The Dynamic Picture of Avian Influenza in Indonesia: 
An Analysis on Shifting Key Events and Media Interests

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To my faithful parents
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Abstract

Highly Pathogenic Avian Influenza (HPAI) is an emerging health risk that has caused global anxiety since 2003. Indonesia is the worst-hit country with 141 cases and 115 fatalities as of early 2009. Since epidemiological features of this disease have yet to be discovered, the country has run the learning-by-experience way to control the disease. A prominent newspaper in the country, Kompas daily, is one of the mass media that has reported the development of the health risk in the country comprehensively. Amidst the uncertainty regarding the health risk, the newspaper has also learned how to perceive the health risk on its own. An analysis on the number and contents of Kompas news articles shows that the newspaper has maintained composure in reporting events regarding HPAI. It has managed to preserve strong presence of events in its news-producing activities, resulting in an alternating trend of news waves on HPAI from 2005 to 2008. By exercising the journalism principle of impartiality, it has accommodated interests of key actors, the likes of the WHO, the Government of Indonesia, and poultry industry in the news articles. The newspaper amplifies the health risk as it has shared interests on HPAI risk events with these key actors, especially with the WHO. Nevertheless, risk amplification during a health risk event may be useful as long as it is based on actual events. The news articles may give readers insights on how to act in the health risk. The newspaper has maintained the strong presence of events in its articles by exploring news events from various angles, resulting in the various news themes in the news articles across the years. The themes, along with the alternating trend of news waves and various key actors involved, resemble the dynamic picture of avian influenza in Indonesia.

Keywords: avian influenza, newspaper, risk amplification, media hype, Indonesia
Chapter 1: Introduction

The societies of the world are facing increasing risks and hazards, as consequences of scientific and industrial advancements humanity has attained through centuries (Beck, 1992). They are often beyond comprehension of the science itself making impacts are larger and deeper across time and places, diminishing gaps among socio-economic classes, races and nations.

This phenomenon is eminently profound in current outbreaks of influenzas that involve two new A-type viruses, H5N1 that causes Highly Pathogenic Avian Influenza (HPAI) and H1N1 that causes Mexican flu. Both have caused hundreds of fatalities. As science has yet to discover complete configurations of the strains as well as ways to control them, global and local strategies to prevent spreads of the viruses will always be challenges.

HPAI became a global outbreak in 2003 (WHO, 2008). Direct avian-to-human virus transmission is the predominant means of human infection, although the exact mode and sites of the virus acquisition in the respiratory tract are incompletely understood (Abdel-Ghafar et al, 2008). Scientists are not certain until now about whether the virus is transmitted through the air or direct contacts with sick birds.

This suggests that mode of transmission is a major uncertainty to overcome this disease. Handling of sick or dead poultry during the week before the onset of illness is the most commonly recognized risk factor (ibid Abdel-Ghafar et al, 2008). Hence, reducing overall population exposures to poultry is the focus of public health intervention to decrease the occurrence of the risk factor (Liao et al, 2009). Governments have to communicate that direct contacts with died and live poultry may pose health risks to citizens. This is often not an easy task due to the complexity of actors involves in every country.

This paper discusses the occurrence of the HPAI outbreak and its impacts in Indonesia, the worst-hit country in the world during 2005 to 2008. The strain, has not only resulted
in massive die-offs in birds, chickens and duck populations, but has also caused 141 cases and 115 fatalities among humans (WHOa, August 11, 2009).

Causes of the outbreak may not be the same with the recent Mexican flu pandemic or other influenzas emerging in the future. Nevertheless, this study, which explores series of risk events surrounding the outbreak, depicts the dynamic response of key actors following such health risk in a country. Mass media, as an actor in a risk communication process that records, perceives and reacts to risk events, is the object of observation in this study. An analysis on the number of news coverage reflects their enthusiasm to a risk event while the content of the news coverage reveals their focus of interests during the outbreak.

Indonesia has been struggling to implement the right measures to control HPAI. Swarmed by public scrutiny and international pressures, the Government of Indonesia (GoI) has shaped its national strategy through its own experiences and assistance from a global move to control HPAI coordinated by the United Nations (UN) (Forster, 2009). During the process, mass media have followed the HPAI progress from different angles, resulting in various news stories on the GoI’s efforts and other key actors. These reports may plainly record an event or indicate supports or objections to actors’ responses towards HPAI.

The GoI tried to tone down the issue when the first human case occurred in July 2005 due to concerns that public anxiety on this event would harm poultry business (Kompas, July 27, 2005). As human victims increased and the call to escalate efforts in curbing the disease were voiced by the mass media as well as the international organizations in 2006, the GoI established the National Commission for Avian Influenza and Pandemic Preparedness (NCAIPP), which coordinates an integrated set of policy and a national strategy to prevent, prepare and respond to HPAI (ibid Forster, 2009).

The GoI received a global financial assistance of US$132 million (€92.1 million) from 2006 to 2008, the largest among developing countries that received similar assistance to
control the outbreak (UNISIC, 2008). The fund was juxtaposed with supports in research and surveillance from the various international institutions involved, such as the WHO and the Food and Agriculture Organization (FAO) as well as government-related institutions like the United States Agency for International Development (USAID) and the Canadian International Development Agency (CIDA). These institutions are considered as formal partners of NCAIPP that directly involves in program establishments to support the national policy (INCAIPP, 2009).

Nevertheless, as victims keep falling none of the efforts seemed to be enough for the media. Kompas daily criticized the GoI for ‘hiding problems under the carpet’ and for ‘not acting comprehensively’ following the death of a 12-year-old boy in Jakarta province despite all the grants and efforts from the GoI and the international organizations (Kompas, January 13, 2007). People who worked in poultry industry kept complaining about decreasing income due to decreasing consumption of chickens as well as trade bans that local governments implemented to curb the spread of the disease among poultry (Tempo, October 27, 2007).

As a central stage for public opinion, it is always problematic for mass media to satisfy all audience, including government officials and citizens, at the same time. Moreover, journalists, fundamentally subjective entities that have their own mindset and perception, are behind every media institution, which make it never entirely objective. Let alone its interests as an organization.

In a health risk event like HPAI when public security physically and psychologically is at stake, however, mass media should focus on preserving information that raises people’s awareness but does not cause anxiety that diverts them from the desired action towards the risk. Mass media may want to help the government to tell citizens to keep away from dead and live poultry, but at the same time, they may also voice the concerns of poultry industry that expects the GoI’s and citizens’ supports in consumption and trade of poultry.
This further raises queries for mass media on whether it is enough to report hard news that only exposes what is happening or to go deeper in giving in-depth articles and opinion pieces that are more opinionated and directs audience to certain direction. The extra media attention to a risk event may intensify news coverage of an event as journalists explore more news sources and angles and produce more self-generated stories. These phenomena are also known as media hype (Vasterman, 2005). The focus of the stories in often times is not coherent with the messages that the government, scientists and other key actors try to deliver from an event or an accident. The news stories may amplify or attenuate a risk and affect general public opinion or perception in unanticipated ways.

In this paper, I mainly analyze whether news items produced by mass media on HPAI risks are following or neglecting the risk events that have happened during the outbreak. The main research question that I would investigate is: **How do the mainstream media depict various events related to HPAI risk?** Further, I would like to probe whether the risk events that are pursued by the media are the same with the events that are pursued by other key actors. This would prove whether the media pursue their own interests and divert focus of risk events from other key actors’ interests or are after similar interests with other key actors. This question would be answered by analyzing the number and themes of the news items as results to the coverage of the risk events.

Amid time constraint of this research, I will limit my observation to *Kompas* daily, the largest-selling national newspaper in the country (Sen and Hill, 2006). The observed news articles are from 2005, the year when the first human case emerged in the country, to 2008, when number of cases went down and some further concerns, like the efforts to develop human vaccines from victims’ blood samples transpired.

In the second chapter I will provide the framework of risk and uncertainty and the role of mass media as a transmission station in a risk communication process. The media may interpret events differently from other key actors due to different interests, perceptions and agenda. This high number of news items that are more self-generated than event-
based is defined as news hype. The third chapter will describe how I will conduct the study, which involves layering method and themes classification of news articles, in order to see how focuses of events change over time and how the newspaper react to this.

The fourth chapter will discuss the emergence of high news peaks and whether news hype occurs. To explain the events in high news waves, I will observe contents of the articles and compare it to the key events that reflect the interests of other key actors outside the media, which are the scientists. By doing this, I will describe the rise and fall of the number of news articles across the years. The fifth chapter will elaborate on the similarity and difference in focuses of events between key events and news themes. The results will show whether the newspaper acts as a totally different agent that pursues different news themes or shares similar news themes of other key actors in portraying the health risk in its news articles. A conclusion would describe how Kompas reacts to risk events and portrays HPAI risk in Indonesia.

**Chapter 2: Theoretical Framework**

This chapter discusses the theoretical framework that I employ in this study. It opens with basic notions of risk and uncertainty and how their nature, which is often described by non-conclusive research evidence, causes misinterpretation or miscommunication in the media. In the latter part of the chapter, arguments of media for their occasional or entire non-conformity to the interests of government officials and scientists are presented. The non-conformity can be expressed in self-generated news articles in an event that is not considered important by the other policy actors. Further, the different interests between scientists, government and the media can also be explained through the political dynamics in a policy process.

**Risk and media**

Every science discipline has its own definition of risk. Statisticians and economists tend to perceive it as predictable phenomenon and can be anticipated. The economist Knight argues that risks are the calculable, hence manageable, islands in the sea of uncertainty (van Asselt and Vos, 2006) while Bayes has developed a probability theory that is based
on past events to predict the potential occurrence of a phenomenon in the future (Dale, 1999). Meanwhile, sociologists tend to determine the inherent uncertainty in every risk, which make it less controllable and requires precautionary actions (van Asselt, 2000). Sociologists Nowotny, Scott and Gibbons criticize the economists’ and statistician’s views as they have decreased the inherent feature of uncertainty (ibid van Asselt and Vos, 2006). Another sociologist, Beck (1992), suggests a definition that gives a larger portion of uncertainty by saying that risk is induced and introduced by modernization and has collective impact on civilization. Societies can produce and can be afflicted by it but can never have a total control on it.

Renn (2006) bridges both notions by defining risk as an uncertain of an event or an activity relating to human values. It is a combination of two components, which are the likelihood of consequences and the severity of consequences of human activities, natural events or combination of both. As it roots to human values, the concept of risk can be changed, magnified, dramatized or minimized within knowledge and are open to social construction. Hence, the mass media and scientific and legal professions become key social and political actors who construct risk (ibid Beck, 1992).

The type of risk that are deeply intermingles with uncertainty is called uncertain risk. The uncertainty part of such risk is often regarded as blind spots or grey areas that scientists have yet to fully comprehend in an event. It could come from a complex situation that is caused by inexactness, lack of observations, conflicting evidence and ignorance as well as from natural systems, human behavior, social, economic and cultural dynamics, value diversity to technological advancements (ibid van Asselt and Vos, 2006).

As risk is socially constructed, either by policy-makers, scientists or mass media, a good communication is key to assess and manage risks (ibid Renn, 2006). If public trust to government is high, scientists and policy makers still are the main actors to communicate risk or risk events, which might include actual or hypothesized accidents and incidents, to the public (Lofstedt, 2005). This is evident in the case of waste incinerator in the North Black Forest (1996), Germany, where scientists resolve the decision-making of locations
for a waste incinerator by holding focus group discussions with local residents and government.

In the absence of public trust to the government, however, the roles of other key actors such as mass media or non-governmental organizations (NGO) are significant. Massive coverage of mass media has contributed to nuclear stigmatization in the United States during the latter half of the 20th century (Pidgeon et al, 2003) while the campaign of environmental NGO Greenpeace against the dumping of a redundant oil storage buoy, Brent Spar, in the North Sea have caused public opposition towards oil producer Shell and British’s Department of Trade and Industry (ibid Lofstedt, 2005).

One way to elaborate risk communication process is the social amplification of risk framework (SARF), which was introduced by Kasperson in 1988. This notion holds that in interpreting images—signs and symbols from the risk or risk events—individuals or institutions may share a particular focus of concern and sociopolitical activity regardless they are assessed as relatively low risk (ibid Pidgeon et al, 2003). The shared concerns produce risk amplification. On the contrary, the process by which certain hazards or events that were assessed as relatively high risk by scientists but receive low public concern is considered as risk attenuation.

