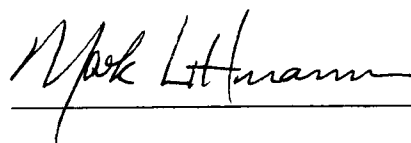


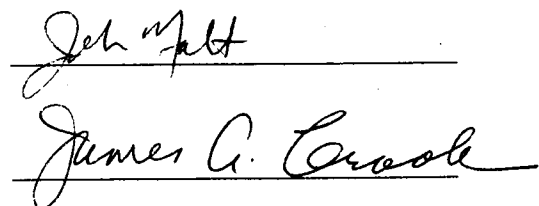
To the Graduate Council:

I am submitting herewith a thesis written by Kris Christen entitled "Appalachian Standoff: Competing Information Campaigns in the Chip Mill Controversy of the Tennessee Valley." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Communications.

A handwritten signature in cursive script, reading "Mark Littmann", written over a horizontal line.

Dr. Mark Littmann, Major Professor

We have read this thesis and
recommend its acceptance:

Two handwritten signatures in cursive script. The first signature, "John Malt", is written over a horizontal line. The second signature, "James A. Crook", is written below the first, also over a horizontal line.

Accepted for the Council:

A handwritten signature in cursive script, reading "Lew Mink", written over a horizontal line.

Associate Vice Chancellor and
Dean of The Graduate School

**Appalachian Standoff:
Competing Information Campaigns in the Chip Mill
Controversy
of the Tennessee Valley**

A Thesis
Presented for the
Master of Science Degree
The University of Tennessee,
Knoxville

Kris Christen
August 1997

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Finally, I would especially like to thank my husband for his undying support and encouragement and the shoulder he willfully offered in my times of greatest need.

ABSTRACT

The media play an important role in how the public perceives issues, especially with controversial issues, by allowing some voices to filter through unscathed, distorting others, and silencing still others.

This study analyzes, through interviews, the accuracy and fairness with which the media, and in particular the print media, filtered the various voices associated with the chip mill controversy that has raged in the Tennessee Valley. The study also examines, through a content analysis, whom journalists ultimately cited most often as sources of information on this particular issue.

Interviewees included environmentalists, ranging from radical groups to more mainstream environmental organizations, and timber industry representatives, ranging from small wood contractors and consultants to major corporations. The newspapers studied were *The Chattanooga Times* and the *Chattanooga Free Press*.

As expected, both environmentalists and timber representatives suggested they had not been given a fair hearing by the media and that the media had relied more heavily on the viewpoint portrayed by their opposition. However, the content analysis did not find that the press were inherently unfair or biased toward one side or the other.

Accuracy in news coverage was perceived as low by environmentalists and timber representatives alike, and the timber representatives especially found coverage to be biased in favor of the environmentalists. Both sides felt that instead of basing their stories on incendiary quotes, which served primarily to perpetuate the conflict, the media could have done far more in-depth coverage and analysis on the chip mill issue.

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"The most strident voice is the one that highlights the 11 o'clock news, no matter which side it comes from, fanning the flames in a public controversy." - Jon Loney, Project Director, Chip Mill Environmental Impact Statement, Tennessee Valley Authority

1. INTRODUCTION

Depending on the source of information, clearcutting an area for its timber is seen, environmentally speaking, either as an effective method for giving a forest a chance to begin anew or as akin to raping the land of its natural cover.

In general, clearcutting is defined as a way of harvesting and regenerating forests in which all trees are removed from a site and a new, even-aged stand of trees is grown. It is the primary method of timber production and management in the national forests, particularly in the South, which comprises the geographic area south of the line running from Virginia to Oklahoma and Texas.¹

Timber interests say clearcutting is an environmentally sound approach to reforestation, and, if sustained yield policies are followed, a company can harvest wood at a rate that will support the same supply of wood indefinitely. Clearcutting is the favored harvesting method of timber companies because it is the most financially efficient. Environmentalists, on the other hand, say that clearcutting completely changes the flora and fauna of an area; instead of a wealth of different trees and other types of vegetation, only "generalists," plant and animal species that can live almost anywhere, recolonize a clearcut.

The clearcutting issue became controversial in the mid 1960s,² and environmental awareness in general has grown exponentially since this time when Rachel Carson's book Silent Spring brought environmental issues to the forefront of public debate. The Clean Air and Water Acts were enacted in 1963 and 1972, respectively, and the Environmental Protection Agency was created in 1970. During that same year, the first Earth Day was celebrated. In 1969, the *New York Times* created an environmental beat, a practice that was copied by major newspapers across the country.

¹ Adela Backiel and Ross W. Gorte. "Clearcutting in the National Forests." *A Congressional Research Service Report for Congress*. Available: <http://www.cnire.org/nle/for-2.html> [1992, July 29].

² Backiel and Gorte.

On June 22, 1990, clearcutting became an issue in Tennessee, when Parker Towing Company and its subsidiary, U.S. Chips, applied for a permit from the Tennessee Valley Authority (TVA) to build a barge terminal on the Tennessee River. Shortly thereafter, on July 25, 1990, and September 25, 1990, respectively, Donghae Pulp Company of Alabama and Boise Cascade Corporation followed suit. The three proposed barge terminals were planned, independently of each other, along a 12-mile stretch of the Tennessee river located between Bridgeport, Alabama, and New Hope, Tennessee. (See Figure 1.) They were to serve adjacent chip mills, providing a cost-effective means of transporting wood chips either to paper manufacturing plants where they are used to produce finished paper products or down to Mobile Bay, Alabama, for export.³

These three permits were ultimately denied, but the controversy that grew out of them has not yet died out, but rather expanded to other areas of the Tennessee Valley.

A chip mill is generally a plant employing between 15 and 20 people to make chips of wood the size of a quarter, usually from hardwood tree trunks at least 25 feet long. (See Figure 2.) The chips are subsequently used by paper mills as pulp fiber. One-third of the chips to be made at the three mills trying to locate in the Chattanooga area was to go to Japan and Korea.⁴

The wood to be processed by these three mills was to be procured from private woodlot owners in Tennessee, Alabama, and Georgia, with the entire harvest area extending into 23 counties in southeastern Tennessee, 13 counties in northwestern Georgia, and 6 counties in northeastern Alabama. (See Figure 3.)

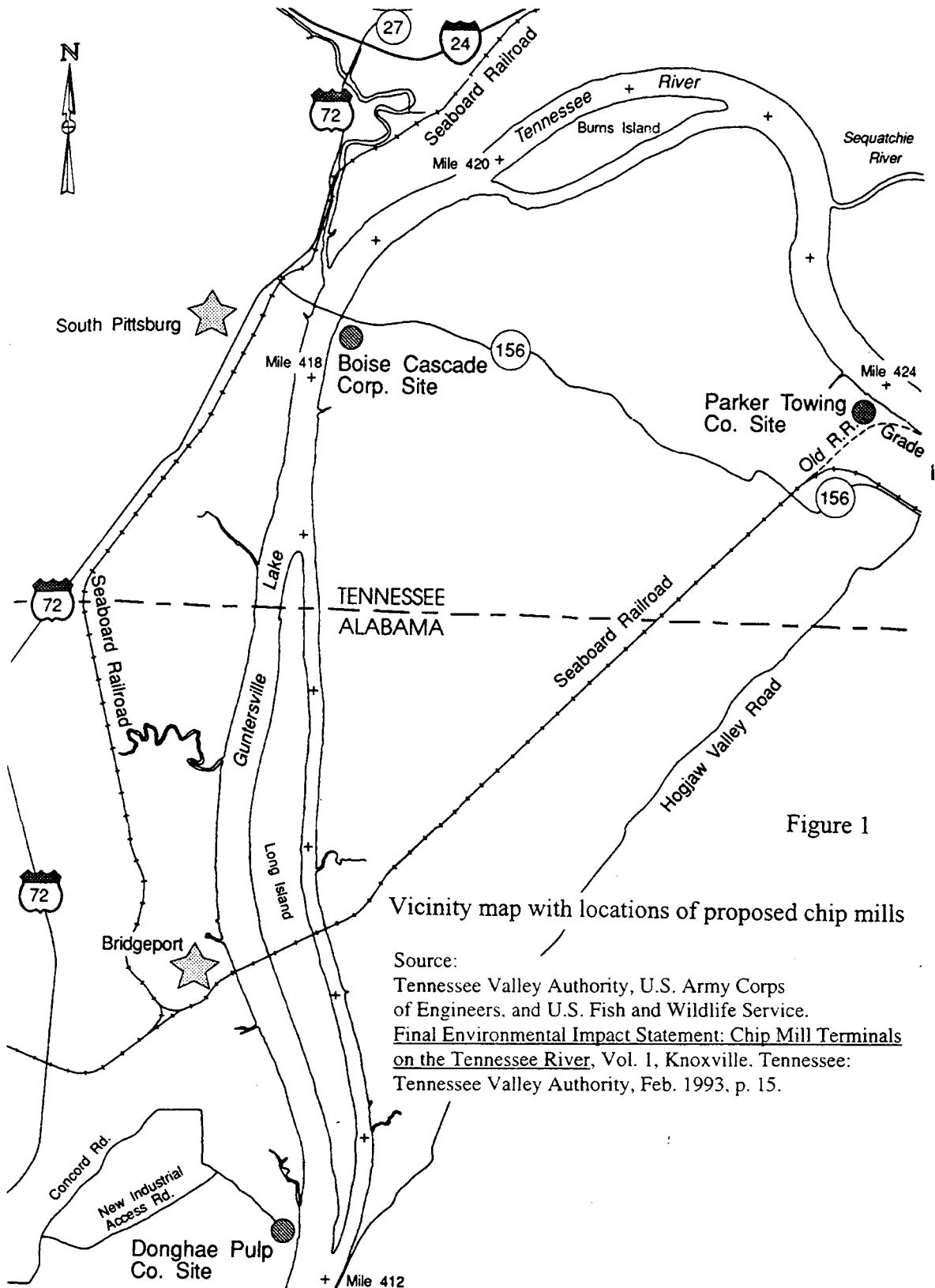
A typical chip mill culls its wood supply from an area encompassing a 75-mile radius.⁵ Because high-capacity chip mills consume an enormous quantity of wood, chip mills and clearcutting tend to go hand in hand.

And while many a forester will wax poetic on the virtues of chip mills as tools for ridding the forest of junk wood, in effect cleansing the tree gene pool to result in a

³ Tennessee Valley Authority, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service. Final Environmental Impact Statement: Chip Mill Terminals on the Tennessee River, Vol. 1, Feb. 1993, p. xix.

⁴ Pam Sohn. "The landowners: Forests not exempt from management." *The Chattanooga Times*, Oct. 2, 1991, p. A1.

⁵ TVA, p. 53.



HOW A CHIP MILL WORKS

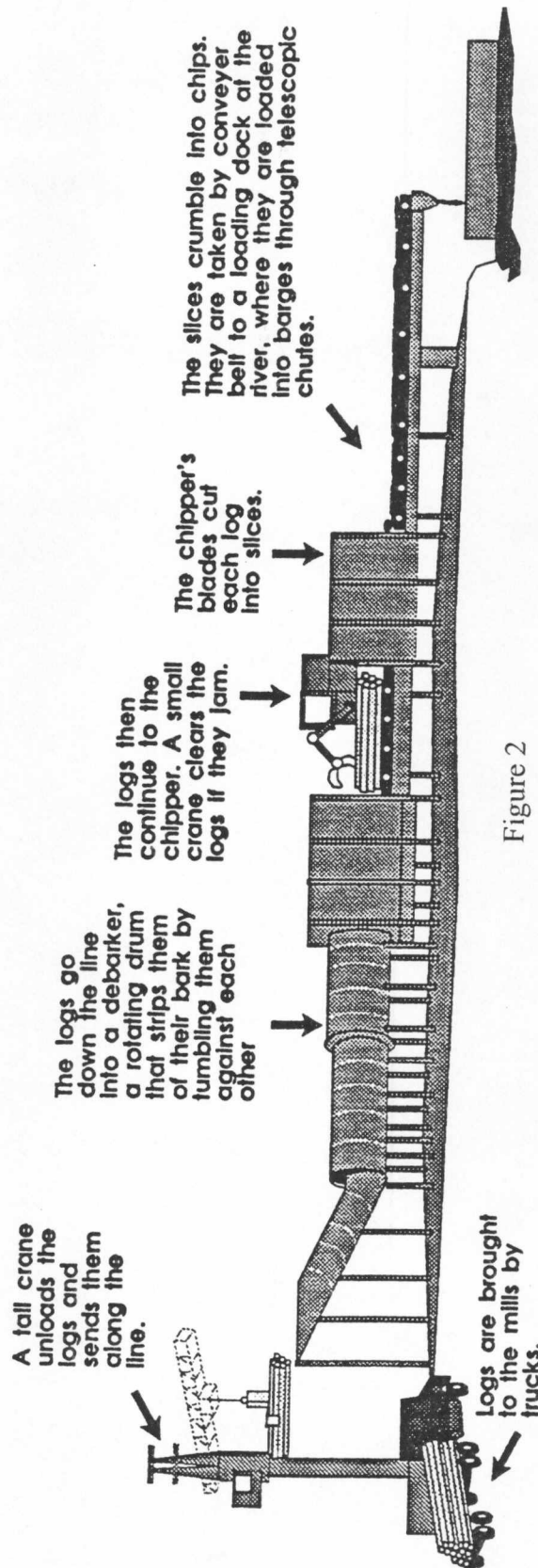


Figure 2

How a chip mill works

Source:

Tennessee Valley Authority, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service. Final Environmental Impact Statement: Chip Mill Terminals on the Tennessee River, Vol. 1, Knoxville, Tennessee: Tennessee Valley Authority, Feb. 1993, p. 2.



Figure 3

Sourcing area for chip mill environmental impact statement

Source: Tennessee Valley Authority, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service.
Final Environmental Impact Statement: Chip Mill Terminals on the Tennessee River, Vol. 1,
 Knoxville, Tennessee: Tennessee Valley Authority, Feb. 1993, p. 54.

more productive forest, environmentalists are more likely to compare chip mills to giant pencil sharpeners, grinding down everything in their path.

Consequently, environmentalists were galvanized to act. The three proposed mills alone would have had the potential to cumulatively produce 1.9 million tons of chips per year⁶ (see Table 1), and according to TVA, the area to be clearcut annually had the potential to increase 107 percent in the region, from 55,000 acres to 114,000 acres.⁷

There are currently 10 chip mills operating in the 42-county sourcing area⁸ (see Figure 4), and 140 in the Southeast as a whole; 100 of which have set up operations within the last 10 years.⁹

Federal agencies, TVA, the Army Corps of Engineers (ACE), and the U.S. Fish and Wildlife Service were drawn into the picture because the three chip mill applicants wanted permission to build river access easements. Parker Towing needed TVA and ACE approval to build a barge mooring facility and TVA's permission to build a chip mill adjacent to an industrial park. Donghae wanted to build an easement across TVA property for a barge terminal and also needed ACE permission to fill a wetland on private property. Boise Cascade needed a river easement from TVA, permission to cross wetlands, and permission from both TVA and ACE to build a barge mooring facility.¹⁰

This isn't the first time wood harvesting has been an issue in the southern Appalachians. During the early 1900s, this same region was heavily logged and stripmined, causing many acres of topsoil to be lost due to the denuding of mountain slopes. The region had a chance to recover when logging interests turned to the Pacific Northwest during the 1920s to maintain supply levels. But as the wood supply there dwindles, companies once firmly entrenched in that region now seem to be migrating back to set up operations in the newly mature forests of the Southeast.

The abundance of hardwood forest stands in the Tennessee Valley region, along

⁶ TVA, p. xx.

⁷ TVA, p. xxvi.

⁸ TVA, p. 154.

⁹ Cielo Myczack. Personal interview. Broadened Horizons RiverKeeper Project. Chattanooga, Tennessee, Mar. 3, 1997.

¹⁰ Randall Higgins. "TVA study cool to idea of chip mills." *The Chattanooga Times*, May 2, 1992, p. A1.

Table 1

Annual tonnage by chip mill combination

Chip Mills	Total Tonnage	Hardwood Tonnage	Softwood Tonnage
Parker Towing	600,000	510,000	90,000
Donghae	600,000	600,000	0
Boise Cascade	700,000	700,000	0
Combination of Two:			
Parker Towing, Donghae	1,200,000	1,110,000	90,000
Boise Cascade,			
Parker Towing	1,300,000	1,210,000	90,000
Boise Cascade, Donghae	1,300,000	1,300,000	0
Combination of Three:			
Boise Cascade, Parker			
Towing, Donghae	1,900,000	1,810,000	90,000

Source: Tennessee Valley Authority, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service. Final Environmental Impact Statement: Chip Mill Terminals on the Tennessee River, Vol. 1, Knoxville, Tennessee: Tennessee Valley Authority, Feb. 1993, p. 29.

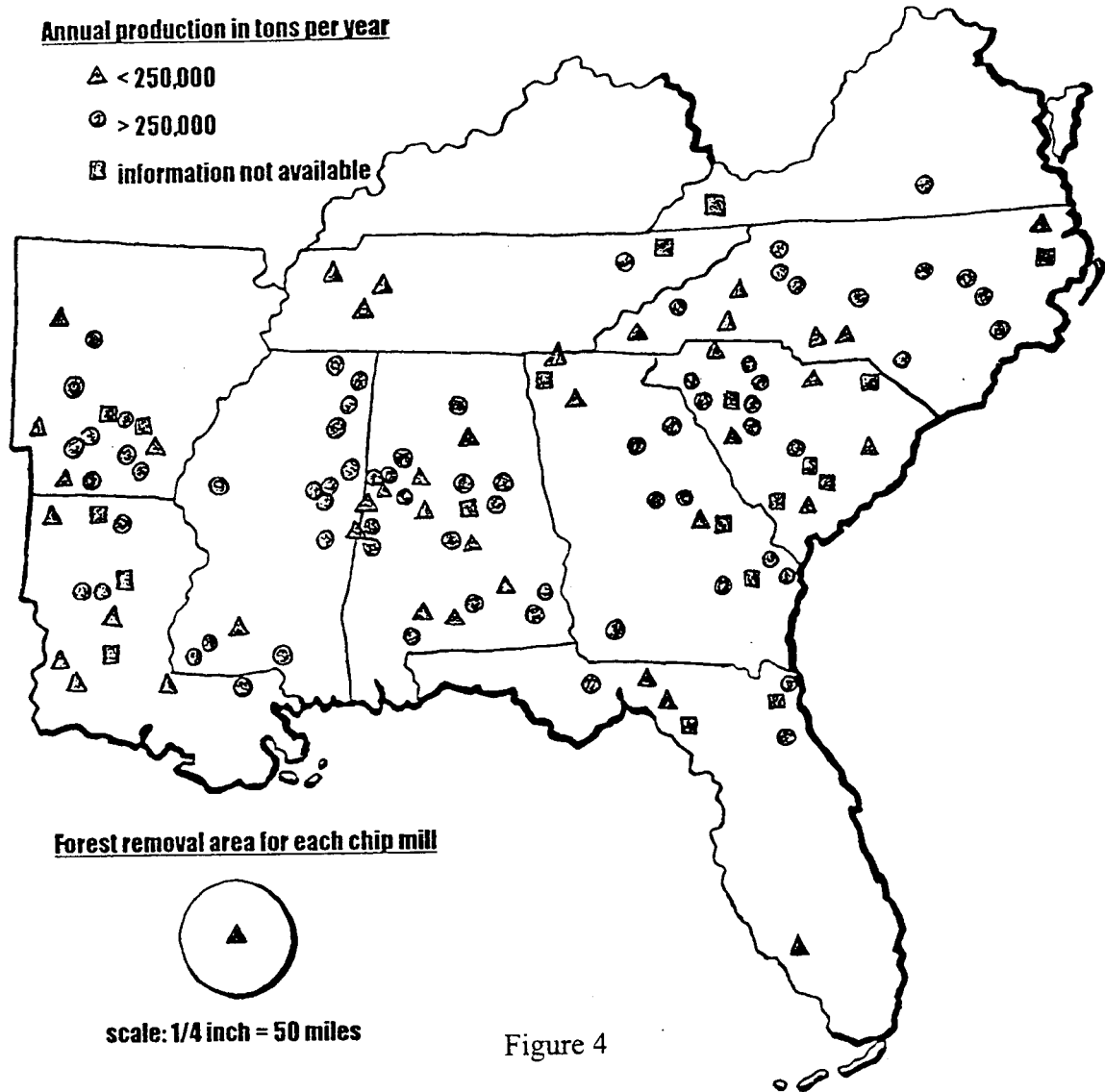


Figure 4

Chip mills in the South

Information gathered by the Broadened Horizons RiverKeeper Project in Chattanooga, Tennessee.

Sources: Tennessee Valley Authority and Timber Processing, Vol.20, No.6 (July/Aug. 1995)

with access to low-cost water transportation, is undeniably attractive to forest products companies, especially in a region where the forest products industry is so omnipresent. According to TVA statistics, there were 501 active forest products firms in the wood procurement area, providing a total of 18,791 jobs in 1989, expected to be affected by the three proposed chip mills.¹¹ (See Tables 2 through 4.)

However, environmentalists are concerned because clearcutting tends to be the predominant form of timber harvesting for feeding the appetite of the chip mills, and there are no timber laws to speak of in Tennessee. The state has only Best Management Practices or BMPs to ensure water quality and to help protect wildlife habitat for game and non-game species, but these BMPs are voluntary and consequently unenforceable.

To make matters worse, in the environmentalists' eyes, the majority of forestland in Tennessee, 89.3 percent or 5.87 million acres, is owned by private individuals.¹² Many of these woodlots, however, are smaller than 50 acres.¹³ This figure has not changed dramatically since 1931 when 95 percent of the area suitable for timber growing was privately owned.¹⁴ Of the portion now privately owned, about 11 percent or 668,638 acres is owned by the forest products industry, and 89 percent or 5.2 million acres is owned by other private individuals.¹⁵ (See Figures 5 and 6.) These factors make such land more accessible to timber companies than government land, and as the market for pulpwood grows, landowners can sell wood from thinnings at lucrative prices, especially as the going rates companies are willing to pay for this idle wood are rising.

Environmentalists, concerned about the potential adverse impacts that non-sustainable tree harvesting methods could have on the region, began sounding the alarm that an invasion by the three timber companies seeking to locate chip mills on the Tennessee-Tombigbee Waterway would almost certainly lead to massive clearcutting, with irreparable harm to the environment the end result. The timber industry, initially

¹¹ TVA, p. 153.

¹² TVA, p. 59.

¹³ Tennessee Valley Authority. The First Fifty Years: Changed Land, Changed Lives. State of the Environment in the Tennessee Valley. Knoxville, Tennessee: Tennessee Valley Authority, Dec. 1983, p. 129.

