# Framing Chicks during the wicked H5N1 avian flu

"Using identity framing as an analytical tool, how was a social conflict constructed between 2004-2007 in United Kingdom newspaper coverage about the avian flu?"

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CPT-81336 MSc Thesis Strategic Communication

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| Title | Framing Chicks during the wicked H5N1 avian flu |
| Subtitle | Studying how a social conflict is constructed in United Kingdom newspaper coverage about the avian flu during 2004-2007, using identity framing as an analytical tool |
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| Chair group | Strategic Communication |
| Course code | CPT-81336 |
| Date handed in | February 12, 2019 |

# Preface

During my second year of the BSc International Development, I discovered my passion and love for strategic communication. I decided to pursue this further, in combination with the interdisciplinary approach of the MSc International Development Studies. Although I find all aspects of communication interesting, it especially intrigues me how news and people are framed. Looking for a thesis that met these interests, I found the PhD study of Marie about media power, framing and contestation about the production of food of animal origin. Together we were able to find an interesting topic for me to conduct my own study, using her elaborate dataset.

I had the immense luck to be able to work together with Marie, who was always there when I had questions or needed her help. Her persistence to see the best in me and push me accordingly so, is one of the big reasons that this finished product lays before you know. I also want to thank Margit for her insightful input during the process. Although the road has been tough, with many ups and downs, I've learned so many invaluable lessons!

Lastly, I also want to thank Bjorn for all his love during my breakdowns and victories; Onna, Doret and Ruben for wine and mental support; my family for always being there; and Odin for endless cuddles and never ceasing to make me laugh.

# Abstract

The H5N1 is an especially virulent strain of the avian flu. It already had immense and devastating consequences around the world. The H5N1 avian flu is a typical example of a wicked problem: a great variety of actors are involved, there are many sub-problems without an actual solution, and it needs a unified and integrated approach in order to be resolved. Although much has been studied about the avian flu, there is a serious knowledge gap on how the actors involved are constructed in different roles.

To address this knowledge gap, this study used identity frames as an analytical tool to analyze how a social conflict was constructed in UK newspaper coverage about the avian flu between 2004-2007. Using data from the PhD project 'Who Framed Chicken Little', several co-occurrence analyses were conducted. These analyses showed that especially governmental actors, the country, actors belonging to the product chain, the farm, the industry and the European authorities, societal actors and animals were constructed as being part of the social conflict. The conflict was mostly constructed by the actors belonging to the media, the governmental actors, actors belonging to the scientific community and actors belonging to the business associations.

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# 1. Introduction

In 2003 and 2004 the H5N1 avian influenza (avian flu) re-emerged, which is a highly pathogenic subtype of the influenza A virus and can cause illness in humans and many other animal species (Webster & Walker, 2003). It already has had immense global and local consequences, which stretched out to different domains of society. The bird-adapted strain of H5N1 has been classified as epizootic, which means that it is an epidemic in nonhumans, and panzootic, which means that it is affecting animals of many species over a wide area (Li, et al., 2004). By now it has killed tens of millions of birds and spurred the culling of hundreds of millions of others to stop its spread (Li, et al., 2004). Although inefficient, the virus is already transmittable from animals to humans, and kills over half the humans it infects (Rosenthal & Bradsher, 2006). As of November 1st, 2018, the virus has infected 860 people, and killed 454 (WHO/GIP, 2018). The H5N1 virus is regarded as the world's largest pandemic threat, as research has shown that the highly contagious strain of H5N1 (one that might allow airborne transmission between mammals) can be reached in only a few mutations (Schorow, 2012).

The H5N1 avian flu reached the United Kingdom (UK) in 2005, when exotic birds were imported from Taiwan and South America in Essex (Dudley, 2006). The second case was a dead swan found in Cellardyke, Scotland, in 2006 (BBC News, 2006). However, the largest and most devastating outbreak was in 2007 in Suffolk (Vidal, 2007): the H5N1 subtype of Influenza virus A was found at a Bernard Matthews' plant. This lead to a large cull of 159.000 turkeys, at least £20m in lost sales and costs, and 130 workers being laid off for a short period of time (Allen & Alleyne, 2007; ITV, 2016; BBC News, 2007). Although the cause of the outbreak has never officially been determined, they considered it significant that Matthews regularly imported turkey and turkey products from Hungary, where a genetically identical H5N1 strain was previously found (Vidal, 2007).

The outbreak in Suffolk is a good example why the H5N1 virus is a 'wicked problem', which has emerged from complex interactions between social and ecological systems. Rittel

and Webber (1973) were the first to define a wicked problem: they stated that a wicked problem is very complex, which involves many different subproblems and a great variety of actors. These actors all own different parts of the problem, and, consequently, part of the solution. However, what might be the solution for one part of the problem, may easily as well aggravate another part of the problem. Because of this, all the actors involved have their own perceived interests for why a resolution may or may not work. Therefore, all the actors involved have their own perceived interest in solving the problem. When these perceived interests diverge, we speak of a social conflict (Pruitt & Kim, 2004).

According to Walter-Toews (2017), a wicked problem like the H5N1 avian flu can therefore not simply "be solved by better surveillance, vaccines, drugs and military-type rapid response teams in white bio-security suits" (p.4). There is a growing body of literature that recognizes the importance of understanding the wicked nature of problems in order to create an unified approach to resolve it (Walter-Toews, 2017; van Bueren, Lammerts van Bueren, & van der Zijpp, 2014; Miller & Parent, 2012; Head, 2008; Rittel & Webber, 1973).

To construct a mutual understanding that can guide a joint effort to solve the wicked problem, we need to acknowledge this socially constructed nature. Above all we need to how the actors involved are be constructed in different roles (van Bueren, Lammerts van Bueren, & van der Zijpp, 2014). Before we can create a successful interaction and negotiation between these actors, we need to understand which actors are involved in the first place, followed by how they are constructed in the conflict.

How actors are framed in newspaper articles exposes issues of values and power relationships (Rubin, Pruitt & Kim, 1994). By studying if and how a social conflict is constructed, using identity frames as an analytical tool, we can understand if and how actors are involved in a social conflict. The actor's worldview is the most important determining factor in resolving a wicked problem (Rittel & Webber, 1973), so once we understand which actors are framed as either villain, victim or problem-solver of the conflict, this unified approach can be designed.

I acknowledge that this study will not bring the magical resolution to the wicked problem, which by definition does not even exists (Rittel & Webber, 1973). However, I will try to do

my bit by increasing the understanding of the complex socially constructed nature. This study will address the knowledge gap surrounding the actors involved in wicked problem that is the H5N1 avian flu. Hopefully, this will partly enlighten the inherent wickedness of this virulent strain. In order to do so, the following research question has been formulated: "Using identity framing as an analytical tool, how was a social conflict constructed between 2004-2007 in United Kingdom newspaper coverage of the avian flu?"

To answer the research question, the following sub-questions have been formulated:

1. Who was constructing the social conflict?
2. Which actors were constructed as being part of the social conflict?
    a. Which actors were framed as the victim, villain and problem-solver?
    b. Which actors were framed as multiple identities?
    c. How have these frames changed over time?
3. Which actors were pitted against each other?

The next chapter will present the theoretical framework, where the concept of a wicked problem will be shortly explained, and I will go more deeply into the social conflict and identity framing. The third chapter presents the research design, in which it is explained how the study is conducted. In the fourth chapter I will explain which actors have been involved in the co-occurrence analyses, and the findings the analyses will be presented in the fifth chapter. In the sixth chapter I will discuss the relevance of the findings and answer the sub-questions, and in chapter seven I will answer the main research question and conclude the study.