As a social amplification station in a risk communication process, media are inclined to have such interpretation gap with scientists or other key actors. Pidgeon et al (2003) poses several arguments to this. Firstly, the demand for certainty in an uncertain condition may triggers journalists to seek the conclusive parts of the event, instead of sticking with the “we need more research” approach from the scientists or government officials. Secondly, in light of government inaction, which means that it refuses to adopt the precautionary principle, risks may be ignored or appear to be resolved among the officials which decrease the event’s news value. Thirdly, prospective insight of risk, which requires projected assessments, also contradicts the retrospective nature of the media. Journalists are more interested to daily events than prediction of the future.
Media amplify or attenuate an event disproportionately, in the view of scientists and policy makers, through a series of news articles that may be overwhelming or insufficient for an event (Vasterman, 2005). Amplification of an event through the media does not only raise an event as a public agenda, but also bring different perspectives on the problem at hand.

However, this does not negate the entire role of media in risk communication. Media have an increasing role in studies of risk, despite the role is vague and lack of observation to provide detailed analysis of their role (Pidgeon et al, 2003). Pressure groups can use the media to force an issue onto the public agenda amidst official denials or government inaction. It is a highway for public information and political or policy process as they provide spaces for discourses by policy communities, which consists of scientists, policy entrepreneurs, politicians, pressure groups and government (Kingdon, 1995).

*HPAI risk*

HPAI viruses are derived from poultry and wild birds in some countries in Asia, Africa and Middle East (Abdel-Ghafar et al, 2008). Most patients have contracted with the virus due to direct and indirect contacts with poultry that are raised inside or outside of their houses. Exact mode of transmission has yet to be discovered. Therefore, all poultry-related activities—slaughtering; de-feathering; or preparing sick poultry for cooking; playing with or holding diseased or dead poultry; handling fighting cocks that appear to be well; and consuming raw or undercooked poultry and poultry products—have included as potential risk factors. Cooler months have also been associated as a risk as human and poultry cases are increased during this period.

There have been 438 cases with 262 deaths in 17 countries since 2003 (WHOa, 2009). The limited human-to-human transmission has occurred in Vietnam, Indonesia and Pakistan (WHOb, 2009). The WHO has slapped pandemic alert status to the global HPAI outbreak with no or very limited human-to-human transmission (Narain, 2008). The WHO has six stages towards pandemic and the pandemic alert status is considered as Stage 3. The pandemic status has yet to be updated as human cases worldwide has
declined since 2007. The latest human-to-human transmission was confirmed from Pakistan on April 3, 2008.

Indonesia has become the worst-hit country with a total of 141 cases and 115 fatalities. The WHO’s Regional Office for Southeast Asia found that of 110 cases found in Indonesia as of May 2008, 83 percent were associated with poultry contact while the rest of the exposures remained inconclusive (ibid Narain, 2008). From the cases affiliated with poultry, the probability of direct and indirect contacts that causes infection is equal.

Through experiments with cats, Kuiken (2006) discovered that H5N1 virus attached abundantly to the cells lining the lower lungs instead of upper respiratory tract like mouth and nose, suggesting that, as avian-to-cat, avian-to-human transmission is difficult (Kuiken et al, 2006). This fits the autopsy results of human victims, which lower lungs are mainly occupied by the virus. Human-to-human transmission is very rare and occurs only with intense physical contacts without barriers like that between mother and child. Another research from Kawaoka of University of Tokyo confirmed this finding (New Scientist, March 22, 2006). However, these studies have yet to answer whether infections occur through oral or respiratory routes as well as whether virus transmission from cats to poultry, humans and other species is possible. These are the major uncertainty in HPAI risk.

HPAI risk and its inherent uncertainty has brought significant socio-economic losses and triggered an orchestrated global action under the United Nations, which established the United Nations System Influenza Coordinator in 2005. The coordinating body enhances and implements technical strategies for influenza action among the UN’s institutions such as the WHO and FAO (UNSIC, 2009). The WHO takes the center stage as the institution that assists country governments to handle human cases, including confirming cases through blood samples, conducting research to from the cases, holding surveillance among family members and relatives every time one case occurs as well as developing vaccines for human (WHOc, 2007).
Newspaper and media-hype

There are many forms of mass media nowadays, ranging from print to online ones. Newspapers are one of the oldest forms of printing media, dating from the sixteenth century in Venice, Italy (Stephens, 1998). It was the handwritten news sheets that circulated widely to give information on wars and politics in Italy and Europe. The employed style of journalism is short sets of news items, forwarded from a particular city, written under the name of that city and the date on which they were sent. The content of the stories were hard news, reporting actual events occurred at that time.

Through centuries, the role of newspaper has changed—from only providing pure information to enriching insights and opinions of the readers—resulting in more varied types of news articles (Bleyer, 2009). In a typical daily paper, news contents may be grouped into seven classes: (1) news stories (hard news); (2) special feature (in-depth) articles; (3) editorial; (4) dramatic, literary, and musical criticism; (5) practical advise and useful information; (6) humorous matter; and (7) fiction. A regular newspaper usually presents all kinds of news, from politics to entertainment.

Hard news presents actual events to the readers while feature articles are less timely but more meticulous in elaborating details of a news event and are generally longer than hard news. Editorials aim to interpret news and carry discussions of conflicting interests involved in a topic. Editorials are often opinionated and reflect stance of the respective newspaper towards an issue. As newspapers are part of the battleground of policy discourses, scientists, experts, and other pressure groups may as well express their insights in the form of opinion piece, which can be purely informative or proposes arguments to certain issues. The latter four types of the news contents generally have similar forms to the first three as they do not have distinct journalistic types of writing.

A series of news items following an event is called a news wave. In a normal news wave, flow of news articles has specific patterns, which includes positive feedback loops, a key event, a news theme, lowering news threshold, interactive media momentum, and the decline of news wave (Vasterman, 2005). Positive feedback loops are a regular
mechanism of news coverage, which starts with journalists report the facts, offer opinion, organize the debate, and the decline of the significance of the topic due to exhaustion of angles and news sources. It can also be because of minimum public attention to an event. In some cases, media can keep pursuing an event regardless actual events if they consider the theme necessary or there are still a lot of questions remain in the event. Here the media may seem to develop the lives of their own, which is totally detached from the actual events.

A key event is the initial incident in the real life that triggers chain reaction of news for whatever reason, from pure curiosity to the lack of more important news during slow news days (Vasterman, 2005). A key event can be an actual event, but it might also be an interview, a speech, an official warning (regarding health risks) or a report from investigative reporters. All of these are parts of the interactivity of the media. All of these actions and reactions contribute to the news wave, reinforcing the newsworthiness of the event.

A significant event usually generates a big news theme that is share across various news desks in a media institution. This is because the event carries a large impact that can affect various aspects in the society. One impact of generalization of news theme to an event is that it lowers the news boundaries temporarily. This means that the media would relate any event or statement to the main news theme, despite there is no direct linkage between them. This leads to a flow of thematically related news and results in selective perception while other facts and opinions are neglected or marginalized.

Media hype can be defined as media-generated, wall-to-wall news wave, triggered by a certain event and enlarged by a self-reinforcing process within the news production of the media (ibid Vasterman, 2005). If a certain issue catches media attention, journalists will pursue the event from various sources, angles and the different types of writings in their pursuits to reveal the truth and understand a risk event. The abundant number of coverage raises public anxiety, although the individual articles hardly change their readers’ views (Lewison, 2007). Hence, the media-hype contributes to the process of social
amplification of risk events, in which risk is magnified, causing all kinds of secondary social, political and economic consequences (Slovic, 2000).

Nevertheless, to claim that media exaggerate an event may be subjective because what is important to one individual or institution may not be important for others. As part of the principle of impartiality, journalists should be able to provide balance in the choice and use of sources, so as to reflect different point of views and objectivity in the presentation of news (Harcup, 2004). If media only comply with one individual or institution it would lead to information monopoly by a certain group, which would dampen the free flow of information in the society.

Media-hype cannot also be regarded as distortion of what is happening and what is being reported because reality to an event may not be singular and can be presented in different angles and comes from the point of view of several sources, which may result in more than one news story. The other side of reality would be that not all reality is worth reporting. A traditional saying in journalism puts it as follows: “Dog bites man is not news. Man bites dog is”. It means that things that frequently occur becomes a common occurrence hence have lower news value (ibid Harcup, 2004)

To satisfy these arguments, Vasterman (2005) gives some criteria to media-hype:

- The sudden materialization of a news wave, which rises rapidly and decreases slowly and is not related to the frequency of any actual events as reported, and which is based on consistent choices in the newsroom of the different media.
- The existence of a key event: there is a clear starting point for a news wave, an event that receives more attention than comparable events, for whatever reason.
- The media are making the news instead of reporting events by: reporting comparable incidents and linking them to the key event; reporting thematically related news such as features, analyses and opinions.
- There is an interaction between the media and social actors resulting in increased coverage of social action triggered by the news wave and increased coverage of reactions from social actors.
In conclusion, a news wave occurs when number of news peaks in one point of time as a consequence of a risk event. A news wave can only be considered a media-hype if items of self-generated stories are more than the hard news or thematically-related news stories are more than the incident-related news. Media-hype can be considered as a social amplification as it is self-reinforcing and develops a life of its own, instead of event-based, and may cause public anxiety and thereby may evoke new social developments such as policy responses from governments as well as public stigmatization towards a risk event.

The impacts of media hype may be positive and negative to a risk event. Television reports on the Oklahoma city bombing and the September 11 terrorist attacks caused an increasing posttraumatic stress disorder and depression symptoms among children and adults (Burke, 2008). In Canada, although crime rates tended to fall in July 1998, fear of crime among citizens was rising due primarily media hype (Coaffee, 2003).

On the other hand, media can be beneficial for the community as they inform, educate or communicate with people (Vasterman et al, 2005). It can be a powerful tool to direct sentiments or actions towards an event. Media can be allies following a terrorist attack because they can help broadcast accurate information to an anxious population. They can also powerful charitable agents that garner relief for disaster-hit areas, for instance during tsunami in Aceh province, Indonesia, in 2004. A study of Brown and Minty (2008) posits that an additional minute of nightly news coverage on network television or one additional 700-word story in major newspapers increases daily total Internet donation by 16.5-20.8 percent. This is because each news item induces sympathy from its audience and encourages them to give charity.

Chapter 3: Methodology
This chapter discusses the methodology of this study, which involves theme classification of news articles. It begins with the explanation of sources of data and how it is organized for the study. It will be continued with definition of the layering methods and its role in
analyzing amplification or attenuation in a risk communication process. It also discusses
classification of news articles, which are based on an expanded content analysis. The
methods are used to see how focus of events changes over time and how the media react
to this. In the last sub-chapter, I discuss the applicability of the methods in this study and
mention several possible drawbacks in the results of the study.

*Kompas daily*

I chose a newspaper as the object of my study because newspaper is a significant form of
media in Indonesia that has been able to set political agenda in critical social and political
events in the country, dating back from the struggles for the country’s independence in
the beginning of the twentieth century (Brown, 2003). *Kompas* is a national and the
largest-selling newspaper in Indonesia, distributing no less than half of million copies
since 1995 every day (Sen and Hill, 2006).

The data used in this study focuses on 2005, the year the human case appeared, to 2008,
when human cases had decreased in most of the provinces in the country. It is very
unlikely, however, to say that this period covers the life cycle of avian influenza. As
vaccines or more complete epidemiological features have yet to be discovered for the
disease, haphazard of the case still exists.

The data used in this analysis is collected from archives of *Kompas* daily’s website
(cetak.kompas.com), by inputting keywords “flu burung” (avian influenza) in the portal’s
engine. The articles that are not available on the website are retrieved through the search
engine of Google Inc. Types of articles that are collected include hard news, in-depth
articles, opinion pieces and editorials. The news articles are compiled monthly. I define a
month to have a high news wave (news peak) when the number of news articles is higher
than the average number of monthly news articles. The average number of monthly
articles is calculated by dividing the total number of articles produced, in 2005 to 2008,
to 48, which is the total number of months in this period.
I don’t observe letters from readers because the analyses are meant for the media itself as an amplification station rather than the direct opinion of the public. The articles collected are also the ones that have appeared in the newspaper, not only the ones that are published in the website. This is because those that have appeared in the newspaper are more comprehensive, containing longer articles and analysis on an issue.

News articles in the website focus to give fast and direct information to readers so journalists only write about facts related to an event shortly after it happens while in the printed edition, they are required to give further explanation like background information or simple analysis to the event. The time lag between the event and the printing schedule allows journalists to do this.

