

International Debate over the use of Glyphosate in Colombia: a study of Environmental
Journalism

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ABSTRACT

JULIA I FERNANDEZ: International Debate over the use of Glyphosate in Colombia: a study of Environmental Journalism
(Under the direction of Lucila Vargas)

This study examined the coverage of two newspapers—Colombia’s *El Tiempo* and the *New York Times*—of the debate over the use of the chemical herbicide glyphosate to eradicate illegal crops in Colombia. The findings suggest that both publications failed to provide significant details about the herbicide’s chemical formula and its secondary effects. The analysis also corroborates prior findings that suggested that the media portray contradictory representations of nature that may confuse the public. At the same time that illegal crop production and its consequent chemical eradication destroyed endemic and primary forests in Colombia, the media neglected to illustrate the natural damage or its significance. In all, very little content in either newspaper communicated the concerns of environmental groups and in *El Tiempo*’s case; such concerns were presented as benefiting drug dealers instead of helping the environmental cause. This in turn, may impair public knowledge and reaction about the environmental problem.

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CHAPTER 1

Introduction

In August 2006, *El Tiempo*, the most widely circulated newspaper in Colombia, announced that for the first time in history, the government would use a chemical herbicide known as glyphosate to eradicate coca plants in the Sierra Macarena National Park¹. The article mentioned that the decision guaranteed further U.S. assistance in Colombia's plan to eradicate coca production. A few months later, an article from the *New York Times* with the headline "Park is a victim of the Cocaine War"² informed readers that Colombian authorities used planes supplied by the United States to spray chemical herbicides in a Colombian national park. These articles reflect differences in content, which is a characteristic found in studies where researchers compared news texts from international and United States media (Boaz, 2005). By way of quantitative content analysis, the purpose of this research is to analyze the news frames and other patterns of coverage found in environmental journalism specifically addressing the use of the chemical glyphosate to eradicate coca plants in Colombia. It is important to analyze media coverage of the use of glyphosate in Colombia by United States and Colombian newspapers because there has not been a strong reaction from the audiences from either country about this prolonged problem. An explanation towards this apathy could be given by the way in which information about the problem is framed in both countries. I studied the text in *El Tiempo* and the *New York Times* to investigate differences or similarities that enlighten the general lack of concern and outrage from people around the world. I am surprised that there has not been a bigger

¹ Glifosato en 2,000 hectáreas del parque de la Macarena. (2006, August 4). *El Tiempo*, p. 1.

² Colombia: park is a victim of the cocaine war. (2006, August 17). *New York Times*, p. 16

reaction against the investment of money coming from U.S. taxes which is lost in this inefficient system to combat drug production.³ People around the world and particularly Colombians should be concerned about the loss of biodiversity and the pollution of important national resources.

The idea that media messages can be studied by looking at the way in which information is framed and offered to the public is one of the main components of framing theory. Framing theory is used to explain the production, character, and potential influence of news stories (Sheufele, 1999). For example, news frames are important elements in mass media because they reflect media stakeholders' interests as well as salient perspectives on issues. Noted writer and conservationist Michael Frome (1998) reaffirmed this concept by stating that all media combined provide a picture of the world, mold people's attitudes, and have an effect on their actions. In other words, the information provided by the media ultimately represents human's perceptions of themselves and others as well as their interactions with the components of the milieu nearest them, including their natural environment.

Even though people's perceptions of the environment are socially constructed through education, their interaction with nature, and even their upbringing, the media influence those perceptions to some degree (Cox, 2006). MacGuen and Combs (1981) suggest that even though people make judgments from their own objective experiences and beliefs about environmental topics, the audience receives an image of reality due to the nature of issues reported by the press. Since media coverage of humans' surroundings is presented through environmental news, the media have the dual responsibility of depicting humans'

³ Liberan recursos para fumigación. (2003, December 20). *El Tiempo*, pp. 1, 24.

relationships with the environment and also educating the public about the consequences of those interactions.

Robert Cox (2006) observes that, even though environmental reporting tends to be cyclic and mostly associated with ecological dilemmas and disasters, coverage of ecological topics is increasing in media outlets. With globalization people are more aware of international political, economic, and environmental situations that affect all human beings. People's interest in environmental reporting will increase, as human population growth continues to place stress on natural resources, thereby making it important to plan sustainable resource management strategies. For example, news media provided substantial coverage of the Kyoto Protocol, an amendment to the international treaty on climate change, which assigns mandatory emission limitations for the reduction of greenhouse gas emissions to the signatory nations.⁴

Environmental problems and other inquiries covered by environmental journalism are investigated through studies that analyze environmental communication, which Cox defines as the “pragmatic and constitutive vehicle for our understanding of the environment as well as our relationship to the natural world” (2006, p.12). Environmental communication is pragmatic because it offers a direct connection to practical consequences or real effects related to the environment. Additionally, it is constitutive because it has the ability to inform people and make them better judges of a variety of situations. Generally, when people are informed about an issue, they become interested and are willing to do something about it. “Environmental communication educates, alerts, persuades, mobilizes, and helps us solve environmental problems” (Cox, 2006, p.12). According to Cox, environmental

⁴ n.a. *The United Nations Framework Convention on Climate Change*, Retrieved August 17, 2007, from <http://unfccc.int/resource/docs/convkp/kpeng.html>

communication also has the power to establish or enact accounts of nature and to transform environmental predicaments into issues that the average person can understand.

As previously mentioned, environmental journalists must investigate and deliberate scientific information so that the public receives a simplified, but complete, summary of the problem. Researchers, including myself, are interested in how journalists choose and deliver news information. To better understand the elements of content selection, some studies of environmental media concentrate on the manner in which both mainstream and alternative media portray nature and environmental dilemmas. They also examine the effects of media in public behavior and perceptions by evaluating media frames and reporting obstacles (Cox, 2006).

Whereas environmental journalism portrays all types of relationships between humans and their surroundings around the world, it is in Colombia that several factors have combined to produce one of the most intense debates related to the environment and human well-being, as well as one of the most interesting media portrayals of nature. In response to its own goals and expectations from its biggest supporter—the United States—in the war against drugs, the Colombian government has been waging a ceaseless war against coca growers, cocaine manufacturers, and dealers. Colombia's methods to stop illegal crop production have included manual eradication of coca crops and extradition of drug dealers. Another technique, the spraying of glyphosate to damage coca plants, has been debated for more than 15 years.

The discussion, which started in the late 1970s and continues today, revolves around the aerial spraying of glyphosate, an herbicide commonly known as Roundup, to eradicate illegal crops. Supporters of the use of glyphosate describe it as the most effective and safest eradication method: *“El general Rozo afirmó que [...] con el empleo del glifosato el costo de*

las operaciones disminuiría y se lograría neutralizar la proliferación de los cultivos en poco tiempo” –Army General Rozo confirmed that employing glyphosate would diminish the cost of the [eradication] operations and would neutralize the proliferation of [illegal] crops in short time.⁵ But opponents of the use of glyphosate, who are concerned about health, environmental and poverty effects, oppose its use: *Armando Lacera, químico de la Universidad Nacional Tecnológica del Magdalena [...] considera que con el uso del glifosato la tierra si sufre modificaciones y que altera el ecosistema*”- Armando Lacera, chemist from the National Technological University in Magdalena [...] considers that the use of glyphosate does alter the soil and affects the ecosystem⁶. While covering this debate, international and Colombian media portray the war against drugs as the main issue of the environmental problem (Jawahar & Williams, 2003), yet they neglect other elements of great importance. For example, the news media rarely analyze Colombia’s lack of agro-business and the violence in rural areas as roots for the production, and eradication of illegal crops.

One of the reasons I want to focus on the portrayal of this environmental problem in Colombia is because I will be able to evaluate news framing and content selection between national and international media. The other reason that prompts me to use the cocaine eradication scenario is because Colombians are not the only ones affected by this perilous situation. Because the United States finances most of the infrastructure created to prevent the production of illegal crops, billions of U.S. dollars are allocated to Latin America for its war against drugs (Vargas, 2002). Moreover, there is a global environmental loss due to the ruination of tropical rain forests and local ecosystems caused by both the growth cycle of illegal crops and their eventual destruction.

⁵ Rubio, M. (1992, January 23). Urge empleo de glifosato: Rozo. *El Tiempo*, pp. A 1, A 9.

⁶ Cubillos, C. (1992, February 3). Glifosato: cara y sello. *El Tiempo*, pp. C 1, C 2.

This prolonged unsettled situation is as complex as it was when the use of the herbicide first began, and if it is to be changed, Colombian citizens and their government need to take a different stand. Such attitude change may be triggered by offering new information or information through different media. For this reason it is important to learn more about current content characteristics, which may provide some account or explanation for people's apathy toward this topic. Finally, I am interested in this debate because it engages all aspects of my academic and professional focus, which is environmental communication. Therefore, the purpose of this research is to compare articles that describe cocaine eradication in Colombia and to find content and news emphasis variations. I obtained such articles from two newspapers: *El Tiempo*, which is the major newspaper of the country where the problem is occurring, and the *New York Times*, which has the largest newspaper circulation in the United States as well as a wide coverage of international issues [The New York Times Company (n.d.)].

Literature Review

Environmental Journalism

In order to study content variances in the environmental news, it is relevant to elaborate on this specific type of news-making and its role in providing an accurate representation of the environmental reality. The motivation to expand on the topic of environmental news media is that humans' perceptions of environmental dilemmas, and the opinions they create in response, are influenced by a variety of sources including scientific reports, college courses, and the media. As Cox argues, mainstream media "in particular have played critical roles in educating the public about environmental problems" (Cox, 2006, p.164).

Scholars disagree on exactly when environmental journalism started, but it expanded from general interest in national parks and wildlife. In the mid-twentieth century nature writers were divided in two groups. The first group was comprised of writers who considered nature a resource that could be exploited to obtain multiple benefits and commodities for human beings. The second one included people like biologists Rachel Carson, who were interested in promoting protection and preservation of the finite resources available to humans (Keating, 1993).

Despite the differences behind each group's interest in the environment, they shared the purpose of discussing and analyzing natural resources and environmental problems. Another common characteristic that environmental journalists share is to provide comprehensive information about complex issues. One way that journalists can increase the probability that readers will understand difficult topics, such as environmental problems, is by organizing the information as narrative structures. For example, texts can be constructed to facilitate or impede reader comprehension (Kintsch, 1998). Due to the complexity of certain information in news media, such as explanations of scientific advancements and environmental problems, writers like Robert Entman suggest that journalists need to shape news texts according to the motivations embodied in news and values (Entman, 2004). However, framing information for the public's benefit carries varied and serious consequences. For instance, past studies, have found that subtle differences in the presentation of complex but identical information in news media can affect cognitive organization, recall and judgment (Berinsky & Kinder, 2006).

Media Framing of Nature

Nature narratives are framed by the media through descriptions of the natural environment and meaning (s) assigned to it. For example, there are distinct differences

between the terms “ecosystem”, “environment”, and “nature”. Michael Keating defines an ecosystem as “a given area in which living organisms have a stable relationship” (Keating, 1993, p.86). This concept is also used to describe the environment because of the close relationship between nature and the chemicals that are supposed to stay in one place. For example, water systems are greatly affected by pollutants that do not belong naturally in the ecosystem water system. An example of this would be if a dumpster, placed near a water source, added pollutants to the water system.

“Environment” is a more general term that is comprised of a number of ecosystems. Before conducting their research about depictions of the environment and their effects, McComas and Shanahan defined three concepts of the environment. One is the social environment, in which cultures have their own view of the world. Next is the social construction of the environment, which refers to the view that is generally accepted in culture. Lastly, the natural environment is the “physical environment and the objectively real physical relationships that persist in that system” (McComas & Shanahan, 1999, p. 24). Nature can be considered as a synonym for that physical environment. All of the characteristics surrounding the interpretation of what nature entails, allows the media to portray ecosystems, the environment, and nature according to different scenarios. Unfortunately for the audience, the settings can be seen as complementary, differing or even contradictory, which can make the message difficult to understand (Soper, 1995).

Meisner (2004), whose study of images of nature in Canadian graphic media seemed to prove Soper’s point of view, classified representations of nature into four opposing groups: nature as a victim, nature as a problem, nature as a sick patient, and nature as a resource. Similarly, McComas and Shanahan (1999) pointed out six narrative dimensions of the environment that could be described from either an environmentalist position or an anti-

environmentalist position. One of these dimensions, growth, can be represented in the media as not valuable because conservation and sustainability are preferred; however growth can also be depicted as progress and prosperity.

Researchers are also interested in the effects produced by the media representations of nature mentioned above. Although past studies have focused on media as a resource for the distribution of information, recent studies proposed a new kind of evaluation that concentrates on the role media play in constructing environmental narratives (Campbell, 1999). McComas and Shanahan (1999), for example, exploited the functions of narratives in understanding the concept of nature, and the kinds of impacts those narratives have on the environment.