¹⁴ E.H. Frothingham. Appalachian Forest Experiment Station, Forest Service. Timber Growing and Logging Practice in the Southern Appalachian Region. Technical Bulletin No. 250, Aug. 1931, p. 6.

¹⁵ TVA, 1993, p. 129.

Table 2

Existing forest industry statistics for the 42-county sourcing area

Forest Industry Type	Firms	Jobs	Annual Plant Capacity Million Board Feet	Annual Plant Capacity Million Tons	Hard-wood Percent	Soft-wood Percent	Wood from Tenn. Valley Region
<u>Primary</u>	169	1,496	463.4	2.3	54.2	45.8	85.0
<u>Secondary</u>	329	12,745	(a)	(a)	33.2	66.8	65.1
<u>Pulp mills</u>	3	2,650	990.4	5.0	13.3	86.7	56.6
<u>Harvesters</u>	(a)	1,900	(a)	(a)	45.6	54.4	(a)
<u>Totals</u>	501	18,791	1,453.8	7.3	26.3	73.7	(a)

(a) Unknown or not additive

Sources: Ellis, 1989; Butts, 1989; and Battle, 1986.

Source: Tennessee Valley Authority, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service. Final Environmental Impact Statement: Chip Mill Terminals on the Tennessee River, Vol. 1, Knoxville, Tennessee: Tennessee Valley Authority, Feb. 1993, p. 154.

Table 3

Existing primary forest industry statistics for the 42-county sourcing area

Forest Industry Type	Firms	Jobs	Annual Plant		Annual Capacity Million	Board Feet	Tons	Hard-wood		Soft-wood		Percent Region	Percent Wood from Tenn. Valley
			Capacity Million	Plant				wood	Percent	wood	Percent		
Hardwood sawmills	91	844	159.0		0.8			97.4		2.6			95.7
Softwood sawmills	54	496	260.3		1.3			24.9		75.1			79.5
Chip mills	10	64	31.3		0.2			59.1		40.9			73.2
Other primary	<u>14</u>	<u>92</u>	<u>12.8</u>		<u>0.1</u>			100.0		0.0			93.0
<u>Primary:</u>	169	1,496	463.4		2.3			54.2		45.8			85.0

Sources: Ellis, 1989; Butts, 1990; and Battle, 1986.

Source: Tennessee Valley Authority, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service. Final Environmental Impact Statement: Chip Mill Terminals on the Tennessee River, Vol. 1, Knoxville, Tennessee: Tennessee Valley Authority, Feb. 1993, p. 154.

Table 4

Existing secondary forest industry statistics for the 42-county sourcing area

Forest Industry Type	Firms	Jobs	Annual Plant		Hard- wood	Soft- wood	Percent	Percent	Wood from Tenn. Valley Region
			Capacity Million	Capacity Million	wood	wood	Percent	Percent	
			Board Feet	Tons					
Furniture	67	4,642	72.4	0.4	75.8	24.2			46.8
Pencils	5	2,895	17.1	0.1	0.3	99.7			0.1
Prefab homes	31	1,179	56.4	0.3	11.7	88.3			4.5
Dimensional/flooring	17	926	51.3	0.3	94.4	5.6			94.0
Cabinets/millwork	89	775	39.3	0.2	17.3	82.7			58.9
Pallets/containers	39	484	54.9	0.3	82.3	17.7			82.4
Planing mills	36	320	185.2	0.9	16.4	83.6			87.0
Other products	<u>45</u>	<u>1,524</u>	<u>201.3</u>	<u>1.0</u>	<u>45.4</u>	<u>54.6</u>			<u>90.1</u>
Secondary:	329	12,745	677.9	3.4	33.2	66.8			65.1

Sources: Ellis, 1989; Butts, 1990; and Battle, 1986.

Source: Tennessee Valley Authority, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service. Final Environmental Impact Statement: Chip Mill Terminals on the Tennessee River, Vol. 1, Knoxville, Tennessee: Tennessee Valley Authority, Feb. 1993, p. 155.

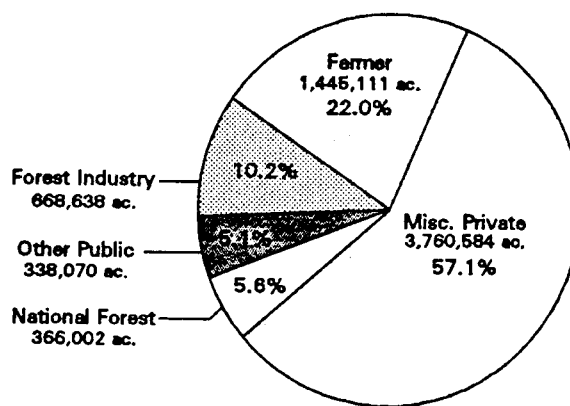


Figure 5
Ownership characteristics of the 42-county sourcing area

Source: Tennessee Valley Authority, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service. Final Environmental Impact Statement: Chip Mill Terminals on the Tennessee River, Vol. 1, Knoxville, Tennessee: Tennessee Valley Authority, Feb. 1993, p. 59.

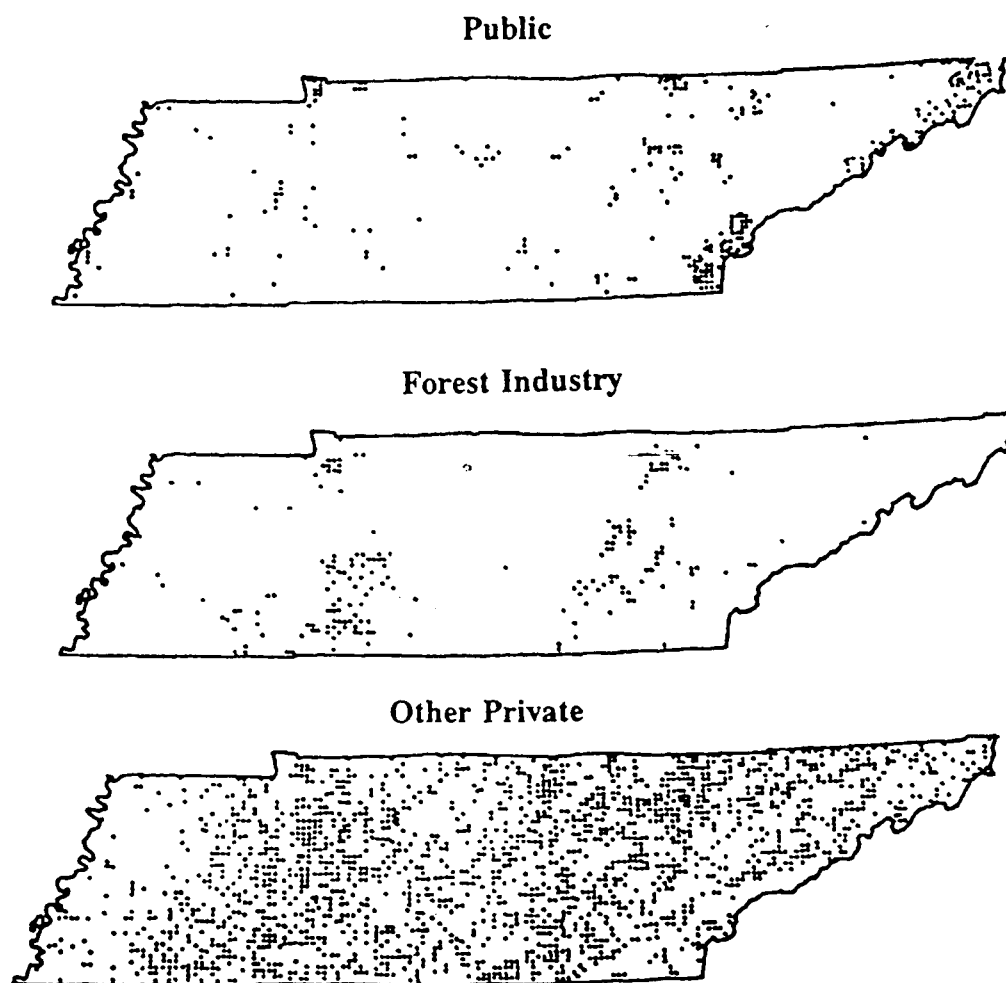


Figure 6

Distribution of forest plots by ownership class, Tennessee, 1989

Source: Dennis May. Forest Resources of Tennessee. Resource Bulletin SO-160. New Orleans, Louisiana: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station, 1991.

caught off guard by the protests, massed its forces and counterattacked, seeking to ease those concerns by emphasizing not only the economic benefits of harvesting trees, a renewable resource, but also highlighting the benefits to overall forest health and wildlife benefits. Since then, each side has upped the ante, zeroing in on the media in their efforts to win the heart and support of the Valley people. In some ways, according to Jon Loney of TVA, the media effectively fanned the flames in the controversy by quoting the most extreme viewpoints from the opposing sides. At other times, the media attempted to give both sides equal play, extensively outlining the implications of both jobs and the environment.¹⁶

Studies have shown that the public relies heavily on the mass media as a source of information about environmental issues. Such issues tend to be unobtrusive, only weakly or indirectly affecting the average person. Since the public has little contact with pollution, for instance, the likelihood of media agenda-setting is increased. Ader observed a particularly strong agenda-setting effect for unobtrusive issues in a longitudinal study on environmental pollution, finding that the public relies primarily, and sometimes exclusively, on the mass media for information on environmental issues.¹⁷ According to Leon Alligood, a senior writer for the *Nashville Banner*, this conclusion has not been lost on special interest groups who flood newspaper editorial offices with press releases and flyers, urging that attention be given to their cause.¹⁸

Griffin and Dunwoody found in a study on daily newspapers in the Midwest that an information subsidy from an environmental group affected the press coverage of a story about pollution from industrial toxins. A press kit the group sent to some of those newspapers appears to have influenced the papers to run a story on industrial toxic releases, but it primarily prompted editors to delegate local staff to cover the story.¹⁹

¹⁶ Jon Loney. Personal interview. Tennessee Valley Authority. Knoxville, Tennessee, Nov. 19, 1996.

¹⁷ Christine R. Ader. "A Longitudinal Study of Agenda Setting for the Issue of Environmental Pollution." *Journalism & Mass Communication Quarterly*, Vol. 72, No. 2, Summer 1995, pp. 300-301.

¹⁸ Leon Alligood. Telephone interview. *Nashville Banner*, Nashville, Tennessee, Nov. 18, 1996.

¹⁹ Robert J. Griffin and Sharon Dunwoody. "Impacts of Information Subsidies and Community Structure on Local Press Coverage of Environmental Contamination." *Journalism & Mass Communication Quarterly*, Vol. 72, No. 2, Summer 1995, pp. 271-272.

Conclusions from this study suggest that at the very least, information packets can guide the decisions journalists make on what to cover, if not how they cover it.²⁰

However, because environmental issues tend to be complex and often evolve slowly, journalists have a tough time finding good news pegs - or story angles such as press conferences, demonstrations, or controversial op-ed pieces - with which they can relate these issues to the public. Furthermore, lacking solid technical backgrounds in biology, chemistry, and the environmental sciences, reporters frequently have difficulty understanding these issues themselves, making journalists vulnerable to outside influences. This inadequacy makes it easier for special interests to influence the way journalists slant or frame the news in their coverage of environmental issues. A nationwide survey commissioned by Duquesne University's Bayer School of Natural and Environmental Sciences, showed that nine in ten environmental journalists say additional training in either environmental law and regulations or the natural sciences would be helpful.²¹

Partly because of this lack of training, environmental reporting is often reactive and event-oriented. The media act as a searchlight, reporting only on those issues that fall under their beam, while other issues are often ignored. Sustainable living is a good example of a widely ignored issue because it's not perceived as interesting enough to generate good headlines and cuts heavily against corporate values encouraging us to consume more.²²

As Lippmann once wrote, the press "is like the beam of a searchlight that moves restlessly about, bringing one episode and then another out of darkness into vision."²³ Where this searchlight shines can be influenced by special interests.

Further complicating the problem is that crisis-oriented reporting, under which environmental reporting frequently falls, usually fails to inform the reader about the

²⁰ Griffin and Dunwoody, p. 280.

²¹ Duquesne University, Bayer School of Natural and Environmental Sciences Survey. "Environmental Journalism Examined." In *Environmental News Network Inc.* [Online]. Available: <http://www.enn.com/news/050395/05jour02.txt> [1995].

²² Laurie Ann Mazur. "Marketing Madness." *E Magazine*, May/June 1996, pp. 36- 41.

²³ Walter Lippmann. "The Searchlight." *Politics and the Media*, Richard Davis, ed. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1994, p. 302.

underlying issues that led up to the crisis, discussing only the crisis or event itself. The public is thus, in a sense, deprived of crucial background information concerning the cause of the problem, which would enable it to more actively respond to environmental problems.²⁴

A prime example occurred during the 1991 Gulf War. During this conflict, the Iraqis set many of the oil pumps in Kuwait on fire, creating a black haze so thick it was difficult to see the sun. Media coverage was extensive with regard to possible environmental damage while this was occurring. Predictions were even made to the extent that the emitted carbon dioxide could cause global warming. Six years later, however, it was difficult to discern what those outcomes actually were. Reporters tend to concentrate on the sensational aspects of such issues, but offer few background reports or follow-up stories examining long-term consequences. Even the *Environmental News Network* on the Internet perpetuates this problem. Daily headlines disclose the latest crises and events, but few investigative reports are found on this network.

1-1. Overview of the problem

Given the difficulties of environmental reporting, which side of the chip mill controversy gets its view filtered through the media in the most positive light? It is not clear why environmentalists and timber industry interests sometimes win the information war to gain media attention, or why a compromise between the two is sometimes made.

During the 1970s, the early years of the green movement, environmental organizations had an easy ear with reporters who were seeking reliable sources with which they could cover the pertinent issues. Concurrently, environmental problems became the leading item on the national agenda,²⁵ and, under the sympathetic umbrella of the public, these groups were successful in their legislative attempts, particularly during

²⁴ Carol M. Liebler and Jacob Bendix. "Old-Growth Forests on Network News: News Sources and the Framing of an Environmental Controversy." *Journalism & Mass Communication Quarterly*, Vol. 73, No. 1, Spring 1996, pp. 53-54.

²⁵ Ader, p. 302.

the late 1980s and early 1990s, to get Congress to pass and modify environmental laws in their favor.²⁶

However, the resulting sensational reporting on the side of environmentalists is said to have contributed in part to the rise of the wise-use movement, otherwise known as the property rights movement. Initially caught off guard by the momentum of environmentalists, business and property interests began responding vigorously with information campaigns of their own, asking the courts to reinterpret environmental laws in a more pro-business light.²⁷ A Wise Use organization was founded in 1988 by political activists and oil, timber, and other natural resource industries, who were united in their fear that newly elected President George Bush was "too green."²⁸

And to some extent, the public seems to be accepting the wise use message. In a recent study of comparative risk projects, which have become a popular tool for helping states and communities prioritize environmental issues, researchers encountered an emerging consensus that businesses, citizens, and state and local governments often feel hobbled by national environmental policies that prescribe specific remedies to pollution without regard to their benefit or cost.²⁹

The same kind of countermovement is occurring within the chip mill controversy in the Tennessee Valley, according to Harold Draper, the project leader for the Chip Mill Environmental Impact Statement (EIS). "The timber products industry was initially caught off guard by the strength of the mounting environmental movement, but they've since come back with vigorous soundbites of their own," Draper said.³⁰

1-2. Problem statement

Most of the time, evidence gleaned from media objectivity and bias studies shows that the sources journalists routinely expose themselves to are government officials and

²⁶ Lettie M. Wenner. "Environmental Policy in the Courts." Environmental Policy in the 1990s, Norman J. Vig and Michael E. Kraft, eds. Washington, D.C.: Congressional Quarterly Inc., 1994, p. 149.

²⁷ Wenner, p. 149.

²⁸ David Helvarg. "Open Hostilities." *National Parks*, Sept./Oct. 1996, p. 37.

²⁹ David L. Feldman, Ralph Perhac, and Ruth Anne Hanahan. Environmental Priority Setting in U.S. States and Communities: A Comparative Analysis. Waste Management Research and Education Institute, University of Tennessee - Knoxville, Sept. 1996, pp. 3-4.

³⁰ Harold Draper. Personal interview. Tennessee Valley Authority, Knoxville, Tennessee, Nov. 19, 1996.

agencies. The reason for this is that reporters rely on work already done for them by the agencies on their particular beat. In this way, reporters don't always have to be present when something is occurring; they can choose what to view firsthand and what to see later in the agency report or by talking to the media liaison person.³¹

According to Jon Loney, the project director for the Chip Mill EIS, the chip mill controversy in the Tennessee Valley was unusual in that the media didn't have government officials consistently at their disposal because, as he put it, TVA, the main government agency involved, "clammed up" until the final draft of the EIS for Chip Mill Terminals on the Tennessee River could be prepared. Instead, as the controversy heated up, journalists had to turn to the interest groups themselves for the bulk of their information.

This study proposes to look at whether or not selected representatives from environmental groups and the forest products industry feel the print media have fairly portrayed the chip mill controversy, particularly in the Chattanooga, Tennessee area. Chattanooga was chosen because it lies nearly in the center of the 42-county harvest area that would have been affected by the three proposed chip mills. In addition, this debate has served as an example for other chip mill fights throughout the Valley.

1-3. Purpose of study

In analyzing the chip mill controversy that raged in the Chattanooga area and elsewhere in the Valley, this study examines how the public relations arms of the two sides attempted to influence the way in which their views were expressed to the public through the media conduit, and whether or not they feel the media, particularly the print media, has been fair and accurate in its coverage.

The purpose of this study is three-fold:

- 1) To establish a timeline synopsis of the main events that elicited media coverage concerning the chip mill controversy in the Chattanooga area from June 1990, when Parker Towing applied for a permit from TVA, to October 1996, when the Dogwood

³¹ Mark Fishman. Manufacturing the News. Austin, Texas: University of Texas Press, 1980, p. 44.

Alliance, which united more than 30 environmentalist groups, was formed to stop or at least slow the chip mill migration to the Southeast.

- 2) To examine, through interviews, how interest groups involved with the chip mill controversy tried to convey their message to the public, and determine how environmentalists and timber products representatives perceive the coverage provided by the print media concerning this issue.
- 3) To follow up the interviews with a newspaper content analysis of 57 articles published between September 1991 and September 1996 by *The Chattanooga Times* and the *Chattanooga Free Press* that categorizes the sources cited in actual newspaper accounts to determine whether the balance differs from those perceptions expressed in the interviews. Because of the small sample size, if the number of environmentalists cited versus the number of timber industry representatives are within 10 percentage points of each other, balance will be considered to have occurred. This percentage was arbitrarily chosen for purposes of this study.

1-4. Significance of study

By analyzing the forces at work in this controversy, this study aims to provide some insight on the relationship between interest groups and the news media and help to show why sources from one side or the other are more successful at gaining news media attention for their version of the events.

1-5. Research questions

- 1) What kinds of strategies do environmental and timber products interest groups employ in getting their message to the public?
- 2) To what degree do these interest groups find media coverage concerning the chip mill controversy accurate?
- 3) Do these interest groups find the media biased toward one side or the other in their coverage of the chip mill controversy?
- 4) Do these interest groups find the media approachable and willing to listen to their point of view?

1-6. Definition of terms

Logging: the cutting of timber for profit; this does not include the clearing of fields or cutting of firewood.

Clearcutting: a regeneration and harvesting system wherein all stems greater than one inch in diameter are cut down.

High grading: a harvesting method for culling only the most valuable trees from a forest.

Saw timber: wood that is straight and free of limbs so that boards sawed from it are free of knots; it is considered the most valuable of wood products.

Board foot: amount of lumber in a board measuring one foot by one foot by one inch.

Pulp/pulpwood: trees that are cut for use in papermaking; this use is increasing and pulpwood is second only to sawtimber in value.

Forestland: land at least 16.7 percent stocked with forest trees of any size and not currently developed for nonforest uses.

Timberland: forestland that is producing, or capable of producing, crops of industrial wood and not withdrawn from timber utilization.

Key legislation affecting the forest industry:³²

1) In 1876, the Division of Forestry, from which the Forest Service later emerged, was set up within the U.S. Department of Agriculture. The Forest Service was eventually moved under the Department of Environment and Conservation until 1991, when it was moved back to the Department of Agriculture by executive order.

2) The Forest Reserve Act of 1891 added land to the national parks and monuments and slowed the sales of public land.

3) The Multiple-Use Sustained Yield Act of 1960 holds that national forests should be maintained for multiple purposes such as outdoor recreation, range, timber, watershed, and wildlife and fish habitats. Harvested timber is to be held within limits that can be sustained indefinitely. This Act only applies to national forests.

4) The Wilderness Act of 1964 established the national Wilderness Preservation System to preserve the most pristine areas.

³² Grant W. Sharpe, Clare S. Hendee, Wenonah F. Sharpe, and John C. Hendee. Introduction to Forest and Renewable Resources, 6th Edition, McGraw-Hill, Inc., 1992, Chapter 2: Forest and Renewable Resource Policy, pp. 23-43.

5) The National Environmental Policy Act (NEPA) of 1969 requires federal agencies to submit proposals for major federal actions when these actions may significantly affect the environmental quality of the surrounding area. Under NEPA, federal agencies must include an environmental impact statement (EIS) on the proposed action considering “any adverse environmental and social and economic effects that cannot be avoided; alternatives to the proposed action, the relationship between local, short-term uses of the human environment and the maintenance and enhancement of long-term productivity; and any irreversible and irretrievable commitments of resources.”³³

If the need for an EIS is unclear, an environmental assessment is prepared. During its preparation, the public must be informed of the proposed action and its possible consequences and be given the opportunity to voice their opinions. If enough public concern is generated, a full EIS will be required.

6) The Endangered Species Act of 1973 protects ecosystems or habitats upon which endangered or threatened plant and animal species depend and requires federal agencies to consult with the U.S. Fish and Wildlife Service on any proposed action that might adversely affect endangered or threatened species.

7) The National Forest Management Act of 1976 requires forest plans to provide for a diversity of plant and animal species and ensure that clearcutting and other harvest methods be used on national forestlands only when they are determined to be the optimum method to meet land management plans.

Senator Hubert Humphrey, the author of the National Forest Management Act, once said, “The days have ended when the forest may be viewed only as trees and trees viewed only as timber.”

³³ Sharpe et al., p. 41.

2. LITERATURE REVIEW

2-1. History of logging in East Tennessee

While chip mills are being built all over the southeastern United States, this study concentrates on the forests of East Tennessee, particularly the Chattanooga area, which is where much of the opposition from environmental groups has been rooted. As mentioned earlier, Chattanooga lies nearly in the center of the 42-county harvest area that was affected by the three chip mill proposals.

As also mentioned in the introduction, this isn't the first time logging operations have set up shop in this region, and environmentalists are counting on the government to apply lessons learned from the timber go-go years of the early 1900s so that history doesn't repeat itself.