*The layering method*

The layering method is a mechanism to assess the applicability of SARF in explaining risk communication. It was first used in the United Kingdom to analyze the relation among data, which are seen as layers over a period of time. The data may be individual actions, attitudes, or statistics, corresponding to the risk event. In the relation with news coverage analysis, this method was used to probe social amplification of HIV/AIDS and Bovine Spongiform Encephalopathy (BSE) or “mad cow” disease, which are considered as among the most significant risk issues in the country (Pidgeon et al, 2003).

There are three key components to conduct this method (*ibid* Pidgeon et al, 2003), which are relevant data, time frame and the analysis of the relationships of the different layers. In the case of the HIV/AIDS, the number of non-news TV programs and newspaper articles on HIV/AIDS were compared to victims and incidents and government expenditure spent for the disease. All of the data are available in similar period of time, 1983-90, which makes them comparable. Peaks and troughs of the layers in some point of time show similar patterns, suggesting there was a public awareness, which was represented by the attention the mass media (*ibid* Pidgeon et al, 2003).
Hence the data involved should be relevant to groups involved in an event. Data should be able to measure socio-economic impacts of the risk event and should also be available in the same period. It is important to decide the time period and key events in which the hazard occurs to form the focus and to be clear as to the rationale for conducting the analysis. The ideal is to include all data in the life cycle of the hazard, which include pre-notification, recognition, attempts to overcome the hazard and its ultimate endpoint. However, it may be difficult to define the start and endpoints of the lifecycle.

The method, nevertheless, has several drawbacks. Firstly, it does not explain the causal relationship among the layers. In the HIV/AIDS case, it has yet to be known whether the media coverage triggers the raise on government expenditures or the number of HIV test (Pidgeon et al, 2003). Secondly, it emphasizes on the quantitative part of SARF as it only analyze the number of news items instead of observing the content of the media. Thirdly, there was no explanation in the study that all of the comparable data were accessible or publicly announced during the news coverage, making the assumption that there are causal relations among the sets of data is rather vague.

In this study, I try to introduce more qualitative approach to the method. I compare the monthly articles of Kompas daily from 2005 to 2008 with a series of key events of HPAI released by the WHO and a study on political economy of HPAI by Forster (2009). The key events consist of occurrence of human cases and victims as well other important events related to HPAI risk. By introducing the key events instead of quantitative data, I can compare the media coverage with events that may explain the rise and fall of the number of articles.

The key events mostly are built on the occurrence of human cases. To complete the key events, I incorporate qualitative key events, e.g. relevant research and policy issuance, which are also considered important by the WHO (Table 1). Another contribution to the key events come from a study conducted by Forster (2009) that runs a comprehensive qualitative research on the economic and political process of HPAI governance in Indonesia.
The study defines key actors during the HPAI risk events, general history of HPAI risk in the country as well as defining key events during 2005 to 2008. The key events completes the WHO’s as it also includes political events that are not recorded by the WHO. Unlike Forster’s study that takes a macro- approach towards the HPAI risk event, I only focus on observing media’s behavior in the key events by observing a media institution’s response, in this case Kompas newspaper, towards HPAI.

Not all key events in the two reports are used in this study. This paper limits the observed key events to maintain focus of the analysis. Human cases can only become a key event if there are more than two human cases within a month. Animal related events are also not determined as key events because GoI has considered HPAI is an extraordinary outbreak in the country since 2004. If I also consider the outbreak among poultry, this means that I have to start the observation of news articles from 2004, which may involve more items of key events. Hence, animal-related events that can become key events are only those related to the control policy of the disease to prevent human cases. The nature of animal-to-human transmission of the virus makes poultry control in each neighborhood hold a central role in preventing human cases.

Table 1: Key events of HPAI in Indonesia

<table>
<thead>
<tr>
<th>Month</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 2005</td>
<td>Research concludes that a girl in Thailand probably passed the virus to her mother in September 2004, causing fatal disease. This is the first published account of probable secondary human transmission of any avian influenza virus.</td>
</tr>
<tr>
<td>Jul 2005</td>
<td>Indonesia confirms its first human case in Tangerang, Banten province.</td>
</tr>
<tr>
<td>Sep 2005</td>
<td>Indonesia confirms its 2nd to 4th human cases. Research describes the clinical features of H5N1 infection and reviews recommendations for the management of cases.</td>
</tr>
<tr>
<td>Oct 2005</td>
<td>Indonesia confirms its fifth to seventh human cases.</td>
</tr>
<tr>
<td>Dec 2005</td>
<td>Indonesia confirms up to twentieth human cases by the end of the year.</td>
</tr>
<tr>
<td>Feb 2006</td>
<td>Jakarta provincial government conducts door-to-door check and poultry vaccination after two residents dies in January. Indonesia confirms 25th human case and 18th fatality.</td>
</tr>
<tr>
<td>Mar 2006</td>
<td>GoI establishes NCAIPP to coordinate efforts to control HPAI and appoints state pharmaceutical company Indofarma to produce 12 million Oseltamivir tablets (for human patients). Two studies find that human-to-human transmission of HPAI is unlikely since the viruses prefer to bind to molecules located deep in the lungs,</td>
</tr>
</tbody>
</table>
instead of mouths and noses.

<table>
<thead>
<tr>
<th>Month</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2006</td>
<td>Indonesia reports the largest family cluster in any country to date, with 7 confirmed cases (the 34th through 39th and the 42nd) from 4 households in the Karo district of North Sumatra.</td>
</tr>
<tr>
<td>Jun 2006</td>
<td>Indonesia confirms its 49th to 51st human cases. GoI holds an expert meeting with WHO, FAO and UNICEF on coordination of national policy strategies to curb HPAI.</td>
</tr>
<tr>
<td>Aug 2006</td>
<td>Indonesia confirms its 55th to 60th human cases.</td>
</tr>
<tr>
<td>Sep 2006</td>
<td>Indonesia confirms its 61st to 68th human cases.</td>
</tr>
<tr>
<td>Oct 2006</td>
<td>Indonesia confirms its 69th to 72nd human cases. A surveillance study of H5N1 isolates from poultry in southern China confirms the virus subtypes continue to emerge and their relative prevalence continues to change.</td>
</tr>
<tr>
<td>Jan 2007</td>
<td>Indonesia confirms its 75th to 81st human cases. Jakarta provincial government bans backyard farming and pledges to apply strict control on its poultry trades. The ban on backyard farming is the first time to be applied in provincial level.</td>
</tr>
<tr>
<td>Feb 2007</td>
<td>GoI appoints Swiss-based Baxter Healthcare SA to develop a human vaccine on Indonesian strain of HPAI.</td>
</tr>
<tr>
<td>Mar 2007</td>
<td>Health ministries from 18 Asia-Pacific countries issue “Jakarta Declaration”, calling for more open virus and information sharing for HPAI and potential pandemic influenza among developing countries.</td>
</tr>
<tr>
<td>May 2007</td>
<td>Ministry of Agriculture announces the purchase of 60 million doses of poultry vaccines and grants of 33 million doses from China and 5 million from World Bank.</td>
</tr>
<tr>
<td>Jun 2007</td>
<td>Indonesia confirms its 99th to 101st human cases.</td>
</tr>
<tr>
<td>Aug 2007</td>
<td>Indonesia confirms its 103rd to 105th human cases. A study describing the epidemiology of 54 human cases of H5N1 infection in Indonesia is published. Conclusions included that 76% of cases were associated with poultry contact, and the source of infection was not identified in 24% of cases. The WHO criteria for accepting confirmed cases of A (H5) infection are amended.</td>
</tr>
<tr>
<td>Sep 2007</td>
<td>International HPAI conference is held in Bali.</td>
</tr>
<tr>
<td>Oct 2007</td>
<td>Indonesia confirms its 107th to 111th human cases.</td>
</tr>
<tr>
<td>Dec 2007</td>
<td>Indonesia confirms its 114th to 116th human cases.</td>
</tr>
<tr>
<td>Jan 2008</td>
<td>Indonesia confirms its 117th to 124th human cases.</td>
</tr>
<tr>
<td>Feb 2008</td>
<td>Indonesia confirms its 125th to 129th human cases. Indonesia sends two virus samples to the WHO after assurance its rights to any vaccines produced would be recognized. FAO reports that Indonesia continues to experience outbreaks among poultry.</td>
</tr>
<tr>
<td>Apr 2008</td>
<td>Indonesia confirms its 130th to 133rd human cases. US NAMRU-2 laboratory in Jakarta is accused of engaging in intelligence operations.</td>
</tr>
<tr>
<td>Jun 2008</td>
<td>Ministry of Health decides to withhold information on human deaths.</td>
</tr>
<tr>
<td>Dec 2008</td>
<td>Indonesia confirms its 138th to 139th human cases.</td>
</tr>
</tbody>
</table>

This study also does not take a lot of international events, i.e. confirmed animal and human cases in other countries, as pegged news events, since the focus of the study is Indonesia. Those that are included are the ones that are policy-based or related research that influence the developments of HPAI in Indonesia.
Classification of news themes and amplification

Classification of news themes is one way to observe the news articles. It is a form of content analysis in which it would analyze headlines and general themes of the articles. It can explain the coexistence and contradiction between the trend of news articles and key events, which results from the layering method.

Vasterman (2005) has designed two broad classifications of news themes to analyze amplification of social problems in news stories. The first category is incident-related, which is defined as factual reports about incidents or accidents that are happening, including key event and similar events. The second one is thematically-related, defined as reports that are not factual but only related to the central news theme in the construction e.g. background articles, feature articles, interviews, notifications, etc. in a media-hype, it is expected that thematically-related news will dominate very soon after the start of the news wave.

By counting the number of reports in these different news categories, it is possible to distinguish which part of the news wave was generated by the factual coverage of events and which part was generated by the news-making activities of the media. The number of articles in the categories, media- or source-generated, gives an indication respectively of the active role of the media or the social actors responding to the coverage. It also shows the degree of consistency between different media concerning their news choices.

The classifications, however, are not sufficient to show the dynamics of news themes that changes within the period of time whereas it is important to explain this to understand the shifting news wave and the changing attention that the media have from time to time. A method that can be used to observe the shifting news themes can be done in the realm of content analysis is by coding the observed news articles or opinions into several general theme categories. It can be found in a study of Rowe et al (2008) that analyze the initial public reactions of avian influenza in Britain in 2007. By coding comments that were posted in BBC website over several weeks, the researchers can point out the concerns of
the public on the issue and they link the disease with the respondents’ view on government, industrialization and foreign policy.

*Kompas* news articles have been sorted into eight news themes (Table 2), which are generally divided into human-related events and animal-related events. This is adopted from the WHO’s event classification of major events (WHO, 2009). The eight news themes simultaneously capture the classification of news categories, which are incident- or thematically related, as well as the themes of all news articles. Direct observation helps to generate these news themes. The configuration of the news themes shows the themes that received most attention from the media or other observed group. The difference of the configuration over time shows the shifting attention and dynamics of perceptions of the observed news theme.

Human-related category is framed into four themes, which are human cases, human-related policies as well as direct and indirect impacts of HPAI. These new themes are based on the notion that humanity aspects of human cases is not only limited to the occurrence of the cases. Moreover, it involves direct and indirect impacts from other aspects of human lives, e.g. economic and political impacts as well as indirect impacts, which relate HPAI with non-relevant issues such as football analysis and nation integrity. The indirect impacts emerge as the consequence of news waves that ripples to various kinds of audience that may have their own interpretations on the news events. This means that HPAI is not merely a disease to the public, but also triggers some kind of “culture” with it being associated with various issues in daily life.

