a combination only increased the level of accuracy. In contrast, interpersonal channels only were associated with agreement or persuasion.

Message

The CIC messages used to measure accuracy and agreement were generated from CIC company representatives. They were divided into general messages and specific messages, which could be defined as what Perloff (1993) called evidence-based and vivid messages. Perloff (1993) defined each, respectively, as messages based on fact and messages that appeal to personal anecdotes. CIC general messages primarily addressed the improving conditions of the Pigeon River and forest stewardship such as "being a good neighbor." Here, CIC was appealing to

personal experience or shaping personal experience. Further, the detail of the specific messages addressed CIC environmental practices or forestry-related facts. Perloff (1993) argued that either message can be influential, depending on the context.

In the ETEP project, general messages were recalled and repeated far more than specific messages. These results could be explained by several factors. The criteria for "correctness" were defined by CIC officials in personal interviews. However, some messages repeated both in the interview and to others would be viewed as positive messages by CIC. For example, some leaders said that clearcutting was favorable for wildlife. Although this was an incorrect CIC message, it was one with which CIC would probably agree. Consequently, many messages deemed incorrect based on the criteria established by CIC were actually messages that CIC might have preferred to be repeated.

The purpose of a communication campaign is to convey a key message or set of messages. If the firm fails to select a set of key messages, then the focus of the campaign is chaotic and potentially ineffective. There were 12 key messages on which CIC focused. This may have been too many. If there had been only three key general messages, for example, communication might have been more effective. In addition, messages needed to be presented in a language that all people could understand. Many of CIC's messages included technical terms and jargon, which can reduce message effectiveness. In summary, accuracy and agreement might have been related to the content of the messages themselves and the way they were framed.

Effectiveness -- Accuracy and Agreement

In general, accuracy was low to moderate and remained unchanged over time, while agreement was low and changed to even lower over time. The mail questionnaire offered an additional measure of accuracy and agreement. It assessed a more general interpretation of the messages than the one used in the interviews. In the mail questionnaire a series of statements indicated whether leaders agreed or disagreed, while in the interviews leaders were asked to recall messages on the spot. In summary, the interviews provided a more sophisticated and precise measure of accuracy and agreement, while the mail questionnaire provided a more general evaluation of these coorientational variables. Consequently, the results from the interview and the mail questionnaire were consistent, because they were merely two different measures of the level and degree of accuracy and agreement. Maybe all CIC could have hoped for was a general level of communication and coorientation, not a more specific measure that was reflected in the pre- and post-chipmill interviews.

Source-Message-Channel-Receiver Effectiveness Model

The SMCRE Model was used as a strategy to evaluate CIC communication efforts. The model provided a framework for identifying where communication successes and failures occurred. The model and results are depicted in Figure 4.

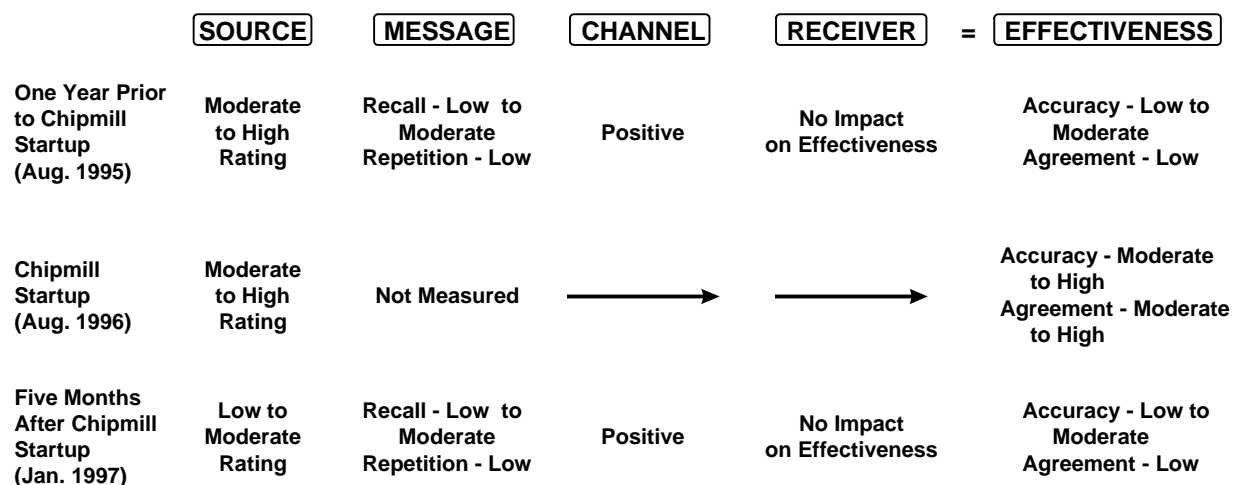


Figure 4. Application of SMCRE Model to CIC communication campaign.

Figure 4 indicates that effectiveness, as measured by accuracy and agreement, was poor as a result of too many messages and a change in source evaluation over time. Channels and receiver characteristics did not appear to have a negative impact on effectiveness.

Previous literature has focused on various components in the model, yet none has integrated all parts of the model. Even in a laboratory setting, controlling for extraneous, antecedent, and intervening variables is difficult in communication research. Nevertheless, I did apply the SMCRE Model in a real-life situation with success, as indicated by the research presented. Absent from this model is the impact of the Pigeon River, which is a prominent feature in the outcome of this research.

To further understand the SCRME process and the results, both can be translated into coorientation theory terms. Figure 5 contains the coorientation model applied to the results of the evaluation. In the coorientation model, I started with perceived agreement to determine whether a campaign is necessary. Again, perceived agreement is the extent to which CIC accurately perceives the community leaders' views of the issue. In this case, perceived agreement was low, making a communication campaign for the land purchase or chipmill unnecessary. The Pigeon River issue seemed a more appropriate target. The degree of accuracy, or the community leaders' perception of CIC's views, was also low on the interviews and high on the mail questionnaire.

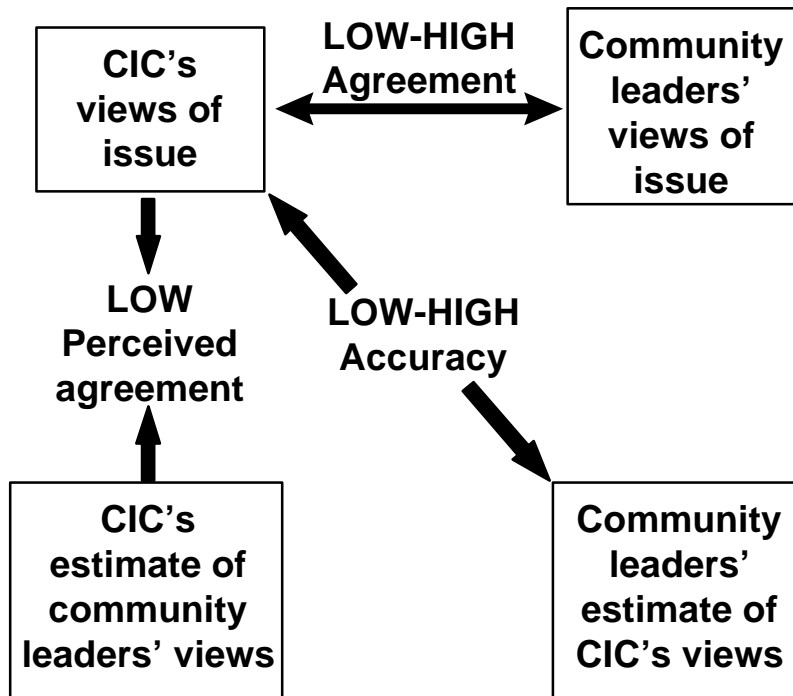


Figure 5. Coorientation model by McLeod and Chaffee (1973) applied to the results of the evaluation of CIC's communication campaign.

In addition, the degree of agreement or consistency between CIC's and the community leaders' views of the issue was low for the interviews and high for the mail questionnaire. Overall, it appeared that CIC launched a communication program for the wrong issue and that campaign was largely unsuccessful at improving accuracy and agreement. However, the degree of success of the campaign may be masked by the Pigeon River issue.

CHAPTER VII

CONCLUSIONS

The ETEP was launched as a way for CIC to communicate information about the company's operations in east Tennessee and gain support from community leaders. CIC reached its operation goals of purchasing land and building a chipmill in the east Tennessee area. The evaluation of the ETEP started in February 1994 and ended in January 1997. The objective of this evaluation was to determine the level of interpersonal communication and coorientation with community leaders and what channels increased the degree of these variables.

The sample population consisted of a purposeful sample of 54 community leaders from a four-county area affected by CIC's operations. The population was loosely based on the two-step flow theory and diffusion of innovation (Rogers, 1962; Shoemaker and Rogers, 1971). Two in-depth interviews were conducted. One interview took place in August 1995, one year prior to the start-up of the chipmill, and the second interview occurred in January 1997, five months after the chipmill was in operation. Between these interviews, a third data collection point occurred at the time of the start-up of the chipmill and took the form of a mail questionnaire.

The land purchase and chipmill startup were the centerpiece of the ETEP and the event that precipitated the CIC communication campaign. The Pigeon River proved to be a critical issue, however, more so than the chipmill and land purchase at times. Consequently, the communication campaign was probably necessary, but the focus might have been off-target.

The coorientational model and theory provided a framework for evaluating the ETEP. The coorientational variables, accuracy (degree of interpersonal communication) and agreement (degree of coorientation), were then framed in the SCMRE model so that the successes and points of breakdown in communication could be identified. General measures of accuracy based on the mail questionnaire indicated that interpersonal communication was moderate to high. Agreement, on the other hand, was low to moderate. More precise measures of accuracy based on the interviews indicated that interpersonal communication was consistent across interviews, ranging from low to moderate. In comparison, agreement was consistently low.

The SCMRE model provided a structured method of interpreting the results. Name recognition and exposure to CIC channels and messages was extremely high, indicating that some type of communication occurred. In addition, accuracy was low to moderate, indicating some degree of interpersonal communication.

CIC's channels received generally positive evaluations from community leaders. Personal contact with a CIC representative resulted in a high degree of accuracy and agreement. A combination of interpersonal and mass media channels produced the highest level of accuracy; yet, agreement was only associated with an interpersonal channel. These were some of the successes.

The complexity of the communication process became apparent when coorientation was analyzed. The various SCMRE variables such as source characteristics, receiver traits, and

message content and framing interacted and influenced the communication and coorientation process. It appeared that trust in CIC as a company decreased over the 17-month period, and so did agreement. Moreover, there were 12 key CIC messages to attend to. Selecting just one or two messages probably depended on the interest level and receiver's position and involvement in the issue. In this case, we go back to the source. If the source is perceived as credible, then interest levels may increase and positions shift from being closed to being at least open to communication.

Overall, CIC communicated with community leaders, yet the media exposure of the Pigeon River issue may have mitigated the effects of CIC's communication campaign. In this situation, this may be the highest possible level of communication and coorientation that could have been expected.

Several conclusions appear to be warranted from this study. They are:

1. CIC failed to measure accurately the coorientational variables prior to the ETEP to determine whether the campaign was necessary and which issue was most salient.
2. The Pigeon River issue dominated community leaders' perception of CIC.
3. In comparison to the Pigeon River, the land purchase and Cumberland Forest chipmill were non-issues.
4. Interpersonal communication is best achieved by a combination of interpersonal and mass media channels, while persuasion most likely occurs with an interpersonal channel.
5. CIC should have developed three key messages that were based on personal experiences of community leaders.
6. In future communication campaigns, CIC should continue to use interpersonal communication, particularly personal contact and mass media channels, as a way to disseminate information to community leaders.

Recommendations to the forest products industry in general include:

1. Measure the coorientational variables of accuracy and agreement to determine if a communication campaign is necessary and the issue that needs to be addressed.
2. If the campaign is necessary, segment audiences not only according to demographic characteristics, but also by traits that help determine the most effective type of communication.
3. Messages that address audience traits should be based on several factors: the importance a person or group places on the issue and its relevancy to his/her life, whether the person or group is seeking information, and previous experience.

4. A combination of interpersonal and mass media channels should be used so that a variety of audience traits can be addressed.
5. If the source's credibility is questionable, the source should seek alliances with other sources known to have credibility with the target audience.
6. Communication campaigns should always be evaluated based on organizational goals to determine where successes and failures occurred.

LITERATURE CITED

- Alabama Forestry Commission. 1992. Public opinion survey. (Publisher and city unknown.)
- American Forest Council and Southern Forestry Associations. 1986. Key findings: 1986 Public opinion survey. Washington, DC: American Forest Council.
- American Forest and Paper Association. 1993. Forest management issues message evaluation and development. Washington, DC: Politics and Public Policy Group.
- Asheville Citizen-Times. 1995, April 19. "Environmentalists protest chipmill."
- Asheville Citizen-Times. 1996, May 19. "Champion continues ads in WNC."
- Asheville Citizen-Times. 1997, January 16. "EPA meets with Tennessee environmentalists."
- Atkin, C. K. 1981. "Mass media information campaign effectiveness." pp.265-281. IN Public Communication Campaigns. Rice, Ronald E. and Paisley, William J. (eds). Beverly Hills: Sage Publ. 328pp.
- Baker, S. M., and Petty, R. E. 1994. Majority and minority influence: source-position imbalance as a determinant of message scrutiny. *J. Personality and Social Psychol.* 67(1):5-19.
- Bartlett, R. A. 1995. Troubled Waters: Champion International and the Pigeon River Controversy. Knoxville, TN: Univ. of Tenn. Press. 348pp.
- Berelson, B. 1971. Content Analysis in Communication Research. New York: Hafner Publ. Co. 220pp.
- Blank, G. B. 1994. Communication in the forester's workplace. *J. For.* 92(3):35-40.
- Bloom, D. J. and Hautaluoma, J. E. 1987. Effects of message valence, communicator credibility, and source anonymity on reactions to peer feedback. *J. Social Psychol.* 127(4):329-338.
- Broom, G. M. and Dozier, D. M. 1990. Using Research in Public Relations. Englewood Cliffs, NJ: Prentice Hall. 474pp.
- Cantor, J. 1994. Fright reactions to mass media. IN Media Effects: Advances in the Theory and Research. pp. 213-245. D. Zillman (ed). Hillsdale, NJ: Lawrence Erlbaum.
- Carney, T. F. 1972. Content Analysis: A Technique for Systematic Inference from Communications. Winnepeg, Canada: Univ. of Manitoba Press. 344pp.