# 2. Theoretical framework

In this chapter I will explain the concept of a wicked problem, after which I will go more into-depth in the theory of the social conflict and identity framing. Finally, I will explain how identity framing can be used as an analytical tool to argue if and how a social conflict is constructed in newspaper articles.

## 2.1 Wicked problem

Van Bueren et al. (2014) explain that a wicked problem is identified especially because of its persistency. It is a complex problem, with many actors involved and many different sub-problems. Rittel and Webber (1973, pp. 161-166) identified 10 characteristics of a wicked problem in their famous paper "Dilemmas in general theory of planning", which have been recognized in many social problems since then:

1. "There is no definitive formulation of a wicked problem;" (p. 161)
2. "Wicked problems have no 'stopping rule';" (p. 162)
3. "Solutions to wicked problems are not true-or-false, but good-or-bad;" (p.162)
4. "There is no immediate and no ultimate test of a solution to a wicked problem;" (p. 163)
5. "Every (attempted) solution to a wicked problem is a 'one-shot operation'; the results cannot be readily undone, and there is no opportunity to learn by trial-and-error;" (p. 163)
6. "Wicked problems do not have a clear set of potential solutions, nor is there a well-described set of permissible operations to be incorporated into the plan;" (p. 164)
7. "Every wicked problem is essentially unique;" (p. 164)
8. "Every wicked problem can be considered to be a symptom of another problem." (p. 165)
9. "The existence of a discrepancy representing a wicked problem can be explained in numerous ways. The choice of explanation determines the nature of the problem's resolution;" (p. 166)
10. "The planner has no 'right to be wrong'." (p.166)

Because a wicked problem has no definitive root cause, it does not have a single best approach to resolve the problem. The problem has many sub-problems and when one tries

to find a solution, they only solve a part of the problem (van Bueren, Lammerts van Bueren, & van der Zijpp, 2014). Even worse so, when one part of the wicked problem gets solved, another part may as easily be aggravated (Walter-Toews, 2017). Additionally, there are no 'one-size-fits-all' solutions (Rittel & Webber, 1973). An approach that might work in the UK, might not work in Indonesia. This means that every case should be treated as a separate and unique case, which only makes it harder to find solutions to problems like the avian flu.

The multi-dimensional character of a wicked problem is reinforced by these multiple problem owners (van Bueren, Lammerts van Bueren, & van der Zijpp, 2014). All these actors involved are equally equipped, interested, and/or entitled to judge these solutions, which are likely to depend on which group they belong to or which personal interests they have (Rittel & Webber, 1973).

Therefore, wicked and contested problems like the avian flu are problems that require interaction and negotiation between the actors involved, in order to come to a mutual understanding of the problem and how to proceed to resolve the problem (van Bueren, Lammerts van Bueren, & van der Zijpp, 2014). These wicked problems become even more persistent if resolving them does not only acquire joint understanding and a sense of urgency, but when it also needs the change or transition of fragmented systems, including the institutions that regulate the interactions and transactions among the actors (van Bueren, Lammerts van Bueren, & van der Zijpp, 2014).

## 2.2 Social conflict

Because of the nature of a wicked problem many different actors are often involved. What may be a problem-solution for one actor, can be problem-generating for another actor (Rittel & Webber, 1973). This complexity easily gives rise to a social conflict, which Pruitt and Kim (2004) define as the perceived divergence of interest between two or more actors. Perceived interests encompass values and needs, and can vary from being concrete, to more abstract. A conflict will arise when the objectives between the different actors are incompatible and compromises cannot be made (Pruitt & Kim, 2004).

An intergroup conflict is when two or more dominant groups of actors are opposing each other (Pruitt & Kim, 2004). Oberschall (1978) actually uses 'group conflict' as a synonym for 'social conflict', as he states that the term 'social' already refers to a conflict where the actors are an aggregate of individuals. When the conflict leads to a competition of winners and losers, actors will try to protect their own group (Oberschall, 1978).

## 2.3 Identity framing

People try to simplify situations by distinguishing clear role divisions, especially when emotions run high (De Bruijn, 2017). When they engage in this act of appointing roles, they frame the identity of themselves and other actors.

In the social sciences, framing includes an array of concepts and theoretical perspectives on how societies, groups and individuals, organize, perceive and communicate about reality. This can happen in two ways: cognitively or in the interaction between people (Snow & Benford, 1988). In social theory, framing is a schema of interpretation that people rely upon to understand and respond to events - a sort of filter through which they make sense of the world (Goffman, 1974). In this sense, framing provides a shortcut to make sense of complex information or a complex situation (Kaufman, Elliot, & Shmueli, 2003). This filter influences the choices that are made (Goffman, 1974). In sociology, framing is understood as an integral part of the communication between humans (Ardèvol-Abreu, 2015).

In this study, I will focus on framing in the communication process. Framing is understood as the act of selecting parts of a story to tell the story in a certain way. This can be used to encourage a target audience to think, feel and act in a particular way (Entman, 1993). In 1993, Entman explained that the act of framing is

> "to select some aspects of a perceived reality, and make them more salient in a communicating text in such a way as to promote a particular problem definition, causal interpretation, moral evaluation and/or treatment recommendation for the issue described" (p. 52).

Framing provides significance through selective simplification. It can "be useful for rationalizing self-interest, convincing a broader audience, building coalitions, or lending preferentiality to specific outcomes" (Kaufman, Elliot, & Shmueli, 2003). Reframing is

trying to change the language that is being used to discuss the issue. Once an issue or identity is framed, it can be reframed to fit a different version of the same reality. This reframing provides the reader with several perspectives on an issue and might be helpful in deciding which it likes best (De Bruijn, 2017).

A frame is the way that the story is told, or how Entman (1993) describes it, "something that calls attention to some aspects of reality, while obscuring other aspects" (p. 54). This frame can change the reader's perception without changing the actual facts (van der Pas, 2014), and suggests what the essence of the issue is (Nelson, 2011).

We come up with and use models to understand patterns that we see come up in framing. We speak of identity framing when the identity of an actor is framed. These identity frames exist as a discursive object and are produced in and through conversations (Dewulf, et al., 2009). One of those models for identity framing is the victim-villain-hero model. The model has proven effective for controlling political debates, especially when it concerned a highly emotive issue (De Bruijn, 2017). This is because the trigger that activates the effect of the frame in the model is emotion. The greater the outrage, the more susceptible people are too simple reasoning that underlines identity framing, even though the actual situation may be more complex than initially thought (De Bruijn, 2018).

The identity frames in this model are the victim, villain and hero, in which: (1) the victim is the one whose interests are being harmed, and who has the moral right to be protected and safeguarded; (2) the villain is the one who is responsible for the harming of these interests, and who should be condemned; and (3) the hero, although this role is defined as the problem-solver in this study. In this study the problem-solver is the one who should be responsible for implementing the solution (De Bruijn, 2018).

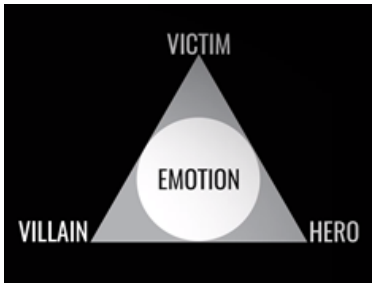



*Figure 1: Victim-Villain-Hero model (De Bruijn, Frame101x - Week 2 - Episode 3, 2015)*

## 2.4 Identity framing as an analytical tool

As explained earlier, a wicked problem is a very complex issue, which has many actors involved. All of these actors own a part of the problem and therefor also own a part of the solution. However, when solving one part of the problem, another part can be easily aggravated. The actors involved in these parts of the problem each have their own perceived interests in the problem, which might diverge from each other. This perceived divergence of interest between actors is defined as a social conflict. It is important to understand which identity role an actor has in the newspaper articles, because it provides an insight in the social conflict. By understanding who was involved and which identity they were framed as, a more unified approach can be designed for similar future cases.