Table 2: The main themes identified according to angles, sources and types of news waves

<table>
<thead>
<tr>
<th>Code</th>
<th>Themes/angles</th>
<th>WHO’s classification</th>
<th>Sources</th>
<th>Types of news</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Poultry cases (confirmed, tests)</td>
<td>Animal-related</td>
<td>GoI, local authorities</td>
<td>Actual event</td>
</tr>
<tr>
<td>2</td>
<td>Poultry (animal) case policy control</td>
<td>Animal-related</td>
<td>Governance</td>
<td>Actual event and media-generated</td>
</tr>
<tr>
<td>A</td>
<td>Rules and regulation</td>
<td></td>
<td>GoI, local authorities</td>
<td>Actual event</td>
</tr>
<tr>
<td>B</td>
<td>Reaction to rules and regulation</td>
<td></td>
<td>Poultry owners, traders, poultry companies, veterinary associations</td>
<td>Actual event and media-generated</td>
</tr>
<tr>
<td>C</td>
<td>Opinion/ in-depth articles</td>
<td></td>
<td>Experts, journalists</td>
<td>Media-generated</td>
</tr>
<tr>
<td></td>
<td>Human-case policy control</td>
<td>Human-related</td>
<td>Governance</td>
<td>Actual event and media-generated</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------</td>
<td>---------------</td>
<td>------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>3</td>
<td>Rules and regulation</td>
<td>Gol, local authorities</td>
<td>Actual event</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Reaction to rules and regulation</td>
<td>Hospitals, families of victims, citizens</td>
<td>Actual event and media-generated</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Opinion/ in-depth articles</td>
<td>Experts, journalists</td>
<td>Media-generated</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>International rules and regulation, cooperation to combat HPAI in Indonesia</td>
<td>WHO and other international organizations</td>
<td>Actual event</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Human cases</td>
<td>Victims, families, neighbors, general public, GoI, journalists</td>
<td>Actual event and media-generated</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Cases (suspects, confirmed, tests)</td>
<td>GoI, hospitals, WHO</td>
<td>Actual event</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Reaction</td>
<td>Victims’ families, neighbors, citizens</td>
<td>Actual event and media-generated</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Opinion/ in-depth articles</td>
<td>Experts, journalists</td>
<td>Media-generated</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>General research</td>
<td>Human and animal-related</td>
<td>GoI, WHO, experts, journalists</td>
<td>Actual event and media-generated</td>
</tr>
<tr>
<td>5</td>
<td>Studies on epidemiological features and human-vaccines</td>
<td>GoI, WHO, experts</td>
<td>Actual event</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Opinion/ in-depth articles</td>
<td>Experts, journalists</td>
<td>Media-generated</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Direct impacts on relevant sectors (e.g. politics and economics)</td>
<td>Human-related</td>
<td>GoI, key actors in the respective sectors</td>
<td>Actual event and media-generated</td>
</tr>
<tr>
<td>6</td>
<td>Hard news</td>
<td>GoI, key actors in the respective sectors</td>
<td>Actual event</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Opinion/ in-depth articles</td>
<td>GoI, key actors in the respective sectors, journalists</td>
<td>Media-generated</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Indirect impacts</td>
<td>Human-related</td>
<td>GoI, key actors in the respective sectors</td>
<td>Actual event and media-generated</td>
</tr>
<tr>
<td>7</td>
<td>Hard news</td>
<td>GoI, key actors in the respective sectors</td>
<td>Actual event</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Opinion/ in-depth articles</td>
<td>GoI, key actors in the respective sectors, journalists</td>
<td>Media-generated</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>International developments</td>
<td>Human and animal-related</td>
<td>WHO, governments in respective countries</td>
<td>Actual event</td>
</tr>
<tr>
<td>8</td>
<td>Animal cases</td>
<td>Animal-related</td>
<td>WHO, governments in respective countries</td>
<td>Actual event</td>
</tr>
<tr>
<td>A</td>
<td>Human cases</td>
<td>Human related</td>
<td>WHO, governments in respective countries</td>
<td>Actual event</td>
</tr>
<tr>
<td>B</td>
<td>Governance</td>
<td>Human and animal-related</td>
<td>Governments in respective countries, international organizations</td>
<td>Actual event</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For hard news, the code of a news article is determined by its headline and its first three paragraphs. It is not determined based on the whole article because a hard news article, which aim to provide basic information of a news event, often includes more than one angle or theme. The determination on the first three paragraphs refers to inverted pyramid news structure, which concentrates the most important messages of a news article in the first paragraphs (McKane, 2006). This structure is commonly used for hard news. For non-hard-news, the whole content of articles are taken into consideration. The appearance of the keywords “flu burung” also determines whether or not the article puts HPAI as its

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central theme. This helps especially to classify the “indirect impacts” theme as most of articles that fall into this category only reveals the keywords once.

This classification can also analyze the existence of media-hype in Kompas, during high news waves. By separating types of news that are based on actual events and media-generated or source generated, it can be determined whether media-hype occurs in an observed month. Media hype occurs when the proportion of media- or source-generated news is higher than the proportion of event-based articles. The occurrence of media-hype indicates risk amplification by a media institution.

From the classification, types of news sub-categories that is event-based are: 1, 2A, 2D, 3A, 3D, 4A, 5A, 6A, 7A, 8A, 8B and 8C. They are in the form of hard news. Meanwhile, the self-generated sub-categories are: 2B, 2C, 3B, 3C, 4B, 4C, 5B, 6B and 7B. They come in the form of non-hard news, which can be special feature (in-depth) articles; editorial; literary, and musical criticism; practical advises and useful information; and humorous matter. All of these observed articles are non-fiction articles.

As social amplification can also be interpreted as shared interests among key actors on particular risk events, Kompas may be considered as amplifying HPAI risk if it shares similar interests with scientists, whose interests are represented in key events. This means that if the majority of focus of news themes during news peaks is similar with key events, this may suggest that Kompas amplify risk regardless the existence of media hype.

Limitation of study
Weaknesses of this study comes generally from two aspects, which are the fact that only one media institution is observed, Kompas daily, and the limited considerations of key events that only take account the WHO’s interest and a relevant study. Observing only one media results in an isolated term of media-hype in this study. If this study reveals that media-hype occurs in Kompas news articles, it does not mean that there is a media-hype in general in Indonesia.
In terms of key events, if it is acknowledged that policy communities consist of various key actors, the key events should be determined based on the various interests available and establish them based on the events that most key actors considered as important. This study finally use the WHO’s key events because the WHO involved in a lot of areas of policy in controlling HPAI risk, including confirming cases and conducting research for human vaccines. Besides, human cases are the focus of this research, instead of taking all human- and animal-related events into consideration. Nevertheless, it does not mean that other institutions do not influence the dynamic of events related to HPAI risk.

**Chapter 4: Avian Influenza Pandemic Alert in Indonesia**

This chapter contains results of an analysis on news articles on HPAI that *Kompas* has produced from 2005 to 2008. It opens with defining news peaks across the years and an analysis on whether media hype occur during the high news waves. To analyze what happens in the news peaks, I define and code events within the news peaks and compare them to the key events that have been established earlier. It is expected that some of the news peaks relate to the key events. In the months when the news peaks do not relate to the key events, the analysis reveals alternative HPAI events that receive the newspaper’s attention.

**Peaks of news waves**

There are 817 news articles mentioning “avian influenza”, which are distributed as follows: 197 articles in 2005, 262 articles in 2006, 223 articles in 2007 and 135 articles in 2008. The average number of monthly news articles is 17 items. There are 17 months with high news waves, in which the number of articles is higher than 17 articles. *Kompas* generally maintains presence of events in its news-generating activities. Event-based articles represent 64 percent in 2005, 66 percent in 2006, 69 percent in 2007 and 81 percent in 2008. In the months with highest news waves, the influence of actual events is apparent. The proportion of event-based articles ranges from 40 to 91 percent within these months regardless the total number of news articles within the months that range from 18 to 49 news articles (Graph 1). Hence, steep drops in the number of news items in
the following months are inevitable, as they simply do not have enough number of events that may stimulate high news waves.

Graph 1: Event-based articles in news peaks

The high proportion of event-based articles also suggests that media hype hardly occur in Kompas. The newspaper has maintained reporting event-based news events, which mean that it sticks to its role as an information provider during the occurrence of HPAI outbreak in Indonesia. The only media hype, in which event-based articles are less than the self-generated ones, happens in July 2005, when the first human case occurs in the country. This is also a month with highest news waves across the years. The event-based articles are 40 percent of a total of 42 news articles produced within the month. The most significant type of articles during the month is opinion and in-depth articles.

As Kompas hardly does media hype in its news-generating process, it indicates that risk amplification of HPAI hardly occur in the newspaper, except for that in July 2005. This proves that a media institution can still act as an objective risk communicator by providing important information that are based on events rather than pursuing its own interests. The first HPAI human case does appear to be shocking for the newspaper as it
reacts by producing more self-generated articles. However, it could gain its composure and produce news articles that are still based on events in other months with strong key events.

*News peaks and key events*

Compared to the assigned key events that have been established earlier, 15 of 26 months with key events are responded with high news waves. If key events are weighted at the average number of monthly news articles of 17 articles, I find that these months—July 2005, September 2005, October 2005, December 2005, February 2006, March 2006, May 2006, August 2006, September 2006, January 2007, February 2007, March 2007, May 2007, January 2008 and April 2008—are accompanied by key events (Graph 2). This means that, in general, the trend of the news articles are in line with the key events. However, to assure whether the newspaper is after the same themes with the key events, contents of news articles in these news peaks have to be analyzed.

Graph 2: Monthly news articles and key events from 2005 to 2008
In July 2005, first human case involves Iwan Siswana Rifai, a 36-year-old resident in Tangerang regency. He was admitted to hospital due to suffering high fever and pneumonia (*Kompas*, July 20, 2005). Direct contact with sick birds did not take place but Rifai’s house located near to backyard farms. He died after being treated for three days at the hospital. Rifai’s daughters also died two weeks afterwards suffering similar symptoms. Blood samples of the two girls, however, did not confirm that either contracted with the H5N1 virus.

The emergence of this case triggers news articles under “human-case policy control” category (Code 3). It is the main theme during this month, representing 26 percent of a total of 42 news items (Graph 3). Half of the news articles under this category are opinion pieces (Code 3C) from health experts and journalists, who criticize that the emergence of the disease was due to the GoI’s negligence to public health sector in the country. Former chairman of the Indonesian Doctors Association Kartono Mohamad criticizes the GoI for blaming citizens’ ignorance for every outbreak in the country (*Kompas*, July 21 2005) while public health researcher Mahlil Ruby emphasizes the significance of comprehensive action from all GoI institutions to resolve public health issues like HPAI in Indonesia (*ibid Kompas*, July 21, 2005). Kompas journalist Soelastri Soekirno wrote that the policy response towards Rifai’s death as “unclear” and “unprepared (*Kompas*, July 25, 2005).

This news theme is slightly different from this month’s key event, which is the death of the Tangerang resident. The news theme that is developed by *Kompas* is actually more thematically-related than incident-related, because the most significant portion of the news articles are opinion pieces, which can be regarded as self-generated. The newspaper is more interested in playing its role to provide insights in the emergence of the disease by posting more articles from experts and journalists, who offer their point of view in the risk event.
After slowing down in August 2005, the news coverage on HPAI increases significantly in September 2005 due to the occurrence of another three human cases in Jakarta province. This contributes to “human cases” category (Code 4) being the main theme of news coverage, with 32 percent of 25 news articles belongs to this category (Graph 3). Most of them are hard news on human cases (Code 4A). This means that it is in the same interest with this month’s key event, which is the confirmation of the 2\textsuperscript{nd} to 4\textsuperscript{th} human cases. These articles do not only report on the confirmed cases but also cover news about other residents who admitted themselves to hospitals, suspecting that they suffered HPAI symptoms like high fever, respiratory problems and pneumonia.

Another key event in September is the release of a research describing clinical features of HPAI that reviews the WHO’s procedures in managing cases. This does not appear in any of the news articles, despite that 24 percent of the news articles belong to the “research” category (Code 5). These news articles mostly discuss avian-to-human cases and possibility of human-to-human transmissions. The different focus on the research articles in the newspaper might be due to the demand for certainty on the risk factors that contribute to HPAI contraction.
Causes of the deaths of the victims are in fact hazy because direct contacts of Rifai and another victim Rini Dina are not available although both have lived nearby chicken coops. There were also a report that Rifai contracted his daughters with the virus (Kompas, July 14, 2005) although later it was confirmed that only Rifai who suffered HPAI (WHO, 2009). Firman, 9, who is Dina’s nephew, is also known to be HPAI positive although he was recovered and returned home (Kompas, September 21, 2005). This may be the reason that the newspaper chooses to provide information on these issues—human cases and potential human-to-human transmission—rather than discussing the clinical features of the disease. Another reason might be that the research on the clinical features is not too useful for the majority of readers because the info on how to manage HPAI cases may only be useful for health professionals.

In October 2005, news coverage on “human cases” (Code 4) category and “human case policy control” (Code 3) intensify, acquiring 22 percent and 20 percent of 49 news articles produced in the month, respectively (Graph 3). The “human cases” category focuses on the reaction of victims’ family members and neighbors (Code 4B) after more cases emerge from other provinces like Jakarta and Yogyakarta. Indonesia had a total of 7 human cases during this month (WHO, 2009).