Before 1890, logging was primarily concentrated in the area in the upper Midwest - especially Michigan - and the Northeast. Timber in the southern Appalachians wasn't economically attractive due to the region's remoteness and lack of railroads.³⁴

However, this changed dramatically in the last years of the 19th century when steam-powered equipment such as locomotives, overhead skidders, log loaders, and steam shovels made large-scale lumbering in what was to become the Great Smoky Mountains National Park (GSMNP)³⁵ and other remote areas attractive.³⁶

Overhead skidders were devices built on elongated flat cars with a boom on the front end extending to about 30 feet above the ground. Cables went out from the boom and were secured at the top of a mountain. Logs traveled overhead attached to the cables.³⁷

³⁴ Weaver H. McCracken III. Comparison of Forest Cover Prior To and Following Disturbance in Two Areas of the Great Smoky Mountains National Park, Master's Thesis, University of Tennessee, 1978, p. 9.

³⁵ The area known as the Great Smoky Mountains National Park was designated a national park on June 15, 1934.

³⁶ McCracken, p. 9.

³⁷ William Hooks. Telephone interview. GSMNP Staff. Gatlinburg, Tennessee, Apr. 4, 1997.

Around 1900, the Appalachian forest was extensively logged, and by the 1930s, primitive timber cutting practices had denuded many of the slopes and compromised the productivity of others.³⁸

According to a 1958 report to the Department of Agriculture's superintendent of forests, there have been two primary periods of logging thus far in the southern Appalachians.³⁹ The report was based on oral testimony and written records of individuals with personal knowledge of logging in the GSMNP. The first period, which began in the 1880s and ended around 1900, was characterized by small companies managed by local owners and financed with local capital. Only the most valuable timber, particularly poplar, cherry, and ash, was cut, and loggers remained near creeks and more accessible places.⁴⁰

During the second period, from around 1900 on into the 1930s, the growing demand for lumber and paper brought in outside capital and management and a number of large-scale operations. Railroads made it possible to carry out wood and lumber from areas that were previously inaccessible, and newly developed mechanized logging and sawmill equipment, combined with new processes of paper-making, resulted in the wider use of trees that had formerly been of little value.

For example, the report states that hemlock began bringing a fair price for use as pulp, as did the poplar and chestnut species. Spruce, which had formerly been the least accessible tree due to its preference for higher elevations, was now accessible with overhead skidders and became the primary ingredient in the sulfite process used in paper manufacturing.⁴¹ In the end, the only timber left had little value and was found primarily in thin strands on rocky slopes.⁴²

³⁸ TVA, 1983, p. 9.

³⁹ Robert S. Lambert. Logging in the Great Smoky Mountains National Park: A Report to the Superintendent, Oct. 1, 1958, p. 9.

⁴⁰ Lambert, p. 9.

⁴¹ Lambert, p. 11.

⁴² Lambert, p. 10.

The slow pace of the earlier period enabled the forest to regenerate at nearly normal rates, but the cutting of the latter period is said to have brought with it "the seeds for the virtual annihilation of the forest."⁴³

Excerpts from historical studies starkly depict the damage left behind:

"By the First World War this penetration [of logging railroads] was so deep as to reach the slopes of the highest peaks."⁴⁴

The cutting included " ... everything you could make a board of."⁴⁵

"Although by its nature logging is harmful to the forest, this destruction was kept within reasonable limits in the early methods of operation. The coming of mechanized devices changed all that."⁴⁶

"Incentives were purely economical, and cutting was done with no consideration for forest regeneration, wildlife or water quality."⁴⁷

Indeed, the situation was so deplorable that the director of the federally managed Appalachian Forest Experiment Station stated in a 1931 technical report that "after many years of logging, the original timber supply of this region is coming to an end. Replacement is hindered by repeated cullings which removed the most useable timber, leaving the poorest."⁴⁸

The lumber industry expanded in the southern Appalachians as changes in market conditions resulted in constantly heavier cullings with less and less timber left standing. New demand for pulpwood and tanning extract wood made possible the use of smaller size trees, as well as those that had previously been considered worthless.⁴⁹

Consequently, the following four conditions were reported to be the most widely prevalent in the southern Appalachians in 1931:

- 1) desirable trees such as yellow poplar, red oak, and white pine were deficient;
- 2) defective trees and less desirables such as sourwood, red maple, and black gum were in surplus supply;

⁴³ Lambert, p. 10.

⁴⁴ Lambert, p. 15.

⁴⁵ McCracken, p. 12.

⁴⁶ Lambert, p. 20.

⁴⁷ McCracken, p. 12.

⁴⁸ Frothingham, p.6.

⁴⁹ Frothingham, p.8.

- 3) reproduction of desirable species was deficient; and
- 4) in burned out stands, there was a heavy amount of sprouts.⁵⁰

By the early 1930s, much of the virgin timber in the Tennessee Valley had been cleared for farms or used for lumber. Of the 36.6 million total acres in the Valley, only 20.2 million or 55.5 percent were still forested. At the same time, surviving second and third generation forests suffered from extensive fire scarring, subsequent disease and insect attack, and damage by livestock.⁵¹

Reforestation efforts were an uncommon practice in the 1930s as TVA began to take control of the situation. From 1933 to 1934, the agency established two forest tree nurseries to produce seedlings for replanting. Educational and demonstration programs were implemented to teach private owners how to revive their eroded lands. Even the Civilian Conservation Corps was tapped to provide large public workforces to undertake reforestation.⁵²

By the 1960s, the situation had been turned around and forests were on their way to recovery, even as the market for pulpwood was growing. In 1967, a story appeared in the *Chattanooga News-Free Press* (name changed to *Chattanooga Free Press* on Dec. 4, 1993) touting the gains made by reforestation efforts. For the first time, a five-year survey conducted by TVA showed an upward trend in hardwood timber quality. In addition, from 1960 to 1965 the Tennessee Valley forest product industries had increased their product value by 38 percent, hired 5,500 more workers, and boosted payrolls by \$36 million dollars annually, making it the region's third largest industry group, with over 40,000 employees.⁵³

Today, Tennessee's wood products industry employs approximately 60,000 people, pays wages of over \$1 billion per year, and produces goods worth an estimated \$4.8 billion annually. The main products include paper, hardwood lumber, and furniture.⁵⁴

⁵⁰ Frothingham, p. 66.

⁵¹ TVA, 1983, p. 122.

⁵² TVA, 1983, p. 122.

⁵³ "TVA forest increase told." *Chattanooga News-Free Press*, Apr. 25, 1967.

⁵⁴ Tennessee Division of Forestry. "Forestry: Forestry Facts." Available: <http://www.state.tn.us/agriculture/tdfff.html> [1997, Jan. 24].

TVA warned in 1983, however, that as forest stands in other regions of the country were being depleted, demands for productivity in southeastern forests would increase.⁵⁵

And there are currently signs that the state division of forestry is concerned about the present timber quality in Tennessee's forests. While forests are said to be growing three times more wood each year than is cut for timber, paper, and other products, the quality is generally declining because of the highgrading that has occurred in the past.⁵⁶

2-2. Issues at stake

The forest products industry is a big industry in Tennessee. In fact, in 1991 Tennessee was the nation's second biggest producer of hardwood lumber.⁵⁷ Since lumber companies typically use only the largest and best portions of trees, there is great economic incentive to use more of the forest, clearing out more of the undesirable trees left from so much high grading. Chip mills offer this opportunity, and before the EIS was completed, TVA insisted that the region's hardwood supply could sustain the chip mills. (TVA ultimately decided against granting the three proposed barge permits, issuing the following judgment: "After weighing the potential benefits of the pending requests with the likelihood of substantial, cumulative localized impacts and risk of harvesting-related impacts, TVA's preferred alternative is the denial of all proposed actions."⁵⁸)

At the same time, the Tennessee-Tombigbee Waterway provides a prime location for such chip mills. Barge travel is said to be one of the cheapest modes of transport, and the Tenn-Tom covers 234 miles, joins 14 rivers, and connects 16,000 miles of navigable waterways on its way to the Gulf of Mexico, curving through the heart of southern timber country.

However, environmentalists see the chip mills as a threat to trees, water, and wildlife. They say the chip mills themselves are noisy, as are all the logging trucks carting the wood in and out. They find the clearcuts ugly and responsible for land gullies, filled

⁵⁵ TVA, 1983, p. 136.

⁵⁶ Tennessee Division of Forestry.

⁵⁷ Dave Flessner. "Wood chip mills may be threat to wildlife." *The Chattanooga Times*, Feb. 25, 1991, p. A1.

⁵⁸ TVA, 1993, Cover Sheet.

streams, and the disappearance of wildlife. In addition, they worry about the region's ability to sustain its timber supply: hardwoods require a minimum of 40 years to regrow, pines need 15.

Some argue that the clearcutting method necessary to make the chip mills profitable will ravage the 11.4 million acres of natural hardwood forests in southeast Tennessee, northern Georgia, and northeast Alabama, an area twice the size of the Great Smoky Mountains National Park.⁵⁹ As mentioned in the introduction, according to TVA itself, the area to be clearcut annually was expected to increase 107 percent in the region, from 55,000 acres to 114,000 acres, had the three chip mills been built.⁶⁰

Companies that do replant often do so with pine because of the shorter time period that pines require over hardwoods to reach maturity. In fact, while Tennessee boasts about a million more acres of timberland than it did 50 years ago, hardwood forests have declined by more than 25 percent since then.⁶¹ And this decline is likely to continue in the near future as businesses are demanding paper with better printability for their laser-jet printers and other machines, making a higher mix of hardwoods necessary for paper production.

There were and still are no guarantees that clearcut areas will be replanted with trees because most of the land is privately held, and in Tennessee, forestry, like farming, is specifically exempted from environmental and water quality laws. Best Management Practice guidelines, also known as BMPs, urge certain forestry practices that won't harm the environment; for example, clearcutting should not occur on steep slopes, and logging roads should never cross streams or go up and down steep slopes. However, BMPs are voluntary, and thus unenforceable. Because so much of the land in question is privately owned - 89.3 percent - landowners are primarily responsible for reforestation, and environmentalists fear that this won't happen. Those in favor of clearcutting say the mills

⁵⁹ Pam Sohn. "The debate: What will change if mills are here?" *The Chattanooga Times*, Oct. 2, 1991, p. A1.

⁶⁰ Pam Sohn. "Groups unite to fight mills: Plans outlined to solve dispute." *The Chattanooga Times*, July 31, 1992, p. A1.

⁶¹ Pam Sohn. "Forest practices a serious threat to area ecology." *The Chattanooga Times*, Jan. 10, 1995, p. A1.

would give landowners a competitive market, offering them an economic incentive to improve forest stands, but according to a Mississippi forest commissioner, 20 percent to 40 percent of those landowners who sell timber do not reforest, but rather let it lay fallow, allowing it to grow back on its own.⁶²

Another sticking point was that, according to TVA projections, the chip mills would convert hardwood trees from a 75-mile radius into chips to be sent to paper mills, domestic and foreign. Cumulatively, the three chip mills would have had the estimated capacity of producing 1.9 million tons of chips per year. Environmentalists wonder why so much needs to be converted into chips in the first place.

In one newspaper article, a manager for Weyerhaeuser said, "We're a 100 percent export-to-Japan market here in Amory [Mississippi],"⁶³ adding fuel to environmentalists' claims that jobs are also being exported in the process due to the loss of value-added products, which are manufactured overseas with raw material from the Tennessee Valley.

Typically, chip mills used to be located right next to paper mills, but wood supplies ran out, and the chip mills then became satellite operations, locating closer to available wood supplies and near inexpensive transportation arteries. Initially, Weyerhaeuser sold its chips to domestic pulp mills, but in an effort to increase its bottom line, it has since found additional markets along the Pacific Rim and Japan.⁶⁴

On the economic side, environmentalists said the chip mills don't provide enough jobs to justify the destruction they wreak, but the timber industry argues that trees are a renewable resource and that chip mills do offer tremendous employment and income opportunities. While the average chip mill directly employs only 15-20 workers, each one indirectly employs over 200 people when trucking and logging jobs are taken into consideration, according to timber industry representatives.

On tourism, those in favor of clearcutting say the individual land tracts are so small that clearcuts would also be small and in checkerboard fashion, rather than cover

⁶² Pam Sohn. "The conflict: Chip mill industry at center of debate over proper land use." *The Chattanooga Times*, Sept. 30, 1991, p. A1.

⁶³ Pam Sohn. "The mill: High-output operation at Amory ships all its wood chips to Japan." *The Chattanooga Times*, Oct. 1, 1991, p. A8.

⁶⁴ Sohn, p. A8.

large areas as in the Pacific Northwest. Their opponents say that clearcuts would harm the natural beauty and economic viability of the region as a tourism and recreation area, an argument the Chattanooga City Council and Chamber of Commerce took to heart by jumping on the environmental bandwagon and opposing the proposed chip mills.

2-3. Pacific Northwest

Some on both sides of the issue have looked to the battle in the Pacific Northwest over old-growth forests for lessons on how to proceed in the Tennessee Valley. The debate over logging in the Pacific Northwest has been raging since the 1980s, and many have argued, with respect to that controversy, that the intensifying shortage of natural resources, particularly "old growth" forests, will continue to pit environmentalists against timber companies.

Old-growth forests have been defined a number of different ways, but the consensus is that they are closed canopy forests dominated by large trees that are more than 150 years old and contain many dead snags and fallen logs. These forests are said to be the desired habitat of the spotted owl because they provide good nesting sites, and they contain thriving populations of the owl's prime prey.⁶⁵ In addition, the scenic value that such forests offer pulls in a number of tourists, allowing them to view firsthand how forests evolve without the interference of man.

Both sides in the debate over the old-growth forests claim the job loss argument as their own. Industry groups bill environmental regulations, especially the Endangered Species Act (ESA), as the primary reason behind job layoffs and cutbacks and restrictions on efficiency. The ESA was passed by Congress in 1973; it requires that any threatened or endangered species be listed and that recovery plans be developed and implemented by all federal land managing agencies.

Another act that frustrates industry is the National Forest Management Act of 1976 in which the U.S. Forest Service is required to protect and maintain the diversity of species on its lands and to identify "indicator species" representing the health of the biotic

⁶⁵ Liebler and Bendix, p. 54.

community. In addition, the Act mandates multiple use of the forest,⁶⁶ requiring that national forests be administered for outdoor recreation, range, watershed, and wildlife and fish habitat purposes, as well as the harvesting of trees.⁶⁷

On the other hand, environmentalists counter that while, in the short term, loggers and other workers will be affected by more stringent regulations, if logging is unregulated, even more jobs will be lost in the long term because current cutting rates can't be sustained, and the supply of trees will eventually run out.

The controversy in the Pacific Northwest has reached the highest echelons of power. Vice President Al Gore wrote, "The issue has been billed as a conflict between jobs and the environment, but if the remaining 10 percent of old-growth forest is logged out, as the timber industry prefers, the jobs will be lost anyway. The only question is whether the effort to create new jobs will begin now or later, after the forest is completely gone."⁶⁸

On the other hand, Oregon Senator Mark Hatfield complained that the media takes information provided by special interest groups and presents it to the public "as gospel without verification."⁶⁹ And more often than not, Hatfield says, reporters go with statistics given by the environmentalists because they paint "a far bleaker picture of the situation,"⁷⁰ and thus make better copy for the news report. He pointed to the *Oregonian* as an example of a newspaper relying too heavily on environmental sources and giving only token representation to forest industry sources.⁷¹

However, Liebler and Bendix found in a content analysis of network news coverage of the spotted owl / old-growth forest controversy that the networks aired more sources who favored cutting the forest than those who proposed saving it. A possible explanation that they found is that the timber industry worker's story is less complex and

⁶⁶ Jonathan I. Lange. "The Logic of Competing Information Campaigns: Conflict Over Old Growth and the Spotted Owl." *Communication Monographs*, Vol. 60, Sept. 1993, p. 244.

⁶⁷ Sharpe et al., p. 34.

⁶⁸ Mary H. Cooper. "Jobs Vs. Environment." *CQ Researcher*, Vol. 2, May 1992, p. 415.

⁶⁹ Mark O. Hatfield. "Old Growth and the Media: A Lawmaker's Perspective." *Media and the Environment*, Craig LaMay and Everette Dennis, eds. Washington, D.C.: Island Press, 1991, p. 186.

⁷⁰ Hatfield, p. 189.

⁷¹ Hatfield, pp. 189-190.

easier to explain. The effect of logging cutbacks on loggers' families and future livelihoods is easier for people to relate to than a bird most people have never seen.⁷²

In short, as Smith puts it, this controversy is a prime example of efforts to protect the environment colliding with activities and technologies such as clearcutting that traditionally support economic growth and provide jobs. While alternative technologies may be less environmentally destructive, they require expensive investments, which also have the potential to dislodge older industries and companies, thereby causing economic dislocation.⁷³

Given the mood of the controversy in the Pacific Northwest, compromise will be difficult. The pro-cut side has emphasized how devastated communities would be by job losses due to a reduction in timber harvests, while the pro-save side has tried to show the ugly scars that clearcutting leaves behind.

In Tennessee, the same forces are at work; the difference is that most of the wood harvesting is projected to occur on privately owned land, as opposed to federal land in the Pacific Northwest. It is to these woodlot owners that the timber industry and environmentalists have concurrently appealed.

2-4. Media studies

News source diversity

The focus of this study is on sources, in particular special interest groups, and their perceptions of the media. There is a lot of evidence that the mass media play an important role in how the public perceives an issue, but in fact, numerous studies have found that sources shape the news more strongly than journalists do, with more than half of all news stories originating from sources' efforts to get their voices heard by the mass media.⁷⁴

What causes reporters to omit information or slant what they write? According to Fishman, there are a number of factors that influence the final report, including how

⁷² Liebler and Bendix, p. 61.

⁷³ Emily T. Smith. "Greens and Greenbacks." *Media and the Environment*, Craig LaMay and Everette Dennis, eds. Washington, D.C.: Island Press, 1991, p. 160.

⁷⁴ Dan Berkowitz and Douglas W. Beach. "News Sources and News Context: The Effect of Routine News, Conflict and Proximity." *Journalism Quarterly*, Vol. 70, No. 1, Spring 1993, p. 4.

reporters systematically expose themselves to occurrences or sources, and how they interpret what they are exposed to.⁷⁵ The message the public ultimately receives depends on what the media allow, and Fishman convincingly argues that this message isn't unbiased because "reporters strategically and systematically expose themselves to only a few sources of information within their beat territories."⁷⁶ More just isn't humanly possible given stiff news deadlines and editorial pressures.

Gans says diversity in news sources shouldn't be expected because routines, or beats, are necessary to produce news efficiently from an infinite number of possible stories occurring every day.⁷⁷

Interestingly enough, these sources that reporters routinely expose themselves to tend, almost exclusively, to have a governmental bureaucratic character. Why? Because many reporters rely heavily on public records, in effect work already done for them by the agencies on their particular beat. With these records, reporters don't always have to be at the scene when something happens; they can choose what to view firsthand and what to view later in the agency report or by talking to the governmental agency media liaison person.⁷⁸

Researchers also reason that since most news involves government in one way or another, journalists logically draw primarily on government officials as sources. In addition, most government sources, as well as those affiliated with businesses and interest groups, tend to be top executives. While these business and interest group sources sometimes see it in their best interests to avoid media coverage, more often than not, they attempt to provide news fodder that fits journalistic criteria and news needs by providing a regular, credible, and ultimately usable flow of information.⁷⁹

And as Brown et al. point out, these elite sources have the power to catch journalists' attention because they can usually supply a formidable amount of information without unduly taxing their organizations or the resources of news organizations.

⁷⁵ Fishman, p. 32.

⁷⁶ Fishman, p. 33.

⁷⁷ Herbert Gans. Deciding What's News. New York: Vintage Books, 1979.

⁷⁸ Fishman, p. 44.

⁷⁹ Berkowitz and Beach, p. 5.

Likewise, they are more likely to meet standard definitions of reliability, trustworthiness, authoritativeness, and articulateness.⁸⁰

In fact, Manheim goes so far as to say that “most of the interest-group-related news or advertising we see is the product of the public relations efforts by large, well-established entities.”⁸¹

For example, some companies distribute video press releases that come across like news stories, and journalists have been chastised for broadcasting them as if they themselves had filmed these segments during the course of their own newsgathering.⁸²

But environmentalists have gotten into this video game as well, producing such documentaries as *Southbound* and *Ready for Harvest: Clearcutting in the Southern Appalachians*, which detail the so-called “invasion” of the southeastern U.S. by such major timber products corporations as Champion, Willamette, and Weyerhaeuser and let local citizens air their feelings concerning clearcutting. *Logs, Lies & Videotape* shows footage of the Pacific Northwest, highlighting the results of additional logging due to the passage of the “emergency” logging measure, the so-called “salvage rider,” passed by Congress in 1995.⁸³ Another, *The Paper Colony*, focuses on the intensive logging taking place in Maine.

During an event staged by environmentalists at the Kimberly-Clark / Scott Marine Export Facility in Mobile Bay, Alabama, on December 19, 1995, demonstrators didn’t get the media coverage they had hoped for, but their own videographers and photographers shot film and distributed it to local television stations. An NBC affiliate ultimately used the footage in one of its broadcasts.⁸⁴

⁸⁰ Jane Delano Brown, Carl R. Bybee, Stanley T. Wearden, and Dulcie Murdock Straughan. “Invisible Power: Newspaper News Sources and the Limits of Diversity.” *Journalism Quarterly*, Vol. 64, Spring 1987, p. 46.

⁸¹ Jarol B. Manheim. “What’s Good For Mobil Oil.” *Politics and the Media*, Richard Davis, ed. Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1994, p. 277.

⁸² Manheim, p. 283.

⁸³ This legislation was attached as a rider to a budget bill providing disaster relief, allowing for logging on national forestland after natural disasters, particularly forest fires, in order to harvest damaged logs.

⁸⁴ Dennis Haldeman. “Mobile Export Action! Environmentalists Challenge Wood Chip Exports in Mobile, Alabama.” *Wild Mountain Times*, Winter, 1996, p.1.

Not surprisingly, such negative exposure can harm a corporation's public image, and this is purported to be one of the reasons behind the rise in advocacy advertising by large companies.

A 1975 national public opinion survey found that 67 percent of the public expressed a "low approval" of big companies in general, up from 47 percent 10 years earlier. By the mid-1980s, just 19 percent of Americans had confidence in business leaders, and only 18 percent said they thought business executives were highly honest and ethical.⁸⁵

Indeed, companies have tried to clean up their public image. The 20th anniversary of Earth Day, April 22, 1990, brought a rash of press releases from companies touting everything from environmentally friendly products to wildlife conservation programs.⁸⁶ Green is now "in," even in industry. More and more products are being packaged in post-consumer recycled material, and many companies are using "green" marketing to position their products. McDonald's made headlines when it decided to switch from plastic to paper packaging in its restaurants, as did StarKist when it agreed to buy only tuna that had been caught with nets that didn't kill dolphins.