I will be using identity frames as an analytical tool to understand how a social conflict was constructed, because studying the identity frames allows me to analyze which actors are framed as being part of the conflict. The meaning given to those three identities (in the previous section) provides an insight into the perceived interests of those actors. As explained in the previous section, identity framing is the act of framing an actor as either the victim, villain or problem-solver.

In the following text I will define the three roles and provide some examples of how the identity role could be interpreted.

- The victim is the one that needs to be protected and safeguarded because their perceived interests are being harmed;

For example, when an actor frames its own identity as the victim, they are constructing themselves as being part of the conflict with their own interests being harmed. When they simultaneously frame another actor as the villain, they construct this actor as being the one that is doing the harming.

- The villain is the one that should be condemned because by pursuing their own perceived interests, they are harming the interests of the victim;

For example, if it is the perceived interest of a company to make profit by cutting costs and increase pollution, it will harm the community's interest of having a clean and healthy

environment. If an actor is framed as the villain, while another actor is framed as the victim, they are constructed as having a perceived divergence of interest. When an actor frames their own identity as the villain, it could indicate that the actor admits that they are the ones who are responsible for the problem. However, it could also be that they believe that other actors from their group are responsible, for example when one political party blamed another political party, or local government is blaming national government.

- The problem-solver is the one that should act and solve problem. This role is not as clear-cut as the previous two roles, because it can be approached in two different ways: being framed as the problem-solver or framing their own identity as the problem-solver. If the actor *gets framed* as the problem-solver, their perceived responsibility is that they should solve the problem. Likewise, if the actor *frames their own identity* as the problem-solver, it suggests that they admit it is their responsibility to fix it.

An actor getting framed as the villain might as well be framed as the problem-solver, because they are considered as being responsible for the problem. Therefore, they are also expected to solve the problem. When an actor framed themselves as the problem-solver, they framed themselves as being responsible for bringing the solution. The problem-solver, regardless if they were framed by another actor or if they were framed themselves, is therefore expected to solve the problem.

To summarize, by studying how actors framed themselves and each other, I can shed light on how the social conflict is constructed. This creates a better understanding of the social part of the wicked problem of the H5N. An actor is constructing the conflict when they speak in the newspaper articles and frame other actors. The actor that is framing, is constructing the social conflict. When an actor was framed, they were constructed as being part of the conflict. Furthermore, actors were pitted against other actors because of the way that they were framed. In order to answer the question how the social conflict was constructed, both the speaker and actor that was framed will be studied, and how these have interacted with each other.

# 3. Research design

In this chapter I will explain the methods that I have used to get the results of my study and how I have then analyzed that data. This study has been a desk research, in which I used a mixed method approach to answer the main research question. The unit of analysis were the statements in the UK newspaper coverage about the avian flu between 2004-2007. I used qualitative analysis in order to gain insights into the social conflict. I analyzed quantitative data (the result of a qualitative framing analysis), but approached it in a qualitative manner, because I used identity framing as the analytical tool.

For the theoretical framework I have conducted a literature study in which I studied scientific literature about the guiding concepts of the study. I used the internet to find most of the scientific literature, as well as using the library of the university. I also used the snowball method to find more literature, using the sources of a relevant article to find new literature.

The quantitative data that I use for my co-occurrence analyses came from the PhD project "Who Framed Chicken Little" (Garnier-Ortiz, 2018). In the PhD project, a framing analysis was conducted, with the unit of analysis being statements in newspaper articles from different UK newspapers between 1975-2016 (the topic being chicken meat farming). Garnier-Ortiz conducted a qualitative framing analysis and coded all the statements in the newspaper articles. The decision to not code the statements myself or include new media, is because it would have been too time intensive, and because the database from Garnier-Ortiz was so extensive already.

I eventually worked with this discrete data and all co-occurrence analyzes were carried out using ATLAS.ti. To find the right data for the co-occurrence analyses, I used a query in which I selected the newspaper articles with the topic avian flu between 2004-2007. The outcomes were co-occurrence matrices which showed how many times codes co-occurred with each other. This meant that for each identity role (victim, villain and problem solver) it was analyzed how many times it co-occurred with an actor speaking (for example, how

many times the speakers from governmental actors co-occured with the identity frame 'victim' for the actors belonging to the production chain of the farm). In order to analyze the data, I then exported these co-occurrence matrices to Excel. Using Excel, I calculated absolute total numbers as well as percentages, in order to get a realistic representation of the data. I used a combination of absolute numbers and percentages in order to create a good overview of each identity role, and later for each year.

For the second part of the co-occurrence analyses I zoomed in on key actors, which had been framed considerably (meaning more than 10% of the identity frame co-occurrences) and studied how these frames changed over time. I used percentages in the results when I zoomed in on certain actors, because the number of co-occurrences differed each year. If I would have only used absolute numbers, it would not have shown how much the distribution had actually changed per year.

To answer my research question, I looked primarily at two things in the analysis: who was constructing the social conflict and who was constructed as being part of the social conflict, illustrated below in figure 2. In order to answer the main research question, three sub-questions were formulated (already stated in the introduction), which address those two components. The concepts of a wicked problem, a social conflict and identity framing have been combined in order to analyze the data, which were explained in section 2.4.

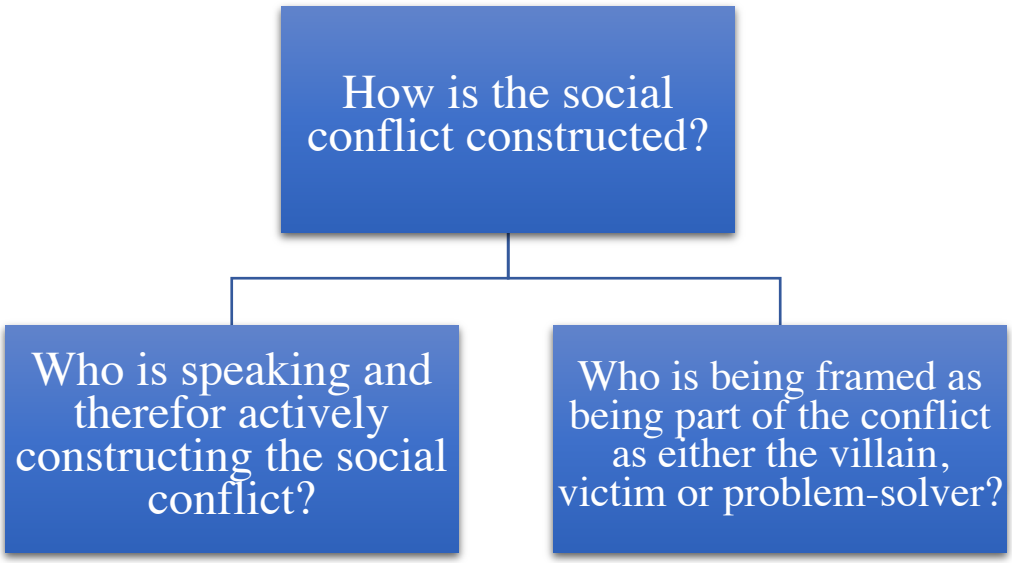
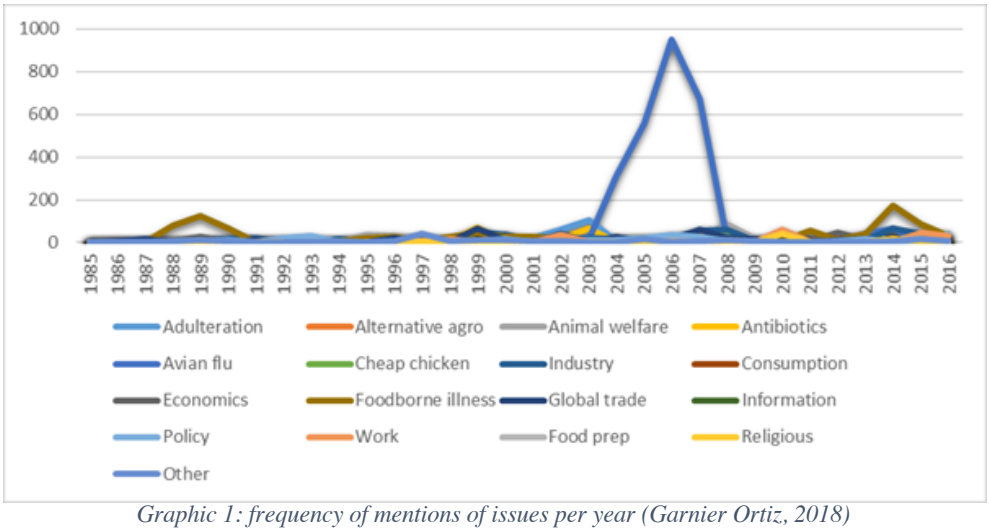



