

**Korea's Stem Cell Research Crisis: Exploring a New Model to Gauge Ethical Intent of
Crisis Communication Strategies**

Keun Yung Hur

**A thesis submitted to the faculty of the University of North Carolina at Chapel Hill in
partial fulfillment of the requirement for the degree of Master of Arts in the School of
Journalism and Mass Communication.**

**Chapel Hill
2008**

**Approved by:
Lois A. Boynton, Ph.D.
Anne Johnston, Ph.D.
Elizabeth Dougall, Ph.D.**

©2008
Keun Yung Hur
ALL RIGHTS RESERVED

ABSTRACT

KEUN YUNG HUR: Korea's Stem Cell Research Crisis: Exploring a New Model to Gauge Ethical Intent of Crisis Communication Strategies

(Under the direction of Lois A. Boynton, Ph.D.)

This thesis begins with the questions of how unethical public relations activities were reported the media, how image restoration strategies could be employed and how moral development theory could be applied to public relations ethics research. Using Benoit's image restoration discourse theory and Kohlberg's moral development theory, this study explores these questions by analyzing the Korean media coverage on the crisis caused by Hwang's scandal. The study's content analysis not only reveals that the Korean media changed their positive attitude toward stem cell research and Hwang, but it also shows that the model of Benoit's image restoration discourse theory and Kohlberg's moral development theory partly worked to generate baseline knowledge for future research.

ACKNOWLEDGEMENTS

I would like to humbly acknowledge my mother Jae-im, who taught me unconditional love; my father Woon-suk, who taught me generosity; and my husband Rick who brought me to Chapel Hill. I would also like to thank my parents-in-law, Hoon and Michelle, not only for their support but for their belief in my abilities.

I wish to express my deep appreciation to the dedication of my committee chair Lois A. Boynton. I also extend my gratitude to all the professors I have worked with at UNC-Chapel Hill.

Table of Contents

LIST OF TABLES	vii
LIST OF FIGURES	viii
CHAPTER I	1
CHAPTER II	5
Image Repair Discourse and Crisis Communication	5
Kohlberg's Moral Development	9
Model of Image Repair Discourse and Moral Development	1 1
Agenda Setting & Framing	1 3
CHAPTER III	1 7
Method	1 8
Content Analysis	1 9
Data Collection and Analysis	2 0
CHAPTER IV	2 2
Tone of Articles	2 3
Image Restoration Strategy	2 5
Model of image repair discourse and moral development	2 8
CHAPTER V	3 2

Implications for further research.....	3 5
Agenda Cutting	3 6
Conclusion	3 8
APPENDIX A: CODING INSTRUCTION	3 9
APPENDIX B: CODING SHEET	4 3
References.....	4 4

LIST OF TABLES

Table

1. Number of articles.....	22
2. Tone of articles.....	23
3. Image restoration strategy.....	28
4. Model of image repair discourse and moral development.....	29

LIST OF FIGURES

Figure

1. Model of image repair discourse and moral development.....	12
--	-----------

CHAPTER I

INTRODUCTION AND BACKGROUND

“Being too focused on scientific development, I may not have seen all the ethical issues related to my research,” said Woo-Suk Hwang, a stem cell researcher from Korea, and one-time national hero, as he apologized for lying about the sources of some human eggs used in his study. Yet, he still excused himself by saying that the staff donations had taken place without his knowledge (Brooke, 2005, p.1). “I should be here reporting the successful results of our research, but I’m sorry instead to have to apologize.” These quotes reflect just one part of his strategic public relations strategies, such as “evasion of responsibility,” which he might have employed when dealing with the disclosure made by his junior researchers.

Since 1999, when he succeeded in cloning a cow, Hwang has been a national hero in Korea. In 2004, he surprised the world by announcing that he had cloned a human embryo and harvested stem cells from it. In May of that year, he announced that he had cloned stem cells that were genetic matches of patients, which was a breakthrough in the quest to find cures for diabetes and other diseases. In August, his team was hailed for creating the first cloned dog, Snuppy. In 2005, He stunned the world again by being charged with fraud, embezzlement, and breach of Korea’s life ethics law (Stem cell fraud, 2006).

His fame, as a genius scientist and patriot, appeared to be collapsing when MBC, a local TV station in Seoul, aired the last part of its series on Hwang’s alleged fraud, which included several testimonies from insiders of Hwang’s team and backup quotes from experts. Hwang responded the next day saying his stem cell work was genuine and accused junior researcher

Sunjong Kim, who revealed the manipulation, of swapping his stem cells with other cells from MizMedi Hospital, which was where Hwang's research team had worked (Stem cell fraud, 2006). Seoul National University, where Hwang worked as a professor, launched an investigation and concluded that his stem cell papers were all fake and his stem cells did not exist. The Seoul Supreme Prosecutor's office confirmed that Hwang's claims of having cloned human stem cells and developing patient-specific stem cells were fraudulent on May 12, 2006. Finally, after his repeated denial, it was officially confirmed that Hwang had fabricated evidence that he had cloned human cells when the journal Science retracted his two papers (Bosman, 2006). The Hwang scandal not only called into question the credibility of such peer-reviewed journals but also warned of a rougher road ahead in terms of the communication of scientific discoveries and findings.

The editors of Science, however, were not alone in telling the world of Hwang's research. World-famous newspapers, wire services, and television networks had been involved with trumpeting the news and damaged their credibility after the fraud was revealed. And news organizations are starting to look at the science journals a bit more skeptically and acknowledge their own heavy dependence on them (Bosman, 2006).

Generally, from a public confidence perspective, this incident raised doubt about the feasibility and ethics of one of science's most cutting-edge research fields: cloning human embryos and then destroying them to extract to stem cells (Lee, 2006). This drop in public support for stem cell research caused some harm because of the already-controversial reputation of the field (Ladley, 2006).

In Korea, however, the public showed extraordinary support for the disgraced scientist despite the charge that he faked much of the work and the possibility that his achievements

did not even exist. One of Hwang's public relations practitioners created the Web site, called "I love Hwang Woo-Suk" right after the crisis. Tens of thousands of South Koreans visited the Web site to defend Hwang (Cho & Faiola, 2005). More than 1,000 women have pledged to donate their eggs for Hwang's research, and some supporters stood in drizzling rain holding candles and praying for Hwang's return (Brooke, 2005).

Hwang again used the media as one of his public relations strategies through his haggard appearance while receiving medical care after he was hospitalized. The media were invited to take pictures of him, which instantly ignited an outpouring of sympathy. By maintaining close relationships with the media and the public, he was able to influence public opinion during the crisis (Stem cell fraud, 2006).

There are a couple of reasons why this case is important to the study of ethics in public relations. First, whether he intended it or not, the scientist is savvy in public relations skills (Choe & Brooke, 2005). He promoted not only his stem cell research achievements that appeared to be of national interest, but he also made the supporters believe that he was innocent and had been framed, even after the revelations that he fabricated his research results. Second, there are ethical ramifications in the field of stem cell research, particularly when it comes to cloning. Stem cell research has not only produced substantial social benefits for medical treatments but has also posed some troubling ethical questions such as the possibility of the technology being used for cloning humans in the future. This concern makes the field get continuous attention from the media and ultimately the public. Within this context, stem cell research is positioned at the center of bioethics.

The main purpose of this study is to observe the interplay between unethical public relations activities and the media's reaction to the crisis caused by Hwang's unethical

performances. The thesis will examine Hwang's public relations strategies that appeared in the media coverage during the crisis situation as well as the resulting media coverage.

The public relations strategies employed by the researcher after the revelation reflect Benoit's (1995) image restoration discourse theory in crisis communication. Thus, this study examines how image repair discourse strategies were present in the comments by Hwang. Additionally, this study proposes that the ethical nature of each of the five image repair strategies may reflect the moral intent of the individual using the strategy. The ethical intention will be examined with the categories of Kohlberg's stages of moral development (1963, 1969).

There has been some research on journalists' and public relations practitioners' ethical reasoning as measured by Kohlberg's stages of moral development as a theoretical framework (Black et al., 1979). Examining how public relations image repair strategies may reflect ethical intent has not received much attention, however. This study helps fill that gap and contributes to build theory that may be used to understand the relationship between practitioner ethics, intent, and behavior.

The next chapter describes the theoretical concepts used in this study. Specifically, these concepts are image repair discourse theory, crisis communication, moral development, and agenda setting.

CHAPTER II

LITERATURE REVIEW

The first section of literature review provides the theoretical framework which is necessary to create a model connecting public relations practitioners' moral reasoning and their image repair strategies. This theoretical model will be used to analyze Hwang's public relations activities as part of his efforts to repair his tarnished image during the crisis. The second section of this review describes various theoretical concepts associated with the relationship between public relations practitioners and the media, including the media's agenda-setting role, framing, and efficacy of public relations in terms of getting media access.