As mass media construct stories, they influence human's interpretations of nature and other concepts. However, McComas and Shanahan argue that because nature is itself a social construct, nature can communicate from its position as a social entity. This means that the stories that people produce about the environment are the result of human's interaction and experiences with it (McComas & Shanahan, 1999). Frequency and importance given to human interaction with nature is linked to the audience's interest in any other topic. The public's attention to environmental issues goes through the same stages as its attention to social problems, ranging from lack of awareness through active engagement to disinterest. This is a five stage progression: the pre-problem stage, alarmed discovery and euphoric enthusiasm, realization of the cost of significant progress (where public support wanes), a gradual decline in intense public interest and the post problem stage, in which the issue moves into a "twilight of lesser attention" (Downs, 1972, p. 40).

The pre-problem stage involves an unpleasant social situation that is known to the public. At this point, the condition is studied by aware experts who are preoccupied with it.

In the second stage, alarmed discovery, the public learns of the situation and is worried by it. More than an explanation for the problem, at this stage the audience desires a rapid solution. In the third stage, people realize the high cost of the solution and begin to withdraw their support as a result. Lastly, support declines and the environmental issue is moved off the public's and media agenda (Downs, 1972).

Chemical contamination, loss of biodiversity and climate change are events that take a long time to be noticed and acted upon because the resultant environmental damage to human health takes a long time to be perceived. In some cases, participants in and witnesses to environmental problems are isolated and can't easily communicate with the rest of the population (Cox, 2006). Due to this difficulty, or when the events themselves are occurring in remote areas, it is difficult for journalists to cover these issues in none-sensational ways.

Consequently, researchers are interested in evaluating the framework surrounding stories in order to better understand the senders' position in some subjects. One way to analyze messages sent by the media is by looking at the way the information is framed. Journalists often simplify or frame news to communicate it to the public. To produce a clear relevant picture of reality, reporters need to create an association between their findings and their intended audience (Entman, 2004). One way to create such associations is by using framing devices to highlight issues. Gamson and Modigliani identified five of them: metaphors, exemplars (history), catch phrases, depictions and visual images (Gamson and Modigliani, 1989).

Despite the benefits that using media frames can provide, they can be perceived as negative for two main reasons. First, they risk a news source's objectivity, which is its main commitment to its audience. News media are supposed to provide information that is accurate and unbiased. Second, once a reporter uses a certain frame to depict a problem, the

news source can be seen as taking a side in the matter, which would upset its audience since the media are supposed to remain unbiased.

To balance controversial stories it is necessary to present all sides of the debate. Nonetheless, the very act of choosing a specific story might be seen as a biased gesture because the chosen topic is subjective. Framing the story and selecting interviewees can have an effect as well. In other words, if frames qualify the substance of disagreements, along with the essence of an argument, they can never be considered neutral. This is especially true for news media, which depicts real events; if these are presented as genuinely two-sided, the public will be confused. Furthermore, the media might be looking after its own interests while presenting news, “media contribute their own frames especially in the realm of foreign affairs” (Entman, 2004, p. 24).

Environmental framing studies consider the importance of discourse in organizing people’s experience of the world and people’s relationship with the environment. Media discourse is part of the process by which individuals construct meaning (Cox, 2006). Text framing concentrates on the ways that media try to help audiences understand events by organizing the facts of phenomena through stories. Framing studies also analyze the potential of an organization to affect people’s relationship with the phenomena being represented.

Background

Colombia’s anti-drug effort started in 1978 after the country became the focus of a forced-eradication policy using herbicides. At the time, Mexico and Colombia were the world’s main producers and exporters of cannabis. A temporary decrease in and relocation of cannabis production in 1989 let Colombia’s illegal economy to focus on the production and export of cocaine and, as a result, the social, economic and political influence of drug-trafficking organizations increased in the 1980s (Vargas, 2000).

Ricardo Vargas, a sociologist and associated fellow at the Transnational Institute in Amsterdam, described the new set of conditions that placed Colombia in a similar position in the 1990s, thus provoking drastic measures to eradicate the illegal crops as the following:

1. The drug economy became diversified (presence of opium crops, heroin processing and drug trafficking).
2. The war against drug cartels intensified allowing smaller regional organizations to take control over the international drug market.
3. The new decentralized organizations stimulated the production of raw materials including cocaine paste and poppy latex.
4. A crisis began in the agricultural sector.
5. Rural and urban migration to environmentally fragile zones increased.

As a result of the critical situation in the 1990s the Colombian government resumed intensive aerial spraying of herbicides. This program had been in place for more than 20 years, beginning with the use of Paraquat in 1978, followed by Triclopyr in 1985 and Thebuthiuron in 1986. Glyphosate has been applied since its initial approval in 1986. Because the chemical was not as efficient as expected and because of the pressure exerted by the United States, the Colombia government fumigated with Imazapyr in 1998 and a second round of Thebuthiuron in 2004 (Vargas, 2002). In response to criticism over the environmental impact cost by these herbicides and their low results, researchers have also been experimenting with biological methods. According to research results supplied by the U.S. Department of Agriculture and the U.S. State Department, the *Fusarium Oxysporum* fungus has been used to destroy coca leaves in Peru and was strongly suggested that it be used in Colombia. This research was approved by the United States Nations Drug Control

Policy and the Colombian government under the anti-drug proposal known as Plan Colombia (Vargas, 2002).

For as long as farmers have grown illegal crops in Colombia, its government representatives have proposed and developed numerous plans to decrease and stop the benefits associated with this business. One way to decrease incentives was to prosecute and punish drug lords who accumulated wealth by trafficking narcotics. With time, the military and politicians concentrated on stopping farmers from receiving remuneration from growing illegal crops (Vargas, 2002). The most recent project associated with this idea is called Plan Colombia. Its goal is to regain control over the southern territory, which is controlled by the Fuerzas Armadas Revolucionarias de Colombia (FARC). The plan illustrates three military objectives: to eradicate coca fields, to reestablish the state's authority in the southern Colombia and to strengthen the country's government capacity. Plan Colombia also includes social and economic goals to combat residents' desire or necessity to grow illegal crops. To date, the Colombian and U.S. governments have invested 900 million dollars in the following plans: Employment in Action, which encourages hiring and qualifying workers in local projects around the country to boost employment levels; Families in action, which gives subsidies to poor families who agree to keep their children in school and Youth in Action, which trains young unemployed men and women in the private sector (Colombian Embassy web page).

In another aid package that was part of Plan Colombia (2000), The Colombian army received a substantial portion of a grant to defeat the guerrillas and militant groups defending the coca zones (Jawahar & Williams, 2003). The utility model advanced by Bruce Bueno de Mesquita proposes that the success of the areas that receive support (i.e. military, national police, alternative development, aid to the displaced, human rights, judicial reform, and rule

of law) depends upon the amount of financial aid they receive. The Mesquita model “incorporates concepts of bounded rationality, in which actor faced with incomplete information and time constraints in gathering and processing information choose to satisfy, rather than maximize, their utility” (Jawahar & Williams, 2003, p. 161).

The model has adapted to analyze Plan Colombia via two indicators: Plan Colombia’s aid quantities and their basic implementation. Plan Colombia applied approximately 75% of U.S. aid military actions (equipping the army with anti-narcotics units providing helicopters to fumigate). By contrast, 14% of aid was devoted to strengthening Colombia’s governing capacity (training in anti-corruption, money laundering and kidnapping measures). The remaining funds, around 12% of the total package were assigned to nonprofit organizations that support alternative development programs (Jawahar & Williams, 2003, p. 162).

After calculating Plan Colombia’s percentage of the total aid package and comparing it to the total amount of money given by the U.S. government, researchers determined that the expected utility would be high for the military group, low for the social aid and governing organizations, and very low for peace negotiations. Researchers also criticized Plan Colombia’s goals based on the observations that “substantial political, economic and social reforms hold higher prospects of pacifying the countryside and reducing coca production” (Jawahar & Williams, 2003, p. 165). The money invested in equipment for the aerial spraying of the illegal crops could otherwise be invested in improving the transportation infrastructure (i.e. facilitating farm-to-market highways which currently hinder trade in legal farm products). The second reflection emphasizes the uncertain results of increasing the Colombian army’s capacity since the increase in armed violence perpetuated by militia groups has not been an efficient method of obtaining political power or policy reforms. Finally, history of forced eradication has proved to be successful in displacing illegal crops

further into the jungle and environmentally fragile zones, or “across the border of neighboring states, the so called balloon effect” (Jawahar & Williams, 2003, p. 165).

The second project known as Alternative Development (AD) was an approach that was implemented from 1994 to 1998. It was included as complementary policy within the larger aid package, to combat illegal crops in Bolivia and Colombia because the governments of these nations were forcing farmers to eradicate coca crops manually. The plan proposed to ameliorate an intense social and economic predicament left by the destruction of the illicit local economies and also to encourage the cultivation of sustainable and legal crops to replace the old economy (Jawahar & Williams, 2003). AD’s objectives were measured by the reduction of the number of hectares that are used to plant illegal crops. On one hand, AD replaced and improved the living conditions of those supporting themselves with illegal crops. On the other hand there were ambiguities between the objectives proposed by different organizations involved in the plan. For example, while the United Nations Office of Drug Control and Crime Prevention (UNODCCP) defined AD as complementary to the eradication plans, United States Agency for International Development (USAID) independently established goals for the reduction of illegal areas (Jawahar & Williams, 2003).

One of the biggest concerns with coca productions is the social impact in nearby populations. Poor residents, peasants and indigenous groups are displaced in two directions. The first group leaves their original location to grow the illegal crop because of the financial benefits; and, at the same time, people who are not interested in growing coca might be threatened by the producers and consequently move to the big cities. Legal crop destruction has a similarly evident social effect involving people’s health conditions and job opportunities. Not only are legal crops destroyed by glyphosate but all of the crop-eradicating

chemicals taken in by the ecosystem pollute water and other limited natural resources in the affected area (Vargas, 2002).

Social displacement is not the only harmful consequence of the purge of coca plants. Eradication promotes crop displacement as well. This was first established in the 1970s when the Sierra Nevada de Santa Marta (a mountain range in the north of Colombia) was sprayed to combat cannabis. After the fumigation, growers moved from the lowlands to the highlands, creating an ecological overload. Similar to the situation in Colombia, crop and human population displacement has been noted in other countries and regions as well (Vargas, 2002).

Finally, drug legalization has also been considered as a solution for the social and economical problems locally resolved by growing illegal crops. The main argument in favor of drug legalization in Colombia is the socioeconomic advantages it would bring. It is argued that drug revenues would “cover the budget deficit, fiscally strengthen the state, improve regional finances of the departments and reactivate the growth of the legal economy” (Tokatlian, 2002, p. 39). Legalizing drug production has been suggested by a number of political figures and international organizations since the 1970s. In 1979 Ernesto Samper, head of the National Association of Financial Institutions (ANIF) suggested an evaluation of the legalization of marijuana as an alternative to regulation. Consequently, the cultivation, sale and consumption of currently illegal crops would be within the law. At this time, Colombian Comptroller General Anibal Martinez Zuleta as well as President of Bogota Stock Exchange Eduardo Gomez and former President of the Supreme Court Luis Sarmiento Buitrago also supported consideration of this measure (Tokatlian, 2002).

Just as the legal and political divisions were encouraging drug legalization, the business sector suggested the same approach. The Popular Colombian Association of

Industrialists (ACOPI) and the Confederation of Chambers of Commerce (CONFECAMARAS) “advised the government to legalize funds stemming from the illegal economy so that they would become part of the country’s wealth” (Tokatlian, 2002, p.39). Along with the financial positive outcomes Samper also pointed out that there would a moral advantage in legitimizing drug mafias. He believed that marginalized and disparaged, these groups would continue to revolt, to attack residents or to buy the government institutions charged of suppressing them. However, the idea did not received support from the public and in the early 1980s the discussion began to fade.

As public interest in legalization waned, government representatives began asking if Colombia drug dealers should be extradited to the United States to stand trial. Soon after that, narcoterrorism claimed many public figures, particularly journalists, police officers and judges. While these crude acts of violence were constantly taking place in Colombian cities, both Bogotá and Washington D.C. projected iron-fisted images of fighting a drug war supported by the public. This perception was borne out by an ABC network survey purporting to show that 75% of the U.S. population was against drug legalization and parallel figures were projected about the lack of Colombian public support (Tokatlian, 2002). Over the next 25 years, Colombian governments further criminalized illicit drug production. Current Colombian President Alvaro Uribe is so committed to drug eradication that in 2006 he authorized spraying glyphosate near the Ecuadorian border, causing tension and a law suit against Colombia because of environmental damage to Ecuadorian territory.⁷

In 2005 political figures had promoted the possibility of some form of drug legalization. A bill was introduced in the Colombian congress in August 2001 that would have placed the production, distribution and consumption of drugs under government control.