- Chaiken, S., and Maheswaran, D. 1994. Heuristic processing can bias systematic processing: effects of source credibility, argument ambiguity, and task importance on attitude judgement. *J. Personality and Social Psychol.* 66(3):460-473.
- Chakrabarti, A. K. 1972. A dissonance theory approach to communication channel usage. *Indian J. Social Res.*13(2):98-110.
- Champion International Corporation. 1993. Clear Values, Clear Vision; Our Approach to Environment, Health, and Safety. New York, NY. 32pp.
- Champion International Corporation. 1994. Annual Report. Hamilton, OH. 68pp.
- Chebat, J.-C., Filitrault, P., and Perrien, J. 1989. Limits of credibility: the case of political persuasion. *J. Social Psychol.* 130(2):157-167.
- Chebat, J.-C., Filitrault, P., Larouche, M. L., and Watson, C. 1988. Compensatory effects of cognitive characteristics of the source, the message, and the receiver upon attitude change. *J. Psychol.* 122(6):609-621.
- County Clerk, Anderson County, Tennessee. 1994, June. Resolution requiring mandatory best management practices on all logging operations for landowners owning 500 acres or more.
- County Clerk, Campbell County, Tennessee. 1994, April. Resolution regarding clearcutting of lands deemed commercially valuable in Caryville, Tennessee and Jellico, Tennessee.
- Cutlip, S. M., Center, A. H., and Broom, G. M. 1985. Effective Public Relations. Englewood Cliffs, NJ: Prentice-Hall. 611pp.
- DeBono, K., and Harnish, R. J. 1988. Source expertise, source attractiveness, and the processing of persuasive information : a functional approach. *J. Personality and Social Psychol.* 55(4):541-546.
- DeBono, K. G., and Klein, C. 1993. Source expertise and persuasion: the moderating role of recipient dogmatism. *Personality and Social Psychol. Bull.* 19(2):167-173.
- Devall, B. 1994. Clearcut: The Tragedy of Industrial Forestry. Earth Island Press: San Francisco, CA. 291pp.
- Dillman, D. 1977. Mail and Telephone Surveys: The Total Research Design. New York: John Wiley and Sons. 325pp.
- Douglas, D. F., Westley, B. H., and Chaffee, S. H. 1970. An information campaign that changed community attitudes. *Journalism Quart.* 47(3):479-487,492.

- Dozier, D. M. and Ehling, W. P. 1992. Evaluation of public relations programs: what the literature tells us about their effects. pp. 159-185. IN *Excellence in Public Relations and Communication Management*. J. E. Grunig (ed). New Jersey: Lawrence Erlbaum Assoc. 666pp.
- Enterprise Mountaineer. 1997, January 27 and 30. "Champion gets permit but controversy continues."
- Ferguson, K. H. 1996. Champion moves toward closure with BFR startup at Canton, NC. *Pulp and Paper*. April.
- Finnegan, J. R., Viswanath, K., Hannan, P. J., Weisbrod, R., and Jacops, D. R., Jr. 1989. Message discrimination: a study of its use in a campaign research project. *Commun. Res.* 16(6):770-792.
- Flyer Handout. 1995, Feb. 3. "Champion Boycott." Handed out at Society of American Foresters Winter Meeting. Chattanooga, TN.
- Georgia Forestry Association. 1995. Georgia Forestry Association's Three-Year Campaign Summary and Communication Campaign Media Content Analysis. Atlanta, GA. March.
- Grunig, J. 1989. Public audiences and market segments: segmentation principles for campaigns. Pp. 199-229. IN *Information Campaigns*. C. T. Salmon (ed). Newbury Park, CA: Sage Publ. 36pp.
- Grunig, J. 1992. Evaluation of public relations programs: what the literature tells us about their effects. pp. 159-185. IN *Excellence in Public Relations and Communication Management*. J. E. Grunig (ed). New Jersey: Lawrence Erlbaum Assoc. 666pp.
- Grunig, J., and Stamm, K. R. 1973. Communication and coorientation of collectivities. *Amer. Behav. Scientist* 16(4):483-488.
- Grunig, J., and Repper, F. C. 1992. Strategic management, publics, and issues. pp.117-157. IN *Excellence in Public Relations and Communication Management*. J. E. Grunig (ed). New Jersey: Lawrence Erlbaum Assoc. 666pp.
- Heesacker, M., Petty, R. E., and Cacioppo, J. T. 1983. Field dependence and attitude change: source credibility can alter persuasion by affecting message-relevant thinking. *J. Personality* 51(4):653-666.
- Holtgraves, T., and Bailey, C. 1991. Premise acceptability and message effectiveness. *Basic and Appl. Social Psychol.* 12(2):157-176.

- Hyman, H. H., and Sheatsley, P. B. Some reasons why information campaigns fail. *Public Opinion Quart.* 11:412-423.
- Katz, E., and Lazarsfeld, P. F. 1970. *Personal Influence*. New York: The Free Press. 400pp.
- Knoxville News-Sentinel. 1993, June 6. "U.S. Forest Service proposes a logging halt on 62 forests."
- Knoxville News-Sentinel. 1994, March 25. "Champion touts its hardwood policies."
- Knoxville News-Sentinel. 1994, July 27. "85,000 acres of timber bought by Champion."
- Knoxville News-Sentinel. 1994, Oct 8. "Anderson County can't zone against Champion, Attorney General says."
- Knoxville News-Sentinel. 1995, Jan. 8. "Pigeon River dispute: community remembers Hartford victims."
- Knoxville News-Sentinel. 1996, April 4. "Conservationists, timber group vie as national forest talks near."
- Knoxville News-Sentinel. 1996, April 7. "Group wants Anderson to tax clear-cutting by Champion."
- Knoxville News-Sentinel. 1996, May 12. "Company reeled in a real cutie for river TV spot."
- Knoxville News-Sentinel. 1996, May 14. "Champion pulls 2 ads."
- Knoxville News-Sentinel. 1996, May 15. "Recovering the river."
- Knoxville News-Sentinel. 1996, May 26. "Groups fight Champion's permit."
- Krendel, K. A. Olsen, B., and Burke, R. 1992. Preparing for the environmental decade. A field experience on recycling behavior. *J. Appl. Commun. Res.* 20(1):19-36.
- Krippendorff, K. 1980. *Content Analysis: An Introduction to its Methodology*. Beverly Hills, CA: Sage Publ. 189pp.
- Krueger, R. A. 1988. *A Practical Guide for Applied Research*. London: Sage Publ. 220pp.
- LaFollette Press. 1993, Dec. 2. "Champion confirms it's eyeing area."
- LaFollette Press. 1995, Oct. 19. "Appeal of local chipmill permits begins in Nashville."

- LaFollette Press. 1995, Dec. 14. "SOCM, Champion express differing views to UT class."
- Lazarsfeld, P. F., Berelson, B., and Gaudet, H. 1968. *The People's Choice*. New York: Columbia Univ. Press. 178pp.
- Ledingham, J. A. 1993. The kindness of strangers: Predictor variables in public information campaign. *Public Rel. Rev.* 19(4):367-384.
- Lord, K. R. 1994. Motivating recycling behavior: a quasiexperimental investigation of message and source strategies. *Psychol. and Marketing* 11(4):341-358.
- Lowery, S., and DeFleur, M. L. 1988. *Milestones in Mass Communication Research Media Effects*. New York: Longman. 398pp.
- Lui, L. and Standing, L. 1989. Communicator credibility: trustworthiness defeats expertness. *Social Behavior and Personality* 17(2):219-221.
- Mackie, D. M., Worth, L. T., and Asuncion, A. G. 1990. Processing of persuasive in-group messages. *J. Personality and Social Psychol.* 58(5):812-822.
- Major, A. M. 1993. Environmental concern and situational communication theory: Implications for communicating with the environmental publics. *J. Public Rel. Res.* 5(4):251-268.
- Manheim, J. B., and Rich, R. C. 1995. *Empirical Political Analysis: Research Materials in Political Science*. 4th ed. White Plains, NY: Longman. 465pp.
- Manfredo, M. J. and Bright, A. D. 1991. A model for assessing the effects of communication on recreationists. *J. Leisure Res.* 23(1):1-20.
- Mazuesky, D., and Schul, Y. 1992. Learning from the ad or relying on related attitudes: the moderating role of involvement. *J. Business Res.* 25:81-93.
- McLeod, J.M., and Chaffee, S.H. 1973. Applying the interpersonal perception model to the real world. *Amer. Behavioral Scientist* 16(4):465-497.
- Mendelsohn, H. 1973. Some reasons why information campaigns can succeed. *Public Opinion Rev.* 19(4):367-384.
- Mick, D. G. 1992. Levels of subjective comprehension in advertising processing and their relations to ad perceptions, attitudes, and memory. *J. Consumer Res.* 18:411-424.
- Newport Plain Talk. 1995, Jan. 9. "Empty Nest star speaks against pollution." Newport, TN.
- Newport Plain Talk. 1996, April 29. "US dominates river race." Newport, TN.

Newport Plain Talk. 1996, May 1. "Officials get select opinions on Pigeon."

Newport Plain Talk. 1996, May 13. "Environmental Management Commission slates hearing for Champion permit." Newport, TN.

Newport Plain Talk. 1997, Feb. 7. "EPA talks renew hope for river." Newport, TN.

O'Hara, B. S., Netemeyer, R. G., and Burton, S. 1991. An examination of the relative effects of source expertise, trustworthiness, and likability. *Social Behavior and Personality* 19(4):305-314.

O'Keefe, D. J. 1990. *Persuasion Theory and Research*. Newbury Park, CA: Sage Publ. 270pp.

Osgood Group Report and American Paper Institute. 1992. *Defining Perception Gaps: A Study of Issues for the American Paper Institute*. Publisher unknown.

Perloff, Richard M. 1993. *The Dynamics of Persuasion*. Hillsdale, NJ: Lawrence Erlbaum Assoc. 411pp.

Pfau, M. 1990. A channel approach to television influence. *Journal of Broadcasting and Electronic Media*: 34(2) Spring 195-214.

Pierce, Barnett W. and Stamm, Keith R. 1973. "Coorientational states and interpersonal communication." IN *New models for communication research*. pp. 177-302. (ed) Peter Clarke. Beverly Hills: Sage Publications. pp.307.

Plyler, J. L. 1994. Public attitudes toward forest management practices in pulp and paper company-owned forest lands in the Southern Appalachian Region. Unpublished MS Thesis. Univ. of Tennessee, Knoxville. 188pp.

Powell, D. S., Faulkner, J. L., Darr, D. R., Zhu, Z., and MacCleery. 1994. Forest resources of the United States, 1992. USDA For. Serv. Gen. Tech. Rep. RM-234 (Rev.).

Pratkanis, A., and Aronson, E. 1992. *Age of Propaganda*. New York: W.H. Freeman and Co. 299pp.

Prout, G. R. 1983. Industry and the environment: A communication gap. *Public Rel. Rev.* 3(3):36-58.

Reinsch, N.L., and Beswick, R. W. 1990. Voice mail versus conventional channels: a cost minimization analysis of individuals' preferences. *Acad. of Manage. J.* 33(4):801-816.

- Report of the Governor's Conference on Forestry: Tennessee's Forest Resources Economic and Social Challenges and Opportunities, Nashville. Sept. 19-20, 1989.
- Rogers, E. M. 1971. *Diffusion of Innovations*. New York: The Free Press. 367pp.
- Rogers, E. M., and Shoemaker, F. F. 1962. *Communication of Innovations*. New York: The Free Press. 476pp.
- Roskos-Ewoldsen, D. R. and Fazio, R. H. 1992. The accessibility of source likability as a determinant of persuasion. *Personality and Social Psychol. Bull.* 18(1):19-25.
- Salcedo, R. N., Read, H., Evans, J. F., and Kong, A. E. 1974. A successful information campaign on pesticides. *Journalism Quart.* 51(1):91-95,110.
- Salmon, C. T. 1989. Campaigns for "social improvement:" An overview of values, rationales, and impacts. pp 19-54. IN *Information Campaigns*. C. T. Salmon (ed). Newbury Park, CA: Sage Publ. 306pp.
- Singer, E., Rogers, T. F., and Glassman, M. B. 1991. Public opinion about AIDS before and after the 1988 U.S. government public information campaign. *Public Opinion Quart.* 55(2):161-179.
- Stern, B. 1994. A revised communication model for advertising: multiple dimensions of the source, the message, and the recipient. *J. Advertising* 23(2):5-15.
- Tan, A. S. 1981. *Mass Communication Theories and Research*. Columbus, OH: Grid Publ., Inc. 311pp.
- Tennessee Valley Authority and Auburn University. 1993. *Attitudes toward Forest Practices and Policies*. Gallup Org.
- Tinkham, S. F., and Weaver-Lariscy, R. A. 1993. A diagnostic approach to assessing the impact of negative political television commercials. *J Broadcasting and Electronic Media* Fall:377-399.
- Wackman, D. 1973. Interpersonal communication and coorientation. *Amer. Behavioral Scientist* 16(4):537-550.
- Wallinger, S. 1995. A commitment to the future: AF&PA's Sustainable Forestry Initiatives. *J. For.* 93(1):16-20.
- Weber, R. P. 1992. *Basic Content Analysis*. 2nd ed. New York: Sage Publ. 96pp.

- Weyerhaeuser Corporation. 1994. Town Hall Meeting; A Report to the Community. Weyerhaeuser Corp., Tacoma, WA.
- Wilde, G. J. S. 1993. Effects of mass media communication on health and safety habits: an overview of issues and evidence. *Addiction* 88:983-996.
- Wilson, E. C. 1971. The effect of medium on loss of information. *Journalism Quart.* 111-115.
- Wilson, E. J. and Sherrell, D. L. 1993. Source effects in communication and persuasion research: a meta-analysis of effect size. *J. Acad. Marketing Sci.* 21(2):101-112.
- Wire, The. 1995, July/Aug. "Champion International selected company of the year." Hamilton, OH.
- Wire, The. 1997, Feb. "Environmental kudos from the EPA." Hamilton, OH.
- Wu, C., and Shaffer, D. R. 1987. Susceptibility to persuasive appeals as a function of source credibility and prior experience with the attitude object. *J. Personality and Psychol.* 52(4):677-688
- Yep, G. 1992. Communicating the HIV/AIDS risk to Hispanic populations: a review and integration. *Hispanic J. Behavioral Sci.* 14(4):403-420.

APPENDIX A

CIC's COMMUNICATION MESSAGES: GENERAL AND SPECIFIC

General messages:

1. Come see our forests, don't take our word for it.
2. Come paddle the river and see the improvements.
3. We are inviting people to see the river and then we will be held to standard by those watching for improvements.
4. We acknowledge that we had a problem on the Pigeon River for a long time but we are beginning to address this problem. We are progressing, but we are not where we want to be.
5. We want to be good neighbors and stewards of the forest.
6. CIC was awarded the Conservation of the Year Award by TCL in 1994 and has received numerous conservation awards in 1995.
7. Over 20,000 people rafted the Pigeon River in 1994.

More specific messages:

1. CIC has been in Tennessee for 60 years and we plan to be here indefinitely.
2. CIC plans to manage the Cumberland Forest on a sustained yield basis looking at the whole range of resources, not just timber. Other resources include wildlife habitat, water quality (BMP's), special places (i.e., threatened and endangered species).
3. Massive site conversion to pine will not occur. We will maintain a hardwood forest.
4. Reforestation will take place, either naturally or planted depending on the site.
5. The chipmill will provide a market for low quality hardwood which has not existed in the past, improving the overall health of the forest resource.

APPENDIX B
PRE- AND POST-INTERVIEW QUESTIONNAIRES

QUESTIONNAIRE # _____

INTERVIEWER _____

PRE-CHIPMILL INTERVIEW

Directions to be read to subjects appear in lower case while instructions to interviewers appear in

**BOXED AND CAPS (NOT TO BE READ TO
SUBJECTS)**

INTRODUCTORY STATEMENT

Hello, my name is _____ and I am a graduate student in the College of Forestry at Virginia Tech in Blacksburg, VA. First, let me start by thanking you for taking the time to help us out.

You may be wondering how you were selected for the study.

The study focuses on communication efforts used by the forest product industry in east Tennessee. Our aim is to identify effective ways to communicate with community leaders, so we decided to go directly to the source—that's where you come in. You were identified as a community leader in your county and selected from a list. Your candid responses and comments are important to the success of this project, so please be as straightforward and specific as possible.