Image Repair Discourse and Crisis Communication

Since Benoit (1995), a communications scholar, built a theory of image restoration strategies, many scholars have applied the theory to crisis communication studies (Benoit, 1995, 1997; Fishman, 1999; Zhang & Benoit, 2004). Image repair discourse theory focuses on what a corporation may say when faced with a crisis and outlines five categories of image repair strategies: denial, evasion of responsibility, reduction of offensiveness, corrective action, and mortification (Benoit, 1997). A conceptual framework of Benoit's theory is briefly reviewed as the basis for building a model about how image repair discourse theory is connected to moral development theory.

Denial

The first approach to image repair is simple denial. An organization facing a crisis may deny that the act occurred (Benoit, 1997). For example, in 1991, Pepsi-Cola accused its major competitor, Coca-Cola, of requiring its other accounts to pay higher prices, subsidizing its largest customer, McDonald's. Coke directly rejected Pepsi-Cola's charges as false. A second form of denial is arguing that another organization is accountable for the offensive act. After the Exxon Valdez oil spill, Lawrence Rawl, Chair of Exxon, "blamed state officials and the Coast Guard for the delay, charging...that the company could not obtain immediate authorization on the scene to begin cleaning up the oil or applying a chemical dispersant" (Mathew & Peterson, 1989, pp. A1-A6). Benoit stated that if the public accepted this version of events, it could help absolve Exxon of guilt for delays in the clean-up. It is important to note that denial may be valid if the organization did not do anything wrong. It also may be a less-than-ethical approach if the individual or organization is trying to avoid getting blamed when it is at fault.

Evasion of Responsibility

Benoit (1997) explains that the evasion of responsibility strategy has four versions: provocation, defeasibility, accident, and good intention. An organization may say the act was merely a response to another's offensive act, and that the behavior can be interpreted as a reasonable reaction to that provocation. For example, when a company closes a local plant and has to withstand the burden of complaints from the local people, it could claim that the decision was in response to an increase in taxes. Another form of evading responsibility is defeasibility. According to the strategy, an organization may attribute the crisis to a lack of

information. For instance, a student who missed a class could claim, “I was never told that the class had been moved up a day.” If it is true that the class was changed and the student was not informed, he or she lacked critical information which may excuse the absence. A third option is to claim the offensive action occurred accidentally, which would be out of the organization’s control. After charges of auto repair fraud, Sears’ Chairman Edward Brennan described the auto repair mistakes as “inadvertent” rather than intentional (Sears to Drop, 1992, p. 5B). Lastly, the accused may argue that the offensive behavior was done with good intentions. Brennan (1992) stressed Sears’ good intention in response to accusations of overcharging its auto repair customers saying that, “Sears wants you to know that we would never intentionally violate the trust customers have shown in our company for 105 years” (p. A56).

Reduce Offensiveness

An organization that is accused of wrongdoing may try to reduce the perceived offensiveness of that act by bolstering, minimization, differentiation, transcendence, attacking the accuser, and compensation. An organization may stress its good traits (bolstering) in order to strengthen the audience’s positive feelings (Benoit, 1997). A second option is to try to minimize the negative feelings associated with the wrongful act. For example, after the Valdez oil spill, Exxon officials tried to downplay the extent of the damage. Third, an organization may try to distinguish the action from another similar but more offensive one. For example, Sears Chairman Brennan (1992) tried to differentiate Sears’s policy of recommending “replacement of worn parts” from “unnecessary repairs” (p.A56). A fourth possibility of reducing offensiveness is transcendence, which attempts to

put the act in a more favorable context. For example, a spokesperson, considering a positive context that may lessen the perceived offensiveness of the act, might attempt to justify layoffs on the basis of higher profits (Benoit & Czerwinski, 1997). A fifth approach is to attack an accuser by reducing the credibility of the accuser. Pepsi-Cola claimed that Coke's pricing policies treat other accounts worse than McDonald's as a counter attack against Coca-Cola. This claim aimed to reduce the credibility of any allegations by Coke and limit the harm to its image. A final form of reducing offensiveness is compensation, such as reimbursement to victims. For example, when Apple cut the price of the iPhone from \$599 to \$399 only two months after its release, the company offered its customers who purchased the phone from either Apple or AT&T and who did not receive a rebate a \$100 store credit towards the purchase of any product at an Apple store.

Corrective Action

As one of the image restoration strategies, an organization may not only promise to solve the current problem but also to prevent the recurrence of the offensive act, which falls under the corrective action category (Benoit, 1997). A willingness to correct or prevent recurrence of the problem can improve the impaired image. In 1993, AT&T experienced a breakdown in long distance service to and from New York City. Chairman Allen (1993) relied on corrective action to repair AT&T's image saying, "We have already taken corrective and preventive action at the affected facility," and he announced plans "to spend billions more over the next few years to make them even more reliable" (p. C3).

Mortification

The final image restoration strategy is to apologize and ask for forgiveness, which Benoit (1997) called mortification. Another part of AT&T's strategy was to apologize and accept the responsibility for the telephone service disruption. Allen (1993) said, "I am deeply disturbed that AT&T was responsible for a disruption in communications service I apologize to all of you who were affected, directly or indirectly" (p. C3). A potential drawback to this strategy is that it might bring lawsuits from victims. However, even if the organization does not apologize, the organization may still be sued.

Each strategy has been tested by Benoit (1997) and others (e.g., Fishman, 1999; Zhang & Benoit, 2004) to show how they have been used by various organizations. What has not generally been paired with image restoration theory, however, is how these strategies may reflect the ethical intent of individuals or organizations that use the strategies. Therefore, this thesis also incorporates the concept of moral development, which identifies the ethical intentions of individuals (Kohlberg, 1963, 1969). Moral development is applied to image restoration theory concepts to show which approaches are least ethical and which may be more ethical. A conceptual framework of Kohlberg's moral development is briefly reviewed as the basis for the model of moral reasoning of image repair discourse.

Kohlberg's Moral Development

Harvard psychologist Lawrence Kohlberg (1963, 1969) developed a six-stage model based on the work of Jean Piaget to show how individuals grow morally. According to Kohlberg, individuals progress along a moral reasoning continuum as they grow and mature. The model is based on Kohlberg's extensive interviews with male children and adults (Cabot, 2005).

According to Kohlberg, there are three levels of moral development, each consisting of two stages.

The first level is pre-conventional and it is self-focused. At stage 1, individuals have a punishment and obedience orientation called heteronomous morality in which they recognize what is right as being obedience to an authority figure and evasion of punishment. At stage two, individualism emerges and rules are followed only when they seem to meet the individual's own needs. At this stage, as with the first, individuals do not care about the needs of others.

The second level, conventional, consists of stages 3 and 4 (Cabot, 2005). At stage 3, individuals have an "interpersonal conformity" orientation in which they try to live up to what others expect. At stage 4, individuals recognize the social systems such as law and order and may consult professional ethics codes to ensure they meet social expectations. Performing social duties, respecting authority, and maintaining the social order should be upheld.

At the third level, post-conventional, individuals are labeled by what Kohlberg (1963, 1969) called the "principle" stages. At stage 5, individuals have a "social contract" orientation, demanding that individuals uphold the law even if they are contrary to the individual's best interests because they provide the greatest good for the greatest number of people. Finally, at stage 6, individuals have a "universal ethical principle" orientation in which they adhere to universally valued principles, including the equality of human rights and respect for the dignity of humans regardless of race, age, and socioeconomic status. In the sixth stage, an individual might defy social conventions to achieve universal ideals. For

example, during the Civil Rights Era, some individuals practiced social disobedience to express their concern about unjust laws.

Model of Image Repair Discourse and Moral Development

The model introduced here (See Figure 1) shows the possible relationship between image restoration theory (Benoit, 1997) and moral development theory (Kohlberg, 1963, 1969). Specifically, this model places specific strategies within pre-conventional, conventional, and post-conventional categories to show how ethical intent may relate to the strategies employed.