In spite of the influence interest groups have on the media, however, Fishman found in his newsroom observations that journalists' sources of choice were overwhelmingly government officials, and it didn't make a difference whether the beat territory was city hall, county government, the crime beat, or even the environment.

The nature beat, which produced stories about the local mountain area, forests, and wildlife, depended on the Forestry Service for its news. When it turned out that even rocks, trees, and squirrels are made available to the newspaper through official agencies, then it is no exaggeration to say that the world is bureaucratically organized for journalists.⁸⁷

In other words, government officials would be the preferred sources on issues like the chip mill controversy. Their statistics on how much timber is left in the forests are likely to be more objective than those of a timber company or an environmentalist.

⁸⁵ Manheim, p. 278.

⁸⁶ E. Smith, p. 157.

⁸⁷ Fishman, p. 51.

However, more than one journalist has complained that Forest Service statistics are sometimes skewed as well,⁸⁸ and environmentalists have protested that Forest Service statistics can hardly be viewed as neutral when much of its budget is linked to timber sales.⁸⁹

Of course, such bureaucratically packaged reports give journalists advance knowledge of newsworthy happenings, making it easier for them to be in the right place at the right time, but the consequence, Fishman argues, is that journalists simply don't seek out and expose themselves regularly to unofficial accounts,⁹⁰ such as when doing actual investigative reporting.

Other studies have come to the same conclusion. Sigal discovered through a content analysis over a 20-year period that most front-page non-local news in the *New York Times* and *Washington Post* were based on government sources.⁹¹ Tichenor et al. found that news accounts about controversial public issues in Minnesota communities tended to "reflect the orientations of organizational power centers."⁹²

Not that background information gained from less elite sources is never reported; sometimes journalists do go to crime victims to hear the story from their first-hand perspective, but more often than not, such information is of secondary importance and generally relegated to feature stories, human interest stories, news analysis, and editorial opinion as soft news rather than hard news.⁹³

Reporters tend to favor government sources because of the journalistic standard of being factually correct even when what is going on is unclear. Information that comes from other sources is considered soft data or speculation that can't be published without further investigation to confirm it.

⁸⁸ Alligood.

⁸⁹ William Dietrich. The Final Forest: The Battle for the Last Great Trees of the Pacific Northwest. New York: Penguin Books USA Inc., 1992, p.175.

⁹⁰ Fishman, p. 62.

⁹¹ Leon V. Sigal. Reporters and Officials: The Organization and Politics of Newsmaking. Lexington, Massachusetts: Heath, 1973.

⁹² Philip J. Tichenor, George A. Donohue, and Clarice N. Olien. Community Conflict and the Press. Beverly Hills, California: Sage, 1980, p. 224.

⁹³ Fishman, p. 71.

On the other hand, file documents, officials that speak “on the record,” and organized meetings are hard information that requires no further substantiation, thus making a reporter’s job easier.⁹⁴ Official documents are the hardest facts journalists can get, and competent knowers are typically bureaucrats and agency officials.⁹⁵ Without the time or resources to do any investigative work, reporters have less latitude than ever to follow up on doubts of any given version of what happened and are more likely than ever to rely on factually safe, easily accessible bureaucratic accounts.⁹⁶ A media contact person at the agency makes a journalist’s job even easier by supplying information, returning calls, and being available at news conferences.

A content analysis focusing on news sources for the 1989 *Exxon Valdez* oil spill revealed that the majority of sources who were named by more than one news organization represented “powerful institutional elites,” namely government and industry in this case.⁹⁷ In fact, of the total number of sources, Smith found that 61 percent were either representatives of the Alaska and federal governments or of the oil industry. In the number of citations, government sources ranked first at 51 percent, the oil industry second with 22 percent, scientists with 8 percent, and environmentalists with 4 percent, respectively.⁹⁸ Such results do seem awfully one-sided in favor of government and industry, but interestingly enough, while the oil industry had the second greatest media access, it was the least satisfied with coverage of the spill than any other group of sources. Environmentalists, although they were cited only 4 percent of the time, gave coverage objectivity and completeness one of the highest ratings.⁹⁹

In fact, Smith found that the groups with limited media access were generally more satisfied with how the spill was reported than either government or oil industry sources. He surmises that this is because reporters are not overly influenced by sources with self-serving interests, or that non-bureaucratic sources have more credibility, and are

⁹⁴ Fishman, p. 93.

⁹⁵ Fishman, p. 99.

⁹⁶ Fishman, p. 148.

⁹⁷ Conrad Smith. “News Sources and Power Elites in News Coverage of the *Exxon Valdez* Oil Spill.” *Journalism Quarterly*, Vol. 70, No.2, Summer 1993, p. 393.

⁹⁸ C. Smith, p. 397.

⁹⁹ C. Smith, p. 398.

thus better able to persuade reporters to frame stories according to their interpretations of events. This latter conclusion, however, contradicts Fishman's study. At any rate, Smith's data do seem to show that elite sources have considerably greater access to the media than other non-elite sources such as environmentalists.

Brown et al. also seem to back up this conclusion. In a content analysis of the *New York Times* and the *Washington Post*, as well as four North Carolina papers, they found that "newspapers relinquish control of news to routine channels [namely press releases, news conferences, preplanned events, or official proceedings] with male government executives as typical sources."¹⁰⁰

Almost one-third of all sources in front-page news stories were affiliated with the U.S. government, and more than half were affiliated with some government agency. By comparison, only one-fourth were affiliated with non-government organizations.¹⁰¹

Conflict news

However, not all news comes from so-called "routine channels." When the news involves conflict or more controversial issues, sources tend to be plucked from a wider range as journalists attempt to maintain objectivity and balance in their stories by providing information from each side of an issue. Keeping the reporter out of the news means relying on sources, and who these sources are thus tell a lot about news.¹⁰²

It is surmised that this study will find a greater source mix due to the confrontational and regional nature of the chip mill controversy.

In nonconflict stories, there are fewer views, and thus a reporter can effectively cover a story using only official sources.¹⁰³

In a content analysis of the three largest daily newspapers in Iowa, Berkowitz and Beach found that as news became less controlled by news sources, a more diverse source mix resulted. However, this seemed to hold true only when the story was of a local nature; the reason being that journalists can develop sources from various perspectives

¹⁰⁰ Brown et al., p. 45.

¹⁰¹ Brown et al., p. 48.

¹⁰² Berkowitz and Beach, p. 6. Leon V. Sigal. "Sources Make the News." *Reading the News: A Pantheon Guide to Popular Culture*. New York: Pantheon Books, 1986, p. 25.

¹⁰³ Berkowitz and Beach, p. 6.

within their own communities, but can find only the most visible sources in other locations.¹⁰⁴

This helps explain Liebler and Bendix's findings from a content analysis of coverage by the three major television networks of the spotted owl controversy. Journalists didn't emphasize government sources in this case and instead tended to put more sources on air that favored cutting the forest rather than saving it.¹⁰⁵

Special interest groups and their information campaigns

"News is not what happens, but what someone says has happened or will happen. The press, in amplifying some voices and muting others, in distorting some messages and letting others come through loud and clear, affects the nature of opposition and hence of governance. The press does not do so on its own: groups differ in their ability to make their voices heard and to direct and shape their messages for the public." - Leon V. Sigal

While much research has been done in the area of agenda-setting and how the media "frame" the news, less has been done on the forces that influence the frames that the media present to the public, leaving the relationship between interest groups and the news media a less explored field of communication. This relationship is the key focus of this study.

At the same time, however, special interest groups have found the media a potent tool in acquiring visibility and legitimacy and regularly conduct strategy sessions on how to gain media attention. Once they become established as legitimate sources, journalists will more readily go to them for information and quotes, particularly if they can meet news criteria of timeliness, trustworthiness, authoritativeness, and articulateness.

One study found that such groups, "often loosely knit confederations of groups, all having at least one item in common," can have a tremendous impact on the media through their ability to catch and hold attention. When this happens, the media are unable to ignore them, even though their events are generally staged.¹⁰⁶

One could say this happened in the controversy of the spotted owl and old-growth forests in the Pacific Northwest. Liebler and Bendix found that both sides worked to

¹⁰⁴ Berkowitz and Beach, p. 10.

¹⁰⁵ Liebler and Bendix, p. 58.

¹⁰⁶ Bruce H. Westley. "Setting the Political Agenda: What Makes It Change?" *Journal of Communication*, Vol. 26, No. 2, Spring 1976, p. 46.

frame the issue in ways that would elicit the most public sympathy, or, in other words, that would give them the most bang for their buck. For the pro-cut side, this meant defining the controversy as a conflict between an obscure bird and a way of life for many people. For the pro-save side, it meant framing the issue as a struggle between the need to save the important public resources of old-growth forest and an industry that was shrinking for a number of reasons.¹⁰⁷

In another study, Griffin and Dunwoody found that an information subsidy from a nonprofit environmental research group appeared to influence newspaper coverage concerning industrial toxic releases. The group issued a report titled "*Toxic Clusters: Patterns of Pollution in the Midwest*" and sent press kits to some 200 reporters in the Midwest in addition to holding several press conferences.¹⁰⁸

A content analysis seemed to show that of the newspapers that received a press kit, a higher percentage ran a story on the issue than those that didn't receive the information subsidy. While the papers didn't run the press release verbatim, the information appeared to prompt editors to assign reporters to the story.¹⁰⁹

Gandy has claimed that such subsidies are "an attempt to produce influence over the actions of others by controlling their access to and use of information relevant to those actions."¹¹⁰ The less expensive news gathering is, the more likely it is to be used. Those who "subsidize" the news media by disseminating to them information they can use quickly and inexpensively increase the likelihood that the media will use that information.

In a study of the influence public relations had on environmental coverage in the San Francisco area, Sachsman found that press releases play an enormous role, particularly those from governmental agencies.¹¹¹

Sachsman also found the public relations material that most often influenced Bay Area environmental coverage concerned local issues or government actions. This is

¹⁰⁷ Liebler and Bendix, p. 61.

¹⁰⁸ Griffin and Dunwoody, p. 272.

¹⁰⁹ Griffin and Dunwoody, p. 277.

¹¹⁰ Oscar H. Gandy. Beyond Agenda Setting: Information Subsidies and Public Policy. Norwood, New Jersey: Ablex Publishing Corporation, 1982, p. 61.

¹¹¹ David B. Sachsman. "Public Relations Influence on Coverage of Environment in San Francisco Area." *Journalism Quarterly*, Vol. 53, Spring 1976, p. 54.

because local coverage is the bread and butter of most journalists. It therefore follows that many important Bay Area environmental stories were found to be about government, with government also supplying the greatest number of press releases.¹¹²

Sachsman estimated that about 40 percent of the environmental coverage came from public relations practitioners, with 20 percent simply being rewritten press releases.¹¹³

Interest group rhetoric

"All of a sudden, we realized that what we were dealing with were these enormous, over-sized pencil sharpeners about to land on the banks of the Tennessee River." - Cielo Myczack, Broadened Horizons RiverKeeper Project

"The beauty of a chip mill is that it serves as a tool to purify the gene pool from which we reproduce our forests. If a chip mill is used in conjunction with clearcutting, you can get rid of all the rumps, the culls, and the unwanted that even the sawmill can't use but still take up so much space in our forests."
- Bob Rusk, Tennessee Mountain Management

Another study looked at the rhetoric used in the competing information campaigns in the Pacific Northwest over the spotted owl and old growth forests. In this study, it was found that each of the opposing sides, environmental and timber groups respectively, used the same five strategies in "mirroring or matching" each others' communicative behavior.¹¹⁴

These five strategies were as follows:

1) Frame and Reframe

Through various methods - press releases, newsletters, newspapers, videos, interviews, demonstrations, advertisements, litigation, letters to congresspersons, letters to newspaper editors - each side distributed their version of the facts and issues. The other side then responded by reframing the same information to convey messages that corresponded more to their line of thinking.

2) Select High / Select Low

Both sides used studies, produced by "expert" sources, that contained statistics and recommendations emphasizing the respective views the groups were trying to portray

¹¹² Sachsman, p. 59.

¹¹³ Sachsman, p. 59.

¹¹⁴ Lange, p. 245.

to the public. For example, environmentalists argued that there is very little old-growth forest left in the United States, and even this is being cut faster than it can grow back. Timber companies used studies that said just the opposite. In addition, each side contended that the other was abusing the facts, and that they, not the others, had science on their side.

3) Vilify / Ennoble

Each side attempted to demonize the other, portraying the opposition in the most negative light possible, while at the same time glorifying its own position. For example, the timber industry called environmentalists “eco-terrorists,” and environmentalists responded by calling loggers “timber beasts.”

4) Simplify and Dramatize

In presenting their viewpoints, each side tried to simplify complicated information into a format that was easy for the media and the public to understand and absorb, complete with dramatic slogans and images.

5) Lobby and Litigate

Both groups prepared and filed lawsuits and appeals in an effort to change unfavorable decisions by various agencies, and each side provided its members with information on the most effective way to do this.

Lange concluded that the communications frenzy carried on by both sides culminated in an “escalating negative spiral,” in which each side found out what the other was up to through the media rather than through direct communication and attempted to mirror or match each other’s messages in the war to win public and governmental sympathy. The issue became a fight to the death rather than an effort to reach common ground, and as a result, compromise became very difficult.

There is evidence that much of the same has occurred with the chip mill controversy in the Tennessee Valley, where extremists on both sides have used the media to further their own projections, working to influence the majority, who were firmly rooted in the middle, through the media.

Another case study that examined dialogue between an environmental activist group and an international mining corporation found that a balanced dialogue between the two parties was essential for negotiation and compromise to take place. The study concluded that such a dialogue gives mutually beneficial relationships a chance to form, whereas unbalanced communication uses persuasion to manipulate attitudes and behaviors.¹¹⁵

¹¹⁵ Courtney Cook. The Pursuit of Dialogue: The Importance of Communicating Symmetrically With Environmental Publics, Master's Thesis, University of Texas, 1994, Abstract.

3. RESEARCH METHOD

Numerous studies of media objectivity and bias have put the media under the magnifying glass, using content analyses and newsroom observations to determine whom journalists turn to for sources in their information gathering. As discussed in the literature review, these sources tend, for the most part, to be government agencies or officials because they are considered credible sources and can be relied upon to provide a consistent flow of information to fill the column inches of a daily newspaper. Special interest groups have to work harder to get media attention.

Fewer studies analyze the sources of media information to determine their perceptions of the media. Do they feel they receive fair treatment from the media? Are the media approachable and sympathetic to interest group viewpoints, or are the media biased toward one side?

As in Smith's study of coverage of the *Exxon Valdez* oil spill, the chip mill controversy in the Tennessee Valley offers an opportunity to find out how interest groups themselves perceive the media's portrayal of the events. How did the public relations arms of the two sides attempt to influence the way in which their views were expressed to the public through the media, and do they feel the media, particularly the print media, have been fair and accurate in their coverage?

The three objectives outlined in section 1-3 were treated in the following way:

- 1) A timeline synopsis was established of the main events that elicited media coverage of the chip mill controversy from June 1990, when Parker Towing first applied for a permit from TVA to build a barge terminal on the Tennessee River, to October 1996 when the Dogwood Alliance, a coalition that united more than 30 environmentalist groups, was formed to stop or at least slow the chip mill migration to Tennessee. Information gathered by TVA during its environmental impact study and newspaper stories collected and indexed by the Chattanooga Local History Bicentennial Library in its clipping file under "Conservation of Resources" and "Forests and Forestry" was used to determine when these media events occurred.

2) The methods interest groups involved with the chip mill controversy employed in trying to convey their message to the public were examined, as well as how well the print media have done their job in relaying this information to the public as perceived by environmentalists and timber industry representatives.

This was accomplished through face-to-face or telephone interviews with representatives of interest groups from both sides of the controversy.

The interviews consisted of open-ended questions, multiple choice questions and semantic differential scale questions. (See Appendix B for a list of the interview questions.) The open-ended questions were the basis of the qualitative analysis that follows in section 5, with many points also clearly illustrated by the multiple choice and scale responses.

The results from questions with multiple answers such as "never," "seldom," "sometimes," or "often" were analyzed by assigning a number value to each answer ("never" = 0, "seldom" = 1, etc.) and then calculating separate averages for the environmentalists and the timber industry representatives, or by presenting a bar graph illustrating the relative frequency with which a particular answer occurred.

As the total number of interviewees was relatively small and the main emphasis was given to a qualitative analysis, the results of several quantitative questions were presented merely by observing general trends in the data. These results were incorporated into the text by stating which way the majority tended to respond and whether there was a difference in this trend between environmentalists and timber industry representatives.

Most of the organizations and companies chosen for these interviews were culled from newspaper articles in the Chattanooga Local History Bicentennial Library clipping files and from the list of individuals, companies, and organizations who provided supporting information for the Chip Mill Environmental Impact Statement. Others were recommended through personal contacts with people knowledgeable of the chip mill controversy. (See Appendix A for a list of interviewees.)

3) A content analysis was conducted on 57 newspaper stories collected by the Chattanooga Local History Bicentennial Library and indexed in its clipping files under

“Conservation of Resources” and “Forests and Forestry” in order to compare the interview results with actual attributed sources. (See Appendix C for the coding sheet.)

The articles were published between September 1991 and September 1996 by *The Chattanooga Times* morning daily and the *Chattanooga Free Press* (called the *Chattanooga News-Free Press* until December 3, 1993) afternoon daily. The clipping file is fairly complete, but it does not contain editorials or articles that simply rehash what has already been reported or duplicates. In other words, if similar articles appeared in both daily newspapers, the clipping service would clip only the one that was the most complete and accurate or that contained a lot of statistics. The majority of the articles maintained in the file are from *The Chattanooga Times*. This clipping file is the only index available for Chattanooga newspapers.

4. TIMELINE OF MEDIA EVENTS IN THE CHIP MILL CONTROVERSY FROM 1990 TO 1996

The first objective of this study was to establish a timeline of the main events in the chip mill controversy that elicited coverage in Chattanooga newspapers from June 1990, when the Parker Towing Company first applied for a permit from TVA to build a barge terminal on the Tennessee River, to October 1996, when the Dogwood Alliance, which united 30 environmentalist groups, was formed to stop or at least slow the chip mill migration to Tennessee. One other date prior to June 1990 was added because of its relevance to the chip mill controversy.

Dates and information for this section were gleaned from newspaper clippings on file in the Chattanooga Local History Bicentennial Library; the Final Environmental Impact Statement for Chip Mill Terminals on the Tennessee River; and personal interviews with Cielo Myczack, co-director of the Broadened Horizons RiverKeeper Project, Dennis Haldeman, a researcher for Tennesseans, Alabamans, and Georgians for Environmental Responsibility, and Jon Loney and Harold Draper, TVA's project director and project leader, respectively, for the Chip Mill Environmental Impact Statement.

4-1. The seeds of controversy

January 1984

TVA's Office of Natural Resources and Economic Development publishes a report titled "Forestry in the Tennessee Valley: Beyond the Year 2000." The report is part of an effort to improve economic development in the Tennessee Valley as TVA seeks to develop an export market as well as expand domestic markets for wood chips to be gleaned from the "low-grade, over-abundant, under-utilized" hardwood forests of the Valley. Also highlighted are the region's low power rates and easy, inexpensive river transport.

This report is later used by environmentalists to bolster their claims that TVA's own forestry department is guilty of promoting chip mills in the Tennessee Valley.

June 22, 1990

Parker Towing Company, along with its subsidiary U.S. Chips, applies for a barge terminal permit from TVA to build a chip mill at Nickajack Port in South Pittsburg, Tennessee. Parker Towing is a 66-year-old river transportation and barge company.

July 25, 1990

Donghae Pulp Company of Alabama applies for a barge terminal permit from TVA to build a chip mill in Bridgeport, Alabama; most of its chips are slated for export to its parent company in Korea.

August 16, 1990

Canal Chip Corporation applies for a barge terminal permit at Bridgeport, Alabama, but later merges its application with that of Parker Towing.

September 25, 1990

Boise Cascade Corporation, an integrated forest products company that manages 2.4 million acres of forestland to support its manufacturing operations,¹¹⁶ applies for a barge permit from TVA.

TVA, the Army Corps of Engineers (ACE), and the U.S. Fish and Wildlife Service must approve each mill and convey easements over TVA property from the proposed mills to the river. The Endangered Species Act requires the federal agencies to determine whether actions may directly or indirectly threaten endangered species.

November 30, 1990

The TVA Environmental Quality Staff notifies Cielo Myczack of the Broadened Horizons RiverKeeper Project of a large number of permit applications for chip mills along the Tennessee River and one on the upper Tennessee-Tombigbee Waterway.

Myczack raises the first warning cries among environmentalists of the potential implications for the Tennessee Valley.

January 1991

TAGER (Tennesseeans, Alabamans and Georgians for Environmental Responsibility) is formed as a regional watchdog on deforestation.

¹¹⁶ Boise Cascade Corporation. Available: <http://www.bc.com/> [1997, Jan. 15].

January 10, 1991

TVA and ACE hold a public hearing on the chip mill issue in Bridgeport, Alabama, for the Donghae permit application. Only Dennis Haldeman of Tennesseans, Alabamans, and Georgians for Environmental Responsibility voices opposition. He begins to drum up more support for the next hearing. (See section 1-7 for a definition of the National Environmental Policy Act (NEPA) and why these agencies must hold public hearings.)

January 30, 1991

A newspaper clipping from *The Chattanooga Times*¹¹⁷ states that the Nickajack Port Authority in South Pittsburg, Tennessee, has been trying in vain for almost a decade to lure industry to the riverport area. The mountainous terrain is cited as being a primary reason behind industry's reluctance to relocate there; the chip mill industry is the first to show interest.

January 31, 1991

TVA and ACE hold a public hearing on the chip mill issue in South Pittsburg, Tennessee, for the Parker Towing permit application. Many area environmentalists voice concerns.

February 1991

Editorials with such headlines as "Chipper plants endanger Valley watershed;" "Stop the chippers, preserve forests;" "Protest the clear-cutting;" and "Stop the permit-express" appear in *The Chattanooga Times*.

Dr. Lee Barclay, a field supervisor for the U.S. Fish and Wildlife Service in Cookville, Tennessee, warns that tree harvesting could threaten more than 24 endangered species in the chip mill wood sourcing area.

Environmentalists ask TVA to place a moratorium on chip mills until an environmental impact statement on the cumulative impact of all chip mills can be assessed.

¹¹⁷ Dave Flessner. "Public hearing addresses pros, cons of proposed wood-chipping mills." *The Chattanooga Times*, Feb. 1, 1991, p. B2.