*Figure 2: How is the social conflict constructed?*

## 3.1 Data selection

Because of the time constraint of this study I chose to focus solely on the issue avian flu, because of its local and global devastating consequences. The avian flu is a typical example of a wicked problem, and therefore an important case to study. It was also convenient, because this topic had also generated the most data during the PhD project. Of all the issues that were coded in the articles between 1975 – 2016, the most mentions were of the avian flu (N=2507) (which again emphasizes the size and importance of the H5N1 as a wicked problem). I chose to study the timeframe 2004 – 2007, because there was an avian flu outbreak in that period and therefore there was more data. This illustrated in the graphic 1, with years on the x-axis and the number of mentions on the y-axis. Looking at the blue avian flu line, we can clearly see that the biggest quantity of mentions in articles are about the avian flu, as well as that there is a spike of mentions between 2004 – 2007.

Statements in articles from the following four newspapers have been studied: The Daily Telegraph (A), The Times (B), the Financial Times (C) and The Guardian (D). I chose these four newspapers because they had the most articles about the avian influenza, and therefore produced the most data.




*Graphic 1: frequency of mentions of issues per year (Garnier Ortiz, 2018)*

I finally decided to analyze combined actors in one group, in order to create a better overview of the analysis. I was afraid that with too many actors the results would have

become too cluttered and no clear conclusion could have been drawn. In order to conduct a good analysis of the perceived divergence of interest, I needed to see which actors were framing and which actors were framed as either villain, victim or problem-solver. These actors and their definitions are described in the next chapter.

# 4. Actors

The actors that have been analyzed in this study are defined in the table below. As explained earlier, the term actor actually refers to a group of actors, e.g. the actor farm consists of the values farm and farmers, transporters, agriculture, and alternative farms or farmers. The definition of these values is given under the header 'definition', as well as to which group and/or subgroup they belong. These definitions are copied exactly from the PhD project, to guarantee consistency (Garnier Ortiz, 2018). Because some actors were not speaking themselves, for example the actors from the animal group, I have made a distinction between active and passive actors: active means that the actor was speaking as well as that their identity was framed, while passive means that they were framed, bu they did not speak themselves.

| **Actor** | **Definition** |
|---|---|
| 1. Farm<br>(active) | Belongs to the group 'Business' and subgroup 'Farm'. Includes the following values:<br>1. Farm/Farmer - both specific farm(s) and anonymous or generic farm(s), as well as farmers/growers/producers. In other words: this refers to actors belonging to the part of the production change at the level of the farm<br>2. Transporter<br>3. Agriculture<br>4. Alternative farmer/producer - organic, free-range- smallholder, backyard, hobby producers/farm/farmer, etc. |
| 2. Production chain<br>(active) | Belongs to the group 'Business'. Includes the following values:<br>1. Breeder - breeder or breeding companies;<br>2. Hatcher - hatcher of hatching companies;<br>3. Supplied - feed, veterinary medicine or drugs, equipment and general supplier or supplier companies;<br>4. Processor - includes manufacturer, processing plant, etc; |

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| | 5. Slaughterhouse - includes abattoir;<br>6. Wholesaler - includes individuals and firms that buy directly from producers in order to sell them again;<br>7. Food industry - includes food processing industry;<br>8. Company general - Includes references to companies or producers that cannot be classified in more specific categories, whether because it is a vertically integrated company with stakes at multiple stages in the value chain or because the text only refers to the company in general terms;<br>9. Shareholder - shareholders in companies at any level of the production chain. |
| 3. Industry<br>(active) | Belongs to the group 'Business' and the subgroup 'Chicken meat industry'. Includes the following values:<br>1. Industry - conventional/standard/broiler/chicken industry;<br>2. Organic industry - Organic chicken industry;<br>3. Free-range industry - Free-range chicken meat industry. |
| 4. Other business<br>(active) | Belongs to the group 'Business'. Includes the following value:<br>1. Other business - Includes firms, companies, shareholders, etc. outside the production chain (not related to chicken meat production). |
| 5. Worker<br>(active) | Workers employed in chicken meat production companies across the value chain (includes catchers, and migrant workforce). |
| 6. Retailer<br>(active) | Includes the following values:<br>1. Retail - General or unspecified retailers, including caterers, butchers, traders, etc.<br>2. Supermarkets - Includes supermarkets like Marks & Spencer, Tesco, Asda, Aldi, Morrisons, Waitrose, Sainsbury's, Lidl, Metro, etc.;<br>3. Restaurants. |
| 7. Consumer<br>(active) | Belongs to the group 'Consumers'. Includes explicit references to consumers, individuals engaged in consumption, buyers, customers, citizen-consumers, etc. |

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| 8. Government<br><br>(active) | Includes the following subgroups with values:<br>1. Executive;<br>a. Local Authorities - Local authorities and personnel;<br>b. Government general - Includes general references to Government, all other members of government, other government officials, and other governmental bodies and staff not included in other categories;<br>c. PM - Prime Minister;<br>d. Ministries - Includes ministries and personnel;<br>e. Defra - Department of Environment, Food and Rural Affairs; includes its predecessor, the ministry of Agriculture, Fisheries and Food and personnel;<br>f. FSA - Food Standards Agency and personnel<br>g. VMD - Veterinary Medicines Directorate and personnel;<br>2. Legislative;<br>a. Parliament - Includes MPs, Houses of Lords or of Commons, parliamentary committees;<br>b. Shadow Cabinet / Minister - Includes members of the opposition Shadow Cabinet;<br>3. Judicial;<br>a. Courts - Includes judges, law enforcement officials, etc. |
| 9. European authorities<br><br>(active) | Belongs to the group 'Inter/Supranational'. Includes European Union and its agencies, European Commission, European Parliament, etc., and personnel. |
| 10. International organizations<br><br>(active) | Belongs to the group 'Inter/Supranational'. Includes WHO, FAO, UN, etc. and personnel. |
| 11. NGO's<br><br>(active) | Belongs to the group 'Civil Society'. Includes the following values: |