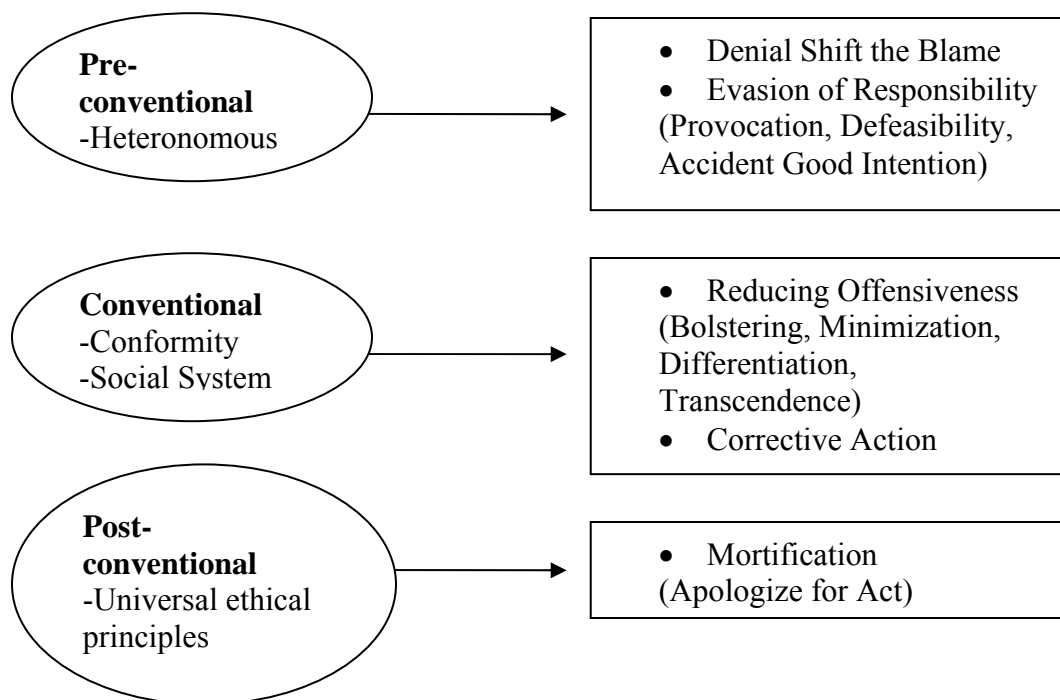
First, Benoit's (1997) denial and evasion of responsibility strategies are self-focused rather than focused on social well being and would be labeled at the pre-conventional level if the intent of denial was self-centered. When an organization decides to reject a charge or to shift the blame to another organization, the decision may represent that the organization is concerned with its own welfare, regardless of the truth of the argument. The exception may be if the denial is, indeed, valid.

Second, Benoit's (1997) reducing offensiveness and taking corrective actions strategies would be labeled at the conventional level, defined by conformity to the expectations of society. These strategies show that the organization admits wrongdoing and responsibility. At this level, the organization's moral reasoning is dominated by performing one's duty and maintaining social order (Coleman & Wilkins, 2002; Kohlberg 1963, 1969).

Third, Benoit's (1997) mortification strategy would be labeled at the post-conventional level, the highest level in Kohlberg's (1969) model, because confessing and begging forgiveness means that individual principles of conscience might motivate this decision. For example, the direct apology made by AT&T chairman Allen (1993) to all of the people who

were affected by the telephone outage may come from the moral reasoning guided by universal principles that morality means acting in accordance with shared standards, which are internal and based on reasoned thought and judgment (Coleman & Wilkins, 2002).

Figure 1 - Moral Intention and Image Restoration Strategies



*if the denial is only self-serving or designed to deflect responsibility.

This model (See Figure 1) integrates Benoit's (1994) image repair theory and Kohlberg's (1963, 1969) moral development theory to show how public relations practitioners or policy makers reason through a crisis. In offering a new perspective, the model defines the relationship between motivations and decisions of public relations practitioners,

communication managers, or anyone who deals with image repair discourse strategies after a crisis.

Additionally, agenda-setting research is important in understanding how the mass media, policy makers, and the public interact and influence one another. Thus, the next section describes how agenda setting theory developed and what the definition of framing is in terms of media research.

Agenda Setting & Framing

Agenda-setting theory, first empirically tested by McCombs and Shaw, explores the transfer of salience from the media to the public. This theory explains that the ranking of news in its importance, emphasis, and salience as portrayed by the media will be reflected in public opinion (McCombs, 2004). Most agenda-setting research has concentrated on the transfer of issue salience, however, other topics such as candidate image and corporate image have been also explored (McCombs & Ghanem, 2001). Wanta (1997) suggests that agenda setting can be thought of as a form of social learning in which the amount of media coverage an object receives helps audiences determine that object's relative importance to society at large.

Recently, agenda-setting research has taken on a new capacity, focusing more on the relationship between the audience and the media. This new approach has been called second-level agenda setting (McCombs, 2004). Stereotyping and image building, involving the salience of attributes, could be good examples of second-level agenda-setting (Eyal, 1981).

McCombs (2004) also suggests that “explication of the second level of agenda-setting, attribute agenda-setting, links the theory with a major contemporary concept, framing” (p.87).

He added that:

To paraphrase this definition in the words of second-level agenda setting, framing is the selection of—and emphasis upon—particular attributes for the media agenda when talking about an object. In turn, as we know from the evidence on attribute agenda-setting, people also frame objects, placing varying degrees of emphasis on the attributes of persons, public issues, or other objects when they think or talk about them. Both framing and attribute agenda-setting call our attention to the perspectives of communicators and their audiences, how they picture topics in the news (p.87).

Similarly, Entman (1993) provided the definition of a frame as “the central organizing idea for news content that supplies a context and suggests what the issue is through the use of selection, emphasis, exclusion, and elaboration ” (p.52). The researcher added that framing deals with salience: constructing news content so that it is more noticeable or memorable to the public.

Some researchers suggest that journalists’ frames, most often called the story angle, are affected by the facts that are thought to be most important (Conaway, 1996). According to Conaway, a frame is “a lens that enables readers to interpret and assess news coverage in a way primarily determined by their previous experience and the narratives already in their minds, in conjunction with the interpretations and narratives of the reporter” (p.2).

Determining which issue is more important is always controversial, particularly given the complexities journalists face as they seek to make sense of events (Gans, 1979). For any controversial public issue, there are individuals and groups with a stake in how news audiences understand the situation (Tewksbury, Jones, Peske, Raymond, & Vig, 2000).

These policy advocates aggressively try to control how an issue is pictured in the media (Andsager & Smiley, 1998). The next section will explain the relationship between the public

relations expertise and the ability to get media access. These concepts are useful in understanding this case because Hwang was not only savvy in public relations but also had access to the media.

Media access and public relations

Organizations and individuals that actively try to exert influence on a policy decision process tend to seek access to the new media, with an assumption that greater media coverage of their stance will result in favorable public opinion and policy-making (Danielian, 1992; Kennamer, 1992). As media space is limited, the organizations must compete against each other to get media attention. Journalists rely on their own news judgments to evaluate sources. As a result, some sources are deemed by journalists to be more legitimate than others; reporters then treat the more legitimate sources favorably (Powers & Fico, 1994). Efficiency of public relations in getting media attention may not only be in its ability to achieve media coverage but also in its contribution to accumulating legitimacy for organizations (Davis, 2000).

Dunn (1969) stated that in order to make their information become news, practitioners should supply the information to the news media by using the identical techniques journalists use to gather news. More recently, Yoon (2006) suggested that the extent of a sources' media access is influenced by either their public relations expertise, such as acknowledging journalists' deadlines, their favorite types of stories and formats, and their pursuit of objectivity. In addition, providing information without consideration of journalists' newsgathering practices may negatively affect journalists' perceptions of the organizations (Butler, 1999). Judy Turk (1986) defined information subsidies to mean organized

information that promotes the ideas of organizations to gain influence of the media agenda.

Turk (1986) added that:

Even though journalists and the conventions of the media for which they work play a role in shaping the media agenda, the sources of the raw material of information upon which journalists rely may ultimately have as much to do with the media's agenda as the selection processes of the journalists themselves. (p.16)

As detailed in the literature review section, this study builds on two main theoretical concepts: image repair discourse and Kohlberg's moral development theory. These two concepts will be used to analyze the Korean media's coverage of the Hwang scandal to identify what strategies he employed during the crisis and how those strategies may reveal his moral intent.

CHAPTER III

RESEARCH QUESTIONS AND METHOD

The literature review points to a few areas associated with crisis communication and ethical behavior that have not been studied. Hence, the following research questions are posed for this study:

1. What is the tone of the articles that appeared about the crisis during the period of time when the cloning announcement was made and the wrongdoing was revealed?

This question draws on framing and agenda setting literature. Tone is a component of framing to indicate whether stories are positive, negative, or neutral.

2. What image restoration strategies are evident in the coverage of Hwang and the cloning crisis?

This question draws on the crisis communication literature, most specifically Benoit's (1997) image restoration theory, to explore how the media reported Hwang's statements in defense of his activities.

3. What level of moral reasoning is evident in Hwang's comments to the media during the crisis?

This question will address how Kohlberg's theory of moral development relates to crisis communication and image restoration theory. To respond to these questions, a quantitative content analysis was conducted of several Korean newspapers during the

timeframes before, during, and after the stem cell research crisis. The following section describes the method used for this study.