⁷ Demandan a Colombia en OEA por fumigación. (2005, August 19). *El Tiempo*, p. 6.

In addition, two senators proposed similar bills suspending chemical eradication and exempting owners of small farms from criminal charges. “Finally, the General Assembly of Governors requested the central government to lead an international debate on drug legalization” (Tokatlian, 2002, p. 38). However, the strongest leader in the war against drugs, the United States, has not backed down on the negative consequences that could befall Colombia if it were to legalize drugs (Tokatlian, 2002).

Through the years, illegal crop production and trafficking in Colombia has been handled by different groups. It began with the big cartels in Medellín and Cali, but after the heads of these organizations turned themselves into the justice system, other groups have come to play a major role in this business. The main groups that are associated with illegal crop production in Colombia have a strong hold on several regions due to the fear they imposed in local residents. The Fuerzas Armadas Revolucionarias de Colombia (FARC) was created as a response to government attack on rural communist cooperatives and has been fighting the government for more than 40 years. It has roughly 17,000 members. Half of FARC’s revenues come from taxes imposed upon coca cultivation in its territory. The Ejército de Liberación Nacional (ELN) is the country’s second-largest insurgent group made up of approximately 6,000 members who demand nationalization of the petroleum industry. With this goal ELN sabotages pipe lines and kidnaps civilians as well as oil company workers. Finally the Autodefensas Colombianas (AUC) formed in the late 1980s as a response to guerrilla attacks, was financed by wealthy cattle ranchers. According to Amnesty International, the AUC militia which counts approximately 30,000 members has perpetrated some of the most brutal human rights violations on record in its confrontations with guerrillas (Jawahar & Williams, 2000, p.160).

Environmental State of Affairs

The Andean region, where most of the coca crops are grown, contains numerous ecosystems, as well as innumerable animal and plant species and several indigenous communities. Chemical and biological eradication pollutes water and food sources because aerial fumigation is spread by wind, water and living organisms (Pettersen, 2002). “The damage done to Colombian biodiversity represents the destruction of 10% of the world’s terrestrial plant and animal species, all of which exist only in this country” (Peterson, 2002, p.430). Just as chemical eradication threatens valuable Colombian and planetary biodiversity, it also violates the “cultural integrity of the Andean/Amazonian people, as well as their rights (Pettersen, 2002, p. 430). Eradication procedures violate this constitutional right by destroying the environment not only for current residents but also for future generations.

The environmental argument is a strong one. Scientists who are worried about the biodiversity and the health of people living in areas where glyphosate spraying is conducted receive complain about environmental pollutants and the negative toll on the human population.⁸ Nonetheless, Colombian President Alvaro Uribe, who favors manual eradication, was forced to reinstate chemical procedures after soldiers and eradication workers were killed or severely wounded by landmines intentionally planted around coca fields.⁹

Justification and Research Questions.

More than 15 years have passed since glyphosate was first used to destroy illegal crops in Colombia, however its use is as polemical as it was from the beginning. Another continuous pattern is the public’s indifference toward this subject. Content analysis of the information provided to the public may shed light on this lethargy and offer not only the

⁸ Fumigación en la cuerda floja. (2003, June 27). *El Tiempo*, pp. 1, 2.

⁹ 26 muertos obligaron a fumigar Parque La Macarena. (2006, August 4). *El Tiempo*, p. 2.

means to enhance environmental communication but also resources that could be used in the future to push for public participation and policy change. Past research comparing the content of international media by looking for differences in content selection has demonstrated that comparative analysis of news media from different countries can shed light onto the potential influence that such media may have on public comprehension of social problems. For example, a study by Cynthia Boaz (2005) in which how news magazines from different countries represented the prelude and invasion of Iraq were examined, analyzed how U.S. residents were persuaded to support the invasion while citizens elsewhere were not. Boaz examined a total of 302 articles from five different sources: *Time* (U.S.), *MacLean's* (Canada), *L' Express* (France), *The Economist* (U.K.) and *Stern* (German). Boaz chose these magazines because of similarities in their content, format, and approach.

Boaz was looking to “explain foreign policy paradigms used to justify war and its progress” (Boaz, 2005, p. 4). She examined variables that included individuals and perspectives mentioned in the articles, main news topics discussed in the stories, references to possible justifications for war, the countries mentioned and their role in the conflict. The results of the study reflected an “Ameri-centric” view of the world and suggested that crucial points of view were not represented by the press in the United States. Additionally, the results confirmed previous evaluations suggesting that the media in the United States have a narrower view of the world than the views found in the media of other countries, because media from the United States portray this country as the main character in stories rather than balancing the political, social and geographical components of conflict (Boaz, 2005).

Similarly to the Boaz inquiry, Philemon Bantimaroudis and Hyun Ban (2001) looked for content differences between European and U.S. media. Bantimaroudis and Ban examined coverage of the crises in Somalia, particularly the political aspect of the conflict, by focusing

in framing choices by the *New York Times* and the *Manchester Guardian*. They found that both print sources identified Somali leaders as “war lords” (Bantimaroudis & Ban, 2001, p. 178) and that their actions were presented in direct opposition to the United Nations forces. The researchers also concluded that language was a key framing device used by both publications. To portray U.S. intervention, the press in both countries described the engagement as a necessity for human relief. It was concluded that there was no difference between U.S. and British coverage of the intervention in Somalia and that the humanitarian and military aspect of the operation were used as frames through which to describe the development and nature of the event (Bantimaroudis & Ban, 2001).

Likewise, studies analyzing the framing of environmental issues have shown that media choose different frames to present those issues, and that such frames tend to follow established stereotypes or stakeholders’ interests. One of these studies conducted by Michael Karlberg (1997), which analyzed the use of adversarial news frames to describe environmental issues, proposes that people’s perception of human interaction with the environment may be influenced by news media. As a result, corporations as well as community groups, both try to influence media presentations of environmental issues. After conducting content analysis, Karlberg describes various frames used in environmental reporting, particularly in disaster narratives, which naturalizes an occurrence, and effectively eliminates discursive consideration of human participation. The author also mentions the coverage of the Exxon Valdez oil spill, wherein: “Media compared the spill in a manner that resembled weather forecast. The disaster narrative moved the discourse away from the political arena into the realm of technology inevitability” (Karlberg, 1997, p. 2).

Another form of an environmental news frame discussed by Karlberg is the adversarial one, which displays two main characteristics: “dichotomy, the representations of

issue in terms of two mutually exclusive stereotyped camps i.e. loggers and environmentalists and confrontation, [and] a dramatization of conflict through emphasis on extreme statements and actions” (Karlberg, 1997, p.3). At the study’s conclusion, Karlberg proposes four features to be used as reframing tools for environmental issues: diversity of perspectives, a non-confrontational tone, ethical principles, and principle-centered discourse. However, the author cautions that to invoke an ethical approach and partisan views about a complex topic such as the environment will produce extreme oppositional discourse.

Parallel research identified four aspects of frame in news stories: subtopics, affective elements, cognitive elements, and framing mechanisms (including headlines, codes and subheads). Frequency is the most powerful framing mechanism stating that “the frequency, [with which] a topic or a stock-phrase is mentioned, is a powerful tool that makes frames salient” (Gandy and Grant, 2001, p.178). A careful examination of word choices and the extent of their use in news coverage can reveal much about the organizing ideas, the framing choices of the media.

I was interested in analyzing the news frames and other patterns of coverage found in *El Tiempo* and the *New York Times* because even though Colombians as well as the international community have been informed by the media of the elements surrounding the current situation, chemical eradication is still applied in Colombia, the drug war has aggravated socioeconomic problems in the country and to this day, Colombia’s environment continues to be destroyed by both coca cultivation and eradication. Thus the following questions were posed:

1. What are the most commonly observed framing devices used by the two countries’ news media?
2. How is financial aid given to Colombia framed by each publication?

3. Can any changes in framing patterns through the years be identified?

By addressing these research questions, this study may shed light on why there is a widespread apathy among both the Colombian and U.S. publics, regarding the use of the chemical glyphosate to eradicate coca plants in Colombia.

CHAPTER 2

Methods

Quantitative Content Analysis

To be able to understand the development of the debate it is necessary to explore its history as well as its current status. Therefore I conducted a quantitative content analysis of print articles that discuss the use of the chemical herbicide known as glyphosate since January 1st, 1991 (first year of its use to destroy illegal crops in Colombia) until December 31st, 2006. Quantitative content analysis can be briefly described as “the systematic assignment of communication content to categories according to rules, and the analysis of relationships involving those categories using statistical methods” (Riffe, Lacy & Fico, 2005, p. 3). In this research, content analysis entails the following elements: obtaining representative samples of content, training a coder to use category rules created to measure content traits and differences and measuring the reliability of coders in applying the rules. Quantitative content analysis is also an appropriate method for this study because it allows researchers to make deductions from the text. The conclusions obtained from the analysis are a window into the sender’s intentions, the message itself, or the audience of the message (Webber, 1991). Moreover, Robert Webber who wrote several papers on content analysis changes suggests it can be used for many purposes. One of these purposes adapted from Berelson (1952) is to disclose international differences in communication content (Webber, 1991).

The four elements of content analysis (after Webber, 1991) are: measurement (numbers that represent meaning in the text), indication (inferences by the investigator of the

presence of an unmeasured quality in the text), representation (techniques for describing semantic aspects of the text) and interpretation (the translation of the meaning into an abstract analytical language). “Indication” refers to terms and ideas not explicitly found in the text but whose lack of mention since significant. “Representation” refers to analysis of ways in which certain entities, (i.e. nature or the environment) are described: as a problem, as a sick patient, as a resource or as a victim. In addition to Webber’s elements, recent models add three more components to quantitative content analysis. It has to be systematic, “it requires the identification of key terms or concepts involved in a phenomenon, specification of possible relationships among concepts, and a generation of testable hypothesis” (Riffe et al., 2005, p. 25). Quantitative content analysis needs also to be replicable to be able to test reliability, objectivity and clarity and finally there need to be “numeric values assigned to represent measured differences” (Riffe et al, 2005, p. 31) Measurement will be conducted via an SPSS program by producing coding sheets that can be computed to find similarities, differences and frequencies. Finally, an interpretation of the findings will be presented and discussed.

The quantitative analysis of the articles was conducted with the statistical program Statistical Package for the Social Sciences (SPSS), which produced descriptive statistics that illustrated frequency of terms and their role in the texts’ frames. Some benefits of SPSS include reduced time spent on data processing, learning the program and analyzing the results for statistical significance.

The Sample

I chose Colombia’s newspaper *El Tiempo* for this project for two reasons: first because it has the largest circulation in Colombia, and second, because it is the only newspaper filed in publicly accessible electronic archives. *El Tiempo* was founded on

January 30, 1911, by Alfonso Villegas Restrepo and its currently owned by the Santos family, one of the most powerful and influential families in the country. The newspaper is also the core of the media conglomerate known as Casa Editorial El Tiempo (CEET). In 1916 *El Tiempo* was bought by Eduardo Santos Montejó, who heads the print media division until 1976. The average circulation of *El Tiempo* (Monday to Saturday) is 240,964, rising to 475,046 on Sunday [Casa Editorial El Tiempo, (n.d.)].

The *New York Times* is published in New York City and distributed internationally. It is owned by the New York Times Company, which publishes 15 other newspapers. The most recent statistics show an average daily print of 1,623,697 copies [The New York Times Company (n.d.)]. The *New York Times* tends to be more ethnocentric and to cover international issues that can be directly related to U.S. policies. The *New York Times* is a major information gatekeeper in the United States since its articles are often reprinted by regional media [The New York Times Company (n.d.)]. Therefore, investigating its coverage patterns allows speculation about coverage trends followed by other media in the United States.

The total sample includes 219 articles from *El Tiempo* and 34 from the *New York Times* from January 1, 1991 to December 31, 2006. Because the Lexis Nexis data base did not recognize the term “glyphosate,” I chose chemical herbicide as the search term to retrieve articles from the *New York Times* because I wanted a term that was the closest in meaning to glyphosate. To retrieve representing articles from *El Tiempo*, I visited the newspaper’s archives office in Bogotá that has an electronic index of past issues. The search keyword for this publication was “glyphosate”.