| | |
|---|---|
| | 1. NGO Animal Welfare - Animal welfare and animal rights organizations and personnel;<br>2. NGO Consumer - Consumer protection organizations and personnel;<br>3. NGO Environment - Environmental organizations and personnel;<br>4. NGO Other - Other non-governmental organizations and personnel; |
| 12. Business associations<br>(active) | Belongs to the group 'Civil Society'. Includes the following values:<br>1. NFU - National Farmers Union and its members;<br>2. Industry Body - Includes British Poultry Council or Poultry Board, as well as scientists, farmers, producers, etc. that work for an industry body and are mentioned in that capacity;<br>3. Other Business Association - Other business associations and their members. |
| 13. Trade union<br>(active) | Belongs to the group 'Civil Society'. Includes the following values:<br>1. Unite - Unite and its members;<br>2. Other - Other unions and their members. |
| 14. Other civil society actors<br>(active) | Belongs to the group 'Civil Society'. Includes the following values:<br>1. Activist - Includes general and specific instances of individuals or groups identified as activists (excluding members of NGO's);<br>2. Celebrity - Celebrities and celebrity endorsements of causes (excluding references to celebrities as experts in a particular topic); includes words and references such as 'the famous actor/chef/singer', 'the star of...', 'the well-known..', 'public personality', etc.;<br>3. Expert - Both anonymous and specific experts (includes professionals and other individuals referred to as an expert on a certain topic);<br>4. Professional Associations - Professional associations and their members; |

| | |
|---|---|
| | 5. Community - Includes references both to generic and specific communities and community members or neighbors;<br>6. Religious organization/group - Includes Halal Food Authority, Schechita UK, Union of Muslim Organizations, churches, and their members;<br>7. Other civil societies - Other civil society actors not included in the previous categories. |
| 15. Society<br>(active) | Belongs to the group 'Civil Society'. Includes the following values:<br>1. The public - Includes references to the public or general public, the audience, the readers, people in general, 'many', the population, everyone, etc., includes individuals who are harmed;<br>2. You/Us - Includes references to the reader or to us as a collective. |
| 16. Country<br>(active) | Belongs to the group 'Civil Society'. Includes UK, Great Britain, etc. |
| 17. Media<br>(active) | Includes the following values:<br>1. Newspaper - Newspaper outlet;<br>2. Journalist - Includes journalist, columnists and writing staff;<br>3. TV Broadcaster - TV broadcaster or channel;<br>4. New Media Outlet - New media outlet, includes websites, blogs, social media networks, etc.;<br>5. Other Media Outlet - Other media outlet, includes radio, BBC Radio, etc.;<br>6. Media General; Media in general, the media, mass media, etc. |
| 18. Scientific community<br>(active) | Includes researchers, scientists, professors, Dr., universities (colleges), research institutes and institutions, as well as their personnel (but excluding those who are working for governmental agencies, NGOs, unions or other categories of actors mentioned here). |
| 19. Source<br>(active) | Includes speakers that the journalist identifies as a source, but then cannot be classified into previous categories |

| | |
|---|---|
| 20. Critics (active) | Includes speakers identified by the journalist as 'critics', 'opponents', 'detractors', etc. without any additional characterization |
| 21. Other (active) | Other actors not included in the previous categories |
| 22. Animals (passive) | Includes the following values:<br>1. Chickens - Includes birds, broilers, chicks, farm animal, livestock, etc.;<br>2. Wildlife - Includes all other wild birds and animals, and wildlife in general. |
| 23. Environment /Nature (passive) | Refers to the environment in general (nature, the countryside, etc.). |
| 24. System (passive) | Includes production system, e.g. "the system's is at fault". |

Studying which actors involved in the co-occurrence analysis were foreign added an extra layer to the analysis. Foreign literally means that the actor speaking or being framed was from outside the UK (for example the Thai government, or the Polish farm). This provided an insight in the international scale of the problem, by showing how frequent the foreign actors were involved in the social conflict.

# 5. Results

In this chapter I will present the most important findings of my co-occurrence analyses. The chapter is divided in three parts: first the results of the villain frame co-occurrence analysis will be presented, then the results of the victim frame co-occurrence analysis and finally the results of the problem-solver co-occurrence analysis. In each section I will first present the findings of all the years combined and highlight some striking results, after which I will present the results for specific actors per year. This is to see if and how the framing developed over the years.

## 5.1 Villain frame co-occurrence analysis

The first set of co-occurrence analyses studied how many times a speaking actor co-occurred with an actor getting framed as the villain between 2004-2007. Table 1 shows an overview of this analysis (with actors speaking in the rows and the actors being framed in the columns). The table is color coded, where red indicates zero co-occurrences, moving to bright green, which indicates the most co-occurrences. The last row and column show the totals and what percentage it is of the total villain frame co-occurrences between 2004-2007. The cells with a bold line are the cell where the speaker and the actor being framed are the same.

| | 1. Farm | 2. Product | 3. Industr | 4. Other b | 5. Worker | 6. Retaile | 7. Consum | 8. Govern | 9. Europe | 10. Intern | 11. NGOs | 12. Busine | 13. Trade | 14. Other | 15. Societ | 16. Country | 17. Media | 18. Scienc | 19. Source | 20. Critic | 21. Other | 22. Anima | 23. Enviro | 24. System | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Farm | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 19 | 5,90% |
| 2. Production chain | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1,55% |
| 3. Industry | 2 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 2,48% |
| 4. Other business | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 2,17% |
| 5. Worker | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0,31% |
| 6. Retailer | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1,24% |
| 7. Consumer | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0,00% |
| 8. Government | 4 | 14 | 1 | 0 | 0 | 2 | 1 | 15 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 8 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 52 | 16,15% |
| 9. European authorities | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 4,04% |
| 10. International organizations | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1,24% |
| 11. NGOs | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 2,48% |
| 12. Business association | 1 | 0 | 2 | 0 | 0 | 1 | 2 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 4,97% |
| 13. Trade union | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0,31% |
| 14. Other civil society actors | 5 | 2 | 1 | 0 | 3 | 0 | 1 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 26 | 8,07% |
| 15. Society | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0,31% |
| 16. Country | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0,00% |
| 17. Media | 7 | 18 | 3 | 1 | 6 | 6 | 1 | 53 | 3 | 0 | 0 | 0 | 0 | 1 | 3 | 23 | 3 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 138 | 42,86% |
| 18. Science/Scientific Community | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 19 | 5,90% |
| 19. Source | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0,00% |
| 20. Critic | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0,00% |
| 21. Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0,00% |
| | 27 | 40 | 11 | 2 | 11 | 11 | 7 | 107 | 12 | 2 | 0 | 0 | 1 | 2 | 10 | 50 | 8 | 1 | 0 | 0 | 4 | 15 | 1 | 0 | 322 | |
| | 8,39% | 12,42% | 3,42% | 0,62% | 3,42% | 3,42% | 2,17% | 33,23% | 3,73% | 0,62% | 0,00% | 0,00% | 0,31% | 0,62% | 3,11% | 15,53% | 2,48% | 0,31% | 0,00% | 0,00% | 1,24% | 4,66% | 0,31% | 0,00% | | |

*Table 1: overview of the villain frame co-occurrence analysis*

As can be seen in the table 1, the codes co-occurred 322 times with each other, which is approximately 15% of all the co-occurrences that happened between 2004-2007. This means, when compared to the victim frame co-occurrence analysis and the problem-solver co-occurrence analysis, that the villain frame was used the least. Out of those 322 co-occurrences, 46 times a foreign actor was speaking (roughly 14% out of all the villain frame co-occurrences between 2004-2007). Out of all the actors that were framed as the villain, it was a foreign actor 113 times. This is more than 1/3th of all the villain frame co-occurrences. A foreign speaker and foreign actor being framed as the villain co-occurred 33 times with each other (meaning a foreign actor framed another foreign actor as the villain).