Method

The goal of doing a content analysis was to identify Hwang's public relations strategies that appeared in media coverage during the crisis situation as well as media the ethical nature of each of the strategies that may reflect the moral intent of Hwang. In order to analyze media tone, image restoration strategies, and possible moral intent, three time periods needed to be distinguished. The first time period is from February 1, 2004 to February 1, 2005, when the initial announcement of cloning success was made. The second time period is from November 1, 2005 to November 1, 2006, when the revelation of the wrongdoing occurred. The third time period is from January 1, 2007 to January 1, 2008, six months after Hwang's conviction of the wrongdoing. This time frame allowed for analysis of the news coverage to determine how the media reported the crisis. In order to respond to the second and third questions, the analysis focused on the second time period.

In sum, the research analyzed three Korean print media outlets- *Joongang Daily*, *Chosun Daily*, and *Donga Daily*- from the time the initial announcement of cloning success was made in May 2004 through six months after Hwang's arrest for embezzlement and subsequent trial in December 2006. These papers were chosen because of their influence and because of the large audience they reach every day. According to the 2002 Audit Bureau of Circulation report, their circulations were 2,051,588, 2,377,703, and 2,051,594, respectively (Management support center, 2007). According to the research by the Korean Press

Foundation in 2004, these three newspapers' market share is over 75.2% (Kim, 2004).

Specifically, a quantitative content analysis method was employed.

Content Analysis

According to Kerlinger (2000), content analysis is a method of studying and analyzing communication in a systematic, objective, and quantitative way for the purpose of measuring variables. This definition involves three concepts: 1) a systematic sample selection and evaluation process, 2) an objective set of procedures for the classification of variables and the specification of the unit of analysis, and 3) a quantitative interpretation of the results (Wimmer & Dominick, 2006).

In order to satisfy the first requirement, this study used online archives of past editions of the three selected newspapers which provided not only timely and physically efficient, but also systematically correct, data. For the second requirement, 20% of the sample was coded separately by two coders to establish intercoder reliability. Scott's pi index was applied to calculate the intercoder reliability. The average reliability score using this formula was 81%¹, which meets the minimum requirement of 75% or above (Wimmer & Dominick, 2006). For the last requirement, SPSS, a statistical tool, was used to generate an accurate result of descriptive frequency and correlation between the image restoration strategies employed by Hwang and the moral reasoning of his activities.

¹ Intercoder reliability for the variable of image restoration strategies was 82%, the variable of the moral development stage was 87%, and the variable of tone of articles was 60%.

Data Collection and Analysis

Utilizing framing and agenda setting theories, Benoit's image restoration theory (1997), and Kohlberg's moral development theory (1969), this thesis examined how the newspapers covered the scandal and how image restoration strategies employed by Hwang relate to the moral intent of the individual using the strategies.

Search terms selected for this study were "stem cell" and "Hwang, Woo-Suk." Korean translations of the terms were used to find relevant data that were published during the second time period of the crisis to analyze Hwang's public relations activities in terms of the image restoration and moral development theories. Preliminary research had been conducted to make sure that the sample of the articles was sufficient to explore article tone, the model of image restoration discourse theory, and moral development. After being conditioned for the second time period and putting the search terms into *Joongang Daily's* online archive, 1,288 articles came up as results.

After the crisis, the Korean media might have changed their tone toward the stem research field. In order to analyze the change, the content analysis compared the tone of the articles published before and after the crisis.

The units of analysis were headlines, lead paragraphs, and the whole context of articles depending on the research question. Headlines and lead paragraphs of each article were examined because news tone is most often communicated there (Jones, Peske, Raymond, Tewksbury, & Vig, 2000). Headlines, in particular, have been shown to influence an audience's understanding and interpretation of the news (Pfau, 1995). More specifically, headlines serve as a tool that both attracts attention to stories and influences audience interpretations (Jones, Peske, Raymond, Tewksbury, & Vig, 2000). Regarding the model of

image restoration discourse theory and moral development, the whole context of the article was examined. The coding guide appears in Appendix A. Appendix B is the coding sheet for this study.

This chapter not only presented what methods were employed for this research but also explained why these methods were appropriate to analyze the contents which were chosen for this study. The next chapter reports the result of the content analysis.

CHAPTER IV

ANALYSIS AND RESULTS

Three major Korean newspapers—*Chosun Daily*, *Donga Daily*, and *Joongang Daily*—were examined over the period of February 2004 through January 2008 to respond to three research questions. The sample of news articles was divided into three periods. The first period was from February 1, 2004 to February 1, 2005, when Hwang’s presumed cloning success was publicized. The second period was from November 1, 2005 to November 1, 2006, when the media reported that Hwang had manipulated study results. The third period was from January 1, 2007 to January 1, 2008, after charges were filed against the researcher. A total of 297 articles were assessed. The findings from these analyses are divided into three sections according to the research questions.

Table 1 - Number of Articles

Time Period	Newspapers			Total
	Chosun Daily	Donga Daily	Joongang Daily	
Pre-crisis period	33	33	33	99
Crisis response period	33	33	33	99
Crisis recovery period	33	33	33	99
Total	99	99	99	297

Note. Pre-crisis period (2.1.2004 – 2.1.2005), Crisis response period (11.1.2005 – 11.1.2006), Crisis recovery period (1.1.2007 – 1.1.2008)

The first section examines the tone of the coverage of stem cell issues and Hwang’s scandal, which addresses RQ1. The tone of each article was measured along a five-point

scale, ranging from strongly negative to strongly positive. This information sheds light on how the media framed stem cell issues and Hwang's scandal over the three time periods.

The second section looks at how Benoit's (1997) image restoration strategies were seen in the coverage about Hwang and the cloning crisis during the second period. This information will show how the Korean researcher used image restorations strategies during the crisis and addresses RQ2.

The third section, to answer RQ3, looks at how stages of moral reasoning correlate with the image restoration strategies Hwang employed, which will be evident in Hwang's comments to the media during the crisis. More specifically, this information will show how Kohlberg's moral development theory and Benoit's image restoration theory relate to each other and whether the model of moral development theory and image restoration theory is valid.

Tone of Articles

Of the 297 articles in the sample, 31.3% were considered to have a neutral tone, 27.9% were considered to have a positive tone, and 18.2% were considered to have a negative tone. The strongly positive and negative tones represented only 14.5% and 7.7%, respectively.

Table 2 - Tone of Articles

Time Period	Tone	Percent (%)
Pre-crisis period	Strongly Negative	1.0
	Negative	3.0
	Neutral	22.2
	Positive	40.4
	Strongly Positive	33.3
	Total	100.0
Crisis response period	Strongly Negative	20.2
	Negative	29.3
	Neutral	27.3
	Positive	13.1

Crisis recovery period	Strongly Positive	10.1
	Total	100.0
	Strongly Negative	2.0
	Negative	22.2
	Neutral	45.5
	Positive	30.3
	Total	100.0

Note. 1st period (2.1.2004 – 2.1.2005), 2nd period (11.1.2005 – 11.1.2006), 3rd period (1.1.2007 – 1.1.2008)

Although the majority of the articles were coded with an overall positive (positive and strongly positive) tone, it is important to note that this number reflects the large number of articles published before Hwang’s scandal during the first time period, February 2004 to February 2005. In fact, during the crisis, (second time period: November 2005 through November 2006), only 13.1% of the articles were coded for a positive tone and 10.1% represented a strongly positive tone. Furthermore, after the crisis, (third time period: January 1, 2007 through January 1, 2008), 66.4% of articles were coded as having either neutral or negative tones with the largest percentage (44.2%) with a neutral tone.

More specifically, the sample articles in the three newspapers changed from a primarily positive tone toward stem cell research and Hwang to a neutral tone during the second period. For instance, in an article that *Joongang Daily* published during the first period of time, the reporter only emphasized the positive aspect of stem cell research in terms of treating spinal paralysis, making the tone of the article positive (Hwang, spinal nerve, 2005). However, In an article in the same newspaper published after the crisis, during the third period, the tone of the article was neutral because it also included a warning quoted from the researcher: “We cannot expect such a dramatic result every time the stem cell procedure is performed to treat cerebral palsy” (Paralyzed Australian woman, 2007).

Overall, findings from the examination of the tone over the three periods suggested that the Korean media changed their positive coverage of Hwang and the stem cell issue to either neutral or somewhat negative tones after the crisis. As noted earlier, the following section will talk about how Benoit's (1997) image restoration strategies were used to respond to the second research question.

Image Restoration Strategy

Hwang and his colleagues' comments were analyzed based on Benoit's (1997) five image restorations strategies: denial, evasion of responsibility, reduction of offensiveness, corrective action, and mortification (see Table 3). This analysis focused on the second and the third period of time when Hwang's unethical behavior was exposed and he attempted to regain his image as a pioneer in stem cell research.