Coding

Variables one to eight in the coding sheet are standard variables that are commonly included in content analysis of newspapers. The categories of variables nine come from Gamson and Modigliani (1989). Likewise, the categories of variable ten are based on Meisner's study of images of nature in Canadian graphic media (Meisner 2004). All variables and their categories are described in the coding protocol found in Appendix A. Although I was the only coder, to assess intercoder reliability, a second coder analyzed 26 randomly selected articles, five from the *NewYork Times* and 21 from *El Tiempo*. Because the second coder is a native Spanish speaker, language was not a barrier for her understanding of articles retrieved from *El Tiempo*. I followed researchers' advice to test between 10% and 25% of the body of content (Wimmer and Dominick, 2003), thus the second coder coded 11.5% of the articles. Moreover I used Scott's Pi (Scott, 1995) reliability test to evaluate intercoder reliability. The overall intercoder agreement was 84%; the lowest agreement was in the secondary region (61.5%) and secondary figure (69.2%) variables. The rationale behind such low scores is mentioned in the limitations section.

The highest degree of agreement (96.1%) was obtained in the primary region, followed by the frame device (92.3%) and the solution frames (92.3%). High scores of accord were also obtained for the nature frame (88.46%). It is worth mentioning that one of the reasons why there was a higher degree of agreement in frame device, nature frames, glyphosate frame and solution frame variables, was to have an option for multiple codes that described one variable. In other words, even if the second coder and I disagreed on the specific codes chosen for the nature or the solution variables, having a multiple code option produced agreement in the end. Despite the fact that there was a strong agreement in the use of glyphosate (88.5%) and solution frames (92.3%), the score hid the complexity of these

subjects. One of the biggest challenges in coding these two variables was to balance the contradictory information provided in the articles. For example, even though the use of glyphosate was allegedly causing health and environmental harm, politicians kept defending its use saying that it was safe and efficient.¹⁰ Similarly, whenever a political figure suggested that they needed more information about chemical eradication, he or she would add that in the meantime they would continue its use.¹¹ In articles where this was the case, the second coder saw glyphosate framed as efficient because political figures encouraged its use. On the other hand, I saw the use of glyphosate framed as needing more research.

Limitations

As it often happens in international comparative research this study was limited by its sample and the publications that were chosen to be evaluated. There was a ratio of 7 to 1 articles from *El Tiempo* to those found in the *New York Times*. The size discrepancy between the two newspapers may have caused a superficial comparison of the themes. Also, the search terms used to retrieve articles from each publication were different since the Lexis-Nexis software did not recognize the term “glyphosate” in its data base. This problem decreased the number of articles that were retrieved. Maybe more articles could be obtained from the *New York Times* if many different search terms were used, but to make parallel comparisons I would have to use those same terms and search articles in *El Tiempo* and the quantity of articles would not be manageable.

As mentioned in the methods chapter, there was disagreement between the second coder and myself about the secondary figure and region categories. Three explanations account for this disagreement. First, despite the fact that areas own by indigenous communities and national parks are part of the national territory, I coded them as “other”

¹⁰ Intensificaremos las fumigaciones. (2001, September 1). *El Tiempo*, pp. 1, 3

¹¹ Fumigación en la cuerda floja. (2003, June 27). *El Tiempo*, pp.1, 2.

instead of “Colombia” due to their special standing. However the second coder placed them under the “Colombia” region code. These territories should be differentiated from the rest of the land because they are not politically controlled by the central government. Another similar type of area is the distension zones, terrains where rebel groups set up camps to meet with government and international representatives and to conduct peace negotiations. The other justification for the lack of agreement in the secondary region is that whereas the primary and secondary figures were located in a certain country, these individuals could be quoted when they were talking about locations other than their own. As a consequence, two locations were often mentioned a similar number of times, making it difficult to choose the secondary region. Finally, several articles mention more than four regions the same number of times, consequently, it was hard to choose one of them above the others.

A similar logic accounts for disagreement in the secondary figure variable. Reporters make an equal number of references to many figures that are mentioned in a secondary level. This was especially common for the Colombian and the United States governments. Another problem in choosing secondary figures is confusion about organizations’ and institutions’ origins. Coders could make mistakes by believing non-profit organizations to be part of the government or gubernatorial institutions to be non-profit organizations because the distinction is not always clearly presented in the articles.

In addition to the limitations mentioned above, this study also produced a large percentage in the category Other in primary region (20.9%), primary figure (21.3%), and glyphosate (17.3%) variables. These high percentages indicate that I did not create as many categories for the variables mentioned above. Researchers interested in the same topic need to add natives’ lands, distension zones and national parks under the primary region variable. Similarly, environmental nonprofit organizations, natural science specialist and international

organizations need to be added in the primary figures. Finally, in the glyphosate representation variable, researchers need to include a Safe variable since this was a common frame. Finally the statistical program used to analyze the data contains a number of obstacles, especially for first time users. One is that it is impossible for users to consult with tech support while the program is running. In addition, the output produced by the statistical procedure is very rich. In most studies, not all of the data and correlations that are obtained can be analyzed.

CHAPTER 3

Results

For a long time I have been interested in content differences between national and international news coverage, as well as concerned about environmental problems. For these reasons, I decided to conduct a quantitative content analysis of an environmental problem and to evaluate the frames depicted in *El Tiempo* and the *New York Times*. I chose the 15-year time period because I wanted to learn more about the origin of the debate of the use of glyphosate to eradicate illegal crops and how it evolved. The total number of articles published in *El Tiempo* from January 1, 1991 to December 31, 2006 was 219. The total number of articles published in the *New York Times* in the same time period was 34. Furthermore, the average number of articles published per year by *El Tiempo* in the period mentioned above was 14, and the average number of articles published per year by the *New York Times* in the same time was two.

Table 1

Articles on glyphosate from El Tiempo and the New York Times (January 1, 1991 to December 31, 2005)

Year	<i>El Tiempo</i>		<i>New York Times</i>	
1991	3	(1.4%)	0	(0%)
1992	14	(6.4%)	1	(2.9%)
1993	5	(2.3%)	0	(0%)
1994	12	(5.4%)	1	(2.9%)
1995	14	(6.4%)	1	(2.9%)
1996	12	(5.4%)	2	(5.9%)
1997	11	(5%)	2	(5.9%)
1998	6	(2.7%)	2	(5.9%)
1999	4	(1.8%)	1	(2.9%)
2000	7	(3.2%)	2	(5.9%)
2001	39	(17.7%)	11	(32.3%)
2002	14	(6.4%)	4	(11.8%)
2003	34	(15.9%)	0	(0%)
2004	13	(5.9%)	1	(2.9%)
2005	13	(5.9%)	3	(8.8%)
2006	18	(7.7%)	3	(8.8%)
Total	219	100%	34	100%

As seen in Table 1, few articles on glyphosate were found in the first year of the studied period in *El Tiempo* (1.4%) and in the *New York Times* (0%). In 1991, the discussion among public figures about the use of glyphosate to eradicate illegal crops in Colombia was just beginning, hence the low number of articles produced about the subject. Table 1 also depicts six periods in which the frequency of the articles stand out, because the quantity of published articles in those years does not follow the average frequencies mentioned before. The years with the highest number of articles in *El Tiempo* were 2001 (17.7%) and 2003 (15.9%). In the *New York Times*, the highest frequencies occurred in 2001 (32.3%) and 2002 (11.8%). Equally notable are the periods with the lowest article incidence, in *El Tiempo*,

1993(2.3%), 1998 (2.7%), 1999 (1.8%) and 2000 (3.2%); in the *New York Times* 1993 (0%) and 2003(0%). The major discrepancy between the two newspapers occurred in 2003 and will be discussed in the discussion chapter.

Table 2

Primary region mentioned by El Tiempo and the New York Times

	<i>El Tiempo</i>	<i>New York Times</i>	Total
Colombia	125 (57.1%)	19 (55.9%)	144 (56.9%)
Putumayo	22 (10%)	3 (8.8%)	25 (9.9%)
Guaviare	13 (5.9%)	2 (5.9%)	15 (5.9%)
Sierra Nevada	8 (3.6%)	1 (2.9%)	9 (3.5%)
U.S.	5 (2.3%)	2 (5.9%)	7 (2.8%)
Other	46 (21%)	7 (20.6%)	5 (2%)
Total	219 (100%)	34 (100%)	253 (100%)

Because they were often mentioned in the articles, the variables chosen for the primary region category included two Colombian states (Guaviare and Putumayo) and Sierra Nevada, which is a well known national park in Colombia. Table 2 shows that both publications follow a similar pattern regarding their mentions of primary regions. *El Tiempo* and the *New York Times* portray Colombia (the entire country) as the primary region with the highest frequency. In *El Tiempo*, such frequency is 57.1%, and in the *New York Times* it is 55.9%. The Other category, which includes national parks, lands owned by indigenous communities, distension zones and two other states that experienced illegal crop production growth (Nariño and Caquetá), also had a high frequency in *El Tiempo* (21%) and in the *New York Times* (20.6%) and will be analyzed in the discussion chapter.

Table 3

Glyphosate stakeholders in Colombia in El Tiempo and the New York Times

	<i>El Tiempo</i>	<i>New York Times</i>	Total
Colombian Government	69 (31.5%)	9 (26.5%)	78 (31%)
Other Figures	50 (22.8%)	4 (11.8%)	54 (21.3%)
U.S. Government	40 (18.3%)	11 (32.3%)	51 (20.1%)
Colombian Army	24 (10.9%)	3 (8.8%)	27 (10.7%)
Farmers	15 (6.8%)	2 (5.9%)	17 (6.7%)
Local Residents	9 (4.1%)	2 (5.9%)	11 (4.3%)
Indigenous Communities	9 (4.1%)	0 (0%)	9 (3.5%)
Indigenous Communities	9 (4.1%)	0 (0%)	9 (3.5%)
Militias	1 (0.4%)	2 (5.9%)	3 (1.2%)
Drug Traffickers	2 (0.9%)	1 (2.9%)	3 (1.2%)
Total	219 (100%)	34 (100%)	253 (100%)

Table 3 shows that while *El Tiempo* most frequently depicted the Colombian government (31.4%) as primary stakeholder; the *New York Times* most frequently depicted the U.S. government (32.3%). This can be partly explained by taking into account that each newspaper will be more likely to mention its country's government due to their readers' interests. These variables were further analyzed in the discussion chapter. The Other Figures category for stakeholders had a high frequency in both publications as well. The incidence in *El Tiempo* was 22.8% and in the *New York Times* 11.8%. Other Figures include non-government organizations and environmental experts who contributed to the debate. Another group represented by the Other Figures category is *raspachines*.¹² These people milk the narcotic substances from the coca and poppy plants and make the paste that is sold to drug

¹² Restrepo, O. (1996, August 26). Ellos solo creen en la coca. *El Tiempo*, p. A9

dealers. In addition to politicians, high ranking members of the Colombian army are often mentioned by *El Tiempo* (10.9%) and the *New York Times* (8.8%). The numerous references to members of the Colombian army are not surprising because they are responsible for insuring security in isolated regions of Colombia. The more funds the rebels obtain through drug trafficking, then the harder and the more expensive it becomes for the Colombian army to control and defend the national territory.¹³ The U.S. Army was the category with the lowest incidence in both publications (0%), which denotes the small influence of the U.S. army within Colombia until now. Farmers are regularly mentioned as well in *El Tiempo* (6.8%) and in the *New York Times* (5.9%) because they account for many people in Colombia including *campesinos*, who are stereotyped as illiterate people who do not own any land. *Colonos* are traveling men and families who look for safe locations to grow or collect a profitable agricultural product in order to survive. Because indigenous people also grow illegal crops, they are also affected to some extent by chemical eradication. Despite their role in illegal crop production, and because they lack the power to stop aerial spraying in their lands, indigenous groups were seldom represented as primary stakeholders by *El Tiempo* (4.1%), and never by the *New York Times* (0%). Even though militias and rebel groups were mentioned in several articles, they were rarely mentioned enough to be considered primary stakeholders by *El Tiempo* (0.4%) or the *New York Times* (5.9%). Drug traffickers have the lowest frequency in *El Tiempo* (0.9%) and in the *New York Times* (2.9%). This common trait is surprising since drug traffickers are the masterminds behind illegal drug production and narcotics traffic. In Colombia, reporters are often threatened when they investigate themes associated with illegal drug production and wealth, which explains to some extent the lack of discussion of drug traffickers. I can only speculate that investigating illegal drugs lords is

¹³ Narcoguerrilla amenaza la frontera con Panamá. (1993, July 24). *El Tiempo*, p. A8.

dangerous and difficult for reporters in the *New York Times*, not only because of the distance but also because of the lack of sources.