To make sure we're focusing on the same organizations as we talk, the "forest product industry or forest products company" refers to any company that makes paper products or lumber materials from trees. I'll use that phrase throughout the interview and wanted to be sure that we are thinking of the same types of companies.

Now, a few logistics:

The interview will last approximately 15 to 20 minutes. If you have any questions, please stop me at any time. I need you to sign a human subject release form required by Tech. This form states that we will keep the results confidential and that your responses will only be used for the purpose of this study. Take a minute to read and sign this form. If you wish to receive a summary of the

results of the study, I will provide a self-addressed stamped envelope so that you can mail your address at a later date to ensure confidentiality.

Do you have any questions before we begin?

A LIST OF POSSIBLE POST-INTERVIEW QUESTIONS AND ANSWERS IS LOCATED
ON PAGE 15.

1. Can you name some forest products companies in Tennessee and surrounding states (EMPHASIZE SURROUNDING STATES)? These companies may include ones that own land but may or may not have a facility in Tennessee.

CIRCLE NUMBER

YES 1

NO 2

DK 3

IF YES: Which ones (DO NOT PROMPT)?

CHAMPION 1

BOWATER 2

GEORGIA-PAC. 3

INTERNATIONAL 4

KIMBERLY CLARK 5

SCOTT PAPER 6

LUMBER COMP. 7

OTHERS 8

list

CIRCLE ALL
THAT ARE NAMED

IF CIC MENTIONED, GO TO **SOURCE QUESTIONS**, BELOW

CIC NOT MENTIONED, REDIRECT

STILL NO CIC, GO TO **SOURCE QUESTIONS**, BELOW USING ANOTHER COMPANY

NO COMPANY MENTIONED, GO TO **NO COMPANY PROTOCOL QUESTIONS**,

PAGE 12, 13, & 14.

SOURCE QUESTIONS

Let's talk for a minute about _____ .

I am going to read some statements that require a rating scale to respond (HAND SUBJECTS SCALE). The last option "not enough information or I don't know," basically gives you an additional option that the "neutral" response may not adequately address. Please use the last option if you do not have enough information to answer this question. When you respond, please say the corresponding number. Do you have any questions?

1. In east Tennessee, for the most part, _____ is responsive to public concerns.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

2. _____ is generally a reliable source of information regarding environmental issues.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

3. _____ cuts more trees than they grow.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

4. _____ reforest cut areas.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

5. _____ does not use erosion control measures when harvesting timber.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

Now, I am going to read some statements regarding the paper manufacturing operations of _____ . Please use the scale to respond.

(REMIND SUBJECTS THAT PAPERMAKING FACILITY FOR CIC IS THE CANTON, NC MILL BOWATERS-CALHOUN, TN PLANT.
NOT EVALUATING CIC OR BOWATERS?, SKIP Q6 & 7, GO TO Q8.

6. _____ is considered an environmental leader in the paper manufacturing industry.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

7. _____ papermaking mill endangers water quality.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

8. How did you find out the information you know about _____?

CIRCLE ALL NUMBERS THAT APPLY (PROMPT IF NECESSARY). IF THEY SAY CIC, ASK: Can you be more specific?

	CIC	1
	TOUR	2
	SPEAKING ENG.	3
	TALKING WITH CIC	4
	NEWSLETTER	5
CIRCLE ALL THAT ARE NAMED	COMMERCIALS	6
	CIC NEWSPAPER STORY	7
	WW SHOOTOUT	8
	TV/NEWSPAPER	9
	FRIENDS	10
	FAMILY	11
	TEACHER/SCHOOL	12
	PART OF MY JOB	13
	ENVIRONMENTAL JOURNALS	14
	ENVIRONMENTAL GROUPS	
	ask to name	
	SAVE OUR CUMBERLAND MOUNTAINS (SOCM)	15
	TENNESSEE CITIZENS FOR WILDERNESS PLANNING (TCWP)	16
	SIERRA CLUB	17
	TAGER	18
	THE CENTER	19
	DEAD PIGEON RIVER COUNCIL	20
	GLOBAL	
	SUSTAINABILITY	21
	OTHER GROUPS	22
	NO GROUP NAMED	23
	I DON'T CARE	24
	I DON'T KNOW	25
	NO ONE	26
	OTHER	27
	REFUSED	28

EXPOSURE QUESTIONS

ASK EXPOSURE QUESTIONS REGARDLESS OF INDUSTRY LISTED ON PAGE 2, Q1

Now, I am going to ask you a few questions about communication efforts that have been initiated by _____ in east Tennessee. Just answer yes, no, or I don't know.

1. Have you been asked to visit _____ papermill, forestland, chipping facility, or (CIC ONLY) the Pigeon River recently?

CIRCLE NUMBER

YES 1
NO 2
DK 3

2. Which ones? CIRCLE ONES

PAPERMILL 1
FORESTLAND 2
CHIPPING MILL 3
(CIC ONLY) PIGEON RIVER 4

3. Did you visit the _____ ?

WRITE RESPONSE AND CIRCLE NUMBER

YES 1
NO 2
DK 3

4. If no, why not?

5. Have you ever been asked to attend a civic group or organization meeting where a _____ representative addressed the group? HAVE SUBJECT EXPLAIN NATURE OF GROUP (I.E. LOOKING FOR CIVIC CLUB MEETINGS SUCH AS KIWANIS, LIONS, ROTARY, ETC....)

CIRCLE NUMBER

YES 1
NO 2
DK 3

6. Did you attend the meeting?

CIRCLE NUMBER

YES 1
NO 2
DK 3

7. If no, why not?

8. Have you ever talked with someone from _____ excluding the tour and civic meeting?

CIRCLE NUMBER

- YES 1
- NO 2
- DK 3

9. Have you ever received a newsletter from _____ ?

CIRCLE NUMBER

- YES 1
- NO 2
- DK 3

10. Have you ever seen a commercial sponsored by _____ ?

CIRCLE NUMBER

- YES 1
- NO 2
- DK 3

11. Have you ever read a newspaper story that was written by _____ ?

CIRCLE NUMBER

- YES 1
- NO 2
- DK 3

12. Have you ever seen a TV newsstory or read a newspaper article about _____ ?

CIRCLE NUMBER

- YES 1
- NO 2
- DK 3

APPLIES TO CIC ONLY

13. Did you attend or participate in the WW Shootout?

CIRCLE NUMBER

- YES 1
- NO 2
- DK 3

CIRCLE ALL CHANNELS THAT SUBJECT ANSWERED YES
ON PAGE 5 & 6.

TOUR	1
SPEAKING ENG	2
TALK WITH CIC	3
NEWSLETTER	4
COMMERCIALS	5
CIC NEWSPAPER STORY	6
WW SHOOTOUT	7

ONLY ONE CHANNEL CIRCLED EXCLUDING TV/NEWSPAPER? GO TO PAGE 7
TWO OR MORE CHANNELS CIRCLED EXCLUDING TV/NEWSPAPER? GO TO PAGE 8

TV/NEWSPAPER	8
--------------	---

YES TO Q12, GO TO PAGE 9

CHANNEL QUESTIONS

QUESTIONS FOR SUBJECTS WHO ANSWERED YES ONLY ONCE
TO Q 1-13,
PAGE 5 & 6

CIRCLE CHANNEL NUMBER THAT IS BEING
EVALUATED

TOUR	1
SPEAKING ENG.	2
TALK WITH CIC	3
NEWSLETTER	4
COMMERCIALS	5
CIC NEWSPAPER STORY	6
WW SHOOTOUT	7

1. In general, what did you think of the _____ as a way to inform community leaders about _____ ? PROMPT: Any other comments? (RECORD FULL ANSWER)

2. In your opinion, did the _____ offer you new or additional information?
CIRCLE NUMBER

YES	1
NO	2
DK	3

3. If yes, what? PROMPT: Any other comments? (RECORD FULL ANSWER)

QUESTIONS FOR SUBJECTS WHO
ANSWERED YES TWO OR MORE TIMES
TO Q1-13, PAGE 5 & 6.

CIRCLE CHANNEL NUMBERS THAT ARE BEING
EVALUATED

TOUR	1
SPEAKING ENG.	2
TALK WITH CIC	3
NEWSLETTER	4
COMMERCIALS	5
CIC NEWSPAPER STORY	6
WW SHOOTOUT	7

1. In general, what did you think of the _____ (LIST CHANNELS) as a way to disseminate information to community leaders about _____? PROMPT: Any other comments? (RECORD FULL ANSWER)

2. In your opinion, which method (list channels exposed to) was most effective in disseminating information? Why? PROMPT: Any other comments? (RECORD FULL ANSWER)

MASS MEDIA QUESTIONS
NOT INITIATED BY CIC

CIRCLE CHANNEL NUMBER THAT IS BEING EVALUATED	
TV/NEWSPAPER	8

Now, I am going to read some statements regarding the mass media coverage of _____
 related newsstories.

REMIND THEM TO USE RATING SCALE

1. The mass media generally do not present a balanced picture of _____ .

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

**2. TV and newspaper are generally reliable sources of information regarding _____
 related newsstories.**

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

3. The TV story or newspaper story did not provide me with any new information.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

**4. My attitude toward _____ is more positive as a result of watching TV coverage or
 reading newsstories about them.**

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

MESSAGE QUESTIONS

CIRCLE CHANNEL NUMBER(S) THAT IS (ARE) BEING EVALUATED	
TOUR	1
SPEAKING ENG.	2
TALK WITH CIC	3
NEWSLETTER	4
COMMERCIALS	5
CIC NEWSPAPER STORY	6
WW SHOOTOUT	7

1. I am going to ask a few questions about _____ (INSERT CHANNEL). Do you remember what messages were conveyed in the _____ (INSERT CHANNEL)?
CIRCLE NUMBER

YES 1
NO 2
DK 3

2. If yes, tell me what you recall. Please be as specific as possible. PROMPT: Any other comments? (RECORD FULL ANSWER)

EFFECTIVENESS OF CHANNEL AND MESSAGE

1. Have you shared the information that you know about _____ with others?
CIRCLE NUMBER

YES 1
NO 2
DK 3

2. Do you recall the information you shared? (RECORD FULL ANSWER)

END QUESTIONS

1. Do you feel that _____ has made a sincere effort to communicate with community leaders in east Tennessee? CIRCLE NUMBER

YES 1
NO 2
DK 3

2. What changes, if any, would you suggest for _____ to make in order to communicate more effectively with community leaders? PROMPT: Any other comments? (RECORD FULL ANSWER)

RECEIVER INFORMATION QUESTIONS

I am going to ask you a few background questions.

MARK SEX OF SUBJECT

FEMALE 1
MALE 2

1. What is your current occupation?

WRITE OCCUPATION AND CIRCLE NEAREST CODE DESCRIPTION

	PROFESSIONAL	1
PROBE IF NECESSARY	PUBLIC OFFICIAL	2
TO CLASSIFY	OWN BUSINESS	3
	NATURAL RESOURCE	4
	SALESPERSON	5
	SKILLED LABORER	6
	HOMEMAKER	7
	STUDENT	8
	UNEMPLOYED	9
	MISCELLANEOUS	10
	OTHER	11
	REFUSED	12

2. I am going to read some age categories, please tell me which category includes your age.

READ AND CIRCLE NUMBER

under 21 1
21-29 2
30-39 3
40-49 4
50-59 5
60 and older 6
REFUSED 7

3. To what organizations (civic, environmental, social, and political) do you belong?

LIST AND CIRCLE CATEGORY	CIVIC	1
	ENVIRONMENTAL	2
	SOCIAL	3
	POLITICAL	4

Do you have any questions about the interview?

Thank you for your time. I will contact you for the second interview around the first of the year. (MOST SUBJECTS WILL BE SURPRISED TO HEAR OF A SECOND INTERVIEW. REMIND THEM THAT THE INTERVIEW WILL LAST APPROXIMATELY 15-20 MINUTES AND WILL BE DIFFERENT THAN THE ONE JUST COMPLETED). In the meantime, please call (703) 231-7744 if you have any questions.

SEE POST-INTERVIEW QUESTIONS FOR INSTRUCTIONS REGARDING ADDITIONAL SUBJECT QUESTIONS ABOUT THE PROJECT. PAGE 21

THESE QUESTIONS ARE TO BE ASKED IF THE SUBJECT DOES NOT MENTION ANY FOREST PRODUCTS COMPANY.

NO COMPANY PROTOCOL

GENERAL CHANNEL QUESTIONS

1. Where do you receive your information about the forest products industry in east

IF CIC IS MENTIONED HERE, GO BACK TO PAGE 3

CIRCLE ALL NUMBERS THAT APPLY (PROMPT IF NECESSARY).
IF THEY SAY CIC, ASK: Can you be more specific?

Tennessee?

CIC	1
TOUR	2
SPEAKING ENG.	3
TALKING WITH CIC	4
NEWSLETTER	5
COMMERCIALS	6
CIC NEWSPAPER STORY	7
WW SHOOTOUT	8
TV/NEWSPAPER	9
FRIENDS	10
FAMILY	11
TEACHER/SCHOOL	12
PART OF MY JOB	13
ENVIRONMENTAL JOURNALS	14
ENVIRONMENTAL GROUPS ask to name	
SAVE OUR CUMBERLAND MTS (SOCM)	15
TENNESSEE CITIZENS FOR	
WILDERNESS PLANNING(TCWP)	16
SIERRA CLUB	17
TAGER	18
THE CENTER	19
DEAD PIGEON RIV.COUNCIL	20
GLOBAL SUSTAINABILITY	21

NO GROUP NAMED	22
OTHER GROUPS	23
I DON'T CARE	24
I DON'T KNOW	25
NO ONE	26
OTHER	27
REFUSED	28

NO COMPANY PROTOCOL-CONTINUED

END QUESTIONS

1. Do you feel that _____ has made a sincere effort to communicate with community leaders in east Tennessee? CIRCLE NUMBER

- YES 1
- NO 2
- DK 3

2. What changes, if any, would you suggest for _____ to make in order to communicate more effectively with community leaders? PROMPT: Any other comments? (RECORD FULL ANSWER)

RECEIVER INFORMATION QUESTIONS

I am going to ask you a few background questions now.

MARK SEX OF SUBJECT		
	FEMALE	1
	MALE	2

1. What is your current occupation?

WRITE OCCUPATION AND CIRCLE NEAREST CODE		
	PROFESSIONAL	1
	PUBLIC OFFICIAL	2
	OWN BUSINESS	3
	NATURAL RESOURCE	4
	SALESPERSON	5
	LABORER	6
	HOMEMAKER	7
	STUDENT	8
	UNEMPLOYED	9
	MISCELLANEOUS	10
	OTHER	11
	REFUSED	12

NO COMPANY PROTOCOL-CONTINUED

2. I am going to read some age categories, please tell which category includes your age.

READ AND CIRCLE NUMBER

under 21	1
21-29	2
30-39	3
40-49	4
50-59	5
60 and older	6
REFUSED	7

3. What organizations (civic, environmental, social, & political, etc.) do you belong to?

LIST AND CIRCLE CATEGORY	CIVIC	1
	ENVIRONMENTAL	2
	SOCIAL	3
	POLITICAL	4

Do you have any questions about the interview?