In a total of 28.3% of the articles, quotes by Hwang or his colleagues reflected the denial strategy. According to Benoit (1997), an organization facing a crisis may deny that the act occurred or say that another organization performed the act. For instance, in the article of *Chosun Daily*, Hwang denied that he ordered the manipulation of the research results (Stem cell's No. 2 & 3 stem, 2005). In addition, he argued that Sunjong Kim, one of his research assistants, replaced the original egg with the one from MizMedi Hospital.

Reduction of offensiveness represents 17.2% of the quoted comments, which is the second- largest percentage of image restoration strategies that Hwang used during the crisis. As mentioned earlier, according to Benoit (1997), an organization that is accused of a crisis may try to reduce the perceived offensiveness of that act by bolstering, minimization, differentiation, transcendence, attacking the accuser, and compensation. Hwang mainly

attacked the credibility of the accuser in an attempt to reduce the offensiveness of his actions and to make himself look good. For instance, in the article of *Donga Daily*, he accused producers of MBC's "PD Note" of violating the ethics of journalism, arguing that the producers forced interviewees to answer questions during the interview process (Post apology by MBC, 2005). Hwang attacked the credibility of other accusers in an article from *Donga Daily* by saying, "There are no experts who understand bio technology among investigation committee members, and the result from the committee might not be convincing" (Dr. Hwang accepts responsibility, 2006).

Another reduction of offensiveness strategy that Hwang used was bolstering his previous achievements and diligence as a stem cell researcher. An article in *Chosun Daily* reported that he was admitted to a hospital and lost 22 pounds because while he was sick he could not stop researching (What Dr. Hwang has, 2005). He also argued that no matter what he did, he did the right thing for the development of human science.

Hwang used the evasion of responsibility strategy to counter charges that he extracted eggs illegally from his female assistants. He maintained that they donated their own eggs voluntarily without his involvement. For instance, in an article from *Joongang Daily*, he argued that he tried to stop the assistants from donating their eggs but they proceeded voluntarily and requested their privacy by hiding the information about the extraction (Endless controversial, 2005). Hwang also said that he did not know about this extraction until MBC's "PD Note" aired the interview with the female assistants who donated their eggs. His arguments in the article are considered evasion of responsibility because he stressed his good intention by mentioning that he was trying to protect the privacy of the assistants.

Hwang's argument that he trusted Sungil Noh, the director of MizMedi Hospital, with the egg donation problem along with the denial of his involvement are considered defeasibility, which is part of the evasion of responsibility strategy. This strategy addresses provocation, defeasibility, accident, and good intention. According to Benoit's (1997) image restoration strategy, Hwang's denial of his involvement with the egg donation problem is associated with defeasibility because he attributed the wrongdoing to the lack of information. In addition, in the article of *Donga Daily*, Hwang emphasized his good intentions of protecting technology by saying that he could not report donors' medical conditions because he was afraid to disclose the secrets of his technology (Kim, 2005). The donors were admitted to the hospital because of ovarian hyperstimulation syndrome.

Hwang's comment in a *Donga Daily* article (Dong & Jung, 2005) that contamination of the stem cell that he had raised happened accidentally represents the accident strategy as another means to evade responsibility. After admitting to the manipulation of the research, he attributed this crisis to accidental contamination, something over which he had no control.

In the middle of the crisis, Hwang used the mortification strategy, even though it only accounts for 2 % of the articles analyzed. For instance, in the article of *Chosun Daily*, the researcher apologized that he got greedy and did not follow his duty as a scientist (Kim, 2006). Since the judicial process has begun, however, he has utilized the denial and evasion of responsibility strategies.

In sum, the denial strategy is seen the most with the largest percentage, 28.3%, in the comments that Hwang and his colleagues made in the articles published during the second period. The reduction of offensiveness and evasion of responsibility strategies were reflected in the comments with 17.2% and 14.1%, respectively. The corrective action and mortification

strategies were rarely seen in the comments with 1% and 2%, respectively. The next section will present how the strategies Hwang employed relate to moral development theory. This section includes discussion of how the proposed model that combines moral development and image restoration theory works.

Table 3 - Image Restoration Strategy

Time Period	Restoration Strategy	Percent (%)
Crisis response period	Denial	28.3
	Evasion of Responsibility	14.1
	Reduction of Offensiveness	17.2
	Corrective Action	1.0
	Mortification	2.0
	None of them	29.3
	Subtotal	91.9
	N/A	8.1
	Total	100.0
Crisis recovery period	Denial	1.0
	None of them	15.2
	Subtotal	16.2
	N/A	83.8
	Total	100.0

Note. Crisis response period (11.1.2005 – 11.1.2006), Crisis recovery period (1.1.2007 – 1.1.2008)

Model of image repair discourse and moral development

This study aims to build a model based on two theoretical concepts: Benoit's (1997) image repair theory and Kohlberg's (1963, 1969) moral development theory. The model suggests that the ethical nature of each of the five image repair strategies may reflect the moral intent of the individual using the strategy (See Figure 1). The relationship between image restoration strategies that Hwang used during the crisis and the categories of moral intent for using the strategies was investigated using the Pearson product-moment correlation coefficient. There was a strong positive correlation between two variables ($r = .841$, $n = 91$, $p < .05$). There are some limitations to testing the model, however, because the corrective

action and mortification strategies were scarcely seen in the sample articles. Nevertheless, a one-sample chi-square test was conducted to assess whether the model of image restoration theory and moral development theory works. The results of the test were significant, $\chi^2 (15, N=91) = 203.7, p < .01$. Table 4 shows the relationship of the strategies used with the corresponding level of moral development.

Table 4 - Moral Development Stage

Time Period	Development Stage	Percent (%)
Crisis response period	Pre-conventional	41.4
	Conventional	11.1
	Post-conventional	2.0
	Not clear	37.4
	Subtotal	91.9
	N/A	8.1
	Total	100.0
Crisis recovery period	Pre-conventional	1.0
	Not clear	15.2
	Subtotal	16.2
	N/A	83.8
	Total	100.0

Note. Crisis response period (11.1.2005 – 11.1.2006), Crisis recovery period (1.1.2007 – 1.1.2008)

When Hwang denied the charges of manipulation, illegal extraction of eggs, and embezzlement, his argument generally reflected that he might be afraid of punishment, which represents the pre-conventional level of Kohlberg's moral development theory. In this analysis, 41.4% of the comments by Hwang or his colleagues fell into the pre-conventional level of moral reasoning. While other colleagues admitted to the wrongdoings, including the manipulation and the extraction, Hwang strongly denied all of the charges when the judicial process started. In addition, his argument that one of his research assistants replaced the original egg with the one at MizMedi Hospital reflects the evasion of responsibility strategy because he attributed all the charges to his assistant rather than to take any personal

responsibility. Eventually, other research assistants' testimonies showed that Hwang's argument was not true, and he was irresponsible not only as a scientist but also a teacher.

It is important to note, however, that a denial strategy is not always an unethical approach. It is appropriate that an organization that faces a false accusation denies culpability. For example, Pepsi denied responsibility for product tampering incidents, and it was later proven that those tampering claims were fraudulent (Guth & March, 2005).

When Hwang did admit partial responsibility for aspects of his research, however, he used the reduction of offensiveness strategy. Whenever he admitted, to some extent, what he did wrong, he gave an excuse about why he had to do it. Most of his excuses were coded as interpersonal conformity, associated with the conventional level, because he mentioned that he was trying to live up to what public expected. The researcher also criticized the media's heavy attention and argued that this attention made him disclose the contamination and the egg donor's medical conditions. All of his efforts to cover up the wrongdoing, along with the admittance of the cover-up, reflect that he didn't want to lose the public's trust and expectations. After admitting to the contamination of his research results, he resigned from all of his honored positions, including his job at Seoul National University. The reasoning behind this action can be interpreted as stage 4 of the conventional level, in which individuals make decisions based on their recognition of the importance of social order. More specifically, 11.1% of the comments by Hwang or his colleagues fell into the conventional level.

Even though the mortification strategy is rarely seen in Hwang's comments, the strategy might be oriented in the social contract stage of the post-conventional level because when he apologized about what he did, Hwang mentioned higher causes such as patriotism and a

scientists' ethical duty. At this stage, individuals uphold the rules even if they are contrary to their own interests for a greater good (Kohlberg, 1969).