> *"The Thai authorities have been deceiving their government and people for months. We have reports of birds dying since November, but it was hushed up because of fears that it would damage their exports." (Uhlig, 2004)*
>
> Example of a foreign actor (in this case the Thai authorities) being framed as the villain, because they deceived their government and people

If we take a look at the actors that were actively framing other actors, we can see that three actors framed the most actors as the villain: the actors from the media, the governmental actors and the other civil society actors. Actors from the media framed the most actors as villain, namely 138 times. This was roughly 14% out of all the times that the media framed an actor as either villain, victim or problem-solver between 2004-2007. To compare, the second biggest speaker, the governmental actors, only framed 52 actors as the villain (which was roughly 13% of all the times the actors from the government framed an actor between 2004-2007). Actors from the other civil society group only namely 26 actors as the villain. But even though this was only 8% of all the villain frame co-occurrences between 2004-2007, it was more than 25% of all the times the other civil society actors framed an actor in total.

In table 1 we can see that the governmental actors, the country and the actors belonging to the product chain were framed the most as the villain. However, the governmental actors were framed as the villain by far the most of all, namely 107 times. This is more than 30% of all the villain frame co-occurrences that came up during 2004-2007. What is even more interesting about this data, is that we can see that 10 different actors framed the

governmental actors the most out of all the actors that they framed as the villain, which suggests some sort of consensus on who was the villain.

> *"Avian flu will be the first plague in history to be preceded by a vast and lurid advertising campaign; yet despite all the warning signs, the rich countries have entirely failed to back up their rhetoric with sufficient aid to the poor frontline countries, or any genuine effort to develop a "world vaccine"." (Davis, 2007)*
> Example of governmental actors being framed as the villain, because they fail to take action.

Interestingly so, out of these three actors that were framed as the most as villain out of all the actors, only the governmental actors were framing other actors as the villain. They have framed a total of 52 actors as the villain during 2004-2007, which is roughly 16% of the total amount of villain frame co-occurrences during those years. They framed themselves as the villain 15 times between 2004-2007.

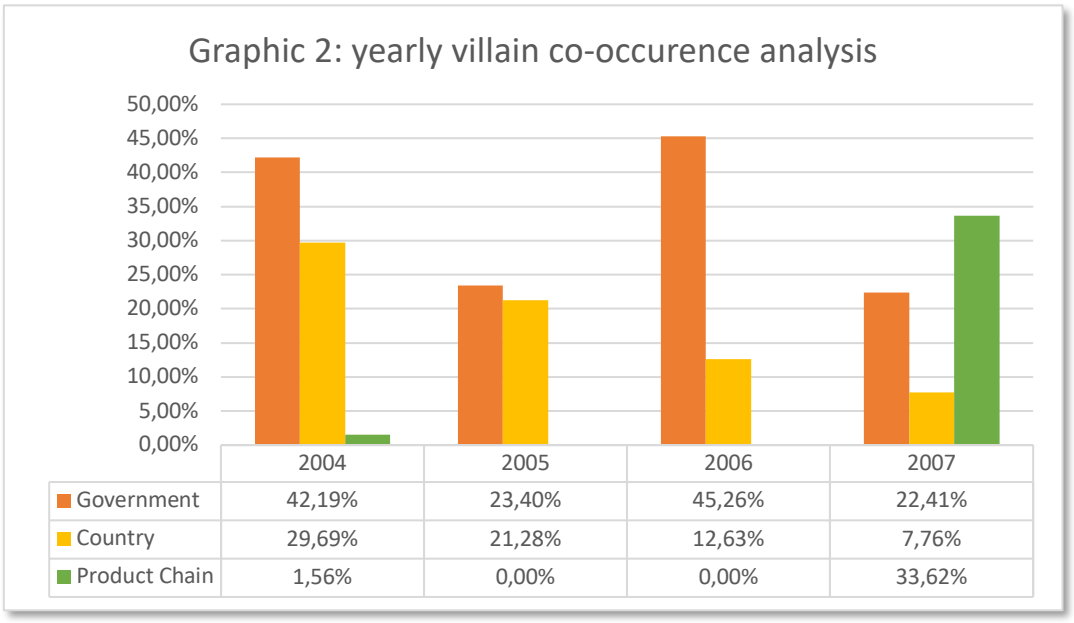
> *"Ministers were accused last night of failing hopelessly to prepare for a bird flu pandemic in Britain after a survey showed that almost nine out of 10 poultry farmers had not been contacted by the government." (Hennessy, 2005)*
> Example of governmental actors being framed as the villain by governmental actors.

A country was framed as the villain 50 times, which is roughly 15% of all the villain frame co-occurrences during 2004-2007. We can see that actors from the media have framed the country 23 times, while governmental actors, despite having framed the country second most as villain, only framed them as the villain a total of eight times. Actors belonging to the European authorities framed the country six times – which was roughly 12% of all the villain frame co-occurrences between 2004-2007.

Moving on to the actors belonging to the product chain, we can see that they have been framed as the villain 40 times, which is roughly 12% out of the total amount of villain frame co-occurrences during 2004-2007. The governmental actors framed the actors belonging to the product chain 14 times, which is 35% of the total villain frame co-occurrences for the product chain.

### 5.1.1 Villain frame co-occurrence analysis for specific actors per year

To understand how the social conflict has been constructed over the years the next step was to analyze the villain frame co-occurrences per year for specific actors. In this section the findings of yearly co-occurrence analyses of the governmental actors, the country and the actors belonging to the product chain will be presented. These actors have been analyzed because during 2004-2007, out of all the actors they were framed as the villain most (at least more than 10% of the total amount of villain frame co-occurrences per actor). Combined they even represented 61% of all the villain frame co-occurrences between 2004-2007.




| | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|
| Government | 42,19% | 23,40% | 45,26% | 22,41% |
| Country | 29,69% | 21,28% | 12,63% | 7,76% |
| Product Chain | 1,56% | 0,00% | 0,00% | 33,62% |

*Graphic 2: overview of the percentages of villain frame co-occurrences per actor per year*

Graphic 2 shows an overview of the percentage of villain frame co-occurrences per actor per year. This means, for example, that in 2004 the actors from the government were framed as the villain 42,19% out of the total villain frames co-occurrences in 2004. This graphic illustrates the changes of how many times an actor was framed as the villain per year, which will be used to explain each actor separately in the next three sections. Each section will begin with a quick overview of the development of how the actor was framed as the villain in those four years, followed by some interesting results.

#### 5.1.1.1 Government

The first actors that were analyzed per year were the governmental actors. As we can see in graphic 2, they were framed as the villain variously over the 4 years. They were framed as the villain 27 times in 2004, which is roughly 42% of the 64 total villain frame co-occurrences for that year. In contrast, in 2005 that percentage dropped to roughly 23%. In 2006 that percentage rose again to roughly 45% out of the total villain frames co-occurred in that year, while in 2007 that percentage fell to just below 2005 levels again (22%). Interestingly, in 2005 governmental actors were framed as the villain only 1% more than the country was framed as the villain. This data shows that the governmental actors were not consistently framed as the biggest villain throughout the four years, but over-all they were framed the most as villain.