Neighbors of Rifai, the first human case, in Pamulang, Tangerang, started to complain about the existence of poultry around their houses, especially those who were running around outside chicken coops while the fowl owners were hostile to the demand of culling their chickens (Kompas, October 1, 2005a). Somad, one of the chicken owners, said he did not want to kill the only chicken he had because it was a pet to the family and his son ‘will cry if the chicken dies.’

Another news article tells a story about HPAI suspects that have returned home because they are either cured or identified as suffering other kinds of illness. Family members of Firman, 9, the survivor of the disease, covered their faces and the child’s face with maskers to hide their identity and avoid stigma from their neighbors while walking out of Sulianti Saroso hospital, Jakarta, to escape themselves from a pack of journalists who
wanted to interview them (Kompas, October 1, 2005b). Jupri, who brought his son to the hospital because of high fever but turned out to be small pox, said his neighbors burnt his 21 ducks while he was accompanying his son at the hospital. ‘I really understand their worries,’ he said. Many residents go to hospitals to check whether they were contracted with HPAI after suffering similar symptoms, for example high fever, respiratory problems or pneumonia. A total of 109 people were recorded as HPAI suspects nationwide following Rifai’s death (Kompas, October 15, 2005). However, 70 were turned out to be negative, three of them were died of the disease, while the remainder were still examined in hospitals.

The rise of global efforts (Code 3D) during this month is another main focus under “human-policy control” category. The UN as well as multilateral organizations—the Association of Southeast Asian Nation (ASEAN) and the European Union—posited the need for global coordination to control HPAI. Then UN Secretary General Kofi Annan appointed WHO public health specialist David Nabarro as the UN System Influenza Coordinator (UNSIC) that would form a task force and coordinate UN institutions actions in countries (Kompas, October 1, 2005c). A meeting among agriculture ministers of ASEAN discussed a proposal requesting a financial assistance from the FAO (Kompas, October 1, 2005d) while another meeting among foreign ministers of EU members called for international coordination to control HPAI (Kompas, October 20, 2005).

The focus of news coverage in October 2005 is consistent with this month’s key event, which is the emergence of three new human cases in the country. Aside from reporting hard news on the risk events, the newspaper also covers the reactions from related key actors, family members and neighbors that are all reports on the chain of events or incidents following the risk events. Kompas, however, divides its attention to cover the initiation of global efforts against HPAI that did not appear as key event in this month.

The number of news articles in December 2005 is 19 news articles, slightly above the monthly average of 17 articles. “Human case policy control” category (Code 3) makes the most themes, representing about 53 percent of the total articles produced by the
newspaper during the month (Graph 3). The news articles on developments on GoI actions to control HPAI (Code 3A) as well as the global move to fight the disease (Code 3D) become the focus of news coverage.

The GoI struggles to improve hospital facilities and to establish the best treatment method to decrease human cases. Ministry of Health held a training session for 1,000 health officials from hospitals in various Indonesia regions to treat HPAI patients (Kompas, December 10, 2005). In international level, as 4 of 10 ASEAN countries have contracted with HPAI, the association tried to integrate actions to handle HPAI and discussed this issue in various forums, including a high-level conference (Kompas, December 12, 2005). The focuses of the news articles are different from December 2005’s key event, which highlights the WHO’s confirming a total of 20 human cases by the end of the year in Indonesia.

2006
The number of news articles reaches 41 items in February 2006, which is highly propelled by coverage on “animal-case policy control” (Code 2) and “human-case policy control” (Code 3) categories. Each theme equally represents 24 percent from the total news articles appears during the month (Graph 4).

The focus of the “poultry-case policy control” highlights responses (Code 2B) from owners of backyard farming as well as breeders towards several policies implemented by the GoI. Residents in Cipedang village, West Java province, threw dead poultry that had been contracted with HPAI to nearby river because they did not know that this might pose risks to humans (Kompas, February 15, 2006) while stock deficiency of poultry vaccines drove a blame game between the East Java provincial government and major breeders in the region (Kompas, February 18, 2006).
The amount of compensation for mass culling also triggers protests among citizens. A mass culling in Kedurus sub-district, East Java province, was canceled as residents refused to give in their chickens for Rp 5,000 (€ 34 cents) whereas the GoI had established a minimum amount of Rp 10,000 (€ 67 cents) per chicken (Kompas, February 21, 2006). In Bergas district, Central Java province, chicken traders were disappointed because the local government did not want to conduct any mass culling (Kompas, February 22, 2006). The amount of compensation money, Rp 10,000 per chicken, was higher than the district’s market price that was suffering sales declines due to HPAI.

“Human-case policy control” category is signed with several actions from the GoI and local governments (Code 3A). The GoI prepared to distribute HPAI medicine oseltamivir, called Tamiflu, to public health centers across provinces, especially in which human cases had been found (Kompas, February 22, 2006), and campaigned for a national awareness to eradicate HPAI (Kompas, February 27, 2006). Local governments responded the campaign by trying to improve their efforts to detect and prevent HPAI. A senior public health official in Central Java province, Budiharja, said he acknowledged that early warning system to recognize HPAI cases was still weak in the province (Kompas, February 24, 2006) while Governor Sultan Hamengku Buwono X of
Yogyakarta province called for faster actions from his subordinates to handle HPAI cases (Kompas, February 28, 2006).

The focuses of news coverage in February 2006 are different than the key events, which are the start of Jakarta provincial government’s door-to-door poultry check and vaccination as well as WHO’s confirmation of 25th human case and 18th fatality in Bandung, West Java province. The key events are actually captured in several news articles as officials from GoI and the provincial government announced the plan.

In one article, the provincial government’s head of animal husbandry, Adnan Ahmad, said his subordinates had sprayed disinfectants to chicken coops among housing areas and poultry breeding places in the region (Kompas, February 15, 2006) while GoI Coordinating Minister of Welfare Aburizal Bakrie said that the door-to-door check and vaccination would also take place in Banten and West Java provinces, where human infections were also high (Kompas, February 23, 2006). No field reports on the vaccination and the door-to-door check on the newspaper to prove that the policy actions really take place. The fact that there is no updates on this policy action makes the news articles on this issue is low and reduce its prominence among other news themes during the month.

Kompas reports the 25th human case and 18th fatality in Bandung, which involves a 26-year-old woman and several other patients that has been suspected to be HPAI infected in 4 news articles. But the number of news articles is less frequent than those under “human-case policy control” and “poultry-case policy control” categories, failing “human cases” category to be the main focus of news themes in February 2006. This means that the news on “human cases” is also one focus of attention during the month, although not the most significant one.

The number of news items increases to 49 articles in March 2006, 24 percent of which belongs to “human-case policy control” category (Code 3), which focuses on government efforts (Code 3A) to improve policies on HPAI control (Graph 4). As the WHO
confirmed 30 human cases with 22 fatalities (Kompas, March 15, 2006), the GoI tried to improve mechanisms to handle HPAI cases by planning to establish its own laboratories to test blood samples of HPAI suspects (Kompas, March 17 and 21, 2006) as well as improving hospital facilities (Kompas, March 13 and 24, 2006). Up until this month, the GoI had to wait for confirmation of blood samples from the WHO’s laboratory in Hong Kong (Kompas, March 17, 2006). The establishment of the National Commission of Avian Influenza and Pandemic Preparedness (NCAIPP) was the crescendo to the series of efforts during this month. The commission is designed to coordinate various ministries that are involved in HPAI control, including Ministry of Health and Ministry of Agriculture.

The news theme does not match with the two key events in March 2006. The articles do not mention the GoI’s appointment of state-owned pharmaceutical company Indofarma to become the producer of Oseltamivir tablets. The two studies, from Rotterdam University and Tokyo University that discover H5N1 viruses mostly bind to molecules in the lungs, are also not part of the news scene in Kompas.

The news on this appointment only appeared in June 2006, when one article reported that the company was expecting to see a surge in profit up to Rp 20 billion (€1.3 million) by the end of the year, relying on the high demand of Tamiflu (oseltamivir), the HPAI medicine for human, from the GoI (Kompas, June 23, 2006).

The number of HPAI news coverage drops to 23 articles in May 2006, although this amount is still above the average monthly news articles of 17 articles. About 57 percent of the total HPAI news articles appeared this month is under the “human cases” category (Graph 4), which focuses to report a series of human cases (Code 4A) in a family in Kubuh Sembelang village, Karo district, North Sumatra.

Kompas reported that five residents in the village died within six days (Kompas, May 15, 2006). The victims were already suffering high fever, coughs and respiratory problems when admitted to Adam Malik hospital, North Sumatra. An investigative team from
North Sumatra Health Agency reported that the village, where victims were found, had low hygiene level with a lot of pig farms scattered inside the village. From Bandung, West Java province, it was also reported that a 10-year-old girl and her 18-year-old brother died of HPAI (*Kompas*, May 24, 2006)

This news theme confirms the May 2006’s key event, which also highlight the emergence of the family cluster. The WHO notes that the Karo case is the largest family cluster in any country to date, with 7 confirmed cases from 4 closely related households in the district. The WHO concludes that there is a possibility of limited human-to-human transmission in the Karo cluster (WHOb, 2009).

‘The first case develops symptoms on April 24, 2006, while the last case dies on May 22, 2006. Disease does not spread beyond the extended family. Limited human-to-human transmission cannot be ruled out. Viruses do not show any significant genetic mutation or reassortment’ --WHO

The Karo case is proven to be a strong risk event as *Kompas* and the WHO highlight it as the focus event of the month. As most of HPAI human cases in Indonesia and other countries involve avian-to-human transmission, this particular case may increase concern of *Kompas* that the disease may also circulate among humans. Human-to-human transmission can increase the likelihood of the virus to spread among men.

News articles in August 2006 are dominated by “poultry-case policy contol” category (Code 2), acquiring 35 percent of a total of 43 news items during the month (Graph 4). The focus of the news reports is developments (Code 2A) about poultry control, in terms of mass-culling and vaccination, in Kubuh Simbelang village, where the Karo cluster has occurred, as well as several other provinces.

The North Sumatra government cleared poultry within the radius of three kilometers of Kubuh Simbelang village, following the incident of Karo cluster (*Kompas*, August 5, 2006). The scale of mass culling was larger than the regular procedure, which is one kilometer radius from the onset of HPAI cases. The mass culling was also conducted in the neighboring areas, Dairi and Deli regencies, but with the regular scale of mass culling
of one kilometer of the onset of HPAI poultry cases (*Kompas*, August 14, 2006). In Garut and Tasikmalaya regencies, the local governments increased stocks of vaccines for poultry following the deaths of a 35-year-old woman, 9-year-old girl and 17-year-old boy, who all lived nearby in Cikelet village, Garut (*Kompas*, August 22, 2006).

The key event in August 2006 is the WHO’s confirmation of Indonesia’s 55th to 60th human cases, which include the Cikelet cluster and several cases in North Sumatra province. This is different from the newspaper’s news themes during the month. *Kompas* reports the first case that involves the 9-year-old girl and other cases on suspects and patients in several provinces. However, the total number of news articles on human cases (Code 4A) is less frequent than the reports under “poultry-case policy control” category. This may suggest that the newspaper is more interested in reporting the developments of poultry policies from local governments as a response to the human cases than covering the significant number of human cases and fatalities during this month.

The number of HPAI articles drops significantly to 18 articles in September 2006. The major part of the articles, 39 percent of these articles, reports on the hard news on “human cases” category (Code 4A). The newspaper reported developments on several human cases and fatalities in West Java and North Sumatra provinces (*Kompas*, September 5, 25, 28 and 30, 2006). It also reported several risk factors that might increase human cases, which were traveling in the route of poultry trade (*Kompas*, September 2, 2006a) and rain season (*Kompas*, September 2, 2006b). The focus on the human cases conforms the key event of September 2006, which is Indonesia confirms its 61st to 68th human cases.

Despite that the total number of HPAI news articles this month is lower than in the previous month, the total of human cases confirmed during this month, which is eight cases, is higher than that in the previous month of six cases. This shows that the high number of human cases is not always the main reason for the newspaper to create a high news wave to cover HPAI risk. This may be a sign of decreasing news value of reports on
human cases due to the high frequency of occurrence. *Kompas* may be interested to cover on issues outside HPAI during this month.