Thank you for your time. I will contact you for the second interview in approximately 3 months.
(MOST SUBJECTS WILL BE SURPRISED TO HEAR OF A SECOND INTERVIEW.)

SEE POST-INTERVIEW QUESTIONS FOR INSTRUCTIONS REGARDING ADDITIONAL SUBJECT QUESTIONS ABOUT THE PROJECT. PAGE 15

REMIND THEM THAT THE INTERVIEW WILL LAST APPROXIMATELY 15-20 MINUTES AND WILL BE DIFFERENT THAN THE ONE JUST COMPLETED). In the meantime, please call (703) 231-7744 if you have any questions.

POST-INTERVIEW QUESTIONS

1. Is CIC part of this project?

The project is sponsored by the co-op group in the Department of Forestry. The co-op is comprised of many forest products industries and CIC is one of those industries. So yes, CIC as well as other forest product industries are interested in the results of this study.

2. Is CIC funding this project?

Once again, the project is funded through the co-op in the Department of Forestry.

3. I understand the co-op arrangement, but is CIC the only funding source?

Yes

4. What will happen to the results?

The results will be part of a Ph. D. dissertation and eventually be summarized and published in a professional journal.

5. Will the second and third interview be similar to the first one?

The second interview will be more specific to communications related to current forestry issues in the east Tennessee area. The third interview will be similar to the first one with modifications made depending on the results of the second interview.

6. When do you anticipate the second interview taking place?

Probably somewhere around Christmas or the first of the year but at this time I am not sure.

7. What are you trying find out in the interviews?

We are trying to determine how effective the forest products industry has been in communicating with community leaders.

8. Why community leaders?

Mainly because community leaders appear to be aware of public issues due to their position in the community. In addition, community leaders represent a diversity of opinions unlike more homogeneous groups such as environmental groups or natural resource professionals. Finally community leaders are usually ones who disseminate information to the general public. We feel that it is important to understand the information you pass on and your source of the information.

9. How did you define community leader for this research?

Community leaders were defined as people who hold positions of power, influence or visibility either formally such as a public official or informally such as a landowner or minister.

10. What would you have done if I had not answered Champion in the beginning?

I would have asked the same questions about another forest product company.

QUESTIONNAIRE # _____ INTERVIEWER _____
--

POST-CHIPMILL INTERVIEW

Directions to be read to subjects appear in lower case while instructions to interviewers appear in

BOXED AND CAPS (NOT TO BE READ TO SUBJECTS)
--

INTRODUCTORY STATEMENT

Hello, my name is _____ and I am a graduate student in the College of Forestry at Virginia Tech in Blacksburg, VA. First, let me start by thanking you again for taking the time to help us out.

To remind you of the purpose of the study.

The study focuses on communication efforts used by the forest product industry in east Tennessee. Our aim is to identify effective ways to communicate with community leaders, so we decided to go directly to the source-that's where you come in. You completed the first interview in August, 1995 and received a mail questionnaire in September, 1996 (If they say they never received it, check address and change if necessary). The study concludes with this interview.

Your candid responses and comments are important to the success of this project, so please be as straightforward and specific as possible.

To make sure we're focusing on the same organizations as we talk, the "forest products industry or forest products company" refers to any company that makes paper products or lumber materials from trees. I'll use that phrase throughout the interview and wanted to be sure that we are thinking of the same types of companies.

Now, a few logistics:

The interview will last approximately 15 to 20 minutes. If you have any questions, please stop me at any time. You signed a human subject release form during the first interview. This agreement is still binding. In other words, we will keep the results confidential and your responses will only be used for the purpose of this study.

In the first interview, we asked you to send your name and address in a self-addressed stamped envelope if you wanted to receive a copy of the results. If you did not submit your name and

address at that time and wish to receive a summary of the results of the study, I can provide you with a self-addressed stamped envelope so that you can mail your address at a later date to ensure confidentiality.

Do you have any questions before we begin?

In the first interview, you named Champion as a forest products company in Tennessee. Since we are trying to make comparisons over time, the focus of this interview will be on Champion.

2. Is there any reason why you named Champion in the first interview (the first interview was in August, 1995)? If so, please explain.

SOURCE QUESTIONS

Let's talk for a minute about Champion in general.

I am going to read some statements that require a rating scale to respond (HAND SUBJECTS SCALE). The last option "not enough information or I don't know," basically gives you an additional option that the "neutral" response may not adequately address. Please use the last option if you do not have enough information to answer this question. When you respond, please say the corresponding number. Do you have any questions?

1. In east Tennessee, for the most part, Champion is responsive to public concerns.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

2. Champion is generally a reliable source of information regarding environmental issues.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

3. Champion cuts more trees than they grow.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

4. Champion reforests harvested areas.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

5. Champion does not use erosion control measures when harvesting timber.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

Now, I am going to read some statements regarding the paper manufacturing operations of Champion. Please use the scale to respond.

6. Champion is considered an environmental leader in the paper manufacturing industry.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
1	2	3	4	5	6	7	

7. Champion's papermaking mill endangers water quality.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

CIRCLE ALL NUMBERS THAT APPLY (PROMPT IF NECESSARY). IF THEY SAY CHAMPION, ASK: Can you be more specific?

8. How did you find out the information you know about Champion?

	CHAMPION	1
	TOUR	2
	SPEAKING ENG.	3
	TALKING WITH CHAMPION	4
	NEWSLETTER	5
	COMMERCIALS	6
CIRCLE ALL THAT ARE NAMED	CHAMPION EDITORIAL	7
	WW SHOOTOUT	8
	TV/NEWSPAPER	9
	FRIENDS	10
	FAMILY	11
	TEACHER/SCHOOL	12
	PART OF MY JOB	13
	ENVIRONMENTAL JOURNALS	14
	ENVIRONMENTAL GROUPS	
	ask to name	
	SAVE OUR CUMBERLAND MOUNTAINS (SOCM)	15
	TENNESSEE CITIZENS FOR WILDERNESS PLANNING (TCWP)	16
	SIERRA CLUB	17
	TAGER	18
	THE CENTER	19
	DEAD PIGEON RIVER COUNCIL	20
	GLOBAL	
	SUSTIANABILITY	21
	OTHER GROUPS	22
	NO GROUP NAMED	23
	I DON'T CARE	24
	I DON'T KNOW	25
	NO ONE	26
	OTHER	27
	REFUSED	28

EXPLANATION OF CHANNELS

CHAMPION CHANNELS	<p>TOUR (of the Pigeon River, chipmill, forestland, papermill)</p> <p>SPEAKING ENG (any civic meeting where a Champion representative spoke to group)</p> <p>TALK WITH Champion (any phone conversation or personal visit by a Champion representative [excludes speaking eng])</p> <p>NEWSLETTER (a Champion newsletter that is distributed 4 times a year)</p> <p>COMMERCIALS (any Champion-sponsored commercial/TV)</p> <p>EDITORIAL WRITTEN BY CHAMPION (any news story or editorial submitted by Champion, not mass media coverage)</p> <p>WW SHOOTOUT/WW SERIES RACE (the races held on the Pigeon River that are sponsored by Champion)</p>
NON-CHAMPION CHANNEL	TV/NEWSPAPER (any news story about Champion not initiated by Champion)

EXPOSURE QUESTIONS

Now, I am going to ask you a few questions about the communication efforts that have been initiated by Champion in east Tennessee. In the first interview, you said that you had received information through the following communication efforts:

BOX 1 EXPOSED-NAME CHANNELS EXPOSED TO**BOX 1 EXPOSED- CHANNELS EXPOSED TO BEFORE FIRST INTERVIEW**

CHAMPION CHANNELS	TOUR	1
	SPEAKING ENG	2
	TALK WITH CHAMPION	3
	NEWSLETTER	4
	COMMERCIALS	5
	CHAMPION EDITORIAL	6
	WW SHOOTOUT/ WW SERIES RACE	7
NON CHAMPION CHANNEL	TV/NEWSPAPER	8

2. Do you recall having received information through these same communication efforts again since the last interview (August, 1995)? Which ones? Please name.

IF SO, CIRCLE CHANNELS EXPOSED TO A SECOND (OR THIRD TIME) BELOW

BOX 2 REEXPOSED- CHANNELS EXPOSED TO SINCE FIRST INTERVIEW

CHAMPION CHANNELS	TOUR	1
	SPEAKING ENG	2
	TALK WITH CHAMPION	3
	NEWSLETTER	4
	COMMERCIALS	5
	CHAMPION EDITORIAL	6
	WW SHOOTOUT/ WW SERIES RACE	7
NON CHAMPION CHANNEL	TV/NEWSPAPER	8

3. Have you been exposed to any new communication efforts since the last interview (August, 1995)? Which ones? Please name. NAME CHANNELS NOT EXPOSED TO (SEE BOX 1, PG 4) AND CIRCLE ANY NEW ONES BELOW

BOX 3 NEW- CHANNELS NEW-NEVER EXPOSED TO

CHAMPION CHANNELS	TOUR	1
	SPEAKING ENG	2
	TALK WITH CHAMPION	3
	NEWSLETTER	4
	COMMERCIALS	5
	CHAMPION EDITORIAL	6
	WW SHOOTOUT/ WW SERIES RACE	7
NON CHAMPION CHANNEL	TV/NEWSPAPER	8

SUMMARY OF CHANNELS EXPOSED TO:
(MARK 1 ONLY)

EXPOSED (ONLY BOX 1 MARKED)	1
REEXPOSED (ONLY BOX 2 MARKED)	2
NEW (ONLY BOX 3 MARKED)	3
EXPOSED & NEW (ONLY BOXES 1 & 3 MARKED)	4
REEXPOSED & NEW (BOXES 1, 2, & 3 MARKED)	5

SUMMARY OF CHAMPION CHANNEL FREQUENCY OVERALL:
(MARK 1 ONLY)

EXPOSED TO ONE CHANNEL ONLY (GO TO PAGE 7 AND THEN PAGE 8)	1
EXPOSED TO TWO OR MORE CHANNELS (GO TO PAGE 7 AND THEN PAGE 9)	2
NO CHANNELS (GO TO PAGE 7, AND THEN PAGE 10, THEN PAGE 11, END QUESTIONS)	3

SUMMARY OF NON CHAMPION CHANNEL FREQUENCY OVERALL:

MASS MEDIA (GO TO PAGE 7 AND THEN PAGE 10 IN ADDITION TO APPLICABLE PAGES ABOVE)	1
---	---

THESE QUESTIONS ARE FOR RESPONDENTS WHO DID NOT PARTICIPATE IN A TOUR OR CIVIC MEETING AT ANY TIME-EXPOSED, REEXPOSED, OR NEW.

1. Since the last interview, do you recall having been asked to visit Champion's papermill, forestland, new chipping facility, or the Pigeon River?

CIRCLE NUMBER

YES	1
NO	2
DK	3

2. If yes, which ones?

CIRCLE ONES

PAPERMILL	1
FORESTLAND	2
CHIPPING MILL	3
PIGEON RIVER	4

3. Why weren't you able to visit?

4. Since the last interview, do you recall having been invited to attend a civic group or organization meeting where a Champion representative addressed the group? HAVE SUBJECT EXPLAIN NATURE OF GROUP (I.E. LOOKING FOR CIVIC CLUB MEETINGS SUCH AS KIWANIS, LIONS, ROTARY, ETC....)

CIRCLE NUMBER

YES	1
NO	2
DK	3

5. If yes, why weren't you able to attend the meeting?

CHANNEL QUESTIONS

QUESTIONS FOR SUBJECTS WHO WERE EXPOSED TO ONLY ONE CHANNEL (SEE PAGE 6)

THIS INCLUDES ALL CHAMPION CHANNELS ONLY - EXPOSED, NEW, AND REEXPOSED

CIRCLE CHANNEL NUMBER THAT IS BEING EVALUATED
PLACE AN E (EXPOSED), R (REEXPOSED), OR N (NEW)
BESIDE CHANNEL TO DENOTE EXPOSURE TYPE

TOUR	1
SPEAKING ENG.	2
TALK WITH CHAMPION	3
NEWSLETTER	4
COMMERCIALS	5
CHAMPION EDITORIAL	6
WW SHOOTOUT/ WW SERIES RACE	7

1. In general, what did you think of the _____ (INSERT CHANNEL) as a way to inform community leaders about _____ ? PROMPT: Any other comments?
(RECORD FULL ANSWER)

2. In your opinion, did the _____ (INSERT CHANNEL) offer you new or additional information about Champion?

CIRCLE NUMBER	YES	1
	NO	2
	DK	3

3. If yes, what? PROMPT: Any other comments? (RECORD FULL ANSWER)

QUESTIONS FOR SUBJECTS WHO
WERE EXPOSED TO TWO OR MORE
CHANNELS (SEE PAGE 6) THIS
INCLUDES ALL CIC CHANNELS ONLY-
EXPOSED, REEXPOSED, OR NEW

CIRCLE CHANNEL NUMBERS THAT ARE BEING EVALUATED
PLACE AN E (EXPOSED), R (REEXPOSED), OR N (NEW)
BESIDE CHANNELS TO DENOTE EXPOSURE TYPE

TOUR	1
SPEAKING ENG.	2
TALK WITH CHAMPION	3
NEWSLETTER	4
COMMERCIALS	5
CHAMPION EDITORIAL	6
WW SHOOTOUT/ WW SERIES RACE	7

1. In general, what did you think of the _____ (LIST CHANNELS) as a way to disseminate information to community leaders about CIC? PROMPT: Any other comments? (RECORD FULL ANSWER)

2. In your opinion, which method (LIST CHANNELS EXPOSED TO) was most effective in disseminating information to community leaders? (CIRCLE ONE(S) NAMED)

CIRCLE CHANNEL NUMBERS THAT ARE BEING EVALUATED
PLACE AN E (EXPOSED), R (REEXPOSED), OR N (NEW),
BESIDE CHANNELS TO DENOTE EXPOSURE TYPE

TOUR	1
SPEAKING ENG.	2
TALK WITH CHAMPION	3
NEWSLETTER	4
COMMERCIALS	5
CHAMPION EDITORIAL	6
WW SHOOTOUT/ WW SERIES RACE	7

3. Why? PROMPT: Any other comments? (RECORD FULL ANSWER)

CIRCLE CHANNEL NUMBER THAT IS BEING EVALUATED
PLACE AN E (EXPOSED), R (REEXPOSED), OR N (NEW),
BESIDE CHANNEL TO DENOTE EXPOSURE TYPE

TV/NEWSPAPER	8
--------------	---

MASS MEDIA QUESTIONS NOT INITIATED BY CHAMPION-ONLY IF THEY WERE EXPOSED TO MASS MEDIA IN BOX 1, 2, OR 3, PAGE 6

Now, I am going to read some statements regarding the mass media coverage of Champion related newstories.