This chapter presented the results of content analysis of articles about the stem-cell research controversy and Hwang's strategic efforts to regain his reputation. The results show that the Korean media, including *Chosun Daily*, *Donga Daily*, and *Joongang Daily*, changed their positive coverage of Hwang and the stem cell issue to either neutral or somewhat negative tones after the crisis. Denial strategy is seen the most with 28.3% in the comments that Hwang and his colleagues made in the articles published during the second period, and the relationship between image restoration strategies Hwang used during the crisis and his moral intent for using the strategies was strongly positive. The next chapter discusses the results as they relate to the study's three research questions and provides additional implications for future research.

CHAPTER V

DISCUSSION AND CONCLUSION

The results, organized by each of the three research questions, are presented here, first with a summary of the content analysis and thereafter with the relevance of the literature review of this thesis.

RQ1: What is the tone of the articles that appeared about the crisis during the period of time when the cloning announcement was made and the wrongdoing was revealed?

RQ1 asked what tone the articles had in the three stages of the study: pre-crisis, during the crisis, and post-crisis. The findings from the examination of the tone over the three periods suggested that the Korean media changed their positive coverage of Hwang and the stem cell issue to either a neutral or somewhat negative tones after the crisis. This finding is important because the change of tone in the coverage of Hwang and stem cell research showed how the theoretical concepts of the media's agenda-setting role and framing could be represented in the real world. In addition, considering Hwang's public relations expertise, this result also shows how an individual or organization who has the power to get access the media can affect the media negatively if the individual or organization acts unethically.

RQ2: What image restoration strategies are evident in the coverage of Hwang and the cloning crisis?

RQ2 asked what image restoration strategies Hwang employed during and after the crisis. The results revealed that the denial strategy was seen the most, with 28.3%, in the comments that Hwang and his colleagues made in the articles published during the second period. The reduction of offensiveness and evasion of responsibility strategies were reflected in the comments with 17.2% and 14.1%, respectively. The corrective action and mortification strategies were rarely seen in the comments with 1% and 2%, respectively.

This analysis was based on Benoit's (1997) image restoration theory. In the 17 years since the theory of Image Restoration Discourse was articulated (Benoit, Gullifor, & Panici, 1991), the theory has been applied to many studies, including case studies of corporations and government entities. These applications prove that the theory is not only convincing but also crucial to studying image repairing strategies in terms of crisis communication. Another advantage of image restoration discourse theory is that the theory is a viable approach for use in developing and understanding messages that respond to image crises. In addition, Benoit developed a complete typology of image repair strategies for researchers who need to analyze various messages that individuals or organizations produce during crises.

RQ3: What level of moral reasoning is evident in Hwang's comments to the media during the crisis?

RQ3 addressed how the strategies relate to the concepts of moral development. Hwang and his colleagues' comments reflected the intent of the individuals who used image restoration strategies. According the analysis, 41.4% of the comments by Hwang or his colleagues fell into the pre-conventional level of moral reasoning. Regarding the new model of Benoit's

(1997) image restoration theory and Kohlberg's (1963, 1969) moral development theory, the relationship between the image restoration strategies Hwang used during the crisis and his moral intent for using the strategies was strongly positive. As mentioned earlier, however, testing the model (See Figure 1) presented here has are some limitations because the corrective action and mortification strategies were rarely seen in the sample articles.

Kohlberg's stages are descriptive and not predictive. In other words, they do not anticipate how any one individual will develop but instead suggest how most will develop. The description about moral development made this analysis easy to support that moral reasoning and moral behavior are correlated. More specifically, Hwang's comments reflected his moral reasoning of his behavior by justifying why he had to make wrongdoings. Theses comments showed where his moral development stages might be.

An indisputable conclusion is that the Korean media changed their positive attitude toward stem cell research and Hwang to neutral after the scandal. His comments and those made by his colleagues in the articles published during the crisis reflect that the moral reasoning of image restoration strategies employed by Hwang is dominated by the pre-conventional level with 41%.

It is important to note that in the current study, the building of the model of Benoit's (1997) image restore discourse theory and Kohlberg's (1969) moral development theory was limited in that there rarely were corrective action and mortification strategies with 1% and 2%, respectively. In future work, other cases may be studied to add to the model.

Implications for further research

This study provides a preliminary look at the relationship between the image restoration strategies (Benoit, 1997) employed and the perceived intent of those strategies, as measured by Kohlberg's (1963) stages of moral development. As a first, significant step, this particular study showed a correlation between the strategy and intent, which indicates the need for further testing of the model. Hwang primarily employed strategies in which he denied wrongdoing by shifting blame to others or evading responsibility, which reflected pre-conventional levels of moral intent. Other cases, however, may provide additional input regarding the use of corrective action and mortification strategies, which appear to be indicative of conventional and post-conventional intention. There may be additional nuances that emerge when examining cases involving ethical use of image restoration strategies. For example, in the Tylenol case, when denying was truthful, and in accidental disasters (tsunami, hurricane, etc.) the intent of recovery strategies might reflect more-ethical behaviors than those exhibited by Hwang.

Further, this study addressed only how the issue was presented in the media by examining the tone of articles in three leading Korean newspapers. What was not addressed in this study is how the public reacted to the crisis, why the media changed their attitude from positive to neutral or negative, and how the public reacted to this change in coverage. These topics will require additional research. The future research will be able to contribute to the agenda-cutting research, which states that in addition to putting issues on the agenda (agenda setting), the media also decide what not to put on the agenda, or what to avoid (agenda cutting) (See, for example, Colistra, 2006). In this case, for example, the Korean media not only appeared to change their attitudes toward the stem research after the fraud was revealed, but they also

showed reluctance to deal with the issues related to the research field. This reluctance was visible because after the crisis there were fewer positive articles than before Hwang's wrongdoings were revealed (See Table 2). In order to analyze the reluctance to deal with the issue in their reporting, research using qualitative methods, including in-depth interviews and focus groups is necessary. Also a longitudinal study of the early coverage of stem cell research and Hwang over period of two to four years may be useful to track when stem cell coverage emerged, peaked, declined. Additionally, a longitudinal study might reflect when or whether the decline abated and if coverage has improved since ended. Particularly, Eunryung Jung, in the article from *Donga Daily*, said that this case can be a good example when studying journalism ethics. He explained that the media partly aggravated the crisis by being too involved and failing to keep an objective perspective while also reversing their opinion to go along with the reversal of his colleagues' testimonies. The reporter also pointed out that this case reminded the media to double check their agenda- setting role and the system of reporting (Jung, 2005).

Agenda-setting research is important to understand how the mass media, policy makers, and the public interact and influence one another. Here are some theoretical concepts to provide baseline information for future research.

Agenda Cutting

As mentioned before, the media cannot cover most of reality due to limited resources. In one day, more than 75% of possible stories will be rejected by newspapers because the editors decide on the importance of the news events and select which ones merit coverage (McCombs, 2004). Accordingly, the public does not pay attention to certain stories and may

not even recognize that they exist. This effect is called agenda cutting (Media Tenor, 2007). Even though, Gunter and Wober (1988) mentioned the term agenda cutting in their book, *Television and Social Control*, this subject has been researched by few scholars. The book described agenda cutting as “the reverse process whereby problems or issues have attention directed away from them by receiving little or no media coverage” (p.128). Wober (2001) also provided another example of agenda cutting that happened in 1864 during the Civil War when General Meade humiliated a news reporter. In response to this, the Northern press apparently cut all stories about Meade except those associated with defeat, even though stories about the general were deemed newsworthy by the press.

Media Tenor has been the only institute to research the area of agenda cutting to date (Colistra, 2006). The organization specializes in detailed content analysis of the media, concentrating on agenda setting and agenda cutting. For instance, Media Tenor (2007) examined the effects of agenda setting and agenda cutting on German television news coverage of the tsunami that hit Southeast Asia in December 2004 and the earthquake that hit Pakistan in October 2005. The tsunami received far more extensive media attention in all countries and, in turn, affected people's behavior in terms of private donations. Conversely, the public did not recognize the need for help in the earthquake-affected region of Pakistan. Specifically, in Germany, the tsunami received coverage 666 times on three TV channels in comparison to only 66 stories on the earthquake. As a result, these 666 reports contributed to private donations amounting to \$178 million while only \$8 million was received for the earthquake.

The difference between the coverage of the tsunami and the earthquake affected people's actions in terms of private donations, which is a good example of the agenda-cutting effect.

As mentioned earlier, the agenda-cutting phenomenon has not been discussed or tested very much. However, it is quickly gaining attention among scholars, and the future study needs to focus on the media's reluctance to deal with issues related to stem cell research, which may contribute to the development of the agenda-cutting research.

Conclusion

The case of Hwang's scandal is the combination of the wrongdoings of many, including the result-oriented culture of the Korean society and the media's contribution to making Hwang appear as a national hero without merit. This case also showed how a researcher's wrongdoings appear in the media, and what tone the media present about the crisis. Furthermore, this influence on the media may affect the public because the mass media generally have been linked to the spread of moral education since the first newspapers were published in the early 17th century (Barger, 2003). Further research is needed, however.