2007

Two news themes, which are “poultry-case policy control” (Code 2) and “human cases” (Code 4), dominate news coverage in January 2007. Each of the major themes equally acquires 30 percent of 33 articles during the month (Graph 5). In “human cases” category, hard news on the development of human cases is still the major type of the news coverage during this month (Code 4A). The country’s capital, Jakarta, became the center of the news coverage as three patients died of HPAI (*Kompas*, January 10 and 14, 2007). Two city hospitals, Persahabatan and Sulianti Saroso, were overwhelmed with at least 17 HPAI suspects, who need special treatments (*Kompas*, January 15, 2007) while several other cases also emerged in Yogyakarta, South Sumatra and Jambi provinces (*Kompas*, January 19 and 24, 2007).

Graph 5: Proportion of news themes in 2007

Most of news items from “animal-case policy control” are hard news (Code 2A) covering the efforts from the GoI and local governments to control backyard farming and ownership of pet birds in housing areas in order to stop the spread of HPAI among humans. Jakarta provincial government issued a plan to ban backyard farming and to
require health certification for pet birds and control intra- and inter-city poultry trade, which would be fully implemented in February 2007 (Kompas, January 19, 2007a). A pet bird owner attains the certificate if a provincial government official has checked the pet bird’s condition and its cage as well as its vaccination status. At the same time, GoI ordered 9 provinces with highest HPAI risk, because of the occurrence of human cases, to implement strict control on poultry trade and its transportation, as well as a restriction to cull commercial chickens outside slaughter houses (Kompas, January 19, 2007a).

The two major news themes in January 2007 conform the month’s key events, which are the WHO’s confirmation of the country’s 75th to 81st human cases and the breakthrough regulation to ban backyard farming from Jakarta provincial government. This means that the key events are proven to be prominent and significant that both the WHO and the newspaper found them as major events.

In February 2007, “human-case policy control” (Code 3) and “human cases” (Code 4) are two major categories of news themes as each represents 29 percent of a total of 21 news articles produced within the month (Graph 5). The news items under “human-case policy control” fuel criticisms (Code 3B) to the GoI’s policy that put certain requirements in a material transfer agreement between the government and foreign laboratories regarding studies on HPAI human virus strain in the country. Indonesian researchers claimed the GoI to be unsupportive to HPAI research despite that the country had the highest number of cases and fatalities in the world (Kompas, February 10, 2007).

The international media accused GoI wanted ‘to sell its Indonesian HPAI strains instead of providing them for free’ (Kompas, February 23, 2007). The international media cited that the issuance of a Memorandum of Understanding between GoI and Swiss-based vaccine producer Baxter Healthcare SA as an evidence that GoI wanted to make exclusive production of human vaccines. Nevertheless, the WHO’s director of communicable disease, David Heymann, called the policy ‘understandable’ because the numerous requests of the human strains from vaccine producers.
In “human cases” category, reports on human cases and fatalities (Code 4A) are the major type of the news items. There were reports about a HPAI suspect in Malang, East Java province (*Kompas*, February 11, 2007), two deaths in Garut, West Java province (*Kompas*, February 12, 2007), and a suspect from Serang, Banten province. These three provinces are included in the nine provinces with highest HPAI risk.

The major themes in February 2007 are slightly different than the key event, which is the GoI’s appointment of Baxter Healthcare SA to develop human vaccine on Indonesian strain of HPAI. The newspaper emphasizes on the reaction on the issue instead of exploring the plan itself. This may be because the policy is controversial and gains abundant reactions from various key actors in both inside the country and international communities. Amid the increasing number of human and poultry cases among countries, the urgency to create human vaccines is evident. Thus, any barrier that prevents its research seems to be against the interests of the citizens of Indonesia and international communities. Against the previous trend, the WHO does not highlight any human cases this month when the newspaper does. This may be due to the fact that none of these cases turn out to be real HPAI cases.

In March 2007, 33 percent of a total of 21 articles produced within the month are hard news from “human cases” category (Code 4A) (Graph 5). NCAIPP communication center recorded that Indonesia experienced 85 human cases, 75 percent of which died (*Kompas*, March 13, 2007). Several other cases in West Java and East Java provinces (*Kompas*, March 12 and 20, 2007), including one fatality in Surabaya, East Java province (*Kompas*, March 29, 2007) are reported.

This news theme is different from the month’s key event, which still explores the virus sharing issue among countries. The key event from the Forster study highlights that health ministries from 18 Asia-Pacific countries issue “Jakarta Declaration”, calling for more open virus and information sharing for HPAI and potential pandemic influenza among developing countries. This event is a consequence for GoI’s controversial policy
in the previous month. Meanwhile, the WHO does not confirm any human cases during this month.

The newspaper, however, seems to try to focus on the human cases itself and does not report the conference. It might be that the newspaper misses the key event, although this is very unlikely as it is the most reputable newspaper in the country, or it simply is not interested with the battle on virus sharing. The article on the declaration appeared in April 2007, but in a form of an opinion piece on the virus sharing issue (*Kompas*, April 11, 2007). Minister of Health Siti Fadilah Supari wrote the article herself, explaining GoI’s reasons behind its controversial policy.

In her article, Supari criticized the WHO for obliging Indonesia to give the virus for free while giving the strains to producers to create human vaccines. She cited the concern that by doing that, the WHO put the country in an unequal position with the producers since the producers might charge high prices for the vaccines, which make them unaffordable for Indonesia and other developing countries. She also admitted that the country had stopped sending human blood samples for confirmation from the WHO, and had ordered to conduct the procedure within the ministry’s laboratory. The political sensitivity of this issue may also be the cause that the WHO does not make confirmation from any cases in February and March 2007.

In the declaration, it was agreed that the WHO could the Indonesian strains for risk assessments, but vaccine producers had to make agreements with the country origins to attain the viruses (*Kompas*, April 11, 2008). After this declaration, Indonesia agreed to send the blood samples to the WHO again.

In May 2007, the major news theme within this month is “human cases”, with 33 percent of 27 articles produced within this month. The focus of the “human cases” coverage still highlights reports on human cases and fatalities. Some articles reported more cases in North Sumatra province (*Kompas*, May 13, 19 and 21, 2007) and Central Java (*Kompas*, May 30, 2007). NCAIPP released a study saying that there was still low public awareness
with 62 percent of respondents said they were aware of the disease but did not plan to change behavior or make any efforts to prevent them from contraction (Kompas, May 23, 2007).

The major news theme is different with the month’s key event, which is Ministry of Agriculture’s announcement on the purchase of 60 million doses of poultry vaccines and grants of 33 million doses from China and 5 million from World Bank. This may be because the news value of this issue is declining with a lot of news angles already been reported. News on the relief from other countries as well as international organization may not be interested for the newspaper since there has been enormous help to the country from various donors. As it was mentioned in the earlier chapter, Indonesia received the largest international fund to curb the disease.

Moreover, news on relief in general is not favorable for media because this kind of news mostly comes from the donor institutions and only appears as ceremonial events. Media may be interested more in the impact of the relief, which comes in the declining of cases.

2008
There are a total of 20 articles in January 2008, 50 percent of which belongs to “human cases” category (Code 4) (Graph 6). Most of these news articles are hard news on the development of new cases and fatalities (Code 4A), which are similar with the previous articles under this category. New cases were reported from West java, Jakarta and Banten provinces (Kompas, January 5, 14, 15, 22, 2008). Minister of Health Siti Fadilah Supari said HPAI case prevalence was 80.6 percent, with 100 fatalities from 124 cases (Kompas, January 30, 2008). This news theme confirms the key event of the month, which is the WHO’s confirmation of its 117th to 124th human cases.
In April 2008, the newspaper produces 20 HPAI articles, 60 percent of which belong to “human-case policy control” category (Code 3) (Graph 6). Most of the articles under this category are hard news (Code 3D) on cooperation issues between Indonesia and the United States to control HPAI.

Then US Secretary of Health and Human Services Michael Leavitt visited the country to discuss several health cooperation issues between the two countries, including HPAI (Kompas, April 14, 2008). Leavitt did not directly say what issue was being discussed with GoI but Minister of Health Siti Fadilah Supari said the discussion was on the benefit sharing agreement on the utilization of Indonesian HPAI strains to develop human vaccines in the United States. Other news items recorded a demand from GoI that the United States close Naval Medical Research Unit (NAMRU-2) in Jakarta (Kompas, April 14, 2008). Supari said that the demand was to prevent Indonesian hospitals to send blood samples to the research unit, as the benefit-sharing agreement on the HPAI strains had yet to be finalized (Kompas, April 25, 2008). This case has yet to be resolved until the end of the month. The research unit would be closed in October 2009 after long negotiations in 2008 (The Jakarta Post, August 18, 2009).
The focus of the news theme is partly similar with this month’s key events, which are the WHO’s confirmation of the country’s 130th to 133rd human cases and the accusation of the NAMRU-2 to run intelligence activities. The newspaper might choose the cooperation issues with the United States because the issues were new and related to political relation between the two countries. It might also be considered a high profile issue because the United States was the biggest donor that financed various HPAI control policies in Indonesia (Kompas, April 14, 2008). This new issue might make the reports on human cases less interesting for the newspaper.

Non-key-event news peaks
The newspaper also produces two non-key-event news peaks, which are in April 2007 and March 2008. In April 2007, there are 24 news articles, which are equally dominated by “animal-cases policy control” (Code 2) and “direct impacts on relevant sectors” (Code 6) categories. Each of both categories represents 21 percent of the month’s total articles. News articles in the “animal-case policy control” mostly focus on hard news on action policies that GoI and local governments have taken to control HPAI (Code 2A). Ministry of Agriculture lifted trade ban on frozen duck meat from Malaysia because the product had been proven to be free from HPAI (Kompas, April 11, 2007a) while the local government of Sukoharjo regency, Central Java province strengthened control on health status of poultry located at its border areas (Kompas, April 11, 2007b). From Jakarta, the provincial government prepared alternative locations to relocate small and micro poultry farms that were located in housing areas, as a consequence on the implementation of the poultry trade regulation in February 2007 (Kompas, April 30, 2007).

In the “direct impacts on relevant sectors”, most of the articles reports on the battered condition of poultry industry due to the declining supply due to mass-culling and strict regulation on fowl trade (Code 6A). In Makassar regency, South Sulawesi province, it was reported that 30 percent of 4,500 chicken farms in the region had stopped operating due to HPAI (Kompas, April 13, 2007) while stock of chicken meat in East Java province continued to decline (Kompas, April 27, 2007a). Head of Indonesian Poultry Breeders Association Anton Supit said the industry had been in a difficult condition with the
declining demand and supply due to HPAI and the rising price of chicken food (Kompas, April 27, 2007b).

The two news themes highlight the condition of poultry industry during the HPAI outbreak. The strict control on trade of poultry products have posed barriers to the industry, which results in the suffering of the producers and traders. These kinds of news themes are very unlikely to be found on the WHO’s list of major events or the Forster study on political condition of HPAI since both do not have interests in observing socio-economic impacts of HPAI. The WHO’s main concern is on how to prevent, monitor and treat human cases while the Forster study focuses on the general power play of key actors in HPAI but does not count economic losses of the industry. Meanwhile, Kompas, as a media institution that has to accommodate interests of every key actor, cannot leave out this issue. The increasing policy actions to separate humans and poultry as well as to regulate poultry industry itself may have impacts on the livelihood of citizens.

In March 2008, there are 22 news articles, 36 percent of which belong to “human case policy control” category (Code 3). Most of the news articles under this category highlight cooperation between the GoI and international communities on production of human vaccines and medicines (Code 3D). Minister of Health Siti Fadilah Supari released a book that elaborated her view on HPAI virus sharing, emphasizing again that the country should be compensated with affordable HPAI virus medicine and vaccines if these products were developed with Indonesian HPAI strains (Kompas, March 4, 2008). An international conference on bird flu was held in Bali, Indonesia, to share experiences among countries on HPAI medicines and vaccines (Kompas, March 27, 2008). Epidemiologists, health experts, vets and physicians from 25 countries attended the conference. The focus on medicines and vaccines is a sign that the newspaper might be done on reporting on cases and the related issues and focus on how to cure the disease, which remain an unresolved issue regarding HPAI.
Chapter 5: Shifting News Themes and Media Interests

This chapter discusses interests of Kompas during HPAI outbreak that result in a dynamic portrayal of the health risk in Indonesia. It opens with classification of news peaks, elaborating how the newspaper’s interests may be similar or different with the key events, as it also covers events that house the interests of key actors other than the WHO. This may contribute to further discussion on whether the newspaper amplify or attenuate HPAI risk. In the final part of this chapter, the major news themes that reflect the main interests of the newspaper can be defined.