March 1, 1991

The Environmental Protection Agency, prompted by Barclay's concerns, requests TVA to conduct a full environmental impact statement looking at the endangered species' habitat. (TVA initially prepared an environmental assessment, which looked only at the specific chip mill sites, but when enough public concern is voiced, federal guidelines require a full-blown EIS, which also examines potential secondary impacts such as potential erosion or endangered species on private land.)

June 12, 1991

Parker Towing notifies TVA that they and Canal Chip will form a joint venture for the chip mill at Nickajack Port. This effectively reduces the overall mill demand by 400,000 tons.

September 30, 1991

A four-part series highlighting the chip mill controversy, including the pros and cons of chip mills locating in the vicinity, begins in *The Chattanooga Times* titled "Chip Mills: Business versus Environment; Two Shades of Green."

October 7, 1991

An EIS draft is leaked to *The Chattanooga Times*, and the newspaper reports that TVA plans to approve at least one and maybe all three chip mills with some strings attached.

(TVA officials commented that these leaks were occurring even as the agency was still conducting internal reviews.

"They [the newspaper] were printing excerpts of material that was still in working draft form and hadn't been approved by anybody. Not only that, but they didn't have a complete set of information! Copies got into the hands of both the environmental and forestry groups, and both went on the rampage over that, taking issue with whatever pieces of it they wanted to draw out.")¹¹⁸

December 1991

A long-standing rift within the timber industry itself between sawmills and pulp mills is exploited with the formation of the Tennessee Valley Hardwood Alliance, which

¹¹⁸ Loney and Draper.

effectively brings a number of sawmill owners together to rally against chip mills.

December 6, 1991

A debate on the pros and cons concerning the proposed chip mills is held for Chattanooga civic leaders and sponsored by the Chattanooga Venture and Partners for Progress. Representatives from both sides participate.

March 6, 1992

Around 70 demonstrators hold a protest march against the chip mills in Chattanooga; the march ends at TVA's downtown offices.

May 1, 1992

TVA releases a draft of the EIS executive summary, which states that TVA is likely to deny permits to all three applicants.

May 2, 1992

U.S. Senators Al Gore and Jim Sasser urge TVA to follow this inclination.

May 18, 1992

Two of the chip mill applicants, Boise Cascade and Parker Towing, vow to build chip mills in East Tennessee even if TVA denies them river access; Donghae states that it is not likely to pursue the matter if its permit for river access is denied.

May 21, 1992

The Chattanooga Area Chamber of Commerce takes a stand against the three proposed chip mills, expressing its desire to promote the development of the area's forest products industry, including the use of wood chips as raw materials for producing value-added products for domestic and international consumption in the hopes that this will bring higher wage jobs to the region.

June 17, 1992

A draft of the Chattanooga area chip mill environmental impact statement is released for public comment with 900 copies mailed or delivered, making it the most widespread distribution of an environmental impact statement ever by TVA. A 60-day public comment period commences.

The agency still has no preferred alternative, but is inclined to deny all permits. The three alternatives being considered are: 1) to issue no permits; 2) to approve one or

more permits with no limitations; and 3) to approve one or more permits with environmental strings attached. There are three variations to the third proposed alternative: a) to beef up voluntary BMPs; b) to require preharvest plans and harvesting restrictions; and c) to allow one trial mill with state and federal oversight. This last variation is an attempt to appease both sides of the controversy in that it would allow logging to take place, but it would also create forestry harvesting safeguards and regulations where few or none currently exist.

The alternatives please few. Environmentalists worry that there is no state agency in place to enforce the proposed limitations. The property rights group, Landowners for Responsible Natural Resource Management, charges that TVA's proposals to further limit harvests "smacks of regulatory overkill," trying to limit what private landowners can do with their own property.

June 18, 1992

U.S. Senators Al Gore and Jim Sasser and local Chattanooga officials are among the first to weigh in their opinions during the 60-day public comment period, and they are overwhelmingly critical of the report.

July 9, 1992

The property rights group, Landowners for Responsible Natural Resource Management stages a presentation complaining about "radical environmentalists" dominating media coverage with misleading information. Environmentalists protest.

July 28, 1992

The Chattanooga city council, with the Chamber of Commerce and Convention and Visitors Bureau backing it, votes unanimously to adopt a resolution urging TVA to deny all chip mill permit requests.

July 31, 1992

An independent, non-profit educational organization, directed by landowners, foresters, and representatives of both the timber industry and environmental groups, is proposed. Its aim is to provide non-industrial private forest landowners with training materials and demonstration projects on sustainable forest management.

July 31, 1992

TVA holds the first hearing for public comment on the technical aspects of the EIS draft in Chattanooga, Tennessee. More than 70 people speak and most are not pleased with TVA's report. These hearings are required under the National Environmental Policy Act, and the resulting public comments are to help the government agency correct any problems before the final EIS is released.

August 1, 1992

TVA holds a second hearing for public comment on the EIS draft in South Pittsburg, Tennessee.

September 5, 1992

Boise Cascade announces a plan to build a chip mill in New Hope, Tennessee, with or without TVA's approval. Environmentalists accuse the company of trying to pressure TVA's hand.

September 25, 1992

Tennessee Governor Ned McWherter announces his support for regulations restricting chip mills from clearcutting and encourages environmental groups to take the initiative in getting such legislation passed.

October 1992

Parker Towing applies for a barge permit in Eddyville, Kentucky, but meets with strong opposition from environmentalists. It is just up to ACE to grant this permit as TVA only issues permits for barge operations on the Tennessee River. The permit is ultimately denied.

October 4, 1992

Environmentalists announce a boycott of Boise Cascade products and up the ante in pressuring state officials to take their side.

December 9, 1992

U.S. Representative Marilyn Lloyd sends a letter to Governor Ned McWherter requesting that he find a way to delay chip mill operations in the state of Tennessee.

December 15, 1992

Residents in New Hope, Tennessee, gather to protest the Boise Cascade mill, presenting the town's commissioners with a signed survey indicating that most of the townspeople are opposed to the mills.

December 30, 1992

The U.S. Fish and Wildlife Service issues its opinion on the draft EIS and recommends alternative 3b: to approve one or more permits, but to require preharvest plans and harvesting restrictions.

January 23, 1993

The TVA staff recommends to TVA's board of directors that they deny all the permits because three mills so close together with overlapping sourcing areas created the potential for cumulative impacts causing significant adverse problems.

However, TVA officials commented that permits might have been approved had there been only one mill or if they had been spread out more, posing less of a cumulative impact.

"If all the right precautions and tools that are available [in forest harvesting], were applied, at least one or two of those mills probably could've been accommodated without significant concern, but the dealbreaker was that we didn't have an adequate level of insurance that such measures would've in fact been implemented. Right now, they're done primarily on a voluntary basis, and the applicants weren't willing to guarantee or provide assurance that they would require that the people from whom they bought the logs would implement those kinds of measures."¹¹⁹

February 1993

TVA releases the final EIS on the cumulative effects of granting permits for the three proposed barge terminals and issues the following judgment: "After weighing the potential benefits of the pending requests with the likelihood of substantial, cumulative localized impacts and risk of harvesting-related impacts, TVA's preferred alternative is the denial of all proposed actions." TVA concluded that the adverse, cumulative, off-site environmental impacts of the chip mills far outweighed their economic benefits.

¹¹⁹ Loney.

Donghae drops plans for building a chip mill; Parker Towing and Boise Cascade consider plans to build chip mills and haul the logs out by trucks rather than barges, in effect circumventing the permitting process.

April 12, 1993

The TVA board meets in Muscle Shoals, Alabama, to make the final yes/no vote on whether to issue the barge/port permits. It ultimately votes no.

June 26, 1993

Parker Towing, which leases and operates Nickajack Port in South Pittsburg, Tennessee, requests permission to reactivate a conveyor once used to load coal at Nickajack Port. The conveyor would be used to load waste wood chips from existing regional sawmills. Environmentalists see this as another ploy to gain access to cheaper river transportation.

July 3, 1993

An Alabama State Docks official in Bridgeport raises another wave of protest from environmentalists after suggesting that the terminal there could bring in portable chip-loading equipment and set up chip storage areas to serve not just one chip mill but several. Using portable equipment would allow them to avoid TVA and ACE permitting processes. Donghae has inquired into the Bridgeport dock.

August 5, 1993

TVA, after noting a sudden onslaught of six new applications for barge terminals or modifications to old ones, announces it will defend the precedent-setting EIS. ACE has received more than 12 requests and inquiries at this point, but none that seek new mills or terminals.

The Alabama and Tennessee chapters of the Sierra Club announce plans to sue ACE over its recently decided policy not to abide by the study. ACE, a contributor to the EIS, denied the barge permits "without prejudice," giving the agency the option to reconsider.

December 20, 1993

ACE and TVA announce a 30-day public comment period on the Parker Towing request to repair a conveyor belt at Nickajack Port to enable shipment of 150,000 tons per

year of “residual wood chips.” ACE states that it will not enforce how much wood is shipped or check where it comes from, but TVA writes several requirements into the public notice to allow for enforcement.

December 29, 1993

Boise Cascade files a lawsuit against TVA saying the agency improperly and illegally denied permits for a barge facility on the Tennessee River at New Hope, Tennessee, because of environmental concerns.

January 15, 1994

U.S. Representative Marilyn Lloyd and Senator Jim Sasser announce that a 30-day comment period is not long enough for the Parker Towing request and ask ACE to hold a local public hearing. They are concerned that the Corps is studying only potential barge site impacts and not potential impacts on the surrounding area.

March 24, 1994

TVA and ACE grant a request for a public hearing in South Pittsburg, Tennessee, based on the urging of Lloyd and Sasser and almost 200 letters received during the 30-day comment period requesting hearings. The hearing will allow comment on the new Parker Towing request.

April 7, 1994

Lee Barclay of the U.S. Fish and Wildlife Service sends a letter to TVA and ACE asking that permits already granted be reevaluated because of potential harm to endangered and threatened species.

April 25, 1994

Parker Towing withdraws its request to repair and use conveyors installed at Nickajack Port to ship waste wood chips, and the public hearing scheduled in South Pittsburg, Tennessee, is canceled. Reasons cited are Barclay’s letter and global economics. Fluctuations in the dollar and yen have apparently caused a drop in the wood chip trade between wood chip companies and Japan where the chips are usually sold to manufacturers.

Environmentalists declare victory for now but vow to begin pushing for better state and federal forestry legislation.

Summer 1994

Champion International Corporation purchases 85,000 acres of land in Anderson, Campbell, Fentress, Overton, and Scott counties in Tennessee.

February 2, 1995

Demonstrators launch a national boycott against goods produced by Champion while encamped outside a meeting of the Society of American Foresters in Chattanooga. The company applied for a permit to operate a chip mill in Caryville, Tennessee, to supply its paper mill in Canton, North Carolina. The chip mill permit is ultimately granted by the Tennessee Department of Environment and Conservation.

April 7, 1995

The suit brought against TVA by Boise Cascade, along with the American Forest and Paper Association and the Alabama-Tennessee Forest Resources Limited Partnership, in December 1993 is dismissed by a U.S. District Court judge in Alabama. The lawsuit claimed TVA had exceeded its legal authority when it denied the company a permit to ship wood chips on the Tennessee River, but the judge found that TVA's actions were not "arbitrary or capricious" and that these actions were "consistent with applicable law."

May 16, 1996

The Broadened Horizons RiverKeeper Project files a 17-page petition with TVA and ACE challenging the permits to 13 dock-loading facilities it claims are being used to export more than 500,000 tons of logs out of the Tennessee Valley each year. The petition asserts that companies are circumventing the TVA permitting process for chip mills by shipping whole logs from existing ports along the Tennessee and Cumberland rivers to chip mills in Alabama, from where they are subsequently exported via the port in Mobile, Alabama.

September 18, 1996

A lawsuit, supported by over 25 environmental organizations, is filed against TVA and ACE by the Broadened Horizons RiverKeeper Project "for failing to review the environmental consequences of hardwood logging to feed the growing number of log loading ports on the Tennessee and Cumberland rivers.

October 1996

The Dogwood Alliance, a coalition of 30 area environmentalist groups, is created to fight the chip mills.

5. INTERVIEW RESULTS

As outlined in section 3, the second objective of this study was to examine the methods interest groups involved with the chip mill controversy employ in trying to convey their message to the public, and how well the print media have done their job in relaying this information to the public as perceived by the environmentalists and timber industry representatives.

Environmentalists and timber industry representatives contacted for this study ranged from the more radical Earth First! to more mainstream environmental organizations such as the Sierra Club and the National Audubon Society, and from small wood contractors and consultants to major corporations such as Champion International Corporation and Willamette Industries. In all, 26 individuals - 15 environmentalists and 11 timber industry representatives - in the Tennessee Valley region were interviewed for this study.

Unfortunately, representatives from the three original companies named in the Final EIS for Chip Mill Permits on the Tennessee River either refused to be interviewed because of a pending lawsuit against TVA (Boise Cascade Corporation), did not feel confident enough to answer questions because the individual who handled the media relations during the peak of the controversy had since retired and was unable to be reached (Parker Towing Company), or had since left the region and moved back to Korea (Donghae Pulp Company).

5-1. Characteristics of interviewees

Of those who did participate, some from both sides were deeply involved with the chip mill issue through much of the 1990 to 1996 study span, lobbying Congressional representatives, educating the public, aligning their organizations and companies with regional and national groups, attending public meetings, and working with the media to get their respective messages out to the public. Others played a more peripheral role, following the lead of other groups and lending their assistance when it was deemed necessary.

All of those interviewed were high school graduates. Of the environmentalists, one had had two years of vocational training, two had started but not completed their bachelor's degree, and the rest held bachelor's degrees. Five held master's degrees, three were lawyers, and one was a veterinarian. Other areas of study included anthropology, art, biology, chemistry, education, environmental studies, European history, forestry, geology, law enforcement, music, psychology, political science, public affairs, social work, and zoology.

All of the timber industry representatives held a bachelor's degree or the equivalent in either forestry or forest management; five held master's degrees in botany, entomology, forest economy, or forestry, and one held the equivalent of a doctorate.

This difference in credentials came up several times in interviews with environmentalists, with more than one commenting on the frustrations they experienced by the press constantly asking them for their credentials before it interviewed them, listing this as an example of the media being reluctant to listen to what an environmentalist without a degree in forestry has to say.

"It's frustrating to be a grassroots person with no doctorate in conservation biology and not employed with a government agency because you don't get a lot of media attention without such credentials. But I still managed to draw up a river map, based on my own observations, that provides the only comprehensive look at chip mills in the Southeast. Because it's the only reference point available, federal agencies have been using it and are still using it."¹²⁰

Indeed, one environmentalist admitted that his side had had to do a tremendous amount of legwork to get up to speed on the issue just to be taken seriously by the forestry establishment.

"We had to develop a knowledge of the industry, as well as a meaningful dialogue that was accepted in their ranks and gave us some credibility with them because it isn't enough to go before someone who's been taught in a forestry school, largely subsidized by the industry you're fighting, and use the vocabulary of a citizen who is concerned about trees - you get absolutely nowhere."¹²¹

¹²⁰ Myczack.

¹²¹ Bruce Wilkey. Telephone interview. National Audubon Society regional chapter. Chattanooga, Tennessee, May 19, 1997.

By the same token, there were some from industry's side who were frustrated when the media began naming Bob Mitchell, a physics teacher turned activist in the Chattanooga area, as a hardwood industry spokesman after he created the Tennessee Valley Hardwood Alliance. Exploiting a rift within the timber industry itself between sawmills and pulp mills, he was able to bring a number of sawmill owners together to rally against chip mills. (Bob Mitchell refused to be interviewed for this study, stating that he no longer wanted to be associated with the issue.)

"All of a sudden, I started reading in the press about Bob Mitchell, the hardwood industry expert, and this bothered me because he was a physics teacher who had done a bit of research on this thing and decided he didn't like chip mills. I was on the board of directors of the National Hardwood Lumber Association and on the board of Appalachian Hardwood, as well as active in the Tennessee Forestry Association, and I felt like anyone from those organizations would've qualified as an industry expert more than Bob Mitchell did."¹²²

On average, those interviewed from the timber industry had been active in their profession longer than the environmentalists. The average length of time interviewees had been with their current organization or company was 7.5 years for the environmentalists and 21.3 years for those in industry. (This was to be expected because some of the grassroots organizations didn't even exist before this controversy began.) Before they joined their current organizations or companies, environmentalists had been active in their field for an average of 4.8 years and industry employees 3.4 years, respectively.

Almost 75 percent of those interviewed came from organizations or companies of more than 200 members or employees.

The majority of those interviewed, 67 percent of the environmentalists and 63 percent of the timber representatives said they followed the actions of the other side often, but most said they directly met with the other side only yearly.

5-2. Strategies employed by interest groups to convey messages to the public

Although the timber industry had the implicit support of state forestry agencies and trade associations, it was surprising to find that the environmentalist camp had a

¹²² Matt Bennett. Personal interview. Emmet Vaughn Lumber Company (and current president of the Tennessee Forestry Association). Knoxville, Tennessee, May 8, 1997.

more organized information campaign throughout much of the debate.

Jon Loney, TVA's project director for the chip mill EIS, described this peculiarity as follows:

"As the controversy was getting started and building, the overwhelming majority of letters and comments were anti chip mills; then, at the height of it all, as we were heading toward completion of the EIS, the pro-industry/pro-landowner side suddenly started engaging in a letter-writing campaign as sort of a counter punch or as a reaction to what they perceived to be a much more aggressive campaign by the anti chip millers."¹²³

Indeed, several of the timber representatives interviewed said that the industry as a whole had probably not done an adequate job of educating the media and the public. For the most part, individual corporations chose not to use their own names in the publicity game, but they did use their people and the associations to which they belonged to try to convey their side of the story. One of them said:

"We most wholeheartedly supported the Tennessee Forestry Association, as well as the Timber Purchases Council, through the entire process. Generally, the public relations activities came out of such associations rather than the individual companies."¹²⁴

The lack of public relations activities on the part of individual companies was reflected in the answers given by the timber representatives as to how often they relied on various strategies in conveying their message to the public. (See Figures 7 and 8.) The timber industry relied most on public education efforts, which included workshops and forums, brochures, presentations, or speaking engagements, but on average even this strategy was used less often than "sometimes."

Contrastly, environmentalists on average relied on over half of the strategies inquired about at least "sometimes," with "own publications," including newsletters and newspapers, the most frequently used.

Although they weren't able to utilize radio ads much due to prohibitive costs, a news medium that environmentalists in the Chattanooga area found particularly effective was radio talk shows where they were regularly able to "speak for themselves." A group

¹²³ Loney.

¹²⁴ Bill Burris. Telephone interview. Willamette Industries. Kingsport, Tennessee, May 5, 1997

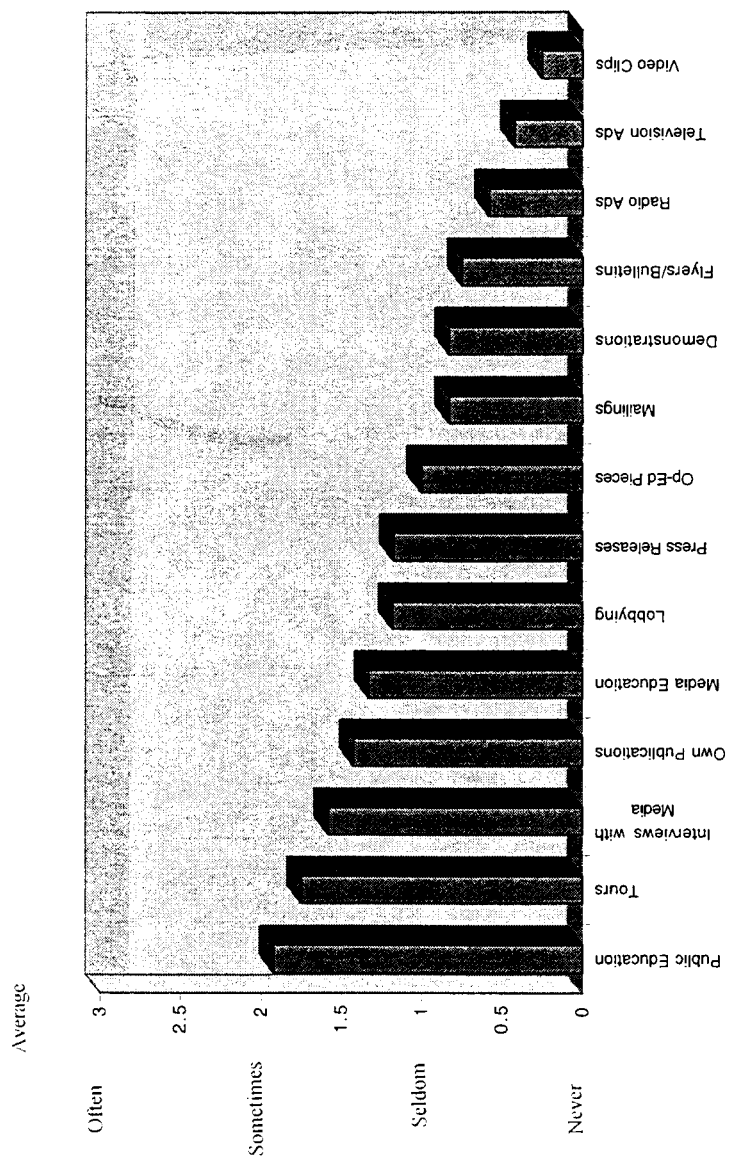


Figure 7

Strategies used by the timber industry in getting its message regarding chip mills and clearcutting out to the public.