Table 4

Frame devices used in El Tiempo and in the New York Times

	<i>El Tiempo</i>	<i>New York Times</i>	Total
Depiction	95 (43.4%)	19 (55.9%)	114 (45%)
Multiple frame devices	96 (43.8%)	10 (29.4%)	106 (41.9%)
No frame device	17 (7.8%)	2 (5.9%)	19 (7.5%)
Catch phrase	5 (2.3%)	1 (2.9%)	6 (2.4%)
Metaphor	3 (1.4%)	2 (5.9%)	5 (2%)
Exemplar	3 (1.4%)	0 (0%)	3 (1.2%)
Total	219 (100%)	34 (100%)	253 (100%)

Table 4 illustrates that the most common frame device in *El Tiempo* (43.4%) and in the *New York Times* (55.9%) were Depictions. Examples of Depictions are vivid descriptions that are often composed with ciphers or quotes “*usted sabe que nosotros somos campesinos y en San Antonio a usted no le dan trabajo o si le dan, le pagan a uno 1.500 pesos. Por eso me vine pa la cordillera, porque me iban a pagar hasta diez mil pesos por día*”. You know we are peasants and in San Antonio nobody employs you, but if they give you a job, they pay 1,500 pesos (0.50 cents). That’s why I came to the mountain, because someone told me that I would make up to ten thousand pesos (5 dollars) per day. “*Lo que haríamos con doscientos o 250 hombres en 15 días, lo hace un helicóptero con cinco o diez hombres*. What two hundred or 250 men can do, can be accomplished with one helicopter with five or ten men.¹⁴ While depictions of the production of illegal crops in *El Tiempo* were often negative, catch phrases (expressions that are spontaneously popularized after a critical amount of widespread

¹⁴ Cultivaba amapola porque me pagaban un mejor jornal. (1992, January 24). *El Tiempo*, p. A3.

repeated usage in everyday conversation) in *El Tiempo* (2.3%) portrayed the new vocabulary created throughout the history of illegal crop production. For example, as drug trafficking introduced itself more and more into Colombians' life, its influence became more evident, and terms such as *narcoviolenencia* and *narcoterrorism* were coined.¹⁵ In both publications, metaphors and exemplars, account for the lowest frequencies. Metaphors in *El Tiempo* (1.4%) are often Colombian expressions related to someone's attitude or behavior e.g. *Puerto Asís, la orilla Blanca del Putumayo*, Puerto Asís, Putumayo's white shore (referring to locals' coca crops).¹⁶ The only metaphor describing the environmental situation was comparing nature to a sick patient. In this case, illegal crop production and eradication were described as an illness that is destroying the environment. "*Los efectos de la siembra de amapola [...] se traduce en el desequilibrio ecológico, la pérdida de la biodiversidad, la disminución de la cobertura forestal y la extinción de especies endémicas de flora y fauna. Así mismo, provoca erosión la contaminación y agotamiento de las fuentes de agua y de los suelos*" -The effects of growing poppy crops translate in the ecological disequilibrium, the loss of biodiversity, diminution of forestry and flora and fauna endemic species' extinction. Similarly, the contamination produces erosion and extinction of water and soil sources¹⁷.

Similarly, there were few Exemplars in *El Tiempo* (1.4%) and the *New York Times* (0%). However in articles with more than one frame device, exemplars are regularly depicted in both publications. For example, politicians pointed out that glyphosate is used as an herbicide around the globe, and that chemical eradication was successful in several countries including Guatemala and Mexico.¹⁸ Nonetheless it is also important to note that the small number of exemplars could be the result of the low rate of success or existence of other

¹⁵ Narcocultivos: uso medicinal. (1999, April 5). *El Tiempo*, p. A7.

¹⁶ Camacho, N. (1994, November 26). Puerto Asís, la orilla blanca del Putumayo. *El Tiempo*, p. B1.

¹⁷ Cubides, A. (1993, July 18). Flor que maldice al medio ambiente. *El Tiempo*, p. C11.

¹⁸ Rubio, M. (1992, January 23). Urge empleo de glifosato: Roza. *El Tiempo*, pp. A1, A9.

instances when glyphosate was used to destroy illegal crops. The last category that stands out is Multiple Frame Devices, which frequency was higher in *El Tiempo* (43.8%) than in the New York Times (29.4%). I attribute this disparity to writing style differences rooted in each journalistic approach. While Spanish writing is more circuitous, English writing is more objective and straight.

Table 5

Nature Frames in El Tiempo and in the New York Times

	<i>El Tiempo</i>	<i>New York Times</i>	Total
No mention of nature/ natural resources	110 (50.2%)	20 (58.9%)	130 (51.4%)
In danger	29 (13.2%)	5 (14.7%)	34 (13.4)
Victim	23 (10.5%)	1 (2.9%)	24 (9.5%)
Multiple nature frames	20 (9.1%)	2 (5.9%)	22 (8.7%)
Resource	15 (6.8%)	4 (11.8%)	19 (7.5%)
Other	11 (5%)	1 (2.9%)	12 (12%)
Sick patient	5 (2.3%)	1 (2.9%)	6 (2.4%)
Asset	5 (2.3%)	0 (0%)	5 (2%)
Problem	1 (0.4%)	0 (0%)	1 (0.4%)
Total	219 (100%)	34 (100%)	253 (100%)

Table 5 shows that even though natural resources are directly affected by the production and eradication of illegal crops in Colombia, they were not always mentioned by either *El Tiempo* (50.2%) or the *New York Times* (58.9%). Nature is also often framed as “in danger” by *El Tiempo* (13.2%) and the *New York times* (14.7%). The most obvious circumstance in which nature was framed as “in danger” was when Colombian government representatives such as the attorney general or the environmental minister declared that the

use of chemical herbicides could produce damaging results.¹⁹ On the other hand, whenever a primary and secondary figure made references to nature, illegal crop production (not eradication) was blamed for most of the destruction of the environment.²⁰ The reason for this blame is that before farmers can begin to grow illegal crops they have to clear a zone, therefore destroying primary forests. Furthermore, to make coca and heroin paste, farmers erect rudimentary laboratories near water zones, which end up polluted after a short use. As a result, the environment is more often described in *El Tiempo* (10.5%) as a victim of illegal crop production and less as a victim of illegal crop eradication. Finally, when nature is described as valuable and important to preserve by *El Tiempo* (2.3%), reporters never explain the consequences of destroying these natural resources or why national parks are important to conserve. As opposed to *El Tiempo* (10.5%), the *New York Times* almost never addresses Colombian natural resources as a victim (2.9%). This evasion makes sense since the U. S. government's interest is to encourage chemical eradication and U.S. public concern about natural resources' destruction might jeopardize that goal.

¹⁹ Minambiente, con licencia para oponerse. (1997, July 20). *El Tiempo*, p. A3

²⁰ Amapoleros, la tercera guerra. (1991, December 30). *El Tiempo*, p. B22.

Table 6

Glyphosate Frames in El Tiempo and in the New York Times

	El Tiempo	New York Times	Total
Multiple glyphosate frames	55 (25%)	16 (47%)	71 (27.9)
Other glyphosate frames	44 (20%)	0 (0%)	44 (17.3%)
Not efficient	33 (15%)	4 (11.85)	37 (14.6%)
Cause of Conflict	21 (10%)	3 (8.8%)	24 (9.8%)
Efficient	9 (4.1%)	1 (2.9%)	10 (40%)
Environmental destruction	11 (5%)	1 (2.9%)	12 (4.7%)
Colombian government duty	9 (4.1%)	1 (2.9%)	10 (3.9%)
Health risks	7 (3.2%)	2 (5.9%)	9 (3.5%)
Social problem	6 (2.7%)	1 (2.9%)	7 (2.7%)
Less harmful than growing drugs	6 (2.7%)	0 (0%)	6 (2.4%)
Economical drawback	6 (2.7%)	0 (0%)	6 (2.4%)
Guarantees security in the region	4 (11.4%)	1 (2.9%)	5 (2%)
Very dangerous	0 (0%)	2 (5.9%)	2 (0.8%)
Economical advantage	0 (0%)	0 (0%)	0 (0%)
Total	219 (100%)	34 (100%)	253 (100%)

Using glyphosate to eradicate illegal crops in Colombia had multiple frames often within the same article. Table 6 shows that while this was the most frequently found category in *El Tiempo* (25%) and in the *New York Times* (47%), the first one used it noticeably more often than the later. I also found that frames in this category are often contradictory. The most commonly paired frames describing the use of glyphosate to eradicate illegal crops are Environmental Destruction and Health Risks associated with it.²¹ In addition to the glyphosate frame variables illustrated in this category, *El Tiempo* often framed glyphosate as safe which explain the noticeable frequency of the Other category in this publication (20%). In several articles in *El Tiempo* Colombian and U. S. government representatives often mentioned that glyphosate is used as an herbicide to protect legal crops, and that this use is

²¹ Cruzada por el parque natural Catatumbo-Barí. (2005, May 26). *El Tiempo*, p. 1.

never questioned.²² They also state that glyphosate is also used to destroy the illegal crops in other countries as well and negative consequences are not mentioned.²³ In other words, glyphosate is often framed as safe. Another high incidence occurred in the Not Efficient category. Both *El Tiempo* (15%) and the *New York Times* (11.8%) mention problems such as the shifting around of illegal crops, that glyphosate is washed away when it rains and that farmers apply a sticky sugar water substance to illegal crops making them impermeable to glyphosate and therefore not harmed.²⁴ The use of glyphosate was never framed as an economical advantage either by *El Tiempo* (0%) or the *New York Times* (0%). Other low incidences in *El Tiempo* include framing the use of glyphosate as an economic advantage (0%) or as very dangerous (0%). Like *El Tiempo*, the *New York Times* never framed the use of glyphosate as an economical advantage (0%), but in contrast with *El Tiempo*, the *New York Times* never framed glyphosate as an economical drawback (0%) or less harmful than growing drugs (0%).

²² Cubillos, C. (1992, February 3). Glifosato: cara y sello. *El Tiempo*, p. C1, C2.

²³ Rubio, M. (1992, January 23). Urge empleo de glifosato: Roza. *El Tiempo*, pp. A1, A9.

²⁴ Bedoya, J. (2004, March 21). Los cristalizadores de las FARC. *El Tiempo*, pp. 1, 4.

Table 7

Solution Frames in El Tiempo and the New York Times

	El Tiempo	New York Times	Total
No solution is proposed	67 (30.6%)	10 (29.4%)	77 (30.4%)
Chemical eradication	41 (18.7%)	5 (14.7%)	46 (18.2%)
Multiple solutions	25 (11.4%)	5 (14.7%)	30 (11.8%)
Increase support for local governments	17 (7.8%)	3 (8.8%)	20 (7.9%)
More research	17 (7.8%)	1 (2.9%)	18 (7.1%)
Alternative solutions	15 (6.8%)	2 (5.9%)	17 (6.7%)
Manual eradication	12 (5.5%)	2 (5.9%)	14 (5.5%)
International aid	10 (4.6%)	2 (5.9%)	12 (4.7%)
Other solutions	5 (2.3%)	1 (2.9%)	6 (2.4%)
More control at frontiers	3 (1.4%)	1 (2.9%)	4 (1.6%)
New government policies	3 (1.4%)	0 (0%)	3 (1.2%)
Improve Colombian army	1 (0.4%)	1 (2.9)	2 (0.8%)
Drug legalization	1 (0.4%)	0 (0%)	1 (0.4%)
Seize acetone, cement and gasoline	0 (0%)	1 (2.9%)	1 (0.4%)
Go harder on drug traffickers	1 (0.4%)	0 (0%)	1 (0.4%)
Agrarian reform	1 (0.4%)	0 (0%)	1 (0.4%)
Total	219 (100%)	34 (100%)	253 (100%)

Most of the articles from *El Tiempo* and the *New York Times* depict the problems associated with the use of glyphosate to eradicate illegal crops in Colombia, but often refrain from suggesting a solution. The lack of a solution is depicted in Table 7 with the highest incidence in *El Tiempo* (30.6%) and in the *New York Times* (29.4%). This overlook is the result of the complexity of illegal crop production in Colombia. Whereas the growth and production of illegal crops is mostly framed as unsolvable, both *El Tiempo* (18.7%) and the *New York Times* (14.7%) frame chemical eradication as the best solution. The high incidence could be attributed to the United States and the Colombian governments' particular interest in continuing chemical eradication. On the one hand the United States' government approach

to fight narcotics consumption in the country is by reducing its production elsewhere.²⁵ On the other hand, the Colombian government knows that by reducing illegal crop profit, the militias' withhold in the land will weaken.

²⁵ Tokatlian, J. (1992, August 9). Enfrentar al enemigo o cederle terreno. *El Tiempo*, p. B2.