Types of news peaks
From the coding analysis in the previous chapter, I can summarize four types of news peaks based on its relations with key events. First, a strong relation in which news themes within a month are exactly the same with key events. This occurs in October 2005, May 2006, September 2006, January 2007 and January 2008. These are the months with key events concerning human cases.

In October 2005, the confirmation of the fifth to seventh human cases, following another three confirmed cases in the previous month, receives attention from both the WHO and the newspaper. The Karo cluster, which is the first case of limited human-to-human transmission in the country, also concerns both the newspaper and the WHO in May 2006. There are eight cases confirmed in September 2006 while seven cases are reported in January 2007. In January 2008, another eight cases are confirmed from the country.

The concern that human cases can grow higher may be the main reason for Kompas to report human cases. This is in the same interest with the WHO that works with the human aspects of HPAI worldwide. Hence human cases are the main risk events that bring together the attention of the newspaper and the WHO.

Only in January 2007, human cases do not come as a single key event that is supported by Kompas and the WHO. The other key event that also receives attention of the newspaper involves the issuance of a ban on backyard farms in Jakarta province. The
policy is the first time in the country and also marks that the GoI and its local governments have stepped out from its reluctance to act firmly against the practice of backyard farming in the country. As it has been discussed in the previous chapter, the habit of residents to keep pet birds and chickens concerns their neighbors as well as the GoI as it may contribute to the spread of the disease. Yet, separating housing areas from poultry was not an easy task since at least 60 percent of households in Indonesia kept chicken in their backyards (Science, January 5, 2007). The potential resistance from pet bird owners and micro-scale chicken breeders may be the reason for the newspaper to highlight this event, along with human cases.

Second, a moderate relation in which focus of events are the same with key events but news articles are presented in different angles. This occurs in July 2005, March 2006, February 2007, and March 2007. Different interests between Kompas and the scientists cause different angles of similar news events in July 2005 and in February 2007. When the first human case takes place in July 2005, the newspaper chooses to seek information on HPAI infections on humans as well as to criticize the GoI than to focus on the occurrence of the case, which is the key event in this month. This causes more articles are produced in the form of opinion pieces under the category of “human-case policy control”. These articles may indicate the anxiety and shocks to the first human case from the newspaper’s journalists as well as experts, who mostly criticize the capability of the GoI to maintain good public health in the country. Blaming the government as a response to avian influenza as a health risk is similar to the one that has occurred in Britain, when most of readers’ comments appeared in BBC website right after the first poultry case occurs in 2007 were expressing similar reactions (Rowe et al, 2008). Government is the natural target to blame in such condition because it is the institution that operates public policies in all aspects of life, including health.

In February 2007, Kompas and the WHO also share similar focus event, which is the appointment of Swiss-based Baxter Healthcare SA to develop a human vaccine on Indonesian strain of HPAI. Nevertheless, both share different angles to the event. The newspaper reports more articles on the reactions from various news sources, including
experts, on the appointment whereas the WHO only highlight the appointment of the company as its key event.

As reactions to a policy and opinion pieces have been considered as self-generated news articles, the different angles suggest that as an amplification station the newspaper has perceived the two events in a different way, producing articles from sources that may express the concerns of its own or of the general public. Meanwhile, the WHO, which is a prominent key actor whose reactions may trigger the reactions of wider community, event the international ones, cannot easily express its opinion towards an event. This makes the WHO may only mention the events as they are regardless its reactions to the events.

The reason for different angles that the newspaper and the WHO have in the two months may also emphasize its role to reflect opinions of different key actors towards events. This goes with the journalism principle of impartiality, in which journalists should be able to provide balance in the choice and the use of news sources, making news coverage in general is neutral and does not lean to the interests of any key actors.

The other explanation of the different angles is time lag of the news (in March 2006 and March 2007), when key events appear in later months in the articles and not as significant themes. The appointment of state-owned pharmaceutical company Indofarma to become the producer of Oseltamivir tablets does not appear in any news articles in March 2006 although this is the key event of the month. This event appears in news articles in June 2006, when one article reported that the company was expecting to see a surge in profit, relying on the high demand of Tamiflu (oseltamivir).

In March 2007, the newspaper does not report the key event from the Forster study that highlights the meeting of health ministries from 18 Asia-Pacific countries and the issuance of “Jakarta Declaration”, calling for more open virus and information sharing for HPAI and potential pandemic influenza among developing countries. The article on
the declaration appeared in April 2007, but in a form of an opinion piece on the virus sharing issue, written by Minister of Health Siti Fadilah Supari.

The time lag between the news articles and key events may be due to the imperfect information transfer from the risk communicator, which in both cases is the GoI, that make the newspaper does not reach the information in time. As the closest aid in controlling HPAI, the WHO does not have this problem and thus can receive the information in time. This highlights that a media institution cannot ripple an event in time due to the absence of transparent information from the government. Self-selection may be another reason to the different angles. The newspaper may simply consider these events are not important compared to its own news themes.

Third, a partial relation in which multiple key events within a month only correspond with one news theme in the news articles. This happens in September 2005, and April 2008. In September 2005, the newspaper focuses on human cases, conforming one key event of the WHO. It does not report, however, another key event that concerns a research describing clinical features of HPAI that reviews the WHO’s procedures in managing cases. These news articles on research mostly discuss avian-to-human cases and possibility of human-to-human transmissions. The different focus on the research articles in the newspaper might be due to the demand for certainty on the risk factors that contribute to HPAI contraction.

Kompas focuses on the political issue regarding the US NAMRU-2 in April 2008, sharing similar key event with the Forster study, but does not focus on the human cases during that month. This may indicate the fall in news value of human cases as the occurrence of human cases become less frequent. In 2008, 23 human cases are reported, almost a half from that of 42 cases in the previous year (WHOb, 2009). The newspaper might choose the cooperation issues with the United States because the issues were new and related to political relation between the two countries. Partial relations in September 2005 and April 2008 are evidence that Kompas self-selects its focus events regardless the key events.
Fourth, totally different relation when the focus of news themes and risk events are different than the key events, which are in December 2005, February 2006, August 2006, and May 2007. In these months, Kompas mostly reports policy actions from the GoI and the local governments, which help them to inform their policies to citizens. Kompas reports the developments on GoI policies regarding hospital facilities to treat human cases in December 2005 while the WHO confirms more human cases that month. In February 2006, the newspaper focuses on policies to control HPAI among poultry and humans, but does not highlight the start of Jakarta provincial government’s door-to-door poultry check and vaccination as well as WHO’s confirmation of 25th human case and 18th fatality in Bandung, West Java province, which are the month’s key events.

The newspaper chooses to focus on the GoI’s and local governments efforts to control HPAI cases among poultry when the key event is the WHO’s confirmation of Indonesia’s 55th to 60th human cases in August 2006. Nevertheless, in May 2007, the newspaper focuses on human cases whereas the Forster study points out the Ministry of Agriculture’s announcement on the purchase of 60 million doses of poultry vaccines and grants of 33 million doses from China and 5 million from the World Bank as key events. This may be due to the news on the relief from China and the World Bank is considered ceremonial and has less tangible results on citizens. All of the differences between key events and news themes strengthen the fact that the newspaper self-selects its own themes and while doing this it may reflects interests of key actors other than the WHO and those that are highlighted in the Forster study.

In general, I can conclude that the newspaper follows the key events despite that it moderately or partially follows the key events. This may roots to the fact that the WHO is a key actor that play an important role in the governance of human cases in the country. The GoI has relied on the WHO for confirming human cases, especially in the first human cases in the country. The WHO has also involved in surveillances in areas in which a human case is found. As it has been discussed in the previous chapter, the WHO is also involved in research on human vaccines and keeps records of the Indonesian virus samples. This makes its involvement in various policy issues in the country is also
inevitable. Thus, to cover the HPAI outbreak in the country, *Kompas* cannot leave out the interest of the WHO, which is expressed in its records on major key events.

In the cases when news themes are totally different than the key events, the newspaper shows its tendency to self-select its focus events. While self-selecting its focus events that are different from the key events, it may accommodate the interest of other key actors such as the GoI and local governments, for instance those in news articles regarding poultry- and human-case policy control. This also happens in the case of non-key-event news peaks that have been discussed in the previous chapter. The newspaper reflects the interests of the GoI and poultry industry. By reflecting interests of more than one actor in its news coverage, *Kompas* has applied the journalistic principle of impartiality as it maintains to inform news from different insights of the multiple key actors and thus sustain its impartiality towards the risk event.

Technical reasons like the imperfect information transfer may also cause the different news themes but to observe this is beyond the comprehension of this study as it does not analyze the news-producing activities and the communication process among the newspaper and related key actors during the observed years.

The key events that have strong correlations with news themes are those related with human cases, such as the Karo cluster, and important government policies, for instance the ban on backyard farming and the policy issues regarding the existence of US NAMRU-2. In several sensitive issues, the likes of the appointment of the Swiss-based Baxter Healthcare SA to develop a human vaccine on Indonesian strain of HPAI and the occurrence of the first human case, it may tend to find different angles to reflect its own stance towards the events. The events that the newspaper is unlikely to report are research and various policy issues that are not followed by direct and concrete actions, for instance the relief delivery from China and the World Bank in May 2007. As both send relief in large scales, it will take time before it will be fully distributed to citizens.

*Risk attenuation?*
It is unlikely, however, to conclude that HPAI risk has been attenuated in *Kompas* because the newspaper does not choose to abandon several key events, but choose to portray it in different angles. In some cases, it even reports news themes that are not in the interest of the WHO or the Forster study, but in the interests of the government or poultry industry. In other months, it reports more news events than the key events. For instance in October 2005, it does not only report human cases, like that in the month’s key event, but also reports the rise of global efforts to fight the disease. The news theme is not in the key events as the WHO, which only a member of the United Nations System Influenza Coordinator, pays more attention on human cases and related policy issues than on the general governance issue regarding the risk. In the case of non-key-event news peaks, the newspaper produces high news waves in the absence of key events, indicating that it may still produce more news articles on HPAI with its own agenda.

There are two indications of risk amplification that has been discussed in this study, which are the existence of media-hype and the Kasperson’s definition that posits that risk amplification can be expressed in shared interests from several key actors towards a risk event. The discussion on the rise and fall of news peaks has proven that media hype hardly occur in *Kompas*. The strong presence of events has produced an alternating trend of news waves across the years.

If Kasperson’s definition is employed, however, it can be concluded that *Kompas* amplifies the HPAI risk events together with the GoI and the scientists as it accommodates several events in the interests of these key actors. The relations between the themes of news peaks and the key events have proven that, regardless *Kompas* may self-select focus events of its news coverage, the interests of the WHO as well as the GoI and the local governments are well accommodated.

It further poses a question to the objectivity of SARF framework. If a risk event is considered to be amplified, it can only be seen from the perspectives of governments or scientists or business communities, which usually release risk messages to the public regarding an event. This means that these institutions already have targets of responses to
the messages and thus can assess whether their messages are amplified or attenuated by the public, including mass media.

During news hype, a media institution is considered to amplify a risk event if it produces more self-generated stories. It suggests that if a media institution produces more news than it is desired by certain key actors, such as government, then it is considered as risk amplification. These kinds of news—in which the media institution apply subjective or source-based types of articles such as opinion-pieces, in-depth reports and editorials—drives it away from actual events as suggested by the key actors.

In the absence of media-hype like it has been found in this study, however, it is hard to consider whether Kompas amplify or attenuate HPAI risk since in fact it has tried to report all prominent events surrounding one main news event. This may correlate with the fact that reality is not singular in any news event. The key actors that act as risk communicators have assumed them to be singular because they have expectations, which are derived from their own interests. It has to be further observed, however, whether the newspaper really accommodates all interests of key actors during the period.

Thus, although HPAI risk may have been amplified in Kompas, this does not necessarily have negative impacts such as public anxiety towards the risk. As the newspaper based its articles on actual events, this may dampen distribution of sensational news on the disease in the country. Although this study cannot assure about the impact of an actual risk event to readers, at least by offering fact-based information it would not distract readers from the useful information on HPAI.

**Shifting prominence of news themes**

The largest part of the news reports consists of three major themes, which are “poultry-case policy control” (153 articles), “human-case policy control” (195 articles), and “human cases” (179 articles). The number of articles for each news theme fluctuates from 2005 to 2008 under the strong influence of key events. However, there is no single
majority among the news themes in a year, as proportion of a news theme within a year ranges from 0.9 to 31 percent of total news articles in an observed year (Graph 7).