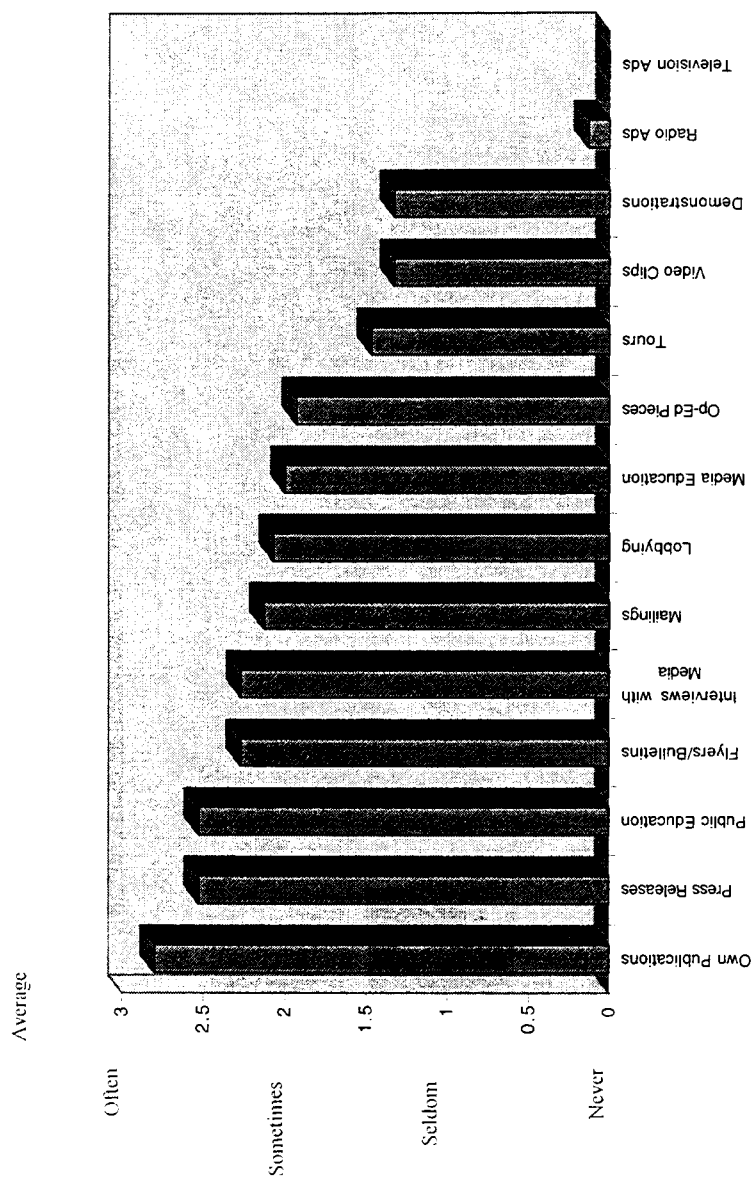


Figure 8

Strategies used by environmentalists in getting their message regarding chip mills and clearcutting out to the public.

in North Carolina, the Southern Appalachian Biodiversity Project, was even invited to do a series of shows on a local AM radio station.¹²⁵

Both sides of the controversy found tours of clearcuts to be an effective method for getting their views across to the media, although several of the environmentalists said they had a more difficult time utilizing it, as the cuts were usually on private land. Environmentalists said they used the tours to show the damage chip mills can wreak, and industry said it used them to show the difference between where harvesting had just occurred and where there hadn't been a harvest for some time to emphasize how well a clearcut area can recover. In addition, some, especially environmentalists, used flyovers of clearcuts to give the media and politicians a better perspective of the vastness of the areas being cut.

Letter-writing campaigns targeting Congressional representatives were used particularly often by environmentalists, with two-thirds of those interviewed saying that they had asked their supporters to do this often, usually every time they sent a newsletter out.

On the other hand, two-thirds of the interviewees from industry said that they used letter-writing campaigns seldom or never. Several qualified this answer by saying that company foresters will do this often depending on the issues as they arise, but that they don't arise very often.

The amount of contact maintained with elected government officials and government agency officials was about the same for both camps. The majority of those interviewed said they did this either sometimes or often.

The Internet has also become an important medium for both sides to communicate with others within their ranks, as well as to monitor what the other side is doing. However, it was not available on a wide scale during much of the period covered by this study and thus could not be included in the statistics.

The Tennessee Division of Forestry also operated a technical reference library as a way of getting its message out on the benefits of chip mills. In addition, the Broadened

¹²⁵ Brownie Newman. Telephone interview. Southern Appalachian Biodiversity Project. Asheville, North Carolina, May 22, 1997.

Horizons RiverKeeper Project filed a lawsuit, signed by numerous other organizations, to appeal existing permits until a region-wide study of the cumulative impacts of chip mills, including a moratorium on the licensing of new chip mills in the region, can be completed.

Almost all of those interviewed said they had alliances with national groups, and all of them said they had an alliance with various regional groups. It is presumed that these larger coalitions enabled each side to reflect a more unified front.

Likewise, almost three-fourths of the environmentalists and timber industry representatives said that their group or company tried to concentrate their efforts on specific aspects of the chip mill issue, again, presumably to enable them to exert a greater degree of influence.

Those areas of concentration mentioned included for the environmentalists: the economic and environmental unsustainability of chip mills and clearcutting, loss of value-added jobs, and the legal and political ramifications of the failure of federal and state agencies to obey the intent and purpose of U.S. laws. The Dogwood Alliance, which is an umbrella organization for more than 30 grassroots organizations working to stop the proliferation of chip mills in the Southeast, had five primary objectives: 1) a region-wide study on the cumulative impacts of chip mills; 2) state timber legislation; 3) private landholder education programs; 4) educating local communities impacted by chip mills; and 5) incorporation of alternative fibers and consumption reduction.

The main focuses of the timber industry have been: private property rights, forest health in that the quality decline in hardwoods justifies chip mills and clearcutting, wildlife benefits, landowner benefits, and overall benefits. One person from the timber industry commented:

“The way we look at it is if we stop producing paper, the whole controversy would go away pretty quickly because that’s what it’s written on.”¹²⁶

Environmentalists said they obtained most of their information regarding logging from government agencies, scientific reports, books, industry publications, inventory

¹²⁶ Adlai Platt. Telephone interview. Champion International Corporation. Caryville, Tennessee, May 15, 1997.

analyses, universities, trade press, other environmentalists, newsletters, flyovers, and direct observations.

Timber industry representatives named industry publications, personal studies, competitors, federal agencies, the "good ol' boy" network, and (interestingly enough) the media as their sources of information on logging. While several of those interviewed from industry named the media as a source of information, none of the environmentalists did.

5-3. To what degree have interest groups found media coverage concerning the chip mill controversy accurate?

5-3-1. How much coverage was there?

Almost all the environmentalists said there was definitely too little coverage on the chip mill issue with comments like the following:

"There are 1.2 million acres being clearcut in the Southeast every year from chip mills alone, and that should warrant an amazing amount of coverage, but it doesn't."¹²⁷

"It's a huge issue for Tennessee; probably nothing is more important for the state, and we only have a few years as a window before it'll be too late to do anything about it."¹²⁸

Likewise, almost all of the timber industry representatives said there was either too much coverage because of the inaccuracies printed:

"What they were presenting was so biased that the general public wasn't getting the whole story."¹²⁹

"I would like to see more of an open forum presenting both sides; what is printed now is too biased."¹³⁰

Or that the amount of coverage was about right:

"You can wear an issue out until nobody cares about it, and the media, for the most part, have done a good job of dealing with things as they come up."¹³¹

¹²⁷ Matt Dietz. Telephone interview. Western North Carolina Alliance. Asheville, North Carolina, May 6, 1997.

¹²⁸ Jerry Bone. Personal interview. Save Our Cumberland Mountains. Lake City, Tennessee, May 6, 1997.

¹²⁹ Jerry Frame. Telephone interview. Packaging Corporation of America (retired), Counce, Tennessee, May 1, 1997.

¹³⁰ Will Donegan. Telephone interview. Timber Processors. Calhoun, Tennessee, May 5, 1997.

¹³¹ Bennett.

All of those interviewed agreed that the print media reported on the issue most often, with talk radio a distant second. And thus, not surprisingly, most of the media contacts that the interviewees named were affiliated with large and small newspapers. A timber industry representative commented that his company's choice of media contacts varied, even within the print media, depending on the objectives they were trying to achieve.

"If we're trying to target an environmental audience with our message, then *The Chattanooga Times* is our preferred medium because they tend to shed a much more positive light on the environmentalists' viewpoint."¹³²

5-3-2. Level of journalists' preparedness in covering the chip mill issue

Both sides tended to agree that reporters, for the most part, came to the chip mill issue very ill prepared to cover it. (See Figure 9.) If a reporter had stayed with the topic for some time, however, learning the terms and understanding the arguments, this level of preparedness seemed to rise in the eyes of the opposing parties.

Twenty percent of the environmentalists gave journalists a score of four on a scale of one to five in terms of level of preparedness, but none of the timber representatives gave journalists a score higher than a three.

Reasons given as to why environmentalists thought reporters were generally unprepared to cover the chip mill issue were as follows:

"I don't think reporters these days are encouraged to get out of their offices and on the beat. They'll call you up, get a quote, and write their story; that's not reporting - they don't do their homework anymore."¹³³

"They don't know how to ask questions about sustainability because they don't know enough about it and other issues like biodiversity and watershed impacts. They're not trained as science writers."¹³⁴

"They'll ask questions that show most of them don't even know what a chip mill is, how many we have, what it actually does, or why they're even a threat - they're really

¹³² Craig Earnest. Telephone interview. Bowater Newsprint. Calhoun, Tennessee, May 5, 1997.

¹³³ Bone.

¹³⁴ Jenny Freeman. Telephone interview. Tennessee Citizens for Wilderness Planning. Oak Ridge, Tennessee, May 6, 1997.

Percent of Responses

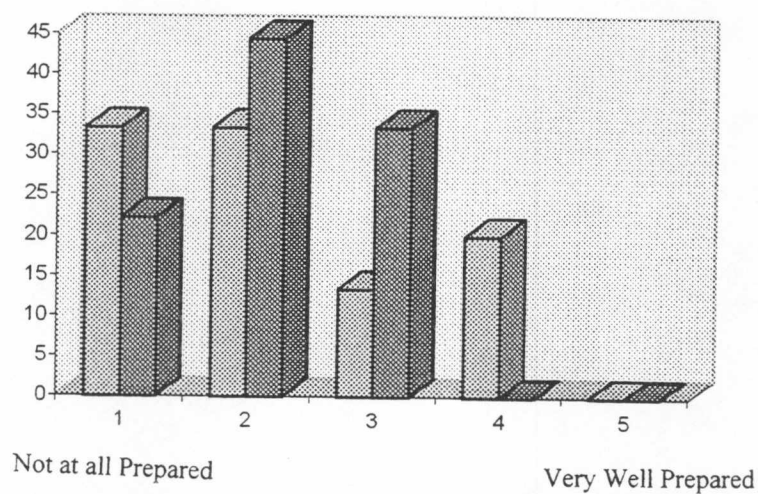


Figure 9

Scale of responses given by environmentalists (light-colored) and timber industry representatives (dark-colored) on reporter preparedness when covering the chip mill issue

not that knowledgeable at all.”¹³⁵

“There’s so much turnover in the media, and since most environmental reporters have multiple beats, they can’t really cover an issue in detail. Besides that, most editors aren’t committed to having really good environmental reporting.”¹³⁶

“Reporters have a lot of things to do, so they tend to be very quick studies.”¹³⁷

“There’s a big difference between those reporters who have worked on the issue for some length of time and those who just cover it sporadically. Usually we get somebody who doesn’t have a clue.”¹³⁸

And timber industry representatives listed the following reasons:

“Reporters probably know enough information to ask the general questions, but they don’t know enough to provide information that’s so very important when you’re dealing with chip mills such as inventory stands and growth/drain ratios. The media rarely get into the science, just the emotional part of it all.”¹³⁹

“Reporters don’t have a good idea of what they’re dealing with. They’ve got the environmentalist perspective, which is obviously presented to them very well, but I don’t feel that they give an equal opposing viewpoint.”¹⁴⁰

“Most of the coverage I’ve seen has been poor, slanted towards conflict.”¹⁴¹

“Many of the environmentalists who are sincere are just absolutely uninformed, but they can get the ear of Channel 6 or the *News-Sentinel* a lot quicker than somebody who’s spent 30 to 40 years studying the biological effects of clearcutting or the type of trees chip mills help us dispose of.”¹⁴²

“How many reporters have degrees in forestry, biology, or any natural resource issue?”¹⁴³

¹³⁵ Matt Dietz. Telephone interview. Western North Carolina Alliance. Asheville, North Carolina, May 6, 1997.

¹³⁶ Steve Smith. Personal interview. Foundation for Global Sustainability. Knoxville, Tennessee, May 6, 1997.

¹³⁷ Bob Pyle. Telephone interview. Sierra Club regional chapter. Chattanooga, Tennessee, May 17, 1997.

¹³⁸ John Johnson. Telephone interview. Earth First! Chattanooga, Tennessee, May 19, 1997.

¹³⁹ Earnest.

¹⁴⁰ Donegan.

¹⁴¹ Platt.

¹⁴² Bob Rusk. Telephone interview. Tennessee Mountain Management. Seymour, Tennessee, April 30, 1997.

¹⁴³ Bennett.

5-3-3. How accurate has media coverage been perceived as?

When the interviewees were asked to judge the overall accuracy of chip mill stories, most of the environmentalists, about 73 percent, gave reporters a three on a scale of one to five in terms of accuracy (see Figure 10), and all of the timber industry representatives gave reporters a grade of one through three, leaning more heavily towards classifying coverage as inaccurate.

One of the main reasons industry representatives gave for this poor score was that:

“Reporters always make the allegation that harvesting for chips, which usually involves clearcutting, causes erosion and destruction of wildlife habitat, and this is highly inaccurate.”¹⁴⁴

In fact, this was another reason why Boise Cascade refused to be interviewed for this survey:

“Chip mills and clearcutting are clearly two separate issues as far as we’re concerned, and questions that link the two further enhance a prejudice and perception that is inaccurate.”¹⁴⁵

However, a comment that resonated throughout the survey on both sides of the issue with regard to the poor rating of media accuracy, but particularly from the environmentalists, was that some journalists do an extremely good job of handling the issue, and others do a horrible job. Thus, when they had to rate overall media performance, they could only give reporters an average score. This is best depicted by the following comments:

“Those reporters that had been in the community for years and had kept up with the issue, looking at it in depth, reported on it accurately; those that wanted to be spoon fed wrote the superficial, inaccurate stories.”¹⁴⁶

“Sometimes reporters do a really good job, and sometimes they’re way off base; it just depends on the reporter and the paper.”¹⁴⁷

¹⁴⁴ Hart Applegate. Telephone interview. Tennessee Division of Forestry. Nashville, Tennessee, May 15, 1997.

¹⁴⁵ Gay DeWitt. Telephone conversation. Boise Cascade Corporation. Jackson, Alabama, May 23, 1997.

¹⁴⁶ Dennis Haldeman. Telephone interview. Tennesseans, Alabamans, and Georgians for Environmental Responsibility. Chattanooga, Tennessee, May 18, 1997.

¹⁴⁷ Bennett.

Percent of Responses

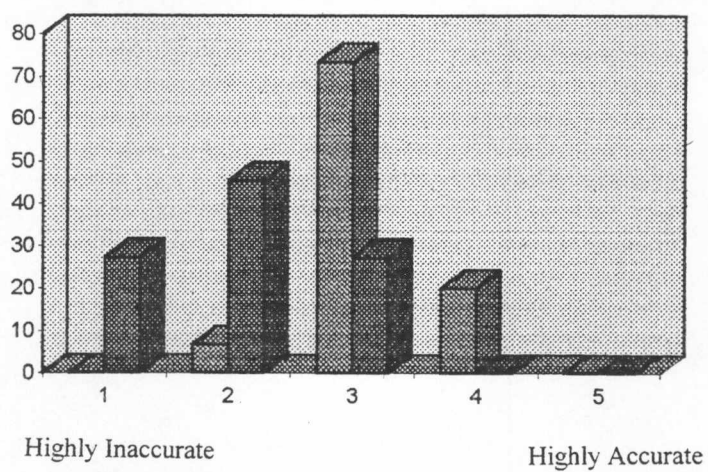


Figure 10

Scale of responses given by environmentalists (light-colored) and timber industry representatives (dark-colored) on how they felt about the overall accuracy of stories relating to the chip mill issue

When they were asked how accurately journalists had portrayed their particular side of the issue, again, environmentalists tended to give the media a higher rating than timber representatives did, with one even giving journalists a five, the highest score for accuracy. (See Figure 11.) None of the timber representatives gave the media a higher rating than three, and their responses tended to lie more heavily on the inaccuracy side than in Figure 10.

Environmentalists gave their reasons for this rating as follows:

“Reporters feel like they’ve done a great job if they get a couple of quotes from environmentalists and a couple of quotes from the timber industry, as opposed to really digging in and finding out the facts. We have to supply them with all the information, and then they turn around and write that such and such is our opinion on the matter, whereas if they’d actually taken the time to find these things out for themselves, they’d know that that was an accurate fact.”¹⁴⁸

“Journalists place too much emphasis on writing balanced stories, and that presents an inaccurate picture in favor of the industry on this issue.”¹⁴⁹

“I don’t think they intend to intentionally misrepresent our point of view, but what usually happens is that even in newspapers you only get a “sentencebite” or two, and that’s rarely adequate to present a point of view, particularly on a complicated issue.”¹⁵⁰

“They tend to present the noncorporate side as being less credible, and since they don’t spend a lot of time on interviews, they don’t really understand the issue and consequently get facts and figures wrong.”¹⁵¹

Timber industry representatives had the following to say:

“If you do get facts into the paper, you can be sure that reporters will pick out the one thing that can be taken as a bone of contention, making sure they can use it as a specific quote, whether it’s right or wrong.”¹⁵²

“They do have some of the information in there, but there’s a lot of information that they’re leaving out that’s available to them; they’re just making a choice not to put it

¹⁴⁸ Dietz.

¹⁴⁹ Bone.

¹⁵⁰ Alan Jones. Telephone interview. Tennessee Environmental Council. Nashville, Tennessee, May 9, 1997.

¹⁵¹ Doug Murray. Telephone interview. The Center. LaFollette, Tennessee, May 1, 1997.

¹⁵² Burris.

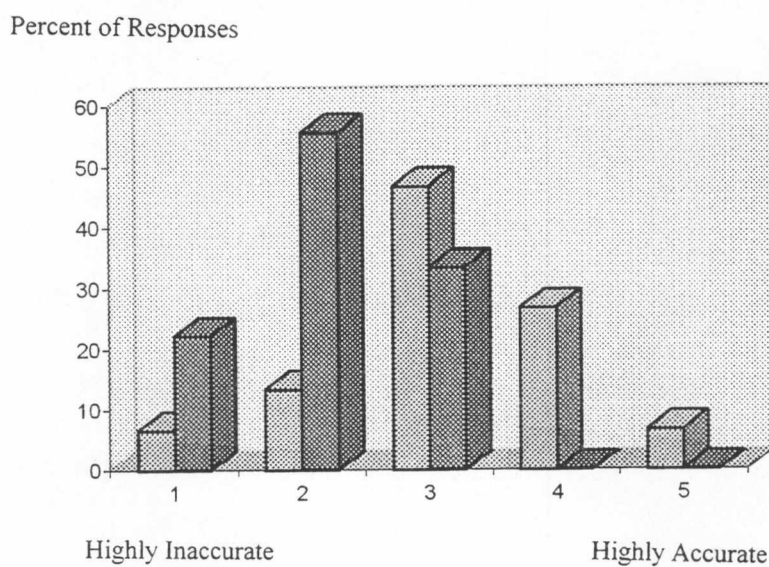


Figure 11

Scale of responses given by environmentalists (light-colored) and timber industry representatives (dark-colored) on how accurately they felt the media portrayed their respective sides of the chip mill issue

in.”¹⁵³

“Accuracy varies with individual reporters. I think some give the forestry community a fair hearing, but there are still some that the environmentalists have a firm grip on; however, more and more are beginning to question the environmentalists’ claims more closely than they once did.”¹⁵⁴

“The middle has been conspicuously absent in this debate, and that’s probably where 90 percent of the public is hanging out. They really don’t know what to think, but in many cases their opinions are being shaped by the extremes that are so often inaccurately portrayed in the media.”¹⁵⁵

“It’s extremely hard for a journalist to know everything about everything, and depending on what kind of water he or she swam in before getting to that word processor has a lot to do with their approach to the whole story. In addition, they’ve got an editor standing over them, wanting them to meet a deadline, and under those circumstances, inaccuracy is inevitable.”¹⁵⁶

Interestingly enough, when asked how they thought the other side felt about the way in which the media had portrayed its side of the issue, three-fourths of the environmentalists said the timber industry would probably give the media a relatively low rating in terms of accuracy, while most of the industry representatives said environmentalists would probably give the media a very high rating. (See Figure 12.) Several interviewees from both sides indicated that the environmentalists had the stronger information campaign.

Reasons given by the environmentalists for this rating were as follows:

“They’re getting beaten to death in the press, and there were claims of inaccuracies, which they said we caused, and of the media just not being fair.”¹⁵⁷

“For the most part, I’m sure they’re dissatisfied because those reporters who looked at the issue in any depth generally ended up with negative opinions of the chip mill industry.”¹⁵⁸

¹⁵³ Earnest.

¹⁵⁴ Jim Patric. Telephone interview. U.S. Forest Service (retired). Greenville, Tennessee, April 30, 1997.

¹⁵⁵ Platt.

¹⁵⁶ Bennett.

¹⁵⁷ Jim Atchison. Telephone interview. Help Alert Western Kentucky. Eddyville, Kentucky, May 6, 1997.

¹⁵⁸ Haldeman, 1997.

Percent of Responses

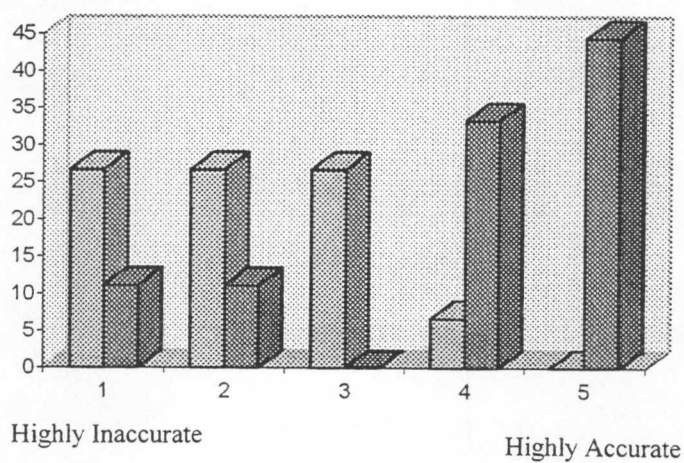


Figure 12

Scale of responses given by environmentalists (light-colored) and timber industry representatives (dark-colored) on how accurately they thought the other side felt about the way the media portrayed its side of the chip mill issue

“They always claim that the media are inherently sympathetic to our cause, and maybe they are, but that’s because industry so often adopts a position that’s untenable and not at all in the public interest.”¹⁵⁹

“They certainly weren’t as effective as we were at getting to the media with their position.”¹⁶⁰

Reasons given by the timber industry included:

“I think they [environmentalists] got a lot of mileage out of the media, and the media over portrays their point of view because they tend to sensationalize things, which is something the media really thrives on; and, quite frankly, I don’t think we’ve done a very good job of representing our point of view.”¹⁶¹

“They generally just print the environmentalists’ viewpoint, and they pretty much print it word for word.”¹⁶²

Part of the reason why the forestry community was rather ineffective at the outset of the controversy was, as Jon Loney said:

“In this part of the country, logging has been considered a way of life much like farming, and those in industry had never really experienced the kinds of opposition that other parts of the country had already seen, particularly the Pacific Northwest. The controversy mushroomed so quickly, I don’t think they were ready to deal with it.”¹⁶³

5-4. Have these interest groups found the media biased toward one side or the other in their coverage of the controversy?