CHAPTER 4

Discussion

The findings of this study show a number of shortcomings as well as content traits shared by both publications. In this chapter, the findings will be divided into those found in the foreground and those found in the background of the texts analyzed from *El Tiempo* and the *New York Times*. The reason behind this partition is to illustrate the importance, or the lack of thereof, that is given to different topics by *El Tiempo* and the *New York Times*. Before analyzing such topics, however, I would like to make reference once again to the disparity of articles in *El Tiempo* and the *New York Times* about the use of glyphosate in Colombia to eradicate illegal crops. The *New York Times*' slight coverage of this environmental problem is worrisome for the very simple reason that it prevents U. S. citizens from becoming aware of the amount of money that is taken from their taxes and invested in the futile war against drugs in Colombia. The most noticeable frequency disparity is exposed in Table 1 in the year 2003. While *El Tiempo* has the second highest number of articles about the use of glyphosate in this year, the *New York Times* published no article in 2003. This is an important discovery because it depicts opposite interests by each publication while covering the environmental problem. Whereas *El Tiempo* displays the use of glyphosate within a context of constant debate (through the use of different frames, for example the use of glyphosate as ineffective or as an environmentally necessary evil), the *New York Times* disengages from the debate and by ignoring the environmental problem during this year, the *New York Times* frames this issue as trivial. This omission by the *New York Times* could be justified if the topics discussed in *El Tiempo* were only of national interest, but three factors disprove this

possibility. In 2003 the UN declared several environmental concerns about the use of glyphosate in Colombia to eradicate illegal crops,²⁶ the Bush administration granted 700 million dollars to continue the war against drugs. The monetary aid was invested in Colombia army's improvement (45%) and alternative development plans (21%).²⁷ Lastly, the United States Senate debated the use of glyphosate to eradicate illegal crops in Colombian national parks.²⁸

Whereas the frequency disparity could be taken as an omission by the *New York Times*, it is also noticeable that both publications failed to provide a thorough investigation of the environmental threats associated with glyphosate. Even though *El Tiempo* and the *New York Times* provide a balanced description of the advantages and troubles associated with the use of glyphosate in the foreground, it is only in the background and in a minuscule manner that a reader may find references to the obscurity behind glyphosate's chemical formula that was used to eradicate illegal crops in Colombia. Similarly, indications to chemical herbicides' dormant effects are nonexistent in both publications. At this point, it is important to add that the use of glyphosate in the United States is different from its use in Colombia. In the United States the Environment Protection Agency (EPA) regulates the use of chemical herbicides (Toxic Substances control Act). "The Toxic Substances Control Act (TSCA) of 1976 was enacted by Congress to give EPA the ability to track the 75,000 industrial chemicals currently produced or imported into the United States. EPA repeatedly screens these chemicals and can require reporting or testing of those that may pose an environmental or human-health hazard".²⁹ (www.epa.com). In Colombia however, the Natural Resources Ministry does not track the use of glyphosate to eradicate illegal crops in Colombia. Another

²⁶ ONU, inquieta por fumigaciones tóxicas. (2003, April 7). *El Tiempo*, p. 23

²⁷ Maseri, S. (2003, December 8). Listos los 700 millones de dólares de los Estados Unidos. *El Tiempo*, pp. 1, 2.

²⁸ Maseri, S. (2003, November 16). Senado de E. U., contra fumigación en parques. *El Tiempo*, pp. 1, 6.

²⁹ Environmental Protection Agency web document: <http://www.epa.gov/> Retrieved June 6, 2007

difference between the use of Roundup in Colombia and in the United States is that in the latter, dormant health effects associated with the application of chemical herbicides have been exposed in the U.S. media.³⁰

In Table 2 it is evident that *El Tiempo* and the *New York Times* present Colombia as the region mentioned most often. Framing Colombia as the most important region in the problem of drug production throws corruption and the lack of law enforcement at numerous countries' borders out of the public discussion. It also discards the option of addressing issues of drug consumption and drug in the United States, so that funds are more heavily invested in rehabilitation programs as well as more educational plans and awareness campaigns about drug use.

Table 2 also illustrates a high score for the Other variable. National parks, natives' lands and distension zones were once protected from glyphosate due to their political standing, but as rebel groups, farmers, and militia groups increased the number of illegal crops in the pristine territories, the government conducted chemical eradication in the secluded lands as well. Although Sierra Nevada, one of the most popular national parks in Colombia, received little attention by *El Tiempo* (3.6%) and the *New York Times* (2.9%), references to other national parks account for the high score of the Other variable. Putumayo and Guaviare, which are southern states in Colombia, receive more attention than other Colombian states in *El Tiempo* (15.9%) and in the *New York Times* (14.7%), most likely because most illegal crops are grown in these regions, and also, because they are isolated and neglected by the Colombian government and they are also controlled by the guerrilla and militia groups.³¹ For these reasons, the southern territories in Colombia are priceless targets

³⁰ Collins, K. (2007, May 9). Ag Mart denies charges. *News and Observer*, p. A1.

³¹ Guerrilla, culpable de paro en Putumayo. (1995, January 3). *El Tiempo*, pp. A 1, 12.

for chemical eradication. By spraying these states, the government is cutting critical revenue collected by rebel and militia groups, hence weakening their hold on the land as well.

As mentioned earlier, the Colombian and U.S. governments are frequently mentioned in the articles. One of the reasons for this may be because the Colombian president and other government representatives make the final decisions. However, because the eradication methods and alternative plans developed in Colombia are financed by the United States, its government was frequently mentioned as well. Articles in *El Tiempo* and in the *New York Times* show that the United States government not only demanded the destruction of all illegal crops, but it also pressured the Colombian government to experiment with more efficient herbicides.³² Another characteristic openly exposed in the analyzed texts, and illustrated in Table 3, is that while the Colombian and United States governments are described as the most influential stakeholders in the environmental problem, the relationship is far from equal. *El Tiempo* and the *New York Times* place the United States within a bully-like frame. Phrases such as “under pressure”³³ may hint to readers that the Colombian government gives in to the demands from the United States, but it is not so palpable why. Furthermore, different components of the illegal drug business could be associated with Colombian government’s need and interest to be considered an ally in the war against drugs. Some of these elements include military funding, subduing militia groups (the Colombian government has faced internal opposition for 40 years), restraining drug traffickers and commerce and trade with the United States. None of the articles that were analyzed deal with any of these topics in depth.

Besides the power inequity openly displayed between the Colombian and U.S. governments, there is another political struggle depicted in the background in articles from

³² E.U. urge reiniciar fumigaciones. (1997, March 6). *El Tiempo*, p. A 8.

³³ Drug crop reduction in Colombia falters. (1006, August 28). *New York Times*, p. A8

both publications. This conflict is the one between the central and the local authorities in Colombia. The importance of local governments is illustrated in Table 3 under the category Other Figures which shows that both publications framed the Colombian government as the most important stakeholder in the environmental problem, followed by the United States, the character financing most of the chemical eradication that takes place in Colombia. Although the central government makes the final decisions related to aerial spraying of glyphosate, local authorities are presented as being more aware and concerned about the problems associated with narcotowns and illegal crop production as well as demanding more realistic measures to deal with the problem. Not only do *El Tiempo* and the *New York Times* frame isolated towns as vulnerable and neglected,³⁴ but they also frame the central government as distant and unreliable. Despite being able to portray an important problem that entails the lack of communication, financial investment and interest in remote regions in Colombia, their coverage of local problems is insufficient, especially since the local residents' decision to grow illegal crops is a direct outcome of this situation.

To continue the discussion of overt and covert topics, I was expecting to find numerous frames to describe nature, such as a resource, a victim or as an asset, but Table 5 illustrates that nature is not mentioned in the majority of the articles in *El Tiempo* and the *New York Times*. This finding was unforeseen and most surprising because the issue I was analyzing is directly related to nature itself. The lack of information about nature as an entity of its own obscures the damage caused by illegal crop production and eradication. Ignoring information about the value of Colombian natural resources, readers might become apathetic towards the environmental disaster. Whenever nature is mentioned in the background, it is done by providing the same superficial and repetitive picture, for example, a typical mention

³⁴ Forero, J. (2001, May 6). New Challenge to the Bogotá leadership. *New York Times*, p. 10

of nature is: “*el daño ecológico que hacen los narcos depredando el piedemonte andino para sembrar amapola*” –drug dealers cause an ecological damage by destroying the Andean piedmont to grow poppy plants”.³⁵ The author of this article does not expand on the meaning of Andean forests and why is it important to preserve them. This information is important for readers to be able to judge the extent of the damage that is being done to the environment. In addition to the lack of information about nature in articles in both newspapers, Table 5 also shows that while *El Tiempo* rarely described Colombian natural resources as an asset, none of the articles in the *New York Times* depicted the worth of Colombia’s natural resources. One explanation for this difference between both publications may be that information related to natural resources would be easier to obtain for Colombian reporters. Another result of the neglect is that the environmental cost of the “war against drugs” is obscured. In the same way that neglecting to mention nature could cultivate readers’ apathy toward this subject, failing to report Colombia’s natural resources value might produce the same consequence.

Regarding glyphosate frames, *El Tiempo* frames the use of glyphosate as “the best way,”³⁶ but the *New York Times* frames it as effective to succeed in the war against drugs.³⁷ These frames are always present in the foreground of the texts, but in the background, it is clear that the strategy is nothing but unsuccessful. Sentences like “despite fighting drug production for 20 years with eradication programs and billions of dollars, cocaine can be bought virtually in every city in the United States,” or “America is still snorting, smoking, injecting 240 tons a year,”³⁸ send a clear message: this strategy does not work. However, it seems that the reporters place so much information in the articles that the message mentioned

³⁵ Cañon, L. (1991, December 22). Sí, aquí si se hace heroína. *El Tiempo*, pp. A 1, 14.

³⁶ Orjuela, M. (1992, January 23). Urge empleo de glifosato: Rozo. *El Tiempo*, p. A9

³⁷ Schemo, D. (1996, August 5). Coca farmers in Colombia in revolt against government. *New York Times*, p. 6.

³⁸ Wren, C. (1997, March 4). The long white line: a special report, keeping cocaine resilient: low cost and high profit. *New York Times*, p. 1.

above might get lost. Furthermore, the writers fail to explain the economic advantage (for the drug dealers) in illegal crop production. Writers neglect to mention that illegal crop production takes place in sweatshops.³⁹ This means that there is a limitless supply of cheap labor, enormous profits for a few, and a base of addicted customers. Drug dealers make so much money that they can buy as many officials and as much land as they see fit. One could conclude that for drug dealers this is an almost perfect business.

³⁹ León, O. (1996, August 26). Ellos sólo creen en la coca. *El Tiempo*, p. A 9.

CHAPTER 5

Conclusion

In this chapter, I will provide a short summary of my thesis and answer the research questions I posed. To begin, I wanted to use my thesis to learn more about content elements of environmental news in print media. I have always been interested in the environment, not only as a resource but as an entity of its own. I believe humans' existence is deeply rooted within our interactions with nature and our ability to preserve it. Additionally, I believe mass media have the responsibility of informing and educating people about issues generally ignored around the globe, hence I found it important to analyze the information given by the media. Thus, I chose to evaluate the coverage of the use of glyphosate in Colombia because illegal crop production, as well as its eradication, is destroying natural resources that enrich global biodiversity, and also because it is bleeding Colombians dry.

For my project, I used quantitative content analysis because it allows researchers to assign communication content to different categories and analyze the data using statistical methods. I also followed Sheufele's observations (1999) and used frames not only in the metaphoric sense but also as story topics or issue positions. Furthermore, I analyzed the print media's depiction of the use of glyphosate in Colombia based on research conducted by Meisner (2004) and Michael Karlberg (1997). These studies analyzed representations of nature or the ways it is framed by different media. In her research, Meisner found that media offered the following contradictory concepts of nature: victim, problem, sick patient and resource. In addition to Meisner's oppositional representations of nature, in my research I found the following four contradictions:

- 1) The use of glyphosate and illegal crop production are destroying Colombia's natural resources, but nature seems to be safe from harm.
- 2) National Parks and indigenous lands are valuable resources, but they are fumigated as well.
- 3) Pesticides are safe to use in legal crops but may not be safe to destroy illegal crops.
- 4) There has been no major decline in drug production in the past 16 years, but the Colombian government, supported by the U.S. government, continues to use chemical eradication to destroy illegal crops.

These contradictions may have major repercussions. The first contradictions may confuse readers about the damage caused to natural resources because if the production and eradication of illegal crops destroy natural resources, but at the same time, nature is safe from harm, readers may conclude that the alleged damage is not as serious, or that the destruction is reasonable because some natural resources are safe. The second contradiction may confuse readers about the true environmental, cultural, and political value of national parks and indigenous lands because, although such value is recognized, they are not protected from glyphosate. The third contradiction may promote confusion regarding the safety of using glyphosate in any type of crop. Finally the continuous use of chemical eradication, despite its inefficacy, may create the notion that this method must be the only method to stop drug production.