This means that *Kompas* presents relatively varied themes of articles on HPAI to its readers. Readers may get information on HPAI from various angles, making HPAI risk events are portrayed more comprehensively and avoid monotonous subjects that can make readers lose interests to HPAI. However, it may cause readers to receive abundant information that distract them from the most important information regarding HPAI risk.

Graph 7: Trends of news themes from 2005 to 2008

From 2005 to 2008, the three main themes acquire the largest proportion of news articles during each year. The domination of the three news themes is apparent as most news peaks, as discussed in the previous sub-chapter, are dominated by these categories. It is only that each news theme changes roles as the most significant news theme of the month. In 2005, “human-case policy control” is the most significant news theme, representing 23 percent of a total of 197 news articles within this month, while “animal-case policy control” and “human cases” trail along with 17 and 16 percent respectively.
In 2006, all of the three news themes share the same proportion at 22 percent of a total of 262 news articles while “human-case policy control” is the most significant news theme in 2007, acquiring 26 percent of a total of 223 news articles. The proportion of news articles in “animal-case policy control” drops significantly to 10 percent of a total of 135 news articles in 2008. Its position in the top three news themes is replaced by “poultry cases” category with 12 percent of news articles while “human-case policy control” and “human cases” maintain their positions with 31 percent and 24 percent news articles, respectively. A shifting significance from “human cases” to “human-case policy control” is due to less human cases reported during 2008 while issues on human vaccines and medicine takes the center stage during this year. There are 23 human cases reported in 2008, half from that of 42 cases in the previous year (WHOb, 2009). The number of cases in 2008 is also the least since 2005.

This results show that although there are three news themes that dominate news articles from 2005 to 2008, only two themes reign as the most popular news themes, which are “human cases” and “human-case policy control”. It may indicate that, for Kompas, human cases and its related policy issues are the most significant concerns of HPAI risk in Indonesia. This issues stand out above other issues such as poultry cases (in “poultry cases” category) and its related policies (in “poultry-case policy control” category), epidemiological and other scientific aspects of HPAI (in “general research” category), direct impacts on social economic issues (in “direct impacts on relevant sectors” category), its representation as a “culture” as people relating HPAI to indirect issues (in “indirect impacts” category) and international developments on HPAI (in “international developments” category). This can be explained as Kompas’ position as a general newspaper that serves public in general. Thus, it chooses the themes that concern the majority of its readers: health issues.

It can also be explained with the nature of HPAI as a disease, which was then a new health issue in the country and in the world, with little to be known on how it came from and how to cure it. Its threats to human health are eminent, similar to how people in the world see Mexican influenza today. The high proportion on “poultry-case policy control”
category during 2005 to 2007 also conforms how this concern. The number of monthly articles this category varies from 1 to 15 articles until December 2007. This means that the newspaper is interested in updates of this issue, as controls to poultry would affect human cases as well. It experiences a major decline in 2008 as less human cases are emerged. The number of articles per month ranges from 0 to 4, with 5 months without news articles in this category.

As no major theme exists, news articles in the other five news categories cannot be neglected. Despite its regulatory issues is significant among the articles, news in “poultry cases” category itself never really become the major attention of Kompas. Nevertheless, it is the only theme with an increasing trend across the years. It represents 4.6 percent of news articles in 2005 and becomes one of the most significant news themes in 2008. Nevertheless, this does not necessarily mean that poultry cases become more frequent as the exact number of articles actually drops to 16 articles in 2008.

The general trend of this category may indicate the emergence of poultry cases itself is not something that attracts general readers as it has already occurred since 2004. It becomes important as its occurrence affect cases on human and thus required regulation from the GoI. As news articles in human cases and several other categories decline, the news under this category takes larger portion in the number of total articles.

Kompas has moderate interests in “general research” category as 14.2 percent of news articles in 2005 are under this category. This may be due to the curiosity in knowing what HPAI is and its potential transmission to and among humans. This interest is not sustained as the number of news articles under this category ranges from 3.1 to 7.4 percent in the following years. Aside from its self-preference, the low proportion of news articles under this category also may be due to limited scientific developments published regarding HPAI or the publications do not reach the newspaper.

The previous discussion on key events shows that, all HPAI studies that are considered to be important by the WHO do not appear in the news articles. The newspaper does not
report the WHO study on the clinical features of H5N1 infection in September 2005 and the Kuiken and Kawaoka studies in March 2006 that may explain the mode of transmission of the disease. The newspaper tends to inform research on mode of transmission issues as well as how citizens should take preventive measures to avoid virus contraction. For instance, It reported a research on human vaccines by the Hungarian government (Kompas, September 28, 2005) or a local study that suggested that HPAI cases among poultry would increase during transitioning periods of weathers, like from dry season to wet season, and would increase the probability of human cases (Kompas, February 2, 2006). However, the number of these articles on research is still low across the years.

In the limitation of study reports reference, the newspaper might have difficulties to explore news. This situation fits with Kasperson’s analysis that the media would choose to avoid non-conclusive scientific developments, which in this way is expressed in the larger news articles proportion on different news themes. Nevertheless, the self-preference not to report research may be because the large audience of the newspaper and too scientific information may not be useful for readers.

“Direct impacts” category acquires 11 and 12 percent of news articles in 2005 and 2006 respectively. Its proportion declines in 2007 and 2008, with 9 and 7 percent of news articles respectively. News in this category mostly discuss the disease’s impacts on poultry industry, tourism and economic in general. The impacts on poultry industry becomes a significant theme in April 2007, despite that this is not appear in the month’s key event.

The NCAIPP calculated that the spread of HPAI in Indonesia caused a total amount of economic loss of Rp 4.1 trillion (€282.8 million) from 2004 to 2008 (Kompas, March 24, 2008). This amount included economic loss due to mass-culling, the decreasing demand in poultry products, the decreasing consumption of chickens and eggs in restaurants and food stalls, the decreasing trends of tourists, as well as the increasing cost that poultry breeders and the GoI and local governments had to add to control HPAI.
Commission head Bayu Krisnamurthi suggested that the amount of loss might be higher if ‘losses in job opportunities and the decreasing dairy protein consumption resulted in the decreasing quality of human resources’ were included. He projected that the amount of economic losses would be higher if HPAI reach pandemic stage worldwide as Indonesia was the worst-hit country in terms of human cases and fatalities.

“Indirect impacts” category experiences a fluctuating trend across the years, ranging from 5.6 to 9.5 percent of total news articles in each year. It accounts as 5.6 percent of total news articles in 2005 while expands to 9.5 percent in 2006. It decreases to 7.2 percent in 2007 and goes up to 8.1 percent in 2008. In spite of the fluctuation, the news themes proportion remains smaller than other categories. This means that although some contributors and journalists compare corruption in football with the spread of HPAI virus (Kompas, March 7, 2006), considers the phenomenon as God’s punishment to the country’s negligence (Kompas, January 11, 2008) or the reason for increasing violence to women (Kompas, March 11, 2006), these never become the major portrayal of HPAI itself in the newspaper. This shows that HPAI has never been too often portrayed out of its context as a disease. This is good since it means that HPAI has never really been associated with non-relevant issues, which mean less distortion to main information on this disease.

“International developments” category always serves as the theme with the least number of news articles, except in 2005 when it acquires 8.1 percent of total news articles. In the other three years, news proportion of this theme ranges from 0.9 to 3.8 percent. The trend of news proportion can be explained in the growing attention to internal problems regarding HPAI in the country. In the early months 2005, human cases have emerged in Vietnam and several other places, but not in Indonesia (WHO, 2009). This makes the newspaper reports the cases quite frequently as it was a new health phenomenon. However, in the following years, the local news on HPAI, of course, is more interesting due to proximity of these issues to its readers. The newspaper does report the emergence of HPAI cases among poultry and humans in Europe and Africa, but this is only to
Chapter 6: Conclusions

This chapter highlights important findings of this study and organizes it in a way that they answer the main question of the study. This chapter is closed with the contribution of this study to discourses of risk communication process of mass media during a health risk in a country.

Conclusions

1. Strong presence of events makes media hype hardly occur in Kompas. The only media hype, when self-generating event is higher than the event-based ones, occurred when the first human case emerged in Tangerang, Banten province. There are 17 news peaks across the years, two of which are self-generated.

2. The themes of the news articles conform most key events, although the newspaper may frame similar key events in different angles or partly take multiple key events in a month. This proves the fact that the WHO is a major actor in HPAI outbreak in Indonesia as its interests, which are expressed in its list of key events, are adopted by the newspaper. The variety in perceiving these key events reflects how the newspaper still has its independence to consider focus events amid the strong influence of the WHO.

3. In the months that the news themes are totally different than the key events, the newspaper self-selects its interests, which are in favor of other key actors, such as the GoI, local governments and poultry industry. This also proves that it self-selects its own themes and focus events.

4. The newspaper conforms most key events regarding human cases, for instance in the case of the Karo cluster. Other key events that often receive similar interests are events related with important government policies, such as the ban on backyard farming and the policy issues surrounding the existence of US NAMRU-2 in Indonesia. In several sensitive issues, like the direct appointment to Swiss-based Baxter Pharmaceutical SA and the occurrence of the first human case, it may tend to change angles. The
newspaper does not report research key events, for instance the Kuiken and Kawaoka studies positing that H5N1 viruses bind with molecules of cells in the lower part of lungs. The newspaper may drop this topic because there is too much scientific information, which makes it difficult for readers to grasp these kinds of articles.

5. The general trends of significant themes in news peaks are similar with the trends of the proportion of news themes across the years. “Human cases” and “human policy control” are the main themes that consistently appear as the most significant news themes during the years. Other themes fluctuate as they depend on actual developments of the outbreak. The category that consistently regards as the least preferable theme is the “international developments”. This is because that the newspaper may consider local news is more interesting than the international ones, as the country is the-worst-hit area in the world. Proximity may be another reason as readers may consider local news more relevant than the international ones.

6. Although media-hype hardly occur, the newspaper still amplify HPAI risk in a way that it shares similar interests with other key actors, which are the scientists, regarding several key events. It might also in favor of the GoI as the newspaper informs some policy actions that the GoI has made. It also benefits poultry industry as it reports the downturn of poultry trade following various policies on HPAI control. Although it does not produce media hype, the newspaper has amplified the risk by housing interests of various key actors in the key events. Housing the interests of various actors is a practice of the journalism principle of impartiality, in which a media institution should cover various news sources in a risk event to maintain balance of news sources and to produce a comprehensive story of a risk event.

7. In the absence of media hype, it is very unlikely to measure risk amplification in Kompas. The objectivity that the newspaper carries in its news-producing activity would always work against the subjective perspective of risk communicators that release risk messages and expect desired responses from the public. A risk communicator can always consider news articles distract the attention from its risk messages because the newspaper reports news from different sources. Thus, a media institution like Kompas would always be considered to amplify risk.
8. With the results above, the dynamic picture of avian influenza in Indonesia can be seen in: the alternating trend of news waves that indicates the strong presence of key events; the various themes that Kompas has presented in its news articles with no single majority that occupy news coverage in a month; the complexity of key actors that have different interests in certain risk events.

Lesson learned

The study has shown that a media institution may not always amplify risk events by producing media hype. It may amplify risk by sharing interests towards a risk with other key actors. Nevertheless, sharing interests with several key actors is inevitable because it is a must according to its journalistic principle of impartiality. Although this study has yet to discover the effects of event-based articles to readers, at least by sticking to event-based aspects of a risk event, a media institution may avoid producing unnecessary public anxiety like those that are occurred after media hype. Moreover, it can provide useful information and raise people's awareness in a health risk event by sticking to event-based articles.

It is also unlikely, however, to maintain the journalistic principle of impartiality in a long period of a health risk event. A media institution needs to stick with reliable sources in a critical health risk event to avoid providing wrong information to the public. In this study, Kompas tends to lean to the interests of the WHO. It is evident with frequent similarity in focus of events with the international organization. It is hard for the newspaper to use other news source to get updates on confirmed cases or research development on HPAI’s epidemiological features and vaccines.

These characteristics reveal that communication process during a health risk event goes beyond the linear notion of risk communication that SARF has suggested. The absence of frequent self-generated articles does not mean that a media institution does not report the event at all. Risk amplification may take place and it can be useful to gain awareness from the public during a health risk event.
Bibliography


*Science*. January 5, 2007


### Appendix. Distribution of themes of Kompas news articles, 2005-08

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