REMIND THEM TO USE RATING SCALE

1. The mass media generally do not present a balanced picture of Champion.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

2. TV and newspaper are generally reliable sources of information regarding Champion-related newstories.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

3. The TV story or newspaper story did not provide me with any new information about Champion.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

4. My attitude toward Champion is more positive as a result of watching TV coverage or reading newstories about them.

CIRCLE NUMBER	SD	D	N	A	SA	NI	NA
	1	2	3	4	5	6	7

MESSAGE QUESTIONS

CIRCLE CHANNEL NUMBERS THAT ARE BEING EVALUATED
 PLACE AN E (EXPOSED), R (REEXPOSED), OR N (NEW)
 BESIDE CHANNELS TO DENOTE EXPOSURE TYPE. DO NOT ASSESS MESSAGE IF
 ONLY EXPOSED TO MASS MEDIA (SEE PAGE 7)

TOUR	1
SPEAKING ENG.	2
TALK WITH CHAMPION	3
NEWSLETTER	4
COMMERCIALS	5
CHAMPION EDITORIAL	6
WW SHOOTOUT/ WW SERIES RACE	7

1. I am going to ask a few questions about _____ (INSERT CHANNEL). Do you
 remember what information was presented in the _____ (INSERT CHANNEL)?
 CIRCLE NUMBER

YES 1
 NO 2
 DK 3

2. If yes, tell me what you recall. Please be as specific as possible. PROMPT: Any other
 comments?
 (RECORD FULL ANSWER)

EFFECTIVENESS OF CHANNEL AND MESSAGE

1. Have you shared the information that you know about Champion with others?
 CIRCLE NUMBER

YES 1
 NO 2
 DK 3

2. Do you recall the information you shared? (RECORD FULL ANSWER)

END QUESTIONS

1. Do you feel that Champion has made a sincere effort to communicate with community

leaders in east Tennessee?

CIRCLE NUMBER

YES 1
NO 2
DK 3

2. What changes, if any, would you suggest for Champion to make in order to communicate more effectively with community leaders? PROMPT: Any other comments? (RECORD FULL ANSWER)

Do you have any questions about the interview?

Thank you for your time for helping make this project successful. The results will be available sometime this Summer. In the meantime, please call Bob Shaffer at (703) 231-7744 if you have any questions.

**APPENDIX C:
COVER LETTERS FOR PRE- AND POST-CHIPMILL INTERVIEWS**

PRE-CHIPMILL INTERVIEW COVER LETTER

July 17, 1995

Dear ,

Virginia Tech is conducting a study of communication efforts used by the forest products industry in Tennessee. The objective of this project is to determine how the forest products industry could be more effective in communicating with community leaders and the general public.

Community leaders in your county were identified and you were randomly selected from the group. Your opinions and ideas are very important and I hope you will take the time to help make this project a success. If you agree to participate, we will ask you to complete three 15-20 minute interviews over a six to nine month period scheduled at your convenience. The first interview will be the week of August 14, 1995.

This study will be conducted with strict confidentiality. The interviewer will only identify you by number and never by name. If you wish to receive a copy of the results, the interviewer will provide you with a self-addressed stamped envelope that you can mail at your convenience with your address or business card enclosed. This way, your name will never be associated with the interview.

Someone will contact you in the next week to schedule an appointment. I appreciate your cooperation. In the meantime, if you have any questions, please call me at (703) 231-7744.

Sincerely,

Bob Shaffer
Associate Professor of Forestry
Virginia Tech, Blacksburg, Virginia

POST-CHIPMILL INTERVIEW COVER LETTER

November 20, 1996

Dear ,

Thank you again for your willingness to participate in the research sponsored by Virginia Tech Department of Forestry. As you may recall, we are studying the communication efforts used by the forest products industry in east Tennessee. The objective of this research project is to determine how the forest products industry could be more effective in communicating with community leaders and the general public.

As you were informed in the cover letter that accompanied the mail questionnaire, a second (and final) interview would occur during the week of January 6, 1997. Similar to the first interview, the second interview will take approximately 15-20 minutes, and conclude the study.

Someone will contact you after the Thanksgiving holiday to schedule an appointment. I appreciate your cooperation. In the meantime, if you have any questions, please call me at (540) 231-7744.

Sincerely,

Bob Shaffer
Associate Professor of Forestry
Virginia Tech, Blacksburg, Virginia

APPENDIX D
HUMAN SUBJECTS RELEASE FORM

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY**Informed Consent for Participants
of Investigative Projects**

Title of Project: Forest Products Industry Communication Efforts: An Evaluation

Principal Investigator: Bob Shaffer, Associate Professor, College of Forestry

I. THE PURPOSE OF THIS RESEARCH/PROJECT

You are asked to participate in a study regarding communication efforts used by the forest products industry in east Tennessee. The aim of this study is to determine how the forest products industry could be more effective in communicating with community leaders and the general public.

II. PROCEDURES

Community leaders in your county were identified and you were selected from the group. You will be asked to complete three 15-20 minute interviews over a six to nine month period scheduled at your convenience.

You may receive a summary of the results. A self-addressed stamped envelope will be provided. You can send your mailing address or business card at a later date. Please ask the interviewer for an envelope if you are interested in receiving the results.

III. EXTENT OF ANONYMITY AND CONFIDENTIALITY

The results of this study are strictly confidential. At no time will the researchers release the results of this study to anyone other than individuals working on the project without your written consent. Your name and position in the community will never be associated with the interview or results. Only a subject number will identify you during analysis and in any written reports of the research.

IV. FREEDOM TO WITHDRAW

You are free to withdraw from this study at any time without penalty. Please call interviewer and advise them if this situation occurs.

V. APPROVAL OF RESEARCH

This research project has been approved, as required, by the Institutional Review Board for projects involving human subjects at Virginia Polytechnic Institute and State University and by the Department of Forestry and the College of Forestry.

Signature

Interviewer

VI. SUBJECT PERMISSION

I have read and understand the informed consent and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent for participation in this project.

Should I have questions about this research or this conduct, I will contact:

Bob Shaffer, Associate Professor, College of Forestry (703) 231-7744

Investigator

Phone

Ernest Stout

(703) 231-9359

Chair, IRB, Research Division

Phone

APPENDIX E
PRE- AND POST-CHIPMILL INTERVIEW THANK YOU LETTERS

PRE-CHIPMILL INTERVIEW THANK-YOU LETTER

September 3, 1995

Dear ,

I want to extend my appreciation for helping with the study project regarding the forest products industry in east Tennessee. The interviews offered us valuable insight into your ideas and opinions of the forest products industry communication efforts in east Tennessee. Thank you for your time and cooperation in scheduling. We will be contact you around the first of January, 1996 to schedule the second interview. In the meantime, if you have any questions, please do not hesitate to call.

Once again, thanks for helping make this project a success.

Sincerely,

Bob Shaffer
Associate Professor of Forestry
Virginia Tech, Blacksburg, Virginia

POST-CHIPMILL INTERVIEW THANK-YOU LETTER

January 13, 1997

Dear ,

I wanted to extend my appreciation for helping with the study project regarding the forest products industry in east Tennessee. Both interviews and the mail questionnaire offered us some valuable insights into your ideas and opinions about the forest products industry in east Tennessee and their communication efforts. Thank you for your time and cooperation in scheduling interviews and completing the mail questionnaire.

For those of you who have requested a summary of the results, you should receive a copy no later than Summer, 1997. If you did not send a request during one of the scheduled interviews, and would like to receive a copy, please send your name and address to me. In the meantime, if you have any questions, please do not hesitate to call.

Once again, thanks for helping make this project a success.

Sincerely,

Bob Shaffer
Associate Professor of Forestry
Virginia Tech, Blacksburg, Virginia

APPENDIX F
MAIL QUESTIONNAIRE

Questionnaire # _____

DIRECTIONS

Just to refresh your memory, this study focuses on communication efforts used by the forest products industry in East Tennessee. Our aim is to identify effective ways to communicate with community leaders, so we decided to go directly to the source -- that's where you come in. You were identified as a community leader in your county. Your candid responses are important to the success of this project, so please be as straightforward and specific as possible.

To make sure we're focusing on the same organizations, the "forest products industry or forest products company" refers to any company that makes paper products or lumber materials from trees.

In the first interview, you signed a human subject release form required by Virginia Tech. This form stated that the results are confidential and that your responses will only be used for the purpose of this study. Your name and position will never be associated with the responses given. The same confidentiality agreement applies to this mail questionnaire.

FOREST PRODUCTS INDUSTRY COMMUNICATION QUESTIONNAIRE

This questionnaire contains a series of statements about the forest products industry and its communication efforts in East Tennessee. Please answer the questions in the order they are presented. Circle the response that best represents your feelings about each statement. The responses are in the form of a rating scale. The first five options are self-explanatory, but the last option, "not enough information/I don't know," basically gives you an additional option that the "neutral" response may not adequately address. Please use the last option only when you do not have enough information to answer the question.

1. Please list any environmental concerns that you would like to voice about the forest products industry in East Tennessee.

2. Please name **one** forest products company that you know operates in or around Tennessee.

Questionnaire # _____

3. Effective communications between the forest products industry and community leaders depends on the image that the industry projects. The following questions ask you to rate the image of the company you named in Question 2, independent of whether you agree or disagree with the accuracy of the image projected. Remember, regardless of your personal opinion of (company), what image does (company) try to project? Now, please rate the following statements by circling the appropriate number. Remember that your responses should be based on the specific company you selected in Question 2.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Enough Information/ I Don't Know
	1	2	3	4	5	6
a. <u>(company)</u> claims to follow standard environmental protection guidelines in their forestry operations.						
b. <u>(company)</u> does not claim to follow guidelines to protect threatened and endangered species regarding their forestry operations.						
c. <u>(company)</u> claims to follow guidelines that protect stream water quality in their forestry operations.						
d. <u>(company)</u> does not claim to follow guidelines that ensure a future supply of trees regarding their forestry operations.						

Questionnaire # _____

4. The next set of statements is intended to assess **your** personal opinion about the true importance of certain environmental issues to (company). Again, rate the statements by circling the appropriate number.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Enough Information/ I Don't Know
a. It is important that <u>(company)</u> address water quality issues in their forestry operations.	1	2	3	4	5	6
b. <u>(company)</u> should not make protecting threatened and endangered species a priority in their forestry operations.	1	2	3	4	5	6
c. It is important that <u>(company)</u> address environmental issues in their forestry operations.	1	2	3	4	5	6
d. Securing future timber supplies should not be a priority for <u>(company)</u> .	1	2	3	4	5	6

	More Negative	Remains Negative but Unchanged	Neutral	Remains Positive but Unchanged	More Positive
5. In what way, if any, has your opinion of <u>(company)</u> changed as a result of the communication efforts initiated by them?	1	2	3	4	5

Questionnaire # _____

	Very Familiar	Familiar	Not Familiar At All	Not Enough Information/ I Don't Know
	1	2	3	4
6. Which of the following terms best describes your familiarity with the environmental policies followed by <u>(company)</u> in their forestry operations?				

7. Can you name any specific environmental practices of (company)?

_____ Yes _____ No

If yes, please list.

8. Is there any specific issue or occurrence that caused you to select the specific forest products company you indicated at the beginning of the questionnaire (for example, an environmental controversy, a business award, etc.)?

_____ Yes _____ No

If yes, please describe the occurrence or issue.

Thank you for your time and interest. Please place the questionnaire in the self-addressed stamped envelope provided and mail. I will be in touch with you in the Fall to arrange the final interview. In the meantime, if you have any questions, please contact me at (540) 231-7744. Thank you.

APPENDIX G
COVER LETTER FOR MAIL QUESTIONNAIRE

July 31, 1996

Dear ,

Thank you again for your willingness to participate in the research sponsored by Virginia Tech Department of Forestry. As you may recall, we studying the communication efforts used by the forest products industry in Tennessee. The objective of this research project is to determine how the forest products industry could be more effective in communicating with community leaders and the general public.

As you were informed during the first interview, two subsequent interviews would follow. Instead of the second interview, we are requesting that community leaders in the study complete a brief mail questionnaire. We believe that a mail questionnaire will decrease the inconvenience of scheduling a personal interview but not sacrifice the valuable information that you can provide.

Please take a few moments of your time to complete the enclosed questionnaire and return it in the self-addressed stamped envelope. The study will culminate with a personal interview probably in the late Fall of 1996. We appreciate your cooperation, and if you have any questions, please call me at (540)231-7744.

Sincerely,

Bob Shaffer
Associate Professor of Forestry
Virginia Tech, Blacksburg, Virginia

APPENDIX H
POSTCARD REMINDER FOR MAIL QUESTIONNAIRE

Dr. Bob Shaffer
228 Cheatham Hall
Department of Forestry
Virginia Tech
Blacksburg, Virginia 24061-0324

(ADDRESS PORTION)

You recently received a mail survey from Virginia Tech about the communication efforts of the forest products industry. Please return the completed survey as soon as possible. I appreciate your help and cooperation. If you have any questions, please call me at (540) 231-7744.

Thank you.

APPENDIX I
SECOND COVER LETTER FOR MAIL QUESTIONNAIRE

August 22, 1996

Dear ,

Thank you again for your willingness to participate in the research sponsored by Virginia Tech Department of Forestry. As you may recall, we are studying the communication efforts used by the forest products industry in Tennessee. The objective of this research project is to determine how the forest products industry could be more effective in communicating with community leaders and the general public.

A mail questionnaire was mailed late July, 1996, followed by a postcard and telephone reminder, but I thought you may have misplaced the first questionnaire so I have enclosed another one. If you have already responded, please ignore this request.

The success of this research is contingent on your responding to the enclosed questionnaire and mailing it in the self-addressed stamped envelope provided. I cannot stress the importance of your responding to this questionnaire. We are very interested in hearing what you think.

Again, please take a few moments of your time to complete the enclosed questionnaire. The study will culminate with a personal interview in January 1997. We appreciate your cooperation, and if you have any questions, please call me at (540) 231-7744.

Sincerely,

Bob Shaffer
Associate Professor of Forestry
Virginia Tech, Blacksburg, Virginia

APPENDIX J
MAIL QUESTIONNAIRE THANK-YOU LETTER

Dear ,

I want to extend my appreciation for helping with the study project regarding the forest products industry in east Tennessee. The mail questionnaires offered us valuable insight into your ideas and opinions of the forest products industry communication efforts in east Tennessee. Thank you for your time and cooperation. We will contact you around the first of December to schedule the second and final interview for the week of January 6-10, 1997. In the meantime, if you have any questions, please do not hesitate to call.

Once again, thanks for helping make this project a success.

Sincerely,

Bob Shaffer
Associate Professor of Forestry
Virginia Tech, Blacksburg, Virginia

APPENDIX K
THANK-YOU LETTER TO COMMUNITY LEADERS WHO WITHDREW

September 15, 1996

Dear ,

Thank you again for your willingness to participate in the first interview. We are sorry that you cannot complete the study but understand your concerns. Your cooperation up this point has been greatly appreciated. If I can be of assistance to you in the future, please do not hesitate to call me at (540) 231-7744.

Sincerely,

Bob Shaffer
Associate Professor of Forestry
Virginia Tech, Blacksburg, Virginia

APPENDIX L
ADDITIONAL REMINDER LETTER FOR MAIL QUESTIONNAIRE

September 8, 1996

Dear ,

Thank you again for your willingness to participate in the research sponsored by Virginia Tech Department of Forestry. As you may recall, we are studying the communication efforts used by the forest products industry in Tennessee. The objective of this research project is to determine how the forest products industry could be more effective in communicating with community leaders and the general public.

As you were informed during the first interview, two subsequent interviews would follow. Instead of the second interview, we requested that community leaders in the study complete a brief questionnaire that was mailed to you on July 31 and again on August 23, 1996. If you still have the questionnaire, please complete it and mail it in the self-addressed envelope provided. Otherwise, we want to thank you again for participating in this project.

The study will culminate with a personal interview the week of January 6-10, 1997. I will contact you the first of December to schedule this interview. We appreciate your cooperation, and if you have any questions, please call me at (540) 231-7744.