As I mentioned in the introduction, Michael Karlberg who was also interested in media's portrayal of the environment found two mainframes, adversity and disaster. In adversity frames, environmental issues are presented as apparently unsolvable conflicts between opposed groups (Karlberg, 1997). These frames are constructed through dichotomy and dramatization of conflicts; dichotomy presents solutions of environmental problems as

mutually exclusive. Disaster narratives, subtract human fault from environmental disasters. Even though I did not find disaster narratives neither in *El Tiempo* nor in the *New York Times*, adversity frames were present throughout the 15 years of analyzed material in both publications. The environmental issue in this case is the destruction of nature as a result of illegal crop production and eradication. The opposed groups are the illegal crop growers and the illegal crop eradicators (Colombian government representatives). Each group's interests are presented as mutually exclusive because farmers survival depend on the revenue they receive from illegal crop production⁴⁰, and as long as this business is illegal in Colombia, the government will not stop fighting its production and commerce “*El gobierno no autoriza que los campesinos cultiven coca, y los campesinos cultivan coca, porque es lo único que les da para sobrevivir.*” –The [Colombian] government does not authorize farmers to grow coca, and farmers grow coca, because it's the only means to survive⁴¹.

Since I was interested in finding possible differences in content selection between *El Tiempo* and the *New York Times*, it was important to analyze the ways in which each publication framed the different issues and topics. I also wanted to see if my research corroborated past studies in which some framing tools prevailed more than others. With this objective I posed the following question: What are the most commonly observed framing devices used by the two countries' news papers?

The most often used framing devices were frequency and depictions. Some of the strongest depictions were offered through quotations. Personal testimonials offer the following advantages for reporters: they facilitate reader's identification with the subject; they illustrate opinions of professional and public figures, and quotations make articles more enjoyable to read. For instance, the situation in Colombia is so desperate and yet so

⁴⁰ La encrucijada de la coca. (1996, August 11). *El Tiempo*, p. B 1.

⁴¹ No al minifundiso del crimen: fiscal. (1994, December 17). *El Tiempo*, pp. A1, A3.

monotonous that U. S. and Colombian publications can afford to show some dark humor though citations. Farmers for example, are illustrated as bullied by everyone: “Guerrilla makes them [farmers] grow the illegal crops, the militias threaten them and murder them, and the government sprays them”.⁴² After reading all articles I still remember the quotes, which in my opinion, made the articles worth reading and gave the best description of what is going on.

In addition to quotes, frequency is another powerful framing mechanism because it continues to point the relevance of issues. Due to the fact that illegal crop production takes place in Colombia, it makes sense that *El Tiempo* published more articles about this subject than the *New York Times*; the ratio of articles was 7 to 1. Nevertheless the quantity difference is surprising because the United States is the principal consumer of narcotics and because it finances the majority of the eradication plans in Colombia, including the aerial spraying of glyphosate. As mentioned earlier, frame devices are not the only elements of framing analysis, it is also important to analyze how reporters make use of frames. In other words: are they providing comparisons or do they illustrate story topics and issue position?

The following are recurrent frames found in *El Tiempo* and the *New York Times*. To begin, illegal crop production is framed as the result of the central government neglect toward isolated regions in Colombia.⁴³ This frame is constructed by exposing these regions’ poverty levels and peasants’ desperation. The regions are also described as dependent on the illegal drug economy, since other agricultural products do not yield enough income to support families or communities. The lack of agro-business is also used to frame the lack of living alternatives. Furthermore, the local residents in these regions are framed as uneducated, poor and violent. Farmers’ difficulties were negatively exposed with the

⁴² Salazar, S. (1994, November 11). Van 33 ataques de guerrilla a aeronaves. *El Tiempo*, p. A1.

⁴³ Anti-drug campaign hits resistance in Colombia. (1994, December 26). *New York Times*, p. 6.

coverage of farmers' protests in the southern regions of Colombia. In the articles describing the protests, farmers violently rebel against the central government's decision to conduct aerial spraying of glyphosate. The articles add that authorities believe the protests were encouraged by the militia groups adding stigma to the demonstrators.⁴⁴ Once the protests came to an end, the southern regions were soon forgotten again and reporters seldom tracked the promises made by the central government.

Furthermore, revenue from illegal crop production is framed as evil because it does not produce any benefit for the local population. "Narcotowns"⁴⁵ are erected or resurrected from ghost towns and they become dependent on the price of the illegal crops. One could describe these towns as mirages because as good as they seem on the surface, they will disappear once the government eradicates nearby crops.

Similarly, farmers are framed as victims because not only do drug dealers exploit their poverty but they are harassed by the government. Farmers' lack of conviction to refrain from growing illegal crops is closely linked to their custom of using the land as a resource.⁴⁶ Therefore, their situation goes from the ironic to the amusing and from the amusing to the pitiful.⁴⁷ The personifications of those who grow illegal crops moves the glyphosate debate towards Colombia's social and agricultural problems. According to the press coverage, there are three possibilities for peasants to obtain an income. One, they can grow legal crops and bring them to larger cities which make production more expensive than profitable. Two, they can grow illegal crops and wait for drug traffickers or militia groups to come to the terrain and pay them more than they could get by growing any other agricultural product. And finally, they can use the subsidies or loans given by the government to grow alternative

⁴⁴ Guerrilla culpable de paro en Putumayo. (1995, January 3). *El Tiempo*, p. A 12.

⁴⁵ Narcocultivos: uso medicinal. (1999, April 4). *El Tiempo*, p. A 7.

⁴⁶ Cultivaba amapola porque me pagaban un mejor jornal. (1991, January 24). *El Tiempo*, p. A 3.

⁴⁷ Restrepo, O. (1996, August 26). Ellos solo creen en la coca. *El Tiempo*, p. A 9.

crops. The reporters fail, however, to make a more precise analysis of the financial outcome in each of these options, but in all descriptions peasants' hands are bound.

In *El Tiempo* and in the *New York Times*, militia groups are framed as illegal crops guards. The relation between drug dealers and each of the militias (guerrilla and paramilitary groups) is portrayed in several articles. Drug dealers pay guerrilla groups to guard their crops. This connection is important because it shows that the militias are benefiting from drugs and also that their role as sentinels not only produces violent encounters between different militia groups but it also produces violent actions against peasants and indigenous communities.⁴⁸ While *El Tiempo* and the *New York Times* increased the coverage of the covert business between drug dealers and militias, both publications produced a superficial and unfavorable coverage of nature, which frames it as nonexistent and is practically buried underneath the elements surrounding illegal crop production. There are more representations of the problems that cause illegal crop production, more representations of the growing number of illegal crops and more representations of glyphosate than allusions or references to the natural environment. Even when an article depicts natural resources as valuable, a reader who does not know much about the environment would only find national parks as valuable because there is little information that supports the need to preserve other zones. In addition to nature's invisibility, reporters take for granted that the reader understands notions related to the environment, for example that primary forests shelter numerous endemic organisms.

In the majority of articles in *El Tiempo*, glyphosate is framed as either inefficient or as a necessary evil. Two factors contribute to the representation of glyphosate as inefficient. First is the regular number of crops that need to be eradicated, which has not diminished. The

⁴⁸ La encrucijada de la coca. (1996, August 11). *El Tiempo*, p. B 1.

second factor is the drift problems associated with aerial spraying. The number of illegal crops that are destroyed is similar to the number of illegal crops that are grown elsewhere in Colombia; one of the commonly found assertions is that “cocaine increases”.⁴⁹ Similarly, aerial spraying benefits lose credibility when reporters illustrate factors that prevent its absorption, such as the rain and the drift of the chemical. With rain, it is very difficult for contractors to fly as low as required to spray illegal crops successfully, and in addition, the water washes the herbicide off the crops. Aerial spray campaigns involve tremendous drift, said Susan Cooper, staff ecologist at the National Coalition Against the Misuse of Pesticides in Washington, D.C. At most 15% of the glyphosate will reach the target acreage. Lots of off-site damage will occur that will not be seen or monitored.⁵⁰

Glyphosate is also presented as a necessary evil. It is framed as necessary when high ranking army members state that chemical eradication is the best eradication method because it saves money, time, and lives. Many articles depict how expensive it is to hire farmers to eradicate illegal crops;⁵¹ other articles depict safety concerns, including land mines and attacks by the rebels and other militias;⁵² and finally other articles concentrate on the time it takes to eradicate crops manually and the futility of the endeavor.⁵³ In addition to these justifications, the connection between rebels and militias and narcotics is another justification to eradicate illegal crops. Reporters provide readers with ciphers of the income received by such groups not only by guarding coca and poppy crops but also by trafficking it. As result, readers are left with no justification to continue manual eradication, and at the same time, they are bombarded with reasons to continue chemical eradication.

⁴⁹ Rebrote de coca puso a policía a solicitar ayuda a E.U. (2005, June 10). *El Tiempo*, p. 1, 2.

⁵⁰ Cultivaba amapola porque me pagaban un mejor jornal. (1992, January 24). *El Tiempo*, p. A 3.

⁵¹ Ortega, M. (1992, February 1). Cultivos de amapola, ahora fumigación con glifosato. *El Tiempo*, p. B 7.

⁵² Salazar, S. (1994, November 11). Van 33 ataques de guerrilla a aeronaves. *El Tiempo*, pp. A 1, 10.

⁵³ Tokatlian, J. (1992, August 9). Enfrentar al enemigo o cederle terreno. *El Tiempo*, p. B 2.

Additionally, glyphosate is also framed as evil because of negative health concerns, as well as doubts related to negative environmental consequences in the near future that are associated with its use. These fears are well rooted and are based on the following facts: To begin, the concentration level of the chemical used in Colombia is not disclosed for fear of other companies producing and stealing the chemical formula.⁵⁴ Without knowing exactly the components sprayed, scientists cannot calculate the damage that could befall on living organisms that come in contact with this chemical herbicide. In addition to the lack of information about the chemical formula used to eradicate illegal crops, a few articles mention that its concentration is much higher than the one used in the United States to destroy weeds.⁵⁵ Another explanation why glyphosate is framed as evil is because of its ability to spread out and contaminate legal crops and other living organisms including flora, fauna and humans.

The last frame that will be discussed is the one employed to represent environmental organizations and experts who are against the use of glyphosate to eradicate illegal crops in Colombia. These environmental figures are presented either as helping narcotics production or as incompetent. In *El Tiempo*, for example, environmental organizations and authorities who address the environmental concern of the use of glyphosate are portrayed by government officials and members of the army as drug dealers' allies. Several quotes state that environmental outcries are the perfect tool for the drug dealers' purpose to stop the government from continuing eradication and to create instability among residents⁵⁶. The framing of environmentalists as drug dealers' allies is supported by having numerous statements by the government and the army, asserting that glyphosate is a safe herbicide also used to destroy unwanted weeds in legal crops and that the chemical herbicide is only

⁵⁴ Marquis, C. (2001, July 11). U.S. law imperils Colombia coca spraying. *New York Times*, p. 10.

⁵⁵ Salazar, J. (1994, November 11). Van 33 ataques de guerrilla a aeronaves. *El Tiempo*, p. A 1.

⁵⁶ Más ejército al Putumayo. (1995, January 5). *El Tiempo*, p. A 1.

criticized when it is used on illegal crops. National Army General Jose Serrano says that the glyphosate is used in sugar cane and rice but it becomes a “scandal when it’s used to destroy illegal crops”.⁵⁷ With comments like this, readers may conclude that glyphosate is safe and that people opposing its use must be benefiting from illegal crop production. Similarly, in other articles in *El Tiempo*, grassroots movements that oppose spraying only seem to complain. When reporters quote leaders of these groups, they fail to describe their organizations or their role in the community. As a consequence, grassroots groups and environmental nonprofit organizations are given little credibility and are portrayed as small and powerless. It seems that reporters use the quotes mainly to include a different view of the problem in the story.

After analyzing different frames and framing devices used by both publications I also wanted to learn how each publication framed the funding given to Colombia to continue the war against drugs. The reason behind this inquiry was that a possible explanation to the apathy from U.S. citizens could be that they are ignorant not only of the amount of dollars that are invested in this war but also of its futility. Trying to shed some light on this issue I posed the following question: How is financial aid given to Colombia framed by each publication?