Certainly, this study represents an examination of the influence of unethical public relations activities on the media even though there are some limitations to defining the causes and effects. In the 21st century, the public's dependence on the media is beyond imagination. What people read or see in the media decides what people want to talk about and how they should react. The media and public relations professionals have a symbolic relationship of mutual dependence. The impact of media coverage and public relations activities on public perception requires both professions put their priority on ethics. In this respect, this study contributes to a better understanding of the interplay of unethical public relations activities and the media's reaction to the crisis caused by the unethical performances.

APPENDIX A: CODING INSTRUCTION

This coding instruction is aimed at analyzing messages in the coverage of stem cell research and Hwang's scandal by three major Korean newspapers. The following definitions are important in selecting and analyzing the content under study.

Stem Cell Issue

A stem cell issue involves various information, including cloning issues and new research accomplishments, not only by Hwang but also other researchers from all over the world. This issue may include, for example, the business opportunity that stem cell research might bring to Korea.

Scandal Issue

A scandal issue involves all of Hwang's wrongdoings, including manipulation of research results, embezzlement, illegal extraction of eggs from his research assistants, and the process of his conviction. This issue may include, for example, the contentions of MizMedi Hospital and Seoul National University, where Hwang worked at the time of the scandal.

Source

A source is a person or organization who gives information to news reporters. The source is identified when news reporters quote or paraphrase information from the source in news stories. The means by which reporters publicly credit a source for information is called attribution. Such attribution is recognized when a source's name is linked in a story sentence with verbs denoting a person speaking, such as, "said," "claimed," and so forth. Attribution also may be made by verbs denoting a source's state of mind, such as "thinks," "feels," "wants," and so forth.

Image Restoration Strategy

Benoit's image repair discourse strategy focuses on what a corporation may say when faced with a crisis and outlines five categories of image repair strategies: denial, evasion of responsibility, reduction of offensiveness, corrective action, and mortification.

Denial: An organization facing a crisis may deny that the act occurred or say that another organization performed the act.

Evasion of responsibility: This strategy has four versions: provocation, defeasibility, accident, and good intention. An organization may say the act was merely a response to another's offensive act and that the behavior can be interpreted as a reasonable reaction to

that provocation. An organization may attribute the crisis to the lack of information. A third option is to claim the offensive action occurred accidentally. Lastly, the accused may argue that the offensive behavior was done with good intentions.

Reduce Offensiveness: An organization that is accused of wrongdoing may try to reduce the perceived offensiveness of that act by bolstering, minimization, differentiation, transcendence, attacking the accuser, and compensation. An organization may stress its good traits in order to strengthen audience's positive feelings. A second option is to try and minimize the negative feelings associated with the wrongful act. Third, an organization may try to distinguish the action from another similar but more offensive one. A fourth possibility of reducing offensiveness is transcendence, which attempts to put the act in a more favorable context. A fifth approach is to attack an accuser by reducing the credibility of the accuser. A final form of reducing offensiveness is compensation, such as reimbursement to victims.

Corrective Action: As one of the general image restoration strategies, an organization may not only promise to solve the current problem but also to prevent the recurrence of the offensive act. A willingness to correct or prevent recurrence of the problem can improve the impaired image.

Mortification: This image restoration strategy is to apologize and ask for forgiveness.

Moral development: Harvard psychologist Lawrence Kohlberg (1963, 1969) developed a six-stage model based on the work of Jean Piaget to show how individuals grow morally. Individuals progress along a moral reasoning continuum as they grow and mature. According to Kohlberg, there are three levels of moral development, each consisting of two stages. The first level is pre-conventional and is self-focused. At stage 1, individuals have a punishment and obedience orientation, called heteronomous morality, in which they recognize what is right as being obedient to an authority figure and evading punishment. At stage two, individualism emerges and rules are followed only when they seem to meet the individual's own needs. At this stage, as with the first, individuals do not care about the needs of others. The second level, conventional, consists of stages 3 and 4. At stage 3, individuals have an "interpersonal conformity" orientation, trying to live up to what others expect. At stage 4, individuals recognize the social systems such as law and order. Performing social duties, respecting authority, and maintaining the social order should be upheld. At the third level, post-conventional, individuals are labeled by what Kohlberg (1963, 1969) called the

“principle” stages. At stage 5, individuals have a “social contract” orientation, demanding that individuals uphold the laws even if they are contrary to the individual’s best interests because they provide the greatest good for the greatest number of people. Finally, at stage 6, individuals have a “universal ethical principle” orientation in which they adhere to universally valued principles, including the equality of human rights and respect for the dignity of humans regardless of race, age, and socioeconomic status.

Procedure

The following steps should be taken in the content analysis described below.

1. Article No. : Number assigned to article
2. Article Date: Month /Date/Year
3. Time Period: The first period is indicated when the articles were published from February 2004 to February 2005. The Second period is indicated when the articles were published from November 2005 to November 2006. The Third period is indicated when the articles were published from January 2007 to January 2008.
4. Type of article
 - (1) Feature story: an article that is not meant to be breaking news but to take an in-depth look at a subject
 - (2) News story: an account of an event or issue
 - (3) Press-release style story: with no obvious reporting
 - (4) Editorial: a nonfactual account/ opinion of an event or issue written by newspaper staff
5. Story issue identification: categories to include
 - (1) Stem Cell issue
 - (2) Scandal issue

6. Story prominence: Code these story locations with the associated numbers
 - (1) Front page= 1
 - (2) Inside page=0
7. Tone of a headline in news story: Code these headlines with associated numbers based on the news reporter's point of view. This will be categorized as:
 - (1) Strongly negative
 - (2) Negative
 - (3) Neutral
 - (4) positive
 - (5) Strongly positive
8. Image restoration strategies: Code these stories with associated numbers based on Hwang or his relevant colleague's comments.
 - (1) Denial
 - (2) Evasion of responsibility
 - (3) Reduction of offensiveness
 - (4) Corrective action
 - (5) Mortification
9. Moral development stages: code Hwang's image restoration strategies with associated numbers representing his moral development stage, based on Hwang or his relevant colleague's comments.
 - (1) Pre-conventional
 - (2) Conventional
 - (3) Post-conventional

APPENDIX B: CODING SHEET

Coder _____

Date _____ Article No. _____ Story Prominence _____

Time Period _____ Type of article _____

What was the main issue in news story?

1. Stem Cell issue
2. Scandal issue

What was the overall affective tone of a headline or lead paragraph in news story?

1. Strongly positive
2. Positive
3. Neutral
4. Negative
5. Strongly negative

What was Hwang's image restoration strategy seen in his comments or relevant colleague's?

1. Denial
2. Evasion of responsibility
3. Reduction of offensiveness
4. Corrective action
5. Mortification

What was the source of news story: _____

1. Experts
2. Hwang or his colleagues

What was Hwang's moral development stage of his image restoration strategy seen in his comments or relevant colleague's?

1. Pre-conventional
2. Conventional
3. Post-conventional

References

- Allen, R. E. (1993, September 23). Apologies are not enough. *The New York Times*, p. C3.
- Barger, W. (2003). Moral language in newspaper commentary: A Kohlbergian analysis. *Journal of Media Ethics*, 18(1), 20-43.
- Benoit, W. L. (1995). *Accounts, excuses, and apologies: A theory of image restoration strategies*. Albany: State University of New York Press.
- Benoit, W. L. (1997). Image repair discourse and crisis communication. *Public Relations Review*, 23(2), 177-187.
- Benoit, W., & Czerwinski, A. (1997, September). A critical analysis of USAir's image repair discourse. *Business Communication Quarterly*, 60(3), 38-57.
- Black, J., Barney, R. D., & Van Tubergen, G. N. (1979). Moral development and belief systems of journalists. *Mass Communication Review*, 6(3), 4-16.
- Bosman, J. (2006, February 13). Reporters find science journal harder to trust, but not easy to verify. *The New York Times*. p.1
- Brennan, E. (1992, June 14). An open letter to Sears' customers. *The New York Times*, p. A56
- Brooke, J. (2005, November 25). Korean leaves cloning center in ethics furor. *The New York Times*, p. 1.
- Brooke, J., & Choe, S-H. (2005, November 29). S. Korean support disgraced scientist: Cloning pioneer remains a hero despite dispute. *The International Herald Tribune*. p. 1.
- Butler, B. (1999). Source strategies, subsidies, and subterfuge: Building the prime-time campaign news agenda during 1998 federal election. *Australian Journal of Communication*, 26(3), 111-126.
- Cabot, M. (2005). Moral development and PR ethics. *Journal of Mass Media Ethics*, 20(4), 321-332.
- Cho, J., & Faiola, A. (2005, November 25). S. Korean stem cell expert apologizes for ethical breach; scientist admits team members provided egg samples that led to cloning of first human embryo. *The Washington Post*. p. A24.
- Coleman, R. & Wilkins, L. (2002). Searching for the ethical journalist: An exploratory study of the moral development of news workers. *Journal of Mass Media Ethics*, 17(3), 209-225