Sensationalizing a story can give the impression of media bias, and while the majority of the environmentalists felt that the media had not used this tactic with any regularity on the chip mill issue, almost all of the timber representatives did.

When asked whether newspaper stories on the chip mill issue tended to be objective rather than emphasizing any sensational aspects of the issue, environmentalists gave the media an average score of 3.5 on a scale of one to five, with five being the most objective. Timber industry representatives on the other hand only gave the media an

¹⁵⁹ Newman.

¹⁶⁰ Pyle.

¹⁶¹ Rusk.

¹⁶² Donegan.

¹⁶³ Loney.

average rating of 1.8 on the five point scale.

Environmentalists commented as follows:

“When I hear “sensational,” I think of distorting the truth or exaggerating the impact, and I don’t know that they ever really dealt with the issue in enough depth to be sensational.”¹⁶⁴

“They bent over backwards in most cases to allow people to have their say, both pro and con, but I wouldn’t consider that sensational.”¹⁶⁵

Other environmentalists said the media had sensationalized the issue to some extent, but considered this necessary for coverage even to occur.

“In a way, the reporting has been sensational because journalists only report on it when there’s a story; there hasn’t been any investigative reporting as to the impacts of chip mills on East Tennessee.”¹⁶⁶

“Of course they try to give the stories a little sensational spin, and in a lot of ways, that’s our hook to gain coverage. We sensationalize our press releases, which is unfortunate, but we feel that with the media we have today, that’s what it takes to get an issue covered.”¹⁶⁷

Timber industry representatives had the following to say on the sensationalizing tendencies of the media:

“They focus on the negative side of clearcutting, showing pictures of denuded hillsides, but never a regenerated forest.”¹⁶⁸

“Journalists present all of the most glaringly negative aspects and allegations in the first few sentences and paragraphs, taking the words of people who aren’t qualified by virtue of education or experience, only by emotion, to provide them with most of the information they have about the issue.”¹⁶⁹

“If there’s a more sensational or stimulating aspect to an issue, then I think they do try to make that the focal point of the article because that’s what generally sells newspapers.”¹⁷⁰

¹⁶⁴ S. Smith.

¹⁶⁵ Wilkey.

¹⁶⁶ Freeman.

¹⁶⁷ Danna Smith. Telephone interview. Dogwood Alliance. Winder, Georgia, May 19, 1997.

¹⁶⁸ Greg Dale. Westvaco. Wickliffe, Kentucky.

¹⁶⁹ Applegate.

¹⁷⁰ Bennett.

"They've been objective, but it depends on how you want to interpret objective. They'll take a small portion of what industry says, usually a short quote that's factual, and a whole lot of the feelings kind of issues emanating from the environmentalist side and expound on that."¹⁷¹

"Everyone has an agenda, even the media, and they tend to print things in relation to what their agenda is and repress things that don't quite jibe with it."¹⁷²

Not surprisingly, most of the interviewees disagreed with the statement that newspaper accounts generally went beyond the basic facts and did a good job of interpreting the chip mill issue in terms of relevant issues. Forty percent of the environmentalists said they agreed with this statement, but 60 percent either disagreed or strongly disagreed. Over 90 percent of the timber industry representatives said they either disagreed or strongly disagreed.

Environmentalists made the following comments:

"Occasionally, they've had articles with more quotes and opinions than facts."¹⁷³

"The media didn't do much analysis; there was more reporting on what somebody said as opposed to a paper or reporting actually interpreting the information."¹⁷⁴

The timber industry people had the following to say about the depth of reporting on the chip mill issue:

"I realize that the media is often a visual thing, but when there's a story about forestry, I wish they'd put a picture of a 20- to 30-year-old clearcut along with the 2-week-old one that's usually front and center of that story. Then you could see that it's not this bombed out, war-type scene, but rather just one moment in time."¹⁷⁵

"They're not using a lot of the data that would show the public there is a legitimate reason to have chip mills and are consequently trying to lead the public on this very emotionally charged issue."¹⁷⁶

"The media may be more accurate than I'm giving them credit for, but lots of times, what they report is not the most relevant part; that is often left out, and from that

¹⁷¹ Burris.

¹⁷² Raymond Harbin. Telephone interview. Dendroi. Atlanta, Georgia, May 16, 1997.

¹⁷³ Johnson.

¹⁷⁴ Jones.

¹⁷⁵ Bennett.

¹⁷⁶ Earnest.

standpoint they're inaccurate."¹⁷⁷

"If you were to write an article saying that the Forest Service never made a mistake and everything they say is absolutely true, nobody would print that. All you have to say is the Forest Service is backing a low-cost timber sale that will involve clearcutting that will ruin fishing in Citco Creek, and they'll jump all over it."¹⁷⁸

On the other hand, the majority of the interviewees from both sides of the chip mill issue felt that when they personally talked to a reporter, their own viewpoint was generally accurately portrayed. Thirteen of the 15 environmentalists felt this was the case, and seven of the 11 timber industry representatives said this was so.

"Generally if we worked with a reporter, our view came across, but not in its entirety. They would zero in on one or two things and accurately report on those few aspects, but we never had any luck with getting them to put together a story comprehensively."¹⁷⁹

"They often portray my viewpoint accurately, especially those reporters with whom I have a relationship. If they're not fair, or I'm telling them something they don't want to hear, they don't call back."¹⁸⁰

Likewise, both sides seemed to feel that stories in which they or their organization or company had been named as a source were generally accurate. On a five point scale, with five being highly accurate, environmentalists gave journalists an average score of 3.53 and timber representatives gave them an average score of 3.22.

Results were similar when interviewees were asked in a slightly different way whether stories usually covered the relevant facts and issues. When they themselves or their organizations or companies were named as sources, environmentalists gave stories an average score of 3.3 on a five point scale in terms of whether they generally covered the relevant facts and issues. Timber representatives gave them an average score of 3.

One timber representative qualified his higher scores by saying:

"When reporters call up here, I try to wear them out by telling them the entire story so that they're literally struggling to get off the phone. I try to convince them that

¹⁷⁷ Rusk.

¹⁷⁸ Patric.

¹⁷⁹ S. Smith.

¹⁸⁰ Applegate.

our experience and training is such that we're authorities on the issue, and we try to stay away from the emotional accusations."¹⁸¹

Another said:

"If a newspaper knows your position, they'd rather not cite you because if they misquote you, they're going to be called on it, and they don't like to deal with that."¹⁸²

One environmentalist said:

"They do better when we're involved in the process. We supply a lot of good information, not just talking to reporters, but doing follow-ups by sending them information that helps them to write more informed stories."¹⁸³

5-5. Did interest groups find the media approachable and willing to listen to their point of view?

Two-thirds of the environmentalists said they received too little coverage on this issue although almost 75 percent said that they were used as a source by the media at least "sometimes," and more than 25 percent said they were used "often" as sources.

Conversely, over half of the timber representatives said that the amount of coverage they had received on the chip mill issue was about right, with two saying they had received too much coverage, primarily because of the negative slant towards chip mills that was being perpetuated by the media. In addition, over half of the timber representatives said they were never used as a source or only very seldomly.

For the most part, both sides didn't find the media particularly cooperative in passing their respective messages on to the public.

Comments from the environmentalists included:

"The media doesn't understand the urgency of this issue, and that's because most of them have to serve the folks in their locale, but we're dealing with an issue much more extensive than that."¹⁸⁴

"They [the media] thought we had wild claims until they looked at it in depth. Those that didn't do that tended to portray it as the old "jobs verses environment" cliché, but those that did look at it in depth saw the boom/bust nature of the situation."¹⁸⁵

¹⁸¹ Applegate.

¹⁸² Harbin.

¹⁸³ Newman.

¹⁸⁴ Myczack.

¹⁸⁵ Haldeman, 1997.

"It's been an uphill battle because foresters have the credentials, and we're out here reading about conservation biology, going out into the field and observing, expressing our opinions and our facts, but the way society is skewed toward experts, people don't believe us as readily as someone with letters at the end of their name."¹⁸⁶

"I think media outlets across the country are too balanced, too tame, and they don't take sides like an independent press should. The argument that you need to present both sides is lazy journalism; I think reporters should be out there looking for what the right side is."¹⁸⁷

And timber representatives said the following about media approachability:

"I think the point of view presented by the print media is probably dominated by those opposed to chip mills, and who don't understand the business aspects of chip mills nor the biological cleansing effects that they can have on the forest by taking out the junk wood."¹⁸⁸

"If one well-informed reporter had just issued a straight-forward account of the sustainability and impact of a modest-sized mill in our location, that probably would've done away with the issue because most of the conflict has centered around whether there is enough of the resource to take and whether it's even right to cut down a tree."¹⁸⁹

"The media are very lopsided against chip mills, and emotion is the primary source they use; they don't give a very fair representation at all."¹⁹⁰

"We haven't been called out on the carpet that much, but when they did quote our people, those quotes would often end up near the bottom of the article after the environmentalists had had their say."¹⁹¹

¹⁸⁶ Johnson.

¹⁸⁷ Bone.

¹⁸⁸ Rusk.

¹⁸⁹ Platt.

¹⁹⁰ Earnest.

¹⁹¹ Applegate.

6. CONTENT ANALYSIS RESULTS

The third objective of this study was to conduct a content analysis on 57 newspaper stories collected by the Chattanooga Local History Bicentennial Library and indexed in its clipping files under "Conservation of Resources" and "Forests and Forestry."

Each coding sheet represented one story and included the following information: the number of people interviewed, affiliation and status of the attributed source, as well as whether the source was pro chip mill, anti chip mill, or neutral,¹⁹² the date and page number of the story's publication, and the number of column inches per story.

6-1. Reliability

One coder was used in conducting the research. In the 57 stories analyzed, there were a total of 211 attributed sources. When a person was quoted or mentioned in a story as having provided information, he was counted as an attributed source. If that same person was cited in another story, he was counted again. Intercoder reliability was established by a second person coding 54 percent of the material, which totaled 31 stories and 120 attributed sources.

Reliability percentages were calculated for three categories: 1) source affiliation, 2) source status, and 3) pro/con/neutral stance. The instances of disagreement were seven (or 5.8 percent) for the first two categories and 15 (or 12.5 percent) for the third category. For the third category, however, 14 of the 15 (or 93 percent) instances of disagreement involved the "neutral" category. If the "neutral" category is eliminated, there was disagreement on only one percent of the stories.

6-2. Source affiliation

Overall, of the 211 attributed sources, the greatest number, 97 (or 56 percent), were government officials; timber industry representatives were second with 46 (or 22 percent), and environmentalists third with 36 (or 17 percent). (See Figure 13.) As

¹⁹² Environmentalists were considered to be anti chip mills. Timber industry representatives were considered to be pro chip mills. Those representing TVA, ACE, or the U.S. Fish and Wildlife Service were considered neutral because they were the agencies conducting the EIS. All others were judged according to their statements in the story.

Number

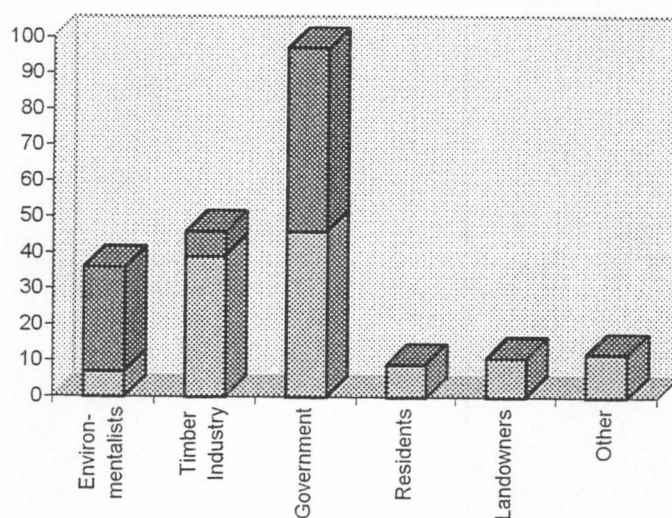


Figure 13

Number of attributed sources: for the environmentalists, the light-colored portion of the graph represents national organizations and the dark-colored portion represents grassroots organizations; for the timber industry, the light-colored portion represents large corporations and the dark-colored portion represents smaller businesses; and for the government, the light-colored portion represents TVA, ACE and U.S. Fish and Wildlife officials and the dark-colored portion represents "other" government officials, including politicians.

illustrated in this figure, almost half (47 percent) of the government sources were from TVA, ACE, or the U.S. Fish and Wildlife Service, which were the agencies that conducted the EIS. The majority of the sources attributed to the timber industry, 85 percent, were affiliated with large corporations as opposed to small businesses. Most of the environmentalist sources, 81 percent, were affiliated with grassroots organizations rather than with national organizations. Interestingly enough, residents and landowners, those that were actually to have been most affected by the chip mills, made up less than 10 percent of the attributed sources.

It is interesting to note that coverage of the chip mill issue seemed to take on less importance after TVA released the final EIS on chip mill terminals on the Tennessee River in February 1993. Overall, 56 percent of the stories appeared in section A of the newspapers, with 45.6 percent appearing on page A1. But before the final decision to deny the three permits was made, 67.6 percent of the stories appeared in section A, with 58.8 percent appearing on page A1. After February 1993, only 39 percent of the stories appeared in section A, with 26 percent appearing on page A1.

In addition, stories that were published before February 1993 were longer on average than those appearing after February 1993. Overall, the average story length was 19.6 column inches, with the median length being 18.5 inches. Before February 1993, the average story length was 21.7 column inches, with 21.7 inches being the median length, and after February 1993, the average story length was 16.4 column inches, with 17.5 being the median length.

As one environmentalist put it:

“After the three permits were denied, the issue was put to bed in the hearts and minds of the Valley people; they thought it was a done deal, and there would be no more chip mills on the river.”¹⁹³

This is reflected in the placement and amount of coverage on the issue in the Chattanooga papers.

¹⁹³ Myczack.

When broken down to the time periods of before and after February 1993, environmentalists were relied on slightly more as sources after February 1993 than before, and the timber industry was relied on a little less. (See Figure 14.)

One might argue that the relative importance of the attributed sources in each story should also be considered. For example, one story might contain attributions to 10 people, of which one is a politician and the other nine are coded under other categories. Another story might attribute a single source. If that single source is a politician, then the interview in the latter story holds much more weight than in the first story. To take this into consideration, the “relative importance” can be defined for each source category by taking the number of people interviewed from that category divided by the total number of attributed sources. (See Figure 15.) As illustrated in the figure, however, the percentages vary only slightly when relative importance is considered; thus for simplicity, only actual numbers were considered for this study.

6-3. Source status¹⁹⁴

Not surprisingly, journalists for the Chattanooga papers chose to attribute sources that were executives in management or decision-making positions more than one-third of the time. (See Figure 16.) Public relations personnel and politicians or their spokespeople were each relied on about 14 percent of the time. Scientists, under which category foresters fell, were relied on only 8 percent of the time. The other and can’t tell categories are significant, totaling more than 20 percent, but this is due to the fact that while the source’s affiliation was almost always identified, their position at an organization, company, or agency was not.

When environmentalists, timber industry representatives, and government officials are looked at separately (see Figures 17, 18, and 19), it is easy to discern that executives made up a significant portion of the sources from all three groups. For the environmentalists, it was hardest to tell which position they held within an

¹⁹⁴ The terms for source status were culled from the ABC News-Harris Survey (Chicago: Chicago Tribune, 1979). “Executives” are those in management or decision-making positions; “professionals” include doctors, lawyers, and teachers; the category “politicians” includes their staff personnel; the category “scientists” includes foresters; “spokespeople” include public relations personnel; and “workers” include loggers, secretaries, factory employees, and technicians.

Percent

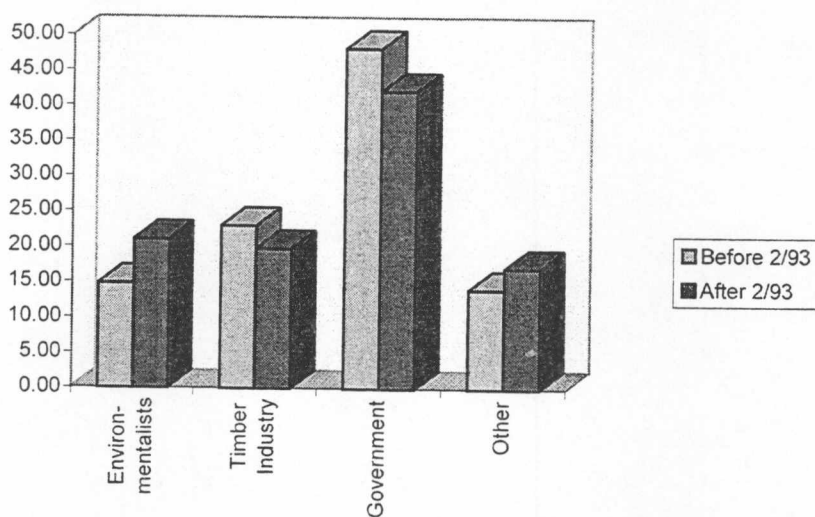


Figure 14

How often different sources were relied upon by the Chattanooga newspapers before 2/93 and after 2/93

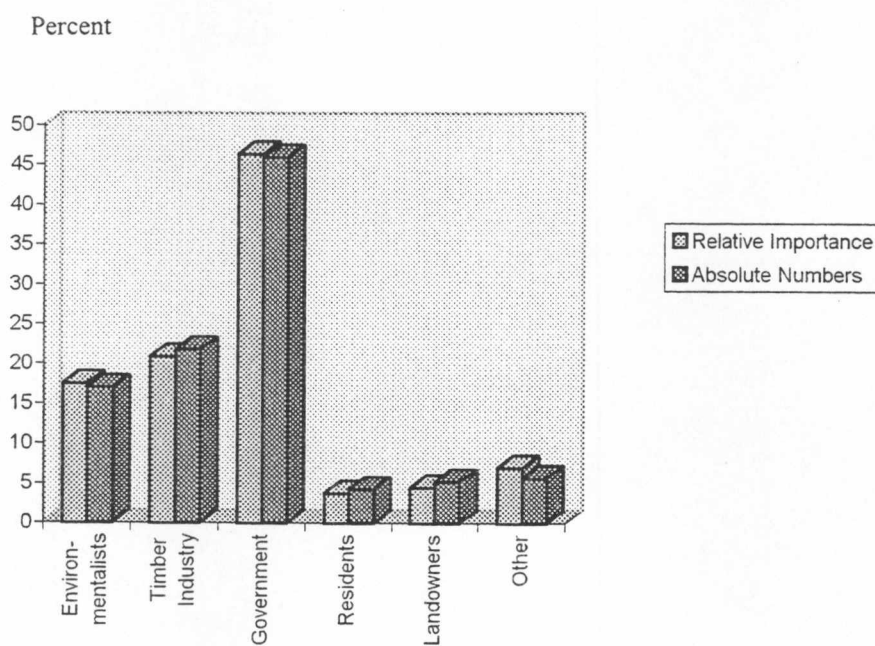


Figure 15

Illustration showing how "relative importance" affects the attributed source groupings. Percentages vary only slightly.

Percent

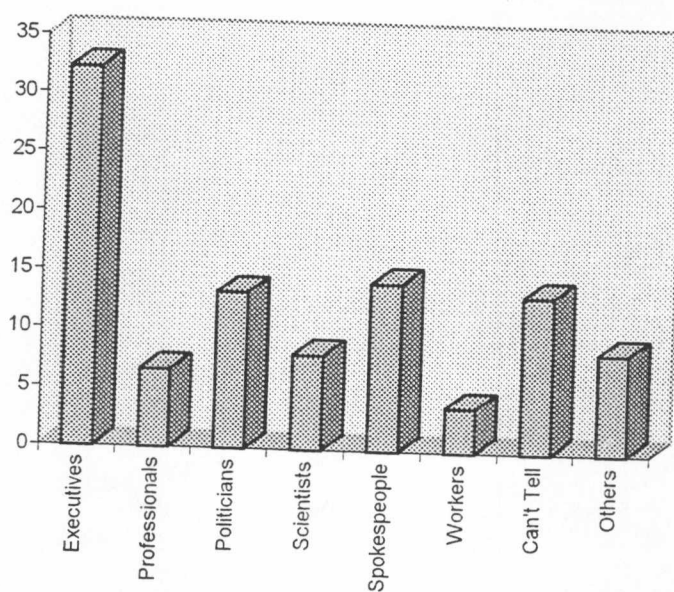


Figure 16

Status of the sources relied upon by the Chattanooga newspapers.

Percent

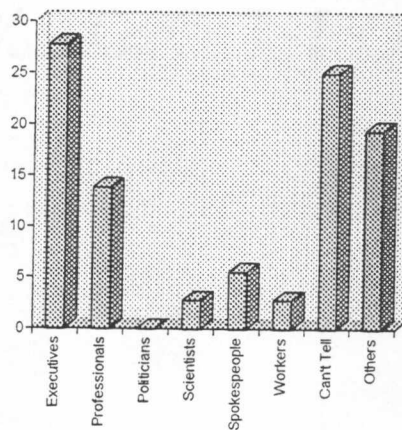


Figure 17

Status of the environmentalist sources relied upon by the Chattanooga newspapers

Percent

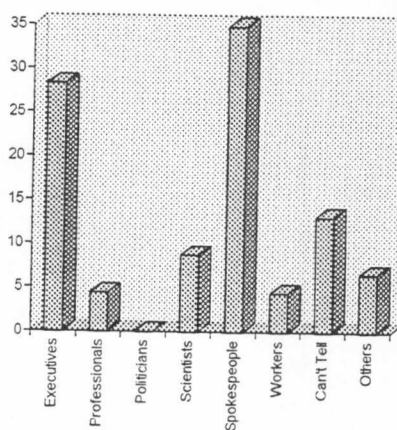


Figure 18

Status of the timber industry sources relied upon by the Chattanooga newspapers

Percent

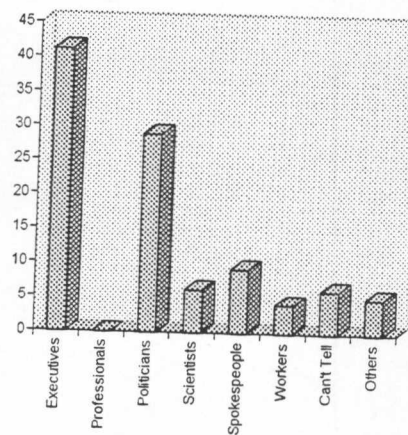


Figure 19

Status of the government sources relied upon by the Chattanooga newspapers

organization based on the information cited in the newspaper clippings. The timber industry had far more people cited as spokespersonnel than any of the other two groups.

6-4. Pro / con / neutral stance

Overall, the Chattanooga papers cited more people who were against chip mills, 36 percent, or neutral, 37 percent, than those who were for chip mills, 26 percent. (The numbers don't quite add up due to rounding.) (See Figure 20.) These statistics don't change much when broken down into the time periods of before or after February 1993, although the number of anti chip millers cited grows slightly.