Sincerely,

Bob Shaffer
Associate Professor of Forestry
Virginia Tech, Blacksburg, Virginia

APPENDIX M
CONTENT ANALYSIS CATEGORIES FOR THE PRE- AND
POST-CHIPMILL INTERVIEWS AND MAIL QUESTIONNAIRES

OPERATIONAL DEFINITIONS OF CATEGORIES -- PRE-CHIPMILL INTERVIEW

CB1: In general, what did you think of the _____ (insert channels) as a way to disseminate information to community leaders about ____ (CIC)?

Broad Categories

- 1 positive - favorable general or specific response related to one or all channels, may or may not have mentioned channel specifically
 - 2 negative - favorable general or specific response related to one or all channels, may or may not have mentioned channel specifically
 - 3 miscellaneous - all others not otherwise specified
-

CB3: In your opinion, which method (list channels exposed to) was most effective in disseminating information? (These responses are not included) Why? (Categories listed below for why?)

Broad Categories

- 1 moral/outstanding/ethical quality mentioned or personal credibility - personal status was used to convince respondent
 - 2 experiential - response related to visual experience
 - 3 offered detail &/or information - response indicating that specific information was presented regarding channels
 - 4 miscellaneous - all others not otherwise specified
-

MQ2A: Do you remember what messages were conveyed in the _____ (list channels)? If yes, tell be what you recall. Please be as specific as possible.

Broad Categories

- 1 correct general message - response indicating correct general message repetition (see below for list of general messages)
- 2 correct specific message - response indicating correct specific message repetition (see below for list of specific messages)
- 3 incorrect message - response indicating incorrect message repetition

CIC MESSAGES

General correct message breakdown - response indicating correct message repetition not specific

General messages include: (key words are underlined)

Come see our forests, don't take our word for it.

Come paddle the river and see the improvements.

We are inviting people to see the river and then we will be held to standard by those watching for improvements.

We acknowledge that we had a problem on the Pigeon River for a long time but we are beginning to address this problem. We are progressing, but we are not where we want to be.

We want to be good neighbors and stewards of the forest.

CIC was awarded the Conservation of the Year Award by TCL in 1994 and has received numerous conservation awards in 1994

Over 20,000 people rafted the Pigeon River in 1994.

Specific correct message breakdown - response indicating correct message repetition not general

More specific messages include:

CIC has been in Tennessee for 60 years and we plan to be here indefinitely.

CIC plans to manage the Cumberland Forest on a sustained yield basis, looking at the whole range of resources, not just timber. Other resources include wildlife habitat, water quality (Best Management Practices BMP's), special places (i.e., threatened and endangered species).

Reforestation will take place, either naturally or planted depending on the site.

Massive conversion to pine will not occur. We will maintain a hardwood resource.

The chipmill will provide a market for low quality hardwood which has not existed in the past, improving the overall health of the forest resource.

ECM2A: Do you recall what information you have shared with others (i.e., messages shared)?

Broad Categories

- 1 correct general message - response indicating correct general message repetition (see below for list of general messages)
- 2 correct specific message - response indicating correct specific message repetition (see below for list of specific messages)
- 3 incorrect message - response indicating incorrect message repetition

CIC MESSAGES

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Specific correct message breakdown - response indicating correct message repetition not general

More specific messages included:

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CIC plans to manage the Cumberland Forest on a sustained yield basis, looking at the whole range of resources, not just timber. Other resources include wildlife habitat, water quality

(Best Management Practices [BMPs]), special places (i.e., threatened and endangered species).

Reforestation will take place, either naturally or planted depending on the site.

Massive conversion to pine will not occur. We will maintain a hardwood resource.

The chipmill will provide a market for low quality hardwood which has not existed in the past, improving the overall health of the forest resource.

EQ2: What changes, if any, would you suggest for _____ (CIC) to make in order to communicate more effectively with community leaders?

Broad Categories

- 1 increase communication - response indicates that CIC should communicate (i.e., presenting positive side of issues or a balanced picture, and respond to criticism), talk with community leaders/public, inform and educate, and increase visible and accessibility more frequently
- 2 clean the river - reference made to cleaning the Pigeon River or acknowledging that the river needs to be cleaned or mention of EPA, variance, permitting, Clean Water Act, etc.
- 3 more of the same - an indication that more of the same efforts are necessary
- 4 miscellaneous - all others not otherwise specified

OPERATIONAL DEFINITIONS OF CATEGORIES -- POST-CHIPMILL INTERVIEW

Why1: Is there any reason why you named Champion (CIC) in the first interview? If so, please explain.

Categories

- 1 Pigeon River and/or Canton Mill operations and any mention of permit, EPA, variance
 - 2 chipmill specifically mentioned (can mention the land purchase but chipmill is deciding factor)
 - 3 land purchase without mentioning the chipmill or some indication of locating in the area or having landholdings (i.e., buying wood, neighbor, etc.)
 - 4 no response
 - 5 Miscellaneous - not otherwise specified
 - 6 Publicity - being visible in the media regardless of type (i.e. positive or negative)
-

CB1: In general, what did you think of the (insert channels)_____ as a way to disseminate information to community leaders about ____ (CIC)?

Broad Categories

- 1 positive - favorable general or specific response related to one or all channels, may or may not have mentioned channel specifically
 - 2 negative - unfavorable general or specific response related to one or all channels, may or may not have mentioned channel specifically
 - 3 miscellaneous - all others not otherwise specified
-

CB3: In your opinion, which method (list channels exposed to) was most effective in disseminating information? (These responses are not included) Why? (Categories listed below for "why?")

Broad Categories

- 1 moral/outstanding/ethical quality mentioned or personal credibility - personal status was used to convince respondent
 - 2 experiential - response related to visual experience
 - 3 offered detail and/or information - response indicating that specific information was presented regarding channels
 - 4 miscellaneous - all others not otherwise specified
-

MQ2A: Do you remember what messages were conveyed in the _____ (list channels)? If yes, tell me what you recall. Please be as specific as possible.

Broad Categories

- 1 correct general message - response indicating correct general message repetition (see below for list of general messages)
- 2 correct specific message - response indicating correct specific message repetition (see below for list of specific messages)
- 3 incorrect message - response indicating incorrect message repetition

CIC MESSAGES

General correct message breakdown - response indicating correct message repetition not specific

General messages include: (key words are underlined)

Come see our forests, don't take our word for it.

Come paddle the river and see the improvements.

We are inviting people to see the river and then we will be held to standard by those watching for improvements.

We acknowledge that we had a problem on the Pigeon River for a long time but we are beginning to address this problem. We are progressing, but we are not where we want to be.

We want to be good neighbors and stewards of the forest.

CIC was awarded the Conservation of the Year Award by TCL in 1994 and has received numerous conservation awards in 1994

Over 20,000 people rafted the Pigeon River in 1994.

Specific correct message breakdown - response indicating correct message repetition not general

More specific messages included:

CIC has been in Tennessee for 60 years and we plan to be here indefinitely.

CIC plans to manage the Cumberland Forest on a sustained yield basis, looking at the whole range of resources, not just timber. Other resources include wildlife habitat, water quality

(Best Management Practices [BMP's]), special places (i.e., threatened and endangered species).

Reforestation will take place, either naturally or planted depending on the site.

Massive conversion to pine will not occur. We will maintain a hardwood resource.

The chipmill will provide a market for low quality hardwood which has not existed in the past, improving the overall health of the forest resource.

ECM2A: Do you recall what information you have shared with others (i.e., messages shared)?

Broad Categories

- 1 correct general message - response indicating correct general message repetition (see below for list of general messages)
- 2 correct specific message - response indicating correct specific message repetition (see below for list of specific messages)
- 3 incorrect message - response indicating incorrect message repetition

CIC MESSAGES

General correct message breakdown - response indicating correct message repetition not specific

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Specific correct message breakdown- response indicating correct message repetition not general

More specific messages included:

CIC has been in Tennessee for 60 years and we plan to be here indefinitely.

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Reforestation will take place, either naturally or planted depending on the site.

Massive conversion to pine will not occur. We will maintain a hardwood resource.

The chipmill will provide a market for low quality hardwood which has not existed in the past, improving the overall health of the forest resource.

EQ2: What changes, if any, would you suggest for ____ (CIC) to make in order to communicate more effectively with community leaders?

Broad Categories

- 1 increase communication - response indicates that CIC should communicate (i.e., presenting positive side of issues or a balanced picture, and respond to criticism), talk with community leaders/public, inform and educate, and increase visibility and accessibility more frequently
- 2 clean the river - reference made to cleaning the Pigeon River or acknowledging that the river needs to be cleaned or mention of EPA, variance, permitting, Clean Water Act, etc..
- 3 more of the same - an indication that more of the same efforts are necessary
- 4 miscellaneous - all others not otherwise specified

OPERATIONAL DEFINITIONS OF CATEGORIES -- MAIL QUESTIONNAIRE

1. *Please list any environmental concerns you would like to voice about the forest products industry in East Tennessee.*

Categories

- 1 Pigeon River or Canton Mill operations
 - 2 Forestry issues in general – must make reference to water quality, clearcutting, wildlife habitat, reforestation, or some other issues associated with forest management
 - 3 no response/no concern
 - 4 miscellaneous – not otherwise specified
-

7. *Can you name any specific environmental practices of _____ (company)?*

Categories

- 1 BMP's, master logging training, or reference to water quality issues related to forestry, not the Pigeon River
 - 2 Pigeon River and/or Canton Mill operations
 - 3 Forestry issues other than BMP's (i.e., clearcutting, wildlife habitat, recreation, etc.)
 - 4 no response
 - 5 miscellaneous – not otherwise specified
-

8. *Is there a specific occurrence that caused you to select the specific forest products company you indicated at the beginning of the questionnaire?*

Categories

- 1 Pigeon River and/or Canton Mill operations
- 2 chipmill specifically mentioned (can mention the land purchase but chipmill is deciding factor)
- 3 land purchase without mentioning the chipmill or some indication of locating in the area (i.e., buying wood, neighbor, etc.)
- 4 no response
- 5 miscellaneous – not otherwise specified

APPENDIX N
RESPONSES TO OPEN-ENDED QUESTIONS ON THE PRE- AND
POST-CHIPMILL INTERVIEWS AND MAIL QUESTIONNAIRE

RESPONSES TO OPEN-ENDED QUESTIONS -- PRE-CHIPMILL INTERVIEW

CBI: In general, what did you think of the (insert channels) _____ as a way to disseminate information to community leaders about ____ (CIC)?

comm response

- 1 very willing to tell you what you want to know
- 2 CIC tried to convince leaders
- 3 tour helpful to know company policy and management
- 4 CIC representative lost their temper and turned me off
- 5 well-done
- 6 one on one at the professional level
- 6 concerned about public relations intern for CIC -- defensive and put off by that
- 7 effective job
- 8 no channel
- 9 felt all were good ways to disseminate information
- 10 good
- 10 public may see the opposite which discredits CIC and affects other operations
- 11 raises awareness
- 11 doesn't necessarily increase information
- 12 personal contact professional
- 13 need to show positive side
- 14 reasonable
- 15 don't learn anything from TV
- 16 didn't like how CIC portrayed self as voluntarily cleaning river
- 17 showed people drinking water
- 18 got to the point quickly
- 19 no channel
- 20 good media
- 21 don't know
- 22 show both sides
- 23 fairly good job
- 24 not sure about channels but was interesting knowing what CIC does
- 25 reading material effective
- 26 comfortable with CIC managing land
- 27 very good
- 28 commercial-a bit too nice-too much-a nice little family
- 28 people were nice and kind
- 29 seems trying better than the past
- 30 meeting could not only see what doing but actions taken
- 31 CIC did too far to the extreme in acting like they did nothing wrong
- 32 highly professional personnel
- 33 CIC people excellent-good quality

34 effective job
 35 raised awareness
 36 everything was presented in above average manner
 37 effective job
 38 fair
 39 no channel
 40 genuine effort
 41 not good job relaying information
 42 should have started efforts sooner
 43 tactful but deceitful-angry hostile
 44 meeting don't reach a lot of people
 44 whitewater shootout good
 45 good experience
 46 good
 47 commercial promoted image
 48 effective job
 49 offer private landowner help
 50 generating good public response
 51 good communication but not a good method for community leaders
 52 opportunity to ask a lot of questions
 53 can't trust
 54 objective
 55 direct contact effective
 56 tried to have an open mind
 57 whitewater shootout better image
 57 don't remember Pigeon River cleaning activity
 58 no channel

CB3: In your opinion, which method (list channels exposed to) was most effective in disseminating information? (These responses are not included) Why? (Categories listed below for "why?")

comm response

1 no reason why
 2 commercials are misleading and not truthful
 3 because can see actual operations
 4 TV commercial for average citizen
 5 time involved
 6 aware of most of the information prior to the meeting
 7 paper making process but dioxin not mentioned well
 8 no channel
 9 easy to understand

- 10 general access is easy-reach large number of people
- 11 because of great detail
- 12 have credibility with public
- 13 more information in newsletter
- 14 one channel
- 15 one channel
- 16 one channel
- 17 commercials showed people drinking water-CIC employees
- 18 seldom watch TV
- 19 no channel
- 20 control information
- 21 remembered commercial but don't know what was said
- 22 enjoy reading newspaper and editorials
- 23 general access is easy-reach large number of people
- 24 general access is easy-reach large number of people
- 25 because questions could be answered
- 26 direct communication
- 27 detailed information about operations, history, company, and management
- 28 one on one
- 29 seems to be trying better than past
- 30 no reason why
- 31 more captive audience
- 32 feels that community involvement is best
- 33 because questions could be answered
- 34 general access is easy-reach large number of people
- 35 no reason why
- 36 well-written
- 37 informative
- 38 because of great detail
- 39 no channel
- 40 informative
- 41 video showed community leaders and their support
- 42 because questions could be answered
- 43 feels CIC needs help
- 44 whitewater shootout not good to spread information but most effective public relations
- 45 because questions could be answered
- 46 a deliberate effort
- 47 actual information
- 48 no channels
- 49 good to spread information
- 50 forester beside stream
- 51 no channel
- 52 good image
- 53 no reason why

54 personal contact makes feel good
 55 credible
 56 one channel
 57 one channel
 58 no channel

MQ2A: Do you remember what messages were conveyed in the _____ (list channels)? If yes, tell me what you recall. Please be as specific as possible.

comm response

1 CIC will do the best thing they can to produce an environmentally friendly product
 2 CIC will clearcut according to suggestions made by Tennessee Div. of Forestry
 3 commercial -- wildlife
 4 environmentally friendly company
 5 evading environmental problems
 6 serious responsible stewardship plans to deal with preexisting erosion and water quality
 problems
 7 want to be a good neighbor
 8 no channel
 9 environmentally conscious
 10 responsible
 11 don't pollute river
 12 not specifically
 13 commercials great -- upbeat positive
 14 described the progress (river)
 15 don't remember
 16 Pigeon River better for recreation
 17 editorial didn't understand
 18 kids swimming in the river
 19 no channel
 20 factual information about production
 21 Pigeon River water cleaner
 22 correction of past mistake
 23 jobs with chipmill
 24 spending a lot of money to improve mill and water quality
 25 commercial-protecting and taking care of land
 26 to make productive forest from high grading
 27 commercial - family-oriented
 28 commercial - family-oriented
 29 economic impact of chipmill
 30 how wonderful job they are doing - don't agree
 31 environmentally conscious