> *"The government is refusing to quarantine free range poultry, even though other countries have taken measures to tackle the disease" (Henderson & Foster, 2005)*
> An example of the actors from the government being framed as the villain, because they did not take measures to tackle the disease.

In the first two years the governmental actors especially framed their own identity as the villain (seven and four times), but in the last two years combined they only framed themselves as the villain four times. In those years they especially started to frame the actors belonging to the production chain (in 2007 14 times).

> *"Oliver Letwin, the shadow environment secretary, said the figures were "deeply disheartening" and attacked ministers and officials for not doing enough to "stop a preventable crisis" (Hennessy, 2005)*
> Example of an actor from the government framing other actors of the government as the villain, because they had not done enough to stop the crisis.

The governmental actors were framed the most by the actors from the media. The actors from the media especially framed them as the villain during 2004, where out of all the actors they framed as villain they framed the actors from the government 40%, and during 2006, where they roughly framed them 54% out of all the villains they framed in 2006.

*"Yet again, the government refuses to take it seriously." (Thomson, 2006)*

An example of the government being framed as the villain, because they did not take H5N1 seriously enough.

#### 5.1.1.2 Country

The second actors that were analyzed were the country. As we can see in graphic 2, the country was framed as the villain decreasingly over the four years. In 2004 their identity was framed 19 times – which was roughly 30% of the total 64 villain frame co-occurrences in that corresponding year. This decreases steadily to roughly 21% in 2005, roughly 13% in 2006, and lastly, to only 8% in 2007.

*"The EU has contingency plans to make euros 1bn (£680m) available for antiviral drugs and vaccines but said it could only do so once the overall EU budget for 2007 to 2013 is agreed. Officials complained that agreement was being blocked by Britain." (Cendrowicz, Smith, & Aglionby, 2015)*

An example of a country (in this case Britain) being framed as the villain, because they blocked the EU budget (which prevented the funding for antiviral drugs and vaccines).

It is interesting to see that especially in 2004 a great variety of actors framed the country as the villain. However, especially actors from the media and actors from the scientific community framed the country as the villain. But while the media framed the country as the villain most in every year – 60% in 2005, 50% in 2006 and 44% in 2007 – actors from the scientific community did not frame the country as the villain in any other years than 2005. Noteworthy is that the governmental actors did not really frame the country in 2004 or 2005, but suddenly framed them five times in 2006.

*"Britain lets poultry run free despite the threat of bird flu" (Henderson & Foster, 2005)*

Example of a country (in this case Britain) being framed as the villain, because they did not take sufficient measures against the H5N1.

#### 5.1.1.3 Production Chain

Perhaps the most striking result to emerge from the data is that of actors belonging to the production chain. Looking at graphic 2, they were only framed as the villain once in 2004,

never in 2005 nor in 2006, but the actors belonging to the product chain were framed as the villain 39 times in 2007, which was roughly 37% – and the most – of the total 116 villain frame co-occurrences that occurred in our data for that year. Most of the villain frames for the actors belonging to the production chain were about the Bernard Matthew's farm, where the outbreak in 2007 happened.

> *"[...] angered MPs of all parties after official veterinary reports identified flagrant breaches of biosecurity on the poultry company's premises at Holton, Suffolk" (Elliott, 2007b)*
>
> An example of the actors belonging to the production chain being framed as the villain.

If we take a closer look at which actors framed in 2007, we can see that especially actors from the media (17 times) and the governmental actors (14 times) framed the actors belonging to the production chain.

## 5.2 Victim frame co-occurrence analysis

The second set of co-occurrence analyses studied how many times an actor speaking co-occurred with the victim frame between 2004-2007. Table 2, color-coded just like table 1, shows an overview of this analysis.

| | 1. Farm | 2. Product | 3. Industry | 4. Other b | 5. Worker | 6. Retaile | 7. Consum | 8. Govern | 9. Europe | 10. Intern | 11. NGOs | 12. Busine | 13. Trade | 14. Other | 15. Societ | 16. Counti | 17. Media | 18. Scienc | 19. Source | 20. Critic | 21. Other | 22. Anima | 23. Enviro | 24. System | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Farm | 41 | 1 | 7 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 57 | 5,22% |
| 2. Production chain | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 0,73% |
| 3. Industry | 5 | 1 | 13 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 2,29% |
| 4. Other business | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 1,01% |
| 5. Worker | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0,64% |
| 6. Retailer | 1 | 1 | 0 | 0 | 0 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 1,28% |
| 7. Consumer | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0,09% |
| 8. Government | 22 | 5 | 15 | 2 | 6 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 7 | 21 | 19 | 0 | 0 | 0 | 0 | 5 | 20 | 0 | 0 | 125 | 11,45% |
| 9. European authorities | 5 | 1 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 25 | 2,29% |
| 10. International organizations | 5 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 19 | 11 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 44 | 4,03% |
| 11. NGOs | 3 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 14 | 1,28% |
| 12. Business association | 13 | 1 | 24 | 7 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 2 | 0 | 3 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 63 | 5,77% |
| 13. Trade union | 3 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0,55% |
| 14. Other civil society actors | 8 | 0 | 5 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 49 | 4,49% |
| 15. Society | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0,18% |
| 16. Country | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 15 | 1,37% |
| 17. Media | 122 | 25 | 95 | 8 | 12 | 6 | 9 | 4 | 0 | 0 | 0 | 0 | 0 | 33 | 97 | 80 | 0 | 0 | 0 | 0 | 5 | 59 | 1 | 0 | 556 | 50,92% |
| 18. Science/Scientific Community | 6 | 2 | 13 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 21 | 9 | 0 | 0 | 0 | 0 | 0 | 10 | 1 | 0 | 65 | 5,95% |
| 19. Source | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0,18% |
| 20. Critic | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0,00% |
| 21. Other | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0,27% |
| | 236 | 45 | 187 | 34 | 30 | 19 | 15 | 9 | 0 | 0 | 0 | 2 | 0 | 62 | 183 | 138 | 0 | 0 | 0 | 0 | 11 | 119 | 2 | 0 | 1092 | |
| | 21,61% | 4,12% | 17,12% | 3,11% | 2,75% | 1,74% | 1,37% | 0,82% | 0,00% | 0,00% | 0,00% | 0,18% | 0,00% | 5,68% | 16,76% | 12,64% | 0,00% | 0,00% | 0,00% | 0,00% | 1,01% | 10,90% | 0,18% | 0,00% | | |

*Table 2: overview of the victim frame co-occurrence analysis*

Table 2 shows that there were a total of 1092 victim frame co-occurrences, which is roughly 50% of all the co-occurrences that came up during 2004-2007. This means, when compared

to the villain and problem-solver frame, that the victim frame was used the most during 2004-2007. Out of all the victim frame co-occurrences, 144 times a foreign actor was framing another actor as the victim. This is about 13% of all the victim frame co-occurrences between 2004-2007. 108 out of all the actors that were framed as villain were foreign, which is roughly 10%. 108 times a foreign speaker co-occurred with a foreign victim.

> *"Indonesia falls victim to bird flu." (Aglionby, 2004)*
> An example of a country (in this case Indonesia) being framed as the victim.

What stands out in the table is that out of all the actors they framed as the victim, eight actors framed themselves the most as the victim between 2004-2007. For example, actors belonging to the other business did not even frame any other actor as the victim in those four years, and out of the eight times that they framed someone as the victim, the actors belonging to the production chain framed themselves six times. Another interesting result is when we compare the victim frame co-occurrence analysis to the villain and problem-solver frame co-occurrence analysis, we can see is that the division of actors who were framed as the victim most is more diffused, with five actors instead of three.