- Colistra, Rita. (2006). *Out of sight, out of mind? : Agenda cutting in the mass media*. Paper presented at the AEJMC Midwinter conference in Bowling Green, OH.
- Danielian, L. (1992). Interest groups in the news. In J.D. Kennamer (Ed.), *Public opinion, the press, and public policy* (pp. 81-102). Westport, CT: Praeger.
- Davis, A. (2000). Public relations campaigning and news production: The case of 'new unionism' in Britain. In J. Curran (Ed.), *Media organizations in society* (pp.173-192). New York: Oxford University Press.
- Dong, J. & Jung, S. (2005, December 17). Dr. Hwang "six researchers witnessed stem cell producing process". *Donga Daily*. p. A2.
- Dr. Hwang accepts responsibility but cannot agree with investigation committee's findings. (2006, January 10). *Donga Daily*. Retrieved 2007-04-15 online from <http://www.donga.com/fbin/output?sfrm=1&f=total&&n=200601100428>
- Dr. Hwang 'Spinal nerve treatment possible within 10- 20 years'. (2004, December 8). *Joongang Daily*. Retrieved 2007-04-15 online from http://article.joins.com/article/article.asp?total_id=422372.
- Dunn, D.D. (1969). *Public officials and the press*. Reading, MA; Addison-Wesley.
- Endless controversial about the source of eggs. (2005, December 29). *Joongang Daily*. Retrieved 2007-04-15 online from http://article.joins.com/article/article.asp?total_id=1777584.
- Entman, R. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication*, 43 (4), 51-58.
- Eyal, C., Graver D., McCombs, M., & Weaver, D. (1981). *Media agenda setting in a presidential election*. Westport, CT: Greenwood.
- Fishman, D. A. (1999). Valujet flight 595: Crisis communication theory blended and extended. *Communication Quarterly*, 47(4), 345-375.
- Gunter, B. & Wober, M. (1988). *Television and social control*. New York: St. Martin's Press.
- Guth, D.W. & Marsh, C. (2005). *Adventures in public relations: Case studies and critical thinking*. Boston, MA: Pearson Education.
- Iacono, E. (2006, February 29). Analysis- Scientific journals under the microscope. *PR Week*. p. 12.

- Jones, Peske, Raymond, Tewksbury, & Vig. (2000). The interaction of news and advocate frames: Manipulating audience perceptions of a local public policy issue. *Journalism & Mass Communication Quarterly*, 77(4), 807-829.
- Jung, E. (2005, December 28). Looking back at Dr. Hwang's scandal. *Donga Daily*. p.A17.
- Kennamer, J.D. (1992). Public opinion, the press, and public policy: An introduction. In J.D. Kennamer (Ed.), *Public opinion, the press, and public policy* (pp. 1-18). Westport, CT: Praeger
- Kerlinger, F. N. (2000). *Foundations of behavioral research* (4th ed.). New York: Holt, Rinehart & Winston.
- Kim, H. K. (2005, December 30). 10 out of 62 egg donors to MizMedi undergo treatment. *Donga Daily*. Retrieved 2007-04-15 online from <http://www.donga.com/fbin/output?sfrm=1&n=200512300129>.
- Kim, Y. H. (2004). History of Korean journalism. Geesiksanupsa.
- Kim, Y. (2006, March 17). Dr. Hwang. Accepts disciplinary punishment. *Chosun Daily*. p. A10.
- Kohlberg, L. (1963). *Stages in development of moral thought and action*. New York: Holt, Rinehart & Winston.
- Kohlberg, L. (1969). Stage and sequence: The cognitive-development approach to socialization. In D. Goslin (Ed.), *Handbook of socialization theory and research* (pp.347-480). Chicago: Rand McNally College.
- Ladley, E. (2006, March 1). Caution: stem cell research ahead: Negative publicity and restrictive regulations will slow down but not halt large pharmaceutical companies spurred on by the market potential of stem cell research. *Med Ad News*. 25(3), p. 4
- Lee, B. J. (2006, January 9). Storm over stem cells; Koreans lost a national hero in the scandal. But their scientists still lead the way in biotech research. *Newsweek International*. Technology section A 1.
- Mathews, J., & Peterson, C. (1989, March 31). Oil tanker captain fired after failing alcohol test; Exxon blames government for cleanup delay. *Washington Post*, p. A1.
- McCombs, M., & Shaw, D. (1972). The agenda-setting function of mass media. *Public Opinion Quarterly*, 36 (2), 176-187.

- McCombs, M., & Ghanem, S. (2001). The convergence of agenda setting and framing. In S. D. Reese, O. H. Gandy Jr. and A. E. Grant (Eds.). *Framing public life; Perspectives on media and our understanding of the social world* (pp. 67-81). Mahwah, NJ: Lawrence Erlbaum Assoc.
- McCombs, M. (2004). Attribute agenda-setting and framing. *Setting the agenda: The mass media and public opinion* (pp. 40-59, 86-97). (Cambridge, England: Blackwell Polity Press).
- Media Tenor. (2007). *Agenda setting theory*. Accessed electronically via http://www.mediatenor.com/smi_AS_approach.php
- Paralyzed Australian women walks after stem cell therapy. (2007, April 16). *Joongang Daily*. Retrieved 2007-04-15 online from http://article.joins.com/article/article.asp?total_id=2696118.
- Patterson, P., & Wilkins, L. (2005). *Media ethics*. Fifth ed. Boston: McGrawHill.
- Pfau, M. (1995). Covering urban unrest: The headline says it all. *Journal of Urban Affairs*, 17(2), 131-141.
- Powers, A., & Fico, F. (1994). Influences on use of sources at large U.S. newspapers. *Newspaper Research Journal*, 15 (4), 87-97
- Post apology by MBC. (2005, December 5). *Donga Daily*. Retrieved 2007-04-15 online from <http://www.donga.com/fbin/output?sfrm=3&n=200512050075>
- Sears to drop incentives in auto service centers. (1992, June 23). *Columbia Daily Tribune*, p.5B.
- Shoemaker, P.J. (1982). The perceived legitimacy of deviant political groups: Two experiments on media effects. *Communication Research*, 9(2), 249-286.
- Special reporting team. (2005, December 28). Stem cell's No.2 & 3 also not customized. *Chosun Daily*. Retrieved 2007-04-15 online from <http://www.chosun.com/economy/news/200512/200512280442.html>.
- Stem cell fraud finally confirmed. (2006, May 13). *The Korea Herald*. p. B1.
- The management support center for franchise chain*. (2007). Retrived 2007-02-13 online from http://cafe.naver.com/fcbiz.cafe?iframe_url=/ArticleRead.nhn%3Farticleid=146.
- Thomsen, S. R. (1998). Public relations and the tobacco industry: Examining the debate on practitioner ethics. *Journal of Mass Media Ethics*, 13(3), 152-164.

- Turk, J. V. (1986). Public relations' influence on the news. *Newspaper Research Journal*, 7(4), 15-27.
- Wanta, W. (1997). *The public and the national agenda: How people learn about important issues*. Mahwah, NJ : Lawrence Erlbaum Assoc.
- Waisbord, S. R. (1994). Knocking on newsroom doors: The press and political scandals in Argentina. *Political Communication*, 11, 19-33.
- What Dr. Hwang's team has to do in order to start all over again. (2005, December 8). *Chosun Daily*. Retrieved 2007-04-15 online from <http://www.chosun.com/editorials/news/200512/200512080596.html>.
- Wimmer, R. D., & Dominick, J. R. (2006). *Mass media research: An introduction*. Thomson Wadsworth: Belmont, CA.
- Wober, J.M. (2001). *Agenda cutting: Some remarks on the phenomenon and its importance*. Paper presented at Media Tenor's Agenda-Setting Conference in Bonn, Germany. October 2001.
- Yoon, Y. (2006). *Legitimacy, public relations, and media access: Proposing and testing media access model with stem cell and cloning organization*. Paper presented at the annual meeting of the International Communication Association, Sheraton New York, New York City, NY. Paper retrieved 2006-10-05 online <PDF> from [http://www. Allacademic.com/meta/p12768_index.html](http://www.Allacademic.com/meta/p12768_index.html).
- Zhang, J., & Benoit, W. L. (2004). Message strategies of Saudi Arabia's image restoration campaign after 9/11. *Public Relations Review*, 30(2), 161-168.