32 have commitment to clean up river
 33 river improved
 34 non-detect dioxins
 35 more concerned about what Tennessee thinks
 36 spending a lot of money to improve mill
 37 Pigeon River water cleaner
 38 CIC concerned about the environment
 39 no channel
 40 correction of past mistake
 41 Pigeon River better for recreation
 42 spent 300 million dollars
 43 denial that there is a problem (Pigeon River)
 44 modernization project
 45 fixing problems
 46 described the progress (river)
 47 river great for river activities
 48 first said they would not decrease pollution
 49 timber management responsibly
 50 reforestation
 51 good management of forest
 52 efforts (environmentally friendly)
 53 positive only
 54 personal contact-professionalism
 55 property acquisition information
 56 no response
 57 no toxic or pollutants in river
 58 no channel

ECM2A: Do you recall what information you have shared with others (i.e., messages shared)?

comm response

1 CIC will do the best thing they can to produce an environmentally friendly product
 2 clearcutting is good
 3 good job in woods
 4 shared technical information that CIC provided
 5 planned harvest
 6 past land acquisition abuse-rehabilitate land
 7 CIC plans
 8 no channel
 9 provided technical information on clearcutting to Farm Bureau
 10 BMP's
 11 talked in depth with others about environmental issues

12 not specifically
13 discussed newsletter
14 no
15 no
16 disgust at CIC portrayal of self in commercials
17 how criticize and don't get credit
18 no
19 no channel
20 CIC learned lessons form the past
21 opposes clearcutting
22 environmental concern about clearcutting
23 write news articles and editorials
24 jobs
25 economy
26 forest health improving
27 jobs
28 discussed commercial
29 money back to community
30 what said was good but what did another story
31 told about visit from forester
32 told an "environmentalist" that his only stake was for self-benefit
33 great improvement in river
34 improved water quality
35 discussed positive things
36 Pigeon River cleaned up
37 river is cleaner but could be cleaner
38 stop pollution-steps taken to address them
39 no channel
40 concerned with employment due to river
41 improved water quality
42 CIC has changed process
43 environmental problems
44 technical information
45 give time to correct problem
46 whitewater shootout invited kids to see kayakers
47 dioxin being found
48 CIC uses power to influence people not clean river
49 timber management
50 environmental issues
51 no
52 utilization of Cumberland Mountain Forest
53 logging bad for environment
54 impact to community
55 ecological balance of clearcutting

56 overall growing stock
 57 no
 58 no channel

EQ2: What changes, if any, would you suggest for _____ (CIC) to make in order to communicate more effectively with community leaders?

comm response

1 expose the public to actual operations (open facility to public)
 2 don't fight regulations
 3 keep up mass media efforts especially with river
 4 quit polluting river
 5 be more visible
 6 high profile for wildlife plans
 7 make sure community leaders see improvements and how operations work
 8 work with environmental groups
 9 could do more through extension
 10 give facts and figures to people
 11 make it ongoing communication instead of project-oriented
 12 personal contact
 13 have more CIC people tell story
 14 offer speakers
 15 show me what they have done
 16 concentrate in counties closes to river - east Tennessee and Western N.C. so Cocke
 County doesn't feel slighted
 17 localized meeting
 18 send literature to community leaders
 19 more public relations
 20 send representative to see community leaders
 21 send literature to community leaders
 22 town hall meetings
 23 monthly news releases describing local activities
 24 doing good in operations
 25 meet with different organizations (hunting)
 26 more visible
 27 UT professor and CIC said the some of the same stuff - good
 28 do more articles
 29 personal contact
 30 tours
 31 personal contact
 32 participate more in community (i.e. schools, charity)
 33 start with younger generation

- 34 see leaders on regular basis
- 35 keep community abreast of what's happening
- 36 actions speak louder than words
- 37 haven't completed their job
- 38 proactive instead of reacting to criticism and public pressure
- 39 didn't voluntarily clean water
- 40 what will ultimately clean up river-what are the standards?
- 41 doesn't like CIC picking projects-let community
- 42 should have started earlier
- 43 tell the truth
- 44 practice what preach
- 45 contribute money to Cocke County
- 46 systematic communication instead of problem oriented
- 47 create jobs in Cocke County
- 48 tell exactly how much pollution is in the river
- 49 no-doing a good job
- 50 landowner contact
- 51 keep communication open to public
- 52 localized meeting
- 53 personal contact
- 54 sincere
- 55 personal contact with newspaper editors-offer information to report
- 56 communicate positive side
- 57 offer speakers
- 58 tell CIC story - media is biased

RESPONSES TO OPEN-ENDED QUESTIONS – POST-CHIPMILL INTERVIEW

Why1: Is there any reason why you named Champion (CIC) in the first interview? If so, please explain.

comm response

1 considerable land holding in Anderson County
 2 had a large argument with CIC because CIC buying land in county and wouldn't agree to
 county resolution she wanted
 3 newest participant in forest activities in region
 4 recently bought a large chunk of county land
 5 most visible forest products company in media and still are
 6 in news more than any other company-bad publicity
 7 more familiar with company
 8 controversy in Campbell County over clearcutting
 9 opened up a chipmill facility in Campbell County
 10 publicity in Anderson County-political issue of clearcutting
 11 became aware of CIC when buying land for chipmill
 12 one of the big ones in E. Tennessee
 13 mostly in the news
 15 know very active in paper about business in NC, didn't know much about TN
 16 contamination of the Pigeon River in NC where they have a pulp and paper mill
 17 because we've had a lot of environmental problems
 18 recognition because of handouts, TV commercials, newsletter
 19 the new legislation about the permit and trying to rework the standards (river)
 20 most familiar with & located here in Campbell Co.
 21 CIC becoming a part of this community
 22 controversy over buying acreage in the county
 23 chipmill
 24 installed a chipmill in the county
 25 putting chipmill in the area
 26 working on coming into the area
 27 they are only one knew of in the area
 28 chipmill in county now
 29 new chipmill in Campbell County
 30 only significant paper products company in this area that has ads
 31 only one here
 33 not that she remembers (no response)
 34 own such large tract of land, 7,000 acres in this community
 35 CIC was pushing public relations at that time
 36 CIC on everybody's mind because of river controversy
 37 own substantial property in NC & TN, 1,000's of acres of land
 38 been in dispute with Pigeon River

39 environmental impacts of Pigeon River
 40 because of talking about pollution of river
 41 pollution from making paper
 43 CIC pollution has been direct impact on life (river)
 44 because of controversy over Pigeon River
 45 only company I know of and CIC is the largest
 46 CIC is not a good word in this area because of pollution of Pigeon River
 47 fighting CIC with Dead Pigeon River Council
 48 been my focus; have fought CIC for 15 yrs
 49 were acquiring property and making promises to county officials & get a lot of publicity
 50 coincided with establishment of chipmill plant
 51 seen in news
 52 the new chipmill
 53 established the chipmill
 54 major lumber paper industry the focus of attention by press
 55 aware of plans to do chip mill
 56 the only one mentioned in the paper
 58 only company that came to mind

CBI: In general, what did you think of the (insert channels)_____ as a way to disseminate information to community leaders about ____ (CIC)?

comm response

1 not enough regularity
 2 TV ads were ridiculous and really turned me off
 3 fairly effective
 4 newspaper/TV well-done by CIC
 5 programs have all been good at professional level
 6 reached a limited number of people-not sure how many leaders were exposed
 7 commercial may arise suspicion in viewers
 8 no channel
 9 TV campaign was a train wreck
 10 specific information I got but most people didn't
 11 TV ads made people angry-perceived to be misleading and dishonest
 12 not very good
 13 newsletter-poor thing and its an opportunity to reach people to counteract what was
 said in the media (not receiving anymore, didn't hear anything else
 15 didn't think they did too well
 16 wasn't impressed
 cannot trust or believe their efforts to clean up river
 17 false advertisement -- little boy living on side, how pure water was, people drinking
 water

- 18 good information, very informative
 19 good idea
 20 effective
 21 If not a CIC advocate, the letters would go in the garbage
 22 pro-Champion, with several good points clarified which The Center (environmental
 group) states.
 23 may not tell the whole story
 24 nothing beats performance
 25 "Fishing on Pigeon River" makes people very skeptical
 26 presented company image real well
 27 talk with CIC: initially skeptical, but after talk felt better of CIC's management
 28 hire people in community
 29 present their side of issue
 30 very pleasant, but talk is cheap
 31 acceptable
 32 good
 33 good
 34 TV commercials backfired -- didn't put things in right perspective
 35 probably good
 36 good job
 37 Dead Pigeon River Council has been around about 10 years
 38 thought they were good
 39 no channel
 40 sounded good
 41 no information provided-just a sponsor
 42 regardless of what has been done with PR efforts, blatant abuse to child in TV
 43 commercial did more damage than anything
 44 overall it comes to a neutral
 45 TV ads are propaganda
 46 all these avenues are intelligent
 47 commercials were well done but backfired on them
 48 CIC is very effective on those things, even though I don't like it
 49 doggone good, especially 15-min video to a group
 50 another perspective than the media's: CIC has bad rap thru TV news
 51 commercials -- good commercials
 52 very good
 53 don't know whether I trust them or not
 54 commercials are one-sided
 55 very favorable
 56 until they reform, that personal contact will not help them
 57 impressed
 58 put forth effort to tell their side

CB3: *In your opinion, which method (list channels exposed to) was most effective in disseminating information? (These responses are not included) Why? (Categories listed below for "why?")*

comm response

1 can answer questions
 2 makes appear that CIC is really trying
 3 must back up with real results
 4 none effective with me
 5 been reasonably effective
 6 very professional presentation by someone personable and sincere
 7 able to ask questions immediately and receive straightforward answers
 8 no channel
 9 commercials are best way but they really got turned around on them
 10 political roundtable get more information, specific information-I need to be spoon fed
 11 easier to talk and be persuaded by a real person
 12 more specific information
 13 newsletter put out by CIC is it true or not true
 15 one channel
 16 one channel
 17 more detail -- editorial
 18 get information from newsletter but most junk mail I don't have time to read
 19 one channel
 20 need a balance of mass distribution & one-on-one
 21 their best means would be radio or TV. If not a CIC advocate, the letters would go in
 the garbage, with TV or radio you would have to get up & turn it off.
 22 one on one without the media
 23 more confident to meet someone & able to ask questions directly
 24 no response
 25 one on one & can respond to comments directly
 26 read positive & negative in newspaper, but seeing the individual in person
 27 able to ask questions: talk 30 min vs. 30 sec. commercial
 28 sincere
 29 showed areas of improvement
 30 no response
 31 can't believe everything you read or see on TV
 33 no comments
 34 gives CIC an opportunity to explain what they're doing
 35 no response
 36 may not read an article or watch TV but if someone talks to you listen to them
 37 facts & figures that were readily available for uses in speeches
 38 more people saw it
 39 no channel
 40 no answer - I don't know (no response)
 41 CIC has not provided us with any information based on what they are doing
 43 most people read it

44 the status & pollution has been big issue
 45 only thing we've had in a while
 46 more people are taking advantage of these methods
 47 as far as goodwill, Whitewater Shootout was best
 48 rafting on river was a good move by CIC
 49 working with wildlife & forestry people, very convincing
 50 opportunity to ask questions and get answers
 51 one on one
 52 communicate better in person
 53 gave a chance to ask questions & see expression on their face
 54 able to listen to questions & answers
 55 in person: told they cut small plots (detail)
 56 one channel
 58 one channel

MQ2A: Do you remember what messages were conveyed in the _____ (list channels)? If yes, tell me what you recall. Please be as specific as possible.

comm response

1 too strong of communication in area, be more subtle
 2 sent newsletter for 1 year then stopped
 3 concern about wildlife, forestry, water quality (fishing), floating river (recreational)
 4 cleaned up discharge from paper manufacturing in NC
 5 one meeting CIC showed chipping in detail
 6 basically the presentation discussed stewardship and BMPs
 7 Cumberland Forest operations
 8 no channel
 9 commercial where kids fishing in stream
 10 chipmill effect in utilization of forest products and wood not usable
 11 TV commercial-grandfather fishing from Pigeon River
 12 erosion
 13 newsletter talked about clean up effort
 15 election since then-Tennessee Governor stands
 16 camera showed nice stream bubbling stream, fish in stream
 17 water was polluted with white substance-foam-upstream of whitewater event. This was evident.
 18 reason to keep clean & efforts to keep clean
 19 building up the company
 20 generally informative, increase the reader's knowledge of forest industry.
 21 in commercial: Pigeon River relay message that they had worked on cleaning it up: rafting
 22 rebuttal to stigma of CIC being detrimental to environment

23 discuss amount of clearcut
24 regeneration of forest
25 recent talk with CIC person: when they would start the chipmill, talked about problems,
people's negative attitudes.
26 connected him with hunting & civic groups
27 what CIC does when they come into a community: their plans; harvesting techniques;
why they cut; which method & why that method
28 no erosion
29 no. of trees cut per year
30 no response
31 clearcutting is big issue of concern
33 that river is cleaner & they are cleaning river
34 whitewater trying to promote recreational activity on river
35 focused on money that had been spent to make improvements (river)
36 other than that, no specifics
37 CIC announced going to spend \$300 million to clean Pigeon River but earlier had
announced \$300 million to modernize plant
38 that CIC was going to install new bleaching process to remove dioxins from river and
color of river (improvements)
39 no channel
40 news stories about Cocke County being held back by dirty river
41 vaguely that they are decreasing the dioxin and mercury levels in river
43 all PR efforts have been to promote river as a resource as opposed to making efforts to
clean the river
44 in general, basically that CIC has been doing things to help river such as modernization
project, Bleach Filtrate Recycling (Canton Mill) process
45 newsletters - speaking about forestry conservation
45 telling what all they had done updating plant to take out dioxin & take out color.
A lot of it is propaganda.
46 lot of talk concerning the rafting with school & community groups
47 no response
48 TV commercials strongly biased and inaccurate
49 land grant forestry school
50 positive approach
51 TV -- make better life around community
52 local level concerning the process of the chipmill
53 operation of chipping mill & where & how they would buy products & where they
would ship them
54 commercials: proactive & concerned about their image
55 erosion control
56 impression didn't clearcut
58 what CIC was doing to the environment

ECM2A: Do recall what information you have shared with others (i.e. messages shared)?

comm response

1 no response
 2 had many meetings at courthouse, open forum meetings
 3 mostly commented on CIC interested in responsible use of resource
 4 no response
 5 not clearcutting all land
 6 basically the presentation discussed stewardship and Best Management Practices
 7 did feature article in regional magazine
 8 no channel
 9 no response
 10 adhoc committee and shared the whole 9 yards
 11 no response
 12 no response
 13 as Tourism Director I tell people about Norris Lake and it is the cleanest river in the
 TVA system
 15 no response
 16 no response
 17 shame that Pigeon River not clean enough to wade, swim. We have to go to Smoky
 Mountains. to drink water & not care
 18 what problem is -- it is a problem not only runs in NC, TN
 19 no response
 20 present positive
 21 hunting
 22 clarify the point that CIC will not rape the mountains and walk away
 23 discuss amount of clearcut
 24 forest products
 25 teach forestry to high school
 26 very positive initially & talked with Tenn. forester & thought CIC was the best option
 27 commercials: cleaning up Pigeon River. Techniques CIC is taking to clean up river
 28 shared with board of directors & speaker also attended
 29 explained chipmill procedures to board of directors
 30 no response
 31 no response
 33 they are trying to do right thing for community
 34 concerns for condition of Pigeon River (color) (toxicity effects)
 35 no response
 36 no, just general talk
 37 that CIC had been polluting river & NC had issued variance as a permit saying NC was
 satisfied with river cleanup
 38 that CIC was going to install new bleaching process to remove dioxins from river &
 color of river