I found two frames that portray U.S. financial aid to Colombia in *El Tiempo* and in the *New York Times*. The first one is presenting this aid as the cohesive action of a bully that exerts pressure on the Colombian government, which in turn has to bend to the United States’ demands due to financial dependency “Under heavy pressure from the United States to adopt stringent anti-narcotics measures, the [Colombian] Government had pledged to wipe out

⁵⁷ Anti-drug campaign hits resistance in Colombia. (1994, December 6). New York Times, p. 6.

more than 100,000 acres of coca and opium poppies this year”⁵⁸. The second one is presenting aid as help given by a benefactor that is only trying to help Colombia in its war against drug production “With United States aid, Colombia is attempting to eradicate its burgeoning opium and coca leaf crops”⁵⁹. In either frame it is clear that without the U.S. funding, Colombia’s goal to bring to an end illegal crop production, would be doomed. Both publications make clear that the United States finances most of the eradication plans in Colombia. In *El Tiempo*, there are numerous references to the Colombian government attempt to fulfill U.S. requisites to be considered an ally in the war against drugs. Frequently the political and economic benefits are not written but implied.⁶⁰

While both publications make few allusions to alternative plans that are also sponsored by the United States, the majority of the articles state that most of the funds are invested in improving Colombia’s army. Also noticeable is that while in 1991 the main requisite to receive financial aid to eradicate illegal crops in Colombia mentioned by *El Tiempo* is to achieve a certain number of destroyed crops, at the end of 2006, both publications mentioned the increase of requisites that include environmental reports as well as evaluations of human rights violation.⁶¹

In addition to the interest in the different framing devices used by *El Tiempo* and the *New York Times*, I was also interested in changes in framing patterns through time that may be associated with political developments in Colombia or scientific findings about glyphosate. This led me to the next question: Can any changes in content patterns through the years be identified? As depicted in Table 1, there are evident changes in coverage of the environmental problem through variation in incidence and story topics as well as issue

⁵⁸ Drug crop reduction in Colombia falters. (1996, August 28). *New York Times*, p. 8.

⁵⁹ Brook, J. (1996, March 27). U.S. copters are target in Colombia. *New York Times*, p. 7.

⁶⁰ Fumigación cultivos ilícitos. (2001, April 17). *El Tiempo*, p. 1.

⁶¹ Sierra, L. (2006, March 23). Por qué apenas ahora? Se agotaron las otras dos batallas? *El Tiempo*, p. 2.

positions in *El Tiempo* and in the *New York Times*. The highest incidence of articles depicted in *El Tiempo* occurred in 2001 and 2003. The highest incidence of articles in the *New York Times* was in 2001. It can also be observed in Table 1 that both publications have the lowest rate of articles in 1993, 1998, 1999 and 2000. Each of these years carried a political and social baggage which decreased Colombia's focus on chemical eradication.

To begin with, in 2001 some of the articles published by the *New York Times* focus on the critical situation in the southern states of Colombia. Other themes depicted by the *New York Times* in 2001 include the displacement of illegal crops, the suspensions and restarting points of chemical eradication, and the requisites imposed by the United States to continue financial aid in Colombia. All these themes, which are related to a political, social and economical instability of Colombia, build up the frame of the use of glyphosate as futile rather than successful. In comparison to the *New York Times*, in 2001 *El Tiempo* published a number of articles illustrating criticism by several environmental organizations in the United States as well as U.S. congress representatives' opposition to continue chemical eradication.⁶² During this evaluation period, a Colombian law firm sued the government because it violated the right of farmers to live in a healthy environment, and because the environmental ministry of Colombia did not acquire a regulatory permit before using glyphosate. The use of glyphosate continued to be evaluated by different government bodies, including the United States Congress. The year 2001 shows the highest degree of disagreement about the use of glyphosate. During this period politicians as well as environmental experts were divided by their opinions about the use of glyphosate.

The lowest incidence of articles depicting chemical eradication took place in 1998, when the Colombian government was conducting peace negotiations with the rebel groups

⁶² Maseri, S. (2001, August 5). Política antidroga de E.U. está en veremos. *El Tiempo*, p. 1.

under the leadership of Colombian President Andres Pastrana. Most likely, the possibility of an agreement between the government and the rebels was too important compared to chemical eradication. Table 1 also depicts 1991 as a year with a low incidence of articles for both publications. In this year, the evidence collected by the United States and the Colombian governments made clear that even though Colombia tried, cocaine production continued to thrive. Because it seems that nobody disagreed or suggested another solution, reporters had no information to offer to the public and the environmental problem lost meaning. In 2000 novel information about a fungus that can act as a biological weapon that would destroy illegal crops produced some debate. However, scientists took a passive stance stating that the fungus could be both positive and negative. Soon enough the Colombian government decided against its use and once again the debate died.

Before finalizing the conclusion section I would like to discuss possible implications of this study's findings. As I mentioned earlier, I chose to study this environmental problem to provide some insight into readers' possible reactions associated with the information provided by *El Tiempo* and the *New York Times*. My biggest concerns are that nature's invisibility frame in both publications decreased people's awareness of the environmental problem and the inefficiency of chemical eradication of illegal crops. In addition, the lack of information that explains the importance of conserving natural resources pushes these subjects to the bottom of news stories and thus the audience may lose interest in this topic. Moreover, contradictory frames offered by both publications may produce confusion and even apathy in readers. Also, by not presenting alternative solutions to the use of chemical eradication and by offering no examples of farmers' successful trials to be independent of illegal crop production, readers would be less likely to engage in discussions about positive outcomes that could change current agricultural and economic policies in Colombia.

Most importantly, while reporters tell the public that glyphosate is used in legal crop production, and that it is used in other countries, they neglect to clarify that the formula used in Colombia to eradicate illegal crops is different from the formula used in legal crops. One can conclude that they are misleading readers. The newspapers also neglect to mention pesticides' latent secondary health and environmental effects. By disregarding these issues, they are encouraging Colombians to feel safe and are also suppressing the public's demand for more research and for an alternative solution to the environmental problems. Finally, *El Tiempo* continuously frames the environment as a victim of illegal crop production and less as a victim of chemical eradication. Such representation places farmers and indigenous communities in a negative light and moves the discussion away from the environmental arena into the security and the political one.

Contributions of the study and Further Research

My research is not the first of its kind. Other researchers have analyzed environmental conflict coverage as well as environmental depiction by the media. However, my research is the first to compare the coverage by two international newspapers from different countries about the use of glyphosate to eradicate illegal crops in Colombia. This contribution is important because it expands information in coverage of environment conflicts and frame use.

As I mentioned earlier, even though the Colombian government has used ineffectively glyphosate and other chemical herbicides for more than 16 years to eradicate illegal crops, no alternative solution has been evaluated and social and security-related issues have not improved. For this reason, it was important to analyze media coverage of the use of glyphosate in Colombia by both United States and Colombian newspapers. Readers' apathy can be explained, to some extent, by the way in which *El Tiempo* and the *New York Times*

have framed this environmental problem. I provide three reasons for this. Readers remain ignorant of the natural resources that are destroyed and the meaning of such destruction. The newspapers also offer contradictory information, which may confuse readers. This in turn supports Kate Soper's finding that mainstream media offer contradictory concepts of nature (Cox p. 176). Also by voicing the political and military opinion that pro-environment activists are benefiting drug dealers and not the environment, the newspapers stripe environmental organizations from the respect they deserve and the knowledge they hold. The possibility of diminishing such groups' significance in the Latin American public sphere should encourage further research about media coverage of green organizations and their representatives. Furthermore, I believe it is critical to make sure that environmental problems are being covered by the media as much as social, political, and health issues. With this purpose, research about environmental news coverage compared with other subjects is recommended as well. Moreover, it is also essential to find similarities and differences in environmental representation between all media outlets to find which one is the most effective in transmitting commendable information and use it to increase the public's knowledge about environmental topics.

Additionally, the study suggests a need for alternative solutions to the widespread use of drugs, such as drug legalization and monetary investment in drug use education programs, and detoxification clinics. Such research would shed light onto the message send by the media and their stakeholders' interests in these topics. Furthermore, it would be incredibly useful to find out the extent to which readers are informed about the use of glyphosate in Colombia. To obtain this information it would be necessary to conduct a survey, which would illustrate to some degree reader's interest in the topic. Another recommendation is to

conduct more research on frames influence on readers. If such influence is small, then frames offered to the public might not be as important as simply covering environmental topics.

Suggestions for Journalists

This research illustrates that *El Tiempo* largely neglects environmental organizations, when they are mentioned in an article, they are often represented in a negative light. This situation needs to change; Colombian reporters need to shed light on environmental organizations' importance in defending Colombians' interests. Similarly, the meager references to Colombia's natural resources by *El Tiempo* and the *New York Times* exemplify that reporters interested in environmental communication need to concentrate in the presentation of the environment with the purpose of improving the quality and the quantity of nature's coverage. By learning more about the coverage patterns and cycles and by finding out what triggers more coverage, we will be better equipped to correct misrepresentation and stereotypical representation of nature. Finally, I believe it would be effective to write two articles. The first one about my findings and the second one covering the lack of information about the chemical formula used to fumigate illegal crops in Colombia, the dormant effects of chemical herbicides, and post these articles on advocacy networks.

APPENDIX A: CODING PROTOCOL

I. Article number: Each news article is one unit of analysis. Editorials and opinion articles are not included in this study. Also articles published by *El Tiempo* owned newspapers in other cities will not be included.

II. Publication date

III. Placement

IV. Source: Indicates if the article is published in *El Tiempo* or in the *New York Times*.

V. Primary regions: Refers to the geographic area depicted In the text. The primary region will describe the area that is mostly mentioned in the article.

VI. Secondary region: The secondary region will be areas that are included as well but not as main locations.

VII. Primary figures: The subject that is mentioned most prominently in the article.

A. Colombian Government: Includes figures belonging to both the central and the local authorities. Ministries and agencies such as the INDERENA which represent branches of the Colombian government are included in this section as well.

B. United States Government: Any representative belonging to the government that is depicted in the article due to her/his role in decision making process. Congress representatives and ambassadors are included in this section.

C. Colombian Army: Includes members of the army identified as such or the army as a collective noun.

E. Farmers: Includes people who grow illegal, legal crops or both.

F. Rebel and Militia Groups: Includes references to FARC, ELN and AUC militias, and references to individual members.

G. Drug Traffickers: Includes people identified as such or drug traffickers as a collective noun

H. Indigenous people: Includes people identified as such or indigenous people as a collective noun.

I. Local Residents: Refers to people living in the mentioned primary region.

VIII. Secondary Figures: same list as primary figures (mutually exclusive categories).

IX. Frame Device: I chose these four categories since they identify common frame devices in narratives (Gamson and Modigliani, 1989).

A. Metaphor-- A direct comparison between two or more seemingly unrelated subjects.

B. Catch Phrase-- A phrase or expression that is spontaneously popularized after a critical amount of widespread repeated usage in everyday conversation.

C. Depiction-- A vivid description.

D. Exemplars (history)-- Situations that are worthy of imitations, good models.

E. Visual Images-- Will not be used since the content analysis only text.

X. Representations of Nature

XI. Representations of Fumigation with glyphosate

XII. Solutions

APPENDIX B: CODING SHEET

1. Article number: Begin numerically from 1. For example, the first article coded is labeled 1; the second article coded is 2 and so on until the last commercial is coded.

2. Publication date

3. Placement

4. Source:

1- El Tiempo

2- The New York Times

5. Primary region mentioned:

1- Colombia

2-United States

3- Guaviare

4- Putumayo

5- Sierra Nevada

6- Other

6. Secondary regions mentioned:

1- Colombia

2-United States

3- Guaviare

4- Putumayo

5- Sierra Nevada

6- Other

7. Primary figures:

01- Colombian government

02- United States government

03- Colombian Army

04- United States Army

05- Farmers

- 06- Military Groups
- 07- Drug traffickers
- 08- Indigenous communities
- 09- Local residents
- 10- Other

8. Secondary figures:

- 01- Colombian government
- 02- United States government
- 03- Colombian Army
- 04- United States Army
- 05- Farmers
- 06- Military Groups
- 07- Drug traffickers
- 08- Indigenous communities
- 09- Local residents
- 10- Other

9. Frame device used:

- 1- Metaphor
- 2- Catch Phrase
- 3-Depictions
- 4- Exemplar
- 5- Multiple Devices
- 6- Non

10. Representation of Nature

- 1-Problem
- 2- Sick patient
- 3- Resource
- 4- Victim
- 5- Asset
- 6- In danger

7- Other

8- Multiple Representations

9- No representation/ mentioning of nature

11. Representations of use of glyphosate

01- Environmental destruction

02-Health risks and consequences

03- Economical Advantage

04- Social problem

05- Efficacy

06- Economical drawback

07- Is less harmful than growing drugs

08- Colombian government duty

09- Very dangerous

10- Guarantees security in the region

11- In crisis

12- Cause of conflict

13- Not efficient/ or enough

14- Multiple representations

15- Other

12. Solutions

01- International aid

02- Alternative solutions

03- Drug legalizations

04- Increase support from the Colombian government to the local communities (indigenous groups and peasants)

05- More control at frontiers to avoid drugs getting into the country

06- Use more chemicals to continue eradication

07- Seize acetone, cement and gasoline

08- More research/ Monitor

09- Manual eradication

10- Army better prepared

- 11- New government policies
- 12- Go harder on drug traffickers
- 13- Agrarian reform
- 14- No solution
- 15- Multiple solutions
- 16- Other

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