As stated in the introduction of section 6, environmentalists were considered to be anti chip mills, timber industry representatives were considered pro chip mills, and the regulatory agencies involved in the EIS were considered neutral. Of those categorized as "other government officials," half were neutral towards the issue, 40 percent were against it, and only 10 percent were for it, with most of those who were pro chip mills being involved with community economic development projects. All of the residents interviewed were against the chip mills. The majority of landowners, seven out of 11, were for chip mills, three were against chip mills, and one was neutral.

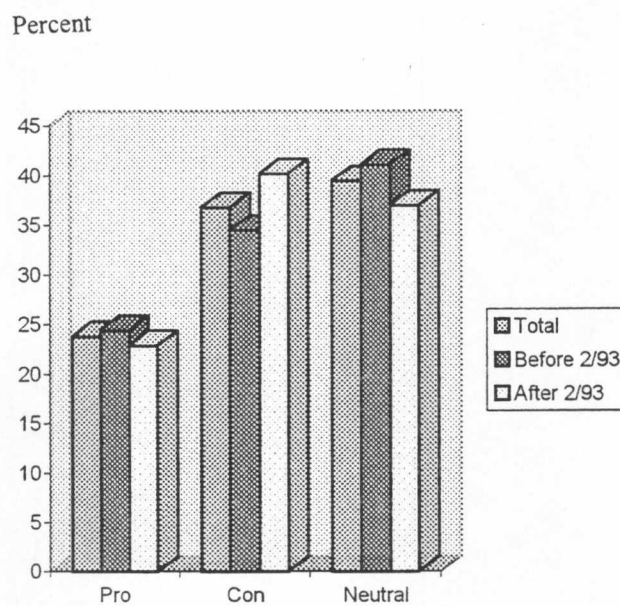


Figure 20

Percentage of attributed sources that were pro chip mills, anti chip mills, or neutral

7. DISCUSSION

"Foresters are falsely represented as gross materialists who would like to convert all forests to uniform, even-aged stands of pines, a viewpoint not borne out by fact. Native-area preservationists are depicted as wishing to convert our forests into a vast wilderness extending from coast to coast, which is equally erroneous." - Frank W. Woods

7-1. Comparison of interview and content analysis results

As this study has brought out, the very public chip mill debate between environmentalists and timber representatives in the Tennessee Valley has been intense, with the media helping to "fan the flames" in this controversy. Which side succeeded in getting its view filtered through the media in the most positive light?

At the outset, it was undoubtedly the environmentalists who succeeded, as representatives from both sides conceded in interviews conducted for this study. As the timber industry began catching up in the propaganda war, it is more questionable, and both sides suggested that they had not been given a fair hearing by the media. A frequent comment given by timber representatives was that the media, manipulated by the environmentalists, had seized upon the emotional appeal of the issue and allowed the environmentalists to carry the day. Likewise, environmentalists were equally frustrated over the credibility issue and complained of the media not taking them seriously due to their lack of degrees in forestry.

As borne out by the results of the content analysis, the sources journalists turned to for information on this issue were not all that different from those in other media studies. The greatest number of sources cited, 56 percent, were government officials, and more than 40 percent of these government sources were executives in decision-making positions.

Although Jon Loney, the project director for the Chip Mill EIS, suggested that TVA "clammed up" until the final EIS draft was prepared, almost half of the government sources cited were officials from TVA, ACE and the U.S. Fish and Wildlife Service, which were the agencies that conducted the EIS, and the majority of these sources were from TVA. Because of the confrontational and regional nature of this controversy, however, reporters did go beyond these government sources in an effort to provide information from the various sides of the chip mill issue.

Overall, the timber industry made up 22 percent of the sources cited and environmentalists 17 percent. Before the EIS came out in February 1993, industry was cited slightly more often than environmentalists were, and after February 1993, environmentalists were cited slightly more often. When all of the source affiliation categories are considered, a significantly higher number of people who were opposed to chip mills were cited than those for them, particularly after February 1993. However, these findings do not show that the Chattanooga press were inherently unfair or biased in favor of the environmentalists based on the number of sources they chose to cite from the two sides studied.

7-2. Message strategies employed by interest groups

As far as the strategies employed by interest groups on both sides of the chip mill issue, the environmentalist camp had the more organized information campaign, relying on a variety of methods regularly and using its own publications most frequently as a means for getting its message out.

By contrast, the timber industry relied most on public education efforts to convey its message to the public, but several of those interviewed said that the industry as a whole had not done an adequate job of educating both the media and the public.

In addition, both sides had maintained contact with government officials; most of those interviewed had alliances with national and regional groups; and many had tried to concentrate their efforts on specific aspects of the chip mill issue - all of which presumably enabled them to reflect a more unified front and allowed them to exert a greater degree of influence.

7-3. Was media coverage accurate?

As far as the media coverage itself, perceptions from environmentalists and industry alike were overwhelmingly negative.

Each side felt that journalists' knowledge of the issue was low and that they were not sufficiently prepared to cover the issue; they were not versed in the technical terms of the issue and thus didn't know the right questions to ask in interviews; they didn't devote enough time and depth to the issue in their actual coverage; and, worse yet, they omitted

important information. All of these things together inevitably led to a number of inaccuracies in the coverage, according to these two groups. Although this perception changed the longer a reporter had been on the beat, media turnover is so high, interviewees claimed, that it was not often the case that a reporter stayed with the story for any length of time. Environmentalists tended to rate media accuracy a touch higher than the timber representatives, but everyone felt the media could have done its homework better.

7-4. Was media coverage biased?

Timber representatives definitely felt that the media had been more biased toward the environmentalists' point of view, especially when it came to seizing on the emotional aspects of the issue, portraying, more often than not, a fresh clearcut rather than an older one to emphasize the highly negative aesthetic effects. Environmentalists, on the other hand, did not find the reporting overly sensational. While a few said that it occasionally happened, they found that such sensationalism was necessary to elicit coverage of the issue.

Both sides found too little interpretation on the issue, with journalists simply reporting what was said, usually citing what could be taken as a bone of contention, in effect perpetuating the conflict.

Interestingly enough, these impressions tended to change when the interviewees had personally worked with the media; when they or their organization or company were quoted, the media got it right more often than otherwise.

7-5. Were the media approachable?

Both sides wished that the media had been more sympathetic to their point of view, with the timber representatives claiming that the media had been slanted against them: reporters coming to them to ask for quotes, but already having their minds made up and using the quotes against them. Environmentalists, on the other hand, felt that coverage had been too balanced and should have weighed more heavily in their favor.

In addition, environmentalists claimed that the media tended to dismiss them due to their lack of credentials in forestry, whereas timber representatives were frustrated that

the media paid so much attention to such concerned individuals and let science fall by the wayside.

7-6. Conclusions

In general, the media have a tough role to play in controversies such as this, and it's unlikely that they could ever appease all, or even most, of the participants, nor is that their purpose. Regardless of the industry, companies are more inclined to do whatever is in their power to avoid the negative publicity that almost inevitably follows controversy, whereas the opposition will almost certainly attempt to force their hand publicly whenever possible. It can only be hoped that the public majority that tends to sit between the two fences will profit from the debate.

But as this study shows, it is not enough for the media to simply record what it sees and hears as a passive observer. Such information tells the audience only a small part of the story; putting it all into context makes it much more valuable, as both environmentalists and timber representatives attested. Some will say that how reporters put such information into context is biased toward one side or the other, and perhaps it is since reporters have feelings too, but maybe such a tradeoff is necessary in order to get to the public in a timely fashion the information required for democratic decision-making.

Hopefully this study has provided some insight into the dynamics at work between the media and interest groups in a public controversy. In this particular controversy, environmentalists were successful in getting their message frame filtered through the media before the timber industry was even able to get its information campaign off the ground, giving the environmentalists a significant advantage in capturing media attention.

7-7. Limitations and recommendations for further research

In the content analysis, this study focused on the individuals who were cited as sources in the newspaper sample; however, TVA studies were also cited as sources, so the importance of TVA as an actual source is larger than these numbers showed.

Also, an individual was only counted as a source when he or she was actually named in the story. If a specific source was not cited - for example, "environmentalists [or timber representatives] claim ..." - then that source was not counted.

Likewise, it was unfortunate that representatives from the three original companies named in the Final EIS for Chip Mill Permits on the Tennessee River were unwilling or unavailable to participate in this study since these companies' applications marked the beginning of the chip mill controversy in the Tennessee Valley region. This handicap was ameliorated by the availability of representatives from other companies with chip mills in the Tennessee Valley and timber industry representatives who were familiar with the controversy from its beginning.

In examining the newspaper stories themselves, it would be interesting to analyze the number of actual column inches devoted to one side or another, as well as the placement of the quotes, in order to determine whether the coverage was in fact more heavily in favor of the environmentalists as industry claimed it was.

Likewise, it would be useful to look at a wider sample of newspapers because *The Chattanooga Times* had a reputation among all involved with this study as having more of an environmentalist slant. At the same time, however, it could be difficult to obtain an ample story sampling from other area newspapers on this issue because although the Chattanooga area was the birthplace of media coverage on this issue in the Southeast, only 57 stories appeared in the clippings file at the Chattanooga Local History Bicentennial Library for the time span covered by this study.

This study might also provide the foundation for additional research on how the media might be used as a neutral mediator for helping opposing sides in a controversial issue talk things through and look for common ground.

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APPENDICES

APPENDIX A

LIST OF INTERVIEWEES

ENVIRONMENTALISTS				
Spokesperson	Title	Organization/ Company	City/State Location	Description of Organization/Company
Atchison, Jim	Researcher	Help Alert Western Kentucky	Eddyville, KY	Grassroots organization that worked to stop Parker Towing Company and Canal Wood Company from receiving a chip mill permit in the Eddyville area.
Bone, Jerry / Gil Hough	Community Organizers	Save Our Cumberland Mountains	Lake City, TN	Grassroots organization that has worked to get timber legislation passed in TN and tried to stop Champion International Corporation from building a chip mill in Caryville, TN.
Dietz, Matt	Ecologist	Western North Carolina Alliance	Asheville, NC	Grassroots organization that is working to stop Willamette Industries from building a chip mill in Union
Freeman, Jenny	President	Tennessee Citizens for Wilderness Planning	Oak Ridge, TN	Grassroots organization that worked to stop Champion International Corporation from building a chip mill in Caryville, TN.
Haldeman, Dennis	Researcher	Tennesseans, Alabamans, and Georgians for Environmental Responsibility	Chattanooga, TN	Grassroots network formed in 1991 specifically to protest the chip mill permits proposed in the EIS.
Johnson, John	Member	Earth First!	Chattanooga, TN	A more radical organization best known for its non- violent civil disobedience
Jones, Alan	Executive Director	Tennessee Environmental Council	Nashville, TN	Statewide environmental education and advocacy group.
Murray, Doug	Researcher	The Center	LaFollette, TN	Grassroots organization that worked to stop Champion International Corporation from building a chip mill in Caryville, TN.
Myczack, Cielo	Co-Director	Broadened Horizons RiverKeeper Project	Chattanooga, TN	Grassroots organization that raised the first warning cries that chip mills were proliferating along the Tennessee River.

ENVIRONMENTALISTS (cont.)				
Spokesperson	Title	Organization/ Company	City/State Location	Description of Organization/Company
Newman, Brownie	Campaign Coordinator	Southern Appalachian Biodiversity Project	Asheville, NC	Regional organization working to stop Willamette from building a chip mill near Asheville.
Pyle, Bob	Attorney	Sierra Club regional chapter	Chattanooga, TN	Regional chapter assisted other organizations whose efforts it supported in fight against chip mills.
Smith, Danna	Campaign Coordinator	Dogwood Alliance	Winder, GA	Umbrella organization for more than 30 grassroots organizations working to stop the proliferation of chip mills in the Southeastern United States.
Smith, Steve	Co-Founder	Foundation for Global Sustainability	Knoxville, TN	Assisted other organizations whose efforts it supports in fight against chip mills.
Wilkey, Bruce	President	National Audubon Society regional chapter	Chattanooga, TN	Regional chapter assisted other organizations whose efforts it supported in fight against chip mills.
Catherine McCue	Attorney	Southern Environmental Law Center	Charlottesville, VA	Legal strategist in 1990- 1994 efforts to defeat the chip mill permits near Chattanooga; continuing advisory role to regional activists.

FOREST INDUSTRY REPRESENTATIVES				
Spokesperson	Title	Organization/ Company	City/State Location	Description of Organization/Company
Applegate, Hart	Chief of Management	Tennessee Division of Forestry	Nashville, TN	State organization that offers assistance and public outreach programs on a variety of forestry topics.
Bennett, Matt	President	Tennessee Forestry Association	Knoxville, TN	State organization that promotes the understanding of, and appreciation for forests and related resources of Tennessee and their development.
"	Vice President Sales	Emmet Vaughn Lumber Company	Knoxville, TN	Wholesale hardwood lumber company
Burris, Bill	Member of Board of Directors	Tennessee Forestry Association	Kingsport, TN	
"	Woodlands Manager	Willamette Industries	Kingsport, TN	Integrated forest products manufacturing company.
Dale, Greg	Central Forest Manager (president of the Tennessee Forestry Association when the chip mill issue started near Chattanooga)	Westvaco	Wickliffe, KY	Manufacturer and distributor of fine printing papers for publishing and commercial markets.
Donegan, Will	Partner	Timber Processors	Calhoun, TN	Independent contractor running mobile chip mill.
Earnest, Craig	Coordinator of Safety and Environmental	Bowater Newsprint	Calhoun, TN	Major producer of newsprint.
Frame, Jerry	Land and Wildlife Manager	Packaging Corporation of	Counce, TN	
Harbin, Raymond	Empirical Forest Ecologist	Dendroi	Atlanta, GA	Consulting firm in hardwood lumber business.
Hoyt, Kevin	Procurement Forester	J.M. Huber Corporation	Spring City, TN	Producer of oriented strand board.
Platt, Adlai	Manager of Sustainable Forestry	Champion International Corporation	Caryville, TN	Major producer of paper and paper products.
Rusk, Bob	Consultant	Tennessee Mountain Management	Seymour, TN	Advises private landholders on methods of timber harvesting.

APPENDIX B

INTERVIEW GUIDE

In answering the following questions, you will be assisting the University of Tennessee's Communications Research Center in a study assessing the media's relationship with interest groups and companies involved with the chip mill issue in the Tennessee Valley. Thank you for your cooperation.

1) Tell me about your role in the chip mill issue, including the organization / company you represent and your title there.

2) How often would you say your organization / company relies on the following strategies for getting its message regarding chip mills / clearcutting out to the public?

	never	seldom	sometimes	often
a. press releases	1	2	3	4
b. flyers or bulletins	1	2	3	4
c. mailings	1	2	3	4
d. video clips	1	2	3	4
e. demonstrations	1	2	3	4
f. radio ads	1	2	3	4
g. television ads	1	2	3	4
h. own publications	1	2	3	4
i. op-ed pieces	1	2	3	4
j. interviews with media	1	2	3	4
k. public education	1	2	3	4
l. media education	1	2	3	4
m. tours	1	2	3	4
n. lobbying	1	2	3	4
o. Internet / e-mail	1	2	3	4
p. other (please specify)	1	2	3	4

3) How often do you ask your supporters to write letters to their congressional representatives with regard to the chip mill issue?

- 1 never
- 2 seldom
- 3 sometimes
- 4 often
- 5 don't know

4) Do you have an alliance with any national groups? 1 yes 2 no

5) If so, which one(s)?

6) Do you have an alliance with any regional groups? 1 yes 2 no

7) If so, which one(s)?

8) Does your group / company try to focus on any specific aspects of the chip mill issue?

1 yes 2 no

9) If so, which one(s)?

10) How often do you maintain contact with elected government officials?

	never	seldom	sometimes	often
a. federal	1	2	3	4
b. state	1	2	3	4
c. local	1	2	3	4

11) How often do you maintain contact with government agency officials?

	never	seldom	sometimes	often
a. federal	1	2	3	4
b. state	1	2	3	4
c. local	1	2	3	4

12) Who is / are your primary media contact(s)? Please include the name of their affiliation and media type.

13) What is your opinion of news coverage concerning the chip mill issue, particularly that of the print media?

14) In your opinion, which news medium reported on the chip mill issue most frequently?

15) How well prepared would you say reporters have been when covering the chip mill issue, with one being not at all prepared and five being very well prepared?

1	2	3	4	5
not at all prepared				very well prepared

Please explain your answer.

16) How accurately would you say journalists portrayed your side when reporting on the chip mill issue, with one being highly inaccurate and five being highly accurate?

1	2	3	4	5
highly inaccurate				highly accurate

Please explain your answer.

17) How would you say the other side feels about the way journalists portrayed its side of the chip mill issue?

1	2	3	4	5
highly inaccurate				highly accurate

Please explain your answer.

18) Would you say the amount of media coverage on the chip mill issue has been:

- 1 too much
- 2 about right
- 3 too little
- 4 don't know

19) How accurate is the following statement? Newspaper stories about the chip mill issue have been generally objective, not sensational.

1	2	3	4	5
highly inaccurate				highly accurate

Please explain your answer.

20) How do you feel about the following statement? Newspaper accounts generally went beyond the basic facts and did a good job of interpreting the chip mill controversy in terms of relevant issues.

- 1 strongly agree
- 2 agree
- 3 disagree
- 4 strongly disagree
- 5 don't know

21) How much press coverage has your organization / company gotten regarding the chip mill issue?

- 1 too much
- 2 about right
- 3 too little
- 4 don't know

22) How often have you been used as a source by the media?

- 1 never
- 2 seldom
- 3 sometimes
- 4 often
- 5 don't know

23) How often do you think your viewpoint has been accurately portrayed?

- 1 never
- 2 seldom
- 3 sometimes
- 4 often
- 5 don't know

In your opinion, how accurate are the following statements?

24) In general, stories relating to the chip mill issue have usually been accurate.

- | | | | | |
|-------------------|---|---|---|-----------------|
| 1 | 2 | 3 | 4 | 5 |
| highly inaccurate | | | | highly accurate |

Please explain your answer.

25) Stories in which I or my organization have been named as a source have usually been:

- | | | | | |
|-------------------|---|---|---|-----------------|
| 1 | 2 | 3 | 4 | 5 |
| highly inaccurate | | | | highly accurate |

Please explain your answer.

26) When I or my organization have been named as a source, these stories usually covered the relevant facts and issues.

- | | | | | |
|-------------------|---|---|---|-----------------|
| 1 | 2 | 3 | 4 | 5 |
| highly inaccurate | | | | highly accurate |

Please explain your answer.

27) How often do you follow the actions the other side is taking on the chip mill issue?

- 1 never
- 2 seldom
- 3 sometimes
- 4 often
- 5 don't know

28) How often would you say you directly meet with the other side for discussion?

- 1 weekly
- 2 monthly
- 3 quarterly
- 4 yearly
- 5 never
- 6 don't know

29) Where do you get your information about environmental issues, particularly with regard to logging?

30) How much do you budget for media relations annually?

- 1 less than \$5,000
- 2 \$5,000 to \$9,999
- 3 \$10,000 to \$14,999
- 4 \$15,000 to \$19,999
- 5 over \$20,000
- 6 don't know

The following will help to categorize the responses:

31) Gender of respondent:

- 1 Male
- 2 Female

32) What schooling have you completed? (Circle all that apply.)

- 1 high school diploma or equivalent
- 2 vocational training; if so, which field(s)? _____
- 3 bachelor's degree; if so, which field(s)? _____
- 4 master's degree; if so, which field(s)? _____
- 5 doctoral degree; if so, which field(s)? _____
- 6 other (please specify) _____

33) How long have you been with this organization / company?
years _____

34) How long were you active in this field before you joined this organization / company?
years _____

35) How large is the membership of your organization? Or how many employees work for your company?

- 1 less than 50
- 2 50 to 99
- 3 100 to 149
- 4 150 to 200
- 5 over 200
- 6 don't know

APPENDIX C

CODING SHEET FOR CHIP MILL / CLEARCUTTING STORIES

1. Date of story
 2. Page Number
 3. Newspaper
 - 1) Chattanooga Times
 - 2) Chattanooga Free Press
 4. Reporter
 5. Column inches
 6. Number of people interviewed

0	1	2	3	4	5	6 or more
---	---	---	---	---	---	-----------
 7. Source affiliation
 9. Source Status
 10. P/C/N
- | | | |
|-----|--|--|
| 0) | no interview in story | |
| 1) | environmental org. (nationally affiliated) | |
| 2) | environmental org. (grassroots) | |
| 3) | timber industry (large corporation) | |
| 4) | timber industry (small business) | |
| 5) | government (TVA, ACE, Fish and Wildlife) | |
| 6) | other government officials | |
| 7) | resident | |
| 8) | landowner | |
| 9) | can't tell | |
| 10) | other | |
- Source status (terms from ABC News-Harris Survey (Chicago: Chicago Tribune, 1979))
- | | |
|----|---|
| 0) | executive (in management or decision-making position) |
| 1) | professional (doctors, lawyers, teachers, scientists) |
| 2) | politicians or their spokespeople |
| 3) | scientist/researcher (foresters) |
| 4) | spokesperson (public relations personnel) |
| 5) | worker (secretaries, factory employees, technicians) |
| 6) | can't tell |
| 7) | other |
11. Graphics accompanying story?
 - 1) pictures
 - 2) graphs/charts/maps/numbers
 12. Story impetus (for event chronology)

VITA

Kris Christen was born in Mankato, Minnesota, on January 15, 1966. She graduated from Mankato East High School in 1984, subsequently receiving a B.A. in International Management and German, with a minor in Political Science, from the Central University of Iowa in 1988 where she achieved cum laude honors. She has interned in the United States Senate on Capitol Hill and worked as a paralegal in the international division of Dow, Lohnes, and Albertson, a major law firm in Washington, D.C. Following this, she obtained a work-study scholarship to work as an accountant for the bank Sal. Oppenheim jr. & Cie in Cologne, Germany; she was a translator and editor of technical documents for Nestle, a multinational firm in Lausanne, Switzerland, and worked as translator and accountant at the Swiss Reinsurance Company in Zurich, Switzerland. While completing an M.S. in Communications at the University of Tennessee (UT), she researched, wrote, and edited press releases on developments in the environmental sciences at the Oak Ridge National Laboratory. In addition, she was a writer for a nationally circulated newsletter funded by UT's Energy, Environment and Resources Center highlighting research efforts to resolve environmental problems with waste-related issues. In recognition of outstanding academic achievement, she was inducted in 1996 into Kappa Tau Alpha, a national honor society in journalism and mass communication. In 1997, she was one of five students selected nationwide to participate in a Student Science Journalism Honors Program in Washington, D.C., sponsored by the American Society for Microbiology to expose up-and-coming journalists to the inner workings of scientists and science writers in an effort to enhance communication links between the media and the scientific community.