39 no channel
 40 mostly economic information on how we could prosper better if river was cleaned up
 41 that mercury level is the same
 43 sure, tell them to go look at river & smell it and they know CIC has lied
 44 everything above (in question previous)
 45 mostly about color units of river & dioxin content of sediment in river
 46 we share any print material that we think is good stuff to people to our own flock
 47 no response
 48 passed along the bad things discovered about CIC in last 15 years
 49 CIC would help local landowners with forest management and consulting; asked for 1st
 refusal
 50 with family & friends: about commercials (well presented). retired forester showing area
 that has been cut
 51 environmental personnel impressed him
 52 about chipper: effect on local area: benefit or harm the local population
 53 operation of chipping mill & where & how they would buy products & where they
 would ship them
 54 add to the community - welcomes them
 55 contacted by tour operator who was concerned & shared the above info
 56 talked about them buying land
 58 no response

EQ2: What changes, if any, would you suggest for ____ (CIC) to make in order to communicate more effectively with community leaders?

comm response

1 be more subtle in advertising
 2 once CIC thought they had won-all communication stopped
 3 develop timetable for cleaning up river and show results to public
 4 clean up discharge at NC plant
 5 engage media in more positive sense
 6 more outreach in all segments of community especially conservation organizations
 7 highlight every positive thing you do
 8 meet with environmental groups
 9 feels confident that CIC will use good management practices
 10 the way they can turn things around is with hunting and fishing opportunities for people
 11 comply with the Clean Water Act (Pigeon River) voluntarily instead of seeking variances
 12 be honest
 13 need to sit down with people of Cocke County-come out of their ivory tower
 15 if they make attempts, we don't hear about them in TN.
 16 CIC executives need to come talk at a Rotary meeting
 17 truth as to what actually doing to clean up

18 comm. leaders to meet in town meeting format & sit down & talk about problem & what
community sees problems as, what concerns are
19 get in the newspaper-tell people what you are doing
20 public appearances -- let it be known that CIC is available to talk to public meetings
21 pro-radio in smaller markets: radio & TV
22 have been very responsive
23 they own the land, more focused on business.
24 less talk & more action
25 invite dignitaries to tour the mill, also Chambers of Commerce & civic groups to tour
the mill
26 deal with hunting groups & civic groups to let know what is going on
27 before actually start full-blown operation: have community meetings
28 make contact through commission, board meetings, town meetings, TV, newspaper
29 more involved in community
30 pay social calls
31 to be good neighbors, need to be aboveboard & tell the story.
32 I don't know. Right now is a bad time & I don't know what they can do. Not sure there
is anything they can do
34 like to see socioeconomic data presented for variance
35 offer to sit down with leaders and citizens
36 dealing with people who are emotionally involved and sometimes rabid
37 feel like I have been duped
38 meet with community leaders as well as groups & explain how CIC is going to clean up
the river
39 spend some money in the community (office supplies, construction materials)
40 clean up the river if it can be done technologically
41 Canton CIC employees would much rather hurt us than have a chance to lose their jobs
43 comply with Clean Water Act at mill, no variance
44 have personal face to face meetings with community leaders Economic Development
Commission, mayor, chamber of commerce
45 better to cap off the lake with more silt than dredge it up and make it go down the river
46 people in this area will never feel good about EPA or CIC until river is clean
47 instead of waiting to react, keep public informed
48 have made effort to influence political people to get their greedy ways
49 quit getting bad publicity re Pigeon River
50 tell positive aspects about company & employees
51 more PR
52 have been willing to speak so far. More speaking engagements & public meetings
53 increase the number of personal reps at civic organizations
54 local community involvement by their people in the field
55 personal contact is the most effective
56 clean up the river, not just what the law says
58 commercials are effective

RESPONSES TO OPEN-ENDED QUESTIONS – MAIL QUESTIONNAIRE

1. *Please list any environmental concerns that you would like to voice about the forest products industry in East Tennessee.*

comm response

- | | |
|----|---|
| 1 | distrust and confusion about the industry |
| 2 | concerned about the streams and rivers unless forest industries practice true cutting principles |
| 4 | they have no sensitivity to any environmental concerns |
| 6 | bad perception of the forest product industry on part of conservation groups. Hope that these groups are misinformed |
| 7 | good news about developing good conservation in forest management is seldom seen in public media |
| 9 | road construction (erosion) |
| 11 | the industry is not adequately regulated |
| 12 | profits always dominate environment |
| 13 | needs to fix its public relations and the commercial with the grandfather and grandchild. they don't eat the fish. |
| 15 | no response |
| 16 | planting large stands of same tree species -- a parasite can proliferate more easily and do widespread damage -- this happened in Oak Ridge Federal Reclamation where southern pines were planted a few years ago -- Southern Pine Beetle caused the damage |
| 18 | preservation of forest |
| 20 | no response |
| 23 | need to save large/old/hardwood trees as den sites for bears and other wildlife |
| 24 | loggers who do not follow BMPs resulting in stream damage and severe erosion |
| 25 | most of my concerns are water quality |
| 26 | soil erosion |
| 27 | no response |
| 28 | I strongly feel it is possible to have a good forest products industry while protecting our environment. However, guidelines must be followed |
| 29 | clearcutting |
| 31 | no response |
| 33 | no response |
| 34 | water pollution-color |
| 35 | CIC has made progress in cleaning up the Pigeon River, they need to continue to improve the water quality of the river with an ultimate goal (within 10 years) of no river pollution |
| 36 | contrary to what some others believe, I think clearcutting is a sound practice for many stands of low grade timber |
| 38 | clearcutting |

- 39 no response
 43 CIC fails to communicate and demonstrate basic concerns of the environment and the forest (August 1996, high levels of Mercury in Pigeon River)
 44 water pollution of the Pigeon River in Cocke County, the Tennessee River and other waterways in and near Athens, TN
 47 pollution both water and air
 49 industry is concerned about BMPs but some are not
 52 loggers should be required to reclaim areas to prevent erosion
 53 forest product industry must work harder to police contractors
 54 no major environmental concerns around the forest industry
 55 loggers do not have the equipment or willingness to perform meaningful BMP work
-

7. *Can you name any specific environmental practices of _____ (company)?*

comm response

- 1 suggest doing a rating process
 2 I am familiar with what CIC has done to the river in NC
 4 they have installed/built measures to remove toxins from manufacturing waste
 6 BMPs for road construction
 7 educational program for loggers to ensure compliance with BMP
 9 no response
 11 no response
 12 clearcutting in specified areas
 13 multimillions spent to fix water output/discharge into Pigeon River
 15 no response
 16 no response
 18 no response
 20 BMP
 23 follow BMP
 24 follow BMP
 25 BMPs for forestry practices in Tennessee
 26 they state they will follow BMPs recommended for harvesting timber
 27 forest management when in an area
 29 no response
 31 no response
 33 no response
 35 modernization to reduce water coloration and dioxin levels
 36 they do some clearcutting
 38 no response
 39 it appears the news that the management of the company believes that they are doing a better job than the public believes.
 43 violation of clean water act since its inception without a state variance over 25 years

Pigeon River)
 44 the company's BFR test project
 47 I fought them for years on their pollution of the Pigeon River
 49 they clearcut which is a good practice in the high graded areas of east Tennessee. They
 do it in 50 acre blocks
 52 reforestation
 53 policy regrading re-forestation
 54 master logging program
 55 company states that it will only buy forest products from select group of "high" quality
 logging contractors.

8. *Is there a specific occurrence that caused you to select the specific forest products company you indicated at the beginning of the questionnaire?*

comm response

1 CIC is a much more responsible company they are pictured to be
 2 CIC was buying land in our county. They came to the Planning Commission.
 4 CIC recently bought a large amount of acreage in the county which has caused a great
 deal of controversy
 6 built a chipmill
 7 no response
 9 personal contacts
 11 no response
 12 living in east Tennessee all my life and I have seen the Little Pigeon River and the mess
 it became
 13 know environmental controversy over Pigeon River
 15 I am familiar with the pollution caused by CIC in the Miami River near my home town
 of Canton, Ohio.
 16 no response
 18 has recently secured timber rights within the county
 20 no response
 23 purchased 80,000 acres in our county
 24 owns 60 to 80,000 acres in my area
 25 an environmental controversy -- a wood product industry having control of 100,000
 acres in our area and setting up a chipmill (which will destroy the land in 5 years
 some say)
 26 I assisted CIC's local manager schedule his addressing local civic/business groups
 27 protection of water supply
 28 no response
 29 the Pigeon River cleanup
 31 no response
 33 no response

34 no response
35 controversy over the Pigeon River-I have lived in east Tennessee since 1985 and this has
been an issue that constantly is in the news
36 CIC owns a large boundary of woodland in this county
38 pollution of the Pigeon River
39 water comes thru our community from the plant - water is toxic and this concerns our
people
43 88 years of pollution of the Pigeon River as an environmental practice
44 grew up in Canton and am familiar with the company
47 as noted above, their pollution of the Pigeon River
49 the little Pigeon River in the Smokies really hurt their image
52 education sponsored by CIC
53 CIC ongoing problems associated with Little Pigeon River
54 they are in the process of locating in our area
55 no response

APPENDIX O: COMPLETE EXPLANATION OF CONTENT ANALYSIS CODING PROCEDURES

Initially, three coders, including the author, assigned categories to community leaders' responses to the pre-chipmill interview questions. This first round of coding included a large number of categories to assign to each response. Scott's phi coefficient was then calculated using SAS for each question. The acceptable coefficient was .70 or higher.

The phi coefficients for the pre-chipmill responses were significantly less than the acceptable cutoff, ranging from .25 to .54. However, the coefficients were significantly greater than if the categories had been assigned by chance. The phi coefficients calculated for the three coders appear in Appendix Table O-1.

Appendix Table O-1. Phi coefficients using three coders and detailed categories for the pre-chipmill interview questions to which content analysis was applied.

Question	Phi Coefficient
1. In general, what did you think of the (insert channel) as a way to disseminate information to community leaders?	.45
2. In your opinion, which method (list channels exposed to) was most effective in disseminating information? Why?	.25
3. Do you remember what messages were conveyed in the (insert channel)? If yes, tell me what you recall. Please be as specific as possible.	.31
4. Do you recall what information you have shared with others (i.e., messages shared)?	.54
5. What changes, if any, would you suggest for (CIC) to make in order to communicate more effectively with community leaders?	.39

The poor reliability coefficients were probably a result of the large number of categories (13 to 25) to which coders could assign responses. The fine distinctions between categories were merely too difficult for coders to interpret with a high degree of accuracy. Plus, the additional categories did not offer substantive detail, since some categories only included one response. As a result, the number of categories was reduced considerably to four or five. Three new coders were then selected in addition to the author, and coding was completed again. The reliability coefficients for the second round of coding for each question are listed in Appendix Table O-2.

Appendix Table O-2. Phi coefficients using four coders and broad categories for the pre-chipmill interview questions to which content analysis was applied

Question	Phi Coefficient
1. In general, what did you think of the (insert channel) as a way to disseminate information to community leaders?	.77
2. In your opinion, which method (list channels exposed to) was most effective in disseminating information? Why?	.72
3. Do you remember what messages were conveyed in the (insert channel)? If yes, tell me what you recall. Please be as specific as possible.	.41
4. Do you recall what information you have shared with others (i.e., messages shared)?	.72
5. What changes, if any, would you suggest for (CIC) to make in order to communicate more effectively with community leaders?	.76

It was noted that for question 3, the reliability coefficient was considerably less than .70, while all others were above the accepted range. Careful analysis of categories assigned by coders revealed that one coder in particular seemed to diverge from the others. When this coder was asked to discuss her thought process for assigning certain values, it was discovered that she had interpreted the categories and directions incorrectly. For example, she thought there were only two possible categories, not three, for question 3. The directions were explained again to her and all other coders, and coding was completed on question 3 a second time. The phi coefficient was then calculated for question 3 once again. This time the reliability coefficient was .74.

Reliability coefficients for three questions on the mail questionnaire were also calculated using Scott's phi coefficient. The mail questions and phi coefficients where content analysis was applied are listed in Appendix Table O-3.

The relatively high level of agreement on the first and only calculations was a result of using broad categories. On the mail questionnaire and post-chipmill interview open-ended responses, only broad categories were used in coding. Detailed categories were omitted on these content analyses resulting in phi-coefficients being within the acceptable range.

Appendix Table O-3. Phi coefficients using four coders and broad categories for the mail questionnaire questions to which content analysis was applied

Question	Phi Coefficient
1. Please list any environmental concerns that you would like to voice about the forest products industry in east Tennessee.	.74
2. Can you name any specific environmental practices of CIC? If yes, please list.	.79
3. Is there any specific occurrence that caused you to select the specific forest products company you indicated at the beginning of the questionnaire? If so, please explain.	.93

Finally, reliability testing was completed on the six open-ended questions on the post-chipmill interview. The first round of coding revealed that the reliability coefficient was .70 or greater on only two out of the six questions. Appendix Table O-4 summarizes the results.

Appendix Table O-4. Phi coefficients using four coders and broad categories for the post-chipmill interview questions to which content analysis was applied.

Question	Phi Coefficient
1. Is there any reason why you named CIC in the first interview? If so, please explain.	.83
2. In general, what did you think of the (insert channel) as a way to disseminate information to community leaders?	.70
3. In your opinion, which method (list channels exposed to) was most effective in disseminating information? Why?	.59
4. Do you remember what messages were conveyed in the (insert channel)? If yes, tell me what you recall. Please be as specific as possible.	.67
5. Do you recall what information you have shared with others (i.e., messages shared)?	.58
6. What changes, if any, would you suggest for (CIC) to make in order to communicate more effectively with community leaders?	.67

The phi coefficients for four statements were less than .70. Consequently, the directions were explained to coders again and they were asked to recode selected responses for these statements. The results of this second round of coding for the post-chipmill interview statements where content analysis was applied appear in Table O-5. In this recoding, .70 or higher was obtained for the remaining four questions in which content analysis was used.

Appendix Table O-5. Phi coefficients using four coders and broad categories for four post-chipmill interview questions to which content analysis was applied in which .70 was not achieved in the first round of coding.

Question	Phi Coefficient
1. In your opinion, which method (list channels exposed to) was most effective in disseminating information? Why?	.75
2. Do you remember what messages were conveyed in the (insert channel)? If yes, tell me what you recall. Please be as specific as possible.	.75
3. Do you recall what information you have shared with others (i.e., messages shared)?	.74
4. What changes, if any, would you suggest for (CIC) to make in order to communicate more effectively with community leaders?	.78

VITA

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She received a Master of Science degree in Forest Resource Management from the University of Tennessee in May, 1994. While there she completed the basic undergraduate courses in Forestry and "spring camp."

Ms. Plyler entered a Ph.D. program in Forestry/Communications at Virginia Polytechnic Institute and State University in May, 1994. She was accepted as a Ph.D. candidate in the Fall of 1996. Jennifer plans to pursue a career in academia and/or in public relations for a major forest products firm.