If we take a look at the actors that were speaking, several actors stand out, which I will discuss briefly in the following. We can see that the actors from the media framed the most, namely 556 times. This is roughly 56% of all the victim frame co-occurrences that came up during 2004-2007. To compare, the actors from the government, who framed the second most, only framed 125 actors as the victim (32,3% of all the times they framed an actor between 2004-2007). The actors from the scientific community and the business associations framed came after that, but they framed even less: "only" 65 and 63 times – both roughly 6% out of all the victim frame co-occurrences.

The actors belonging to the international organizations only considerably framed the societal actors and the country as the victim. Compared to the villain and problem-solver frame co-occurrence analysis, the actors belonging to the business associations framed considerably more victims than villains or problem-solvers. Out of the 63 times they framed

an actor as the victim, they framed 47 actors belonging to either the farm, the industry or other business.

> *"Tim Bennett, NFU president, will make a plea to the media today not to frighten consumers. "Scaremongering will destroy the British poultry industry," he will say, "remember eating chicken, meat and eggs, cooked properly, is safe.""* (Elliot, 2007c)
>
> Example of the industry being framed as the victim.

Looking at table 2, we can see that actors belonging to the farm and the industry, societal actors, the country and the animals were framed as the victim most. Actors belonging to the farm were framed as victim the most, namely 236 times. This is roughly 22% out of all the victim frame co-occurrences that came up during 2004-2007. What is interesting about this data, is that besides the actors from the media – who framed 122 actors belonging to the farm between 2004-2007 – the actors belonging the farm also framed themselves as the victim 41 times. Lastly, the governmental actors framed the actors belonging to the farm as the victim 22 times and the actors belonging to the business associations framed them as the victim 13 times.

The actors belonging to the industry were framed as the victim 187 times between 2004-2007, which is roughly 17% of all the victim frame co-occurrences that came up in our data. Similar to the actors belonging to the farm, actors belonging to the industry also framed their own identity as the victim the most out of all the actors they framed as the victim between 2004-2007 (13 times), but they did not clearly frame any actors as the villain. They were framed the most by the actors from the media (95 times, roughly 51% of all the victim frame co-occurrences for the actors belonging the industry) and they were framed as the victim by the actors belonging to the business associations 24 times (roughly 13%).

If we now move on to the societal actors, we can see in table 2 that they were framed as the victim 183 times during 2004-2007, which is roughly 17% out of all the victim co-occurrences that came up in the data. The only two times the societal actors framed someone as the victim, they framed themselves. The actors from the media framed the societal actors the most, namely 97 times (roughly 53% of all the victim frame co-occurrences for the societal actors between 2004-2007). Actors belonging to the scientific community and the

government framed the societal actors the second most: both framed the them as the victim 21 times, which was roughly 11% out of all the victim co-occurrences. The last considerable actor who framed the societal actors as the victim were the international organizations, who framed them times – which was roughly 10%. If we compare the frequency of victim frames used for the societal actors to the actors belonging to the industry, we can see that while many similar actors framed both of them, the actors belonging to the business associations especially framed the actors belonging the industry as the victim, while the actors belonging to the international organizations especially framed the societal actors.

> *"Public anxiety over the outbreak at the Bernard Matthews plant at Holton, in Suffolk, was further heightened when Patricia Hewitt, the Health Secretary, confirmed yesterday that the Government was preparing "very, very seriously and thoroughly for the possibility of a pandemic flu"." (Elliott, 2007d)*
>
> Example of a societal actor (in this case the public) being framed as the victim.

We will now turn to countries being framed as the victim. Table 1 shows us that they were framed as the victim 138 times, which is roughly 16% of all the victim frame co-occurrences that came up between 2004-2007. Like with every other actor, the actors from the media framed the country the most, namely 80 times. The actors from the government framed them 19 times and the actors belonging to the international organizations framed the country as the victim 11 times. Compared to the previous actors that were discussed, the actors from the media framed the country relatively more than other actors framed the country.

If we include the villain frame co-occurrence analysis of the country, we can see that the country was framed as both the victim and the villain. The actors that framed the country were approximately the same, with actors from the media and the governmental actors framing the country the most.

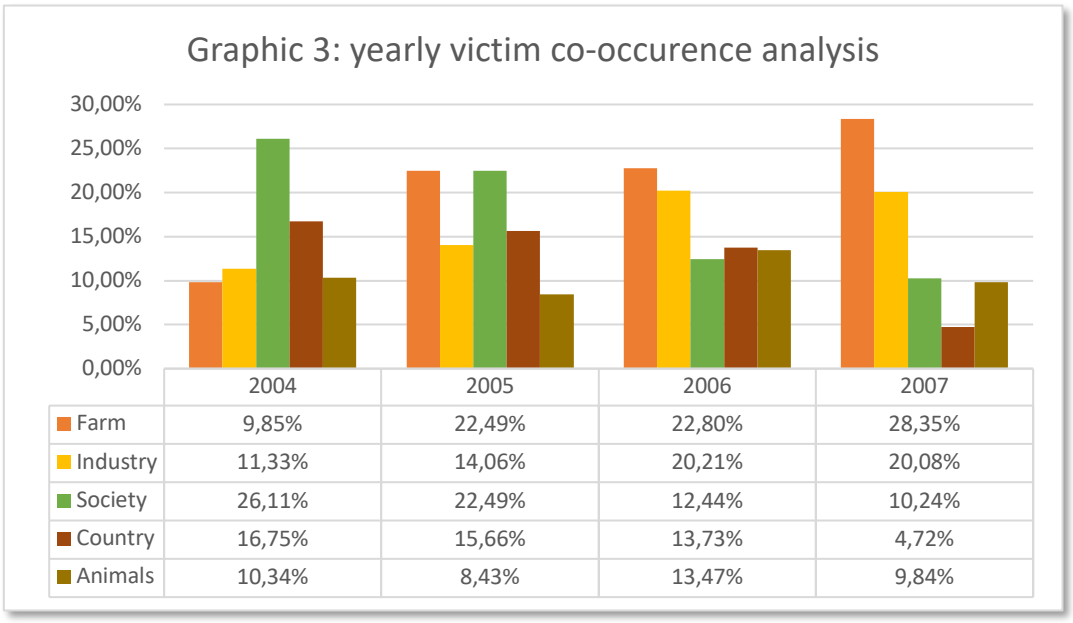
> *"Chillingly, Defra has stated that in the event of an H5N1 outbreak among indoor flocks, producers will be allowed simply to shut down the ventilation systems to sheds so that the birds slowly suffocate to death." (Blythman, 2006)*
>
> Example of the animals being framed as the victim.

The last actor who was considerably (meaning more than 10% of the total victim frames between 2004-2007) framed as the victim were the animals. They were framed as the victim

119 times, which is roughly 14% of all the victim frame co-occurrences between 2004-2007. The actors from the media framed them the most, namely 59 times. The actors from the government framed the animals the second most with 20 times and the other civil society actors and actors belonging the scientific community framed the animals third most, as they both framed them 10 times as the victim.

### 5.2.1 Victim frame co-occurrence analysis for specific actors per year

The next step was to analyze the victim frame co-occurrences per year for specific actors. In this section the findings of yearly victim co-occurrence analyses of actors belonging to the farm and the industry, societal actors, the country and the animals will be discussed. I have chosen to specifically study these actors, because they were framed most as the victim during 2004-2007. Combined they represent 79% of all the victim frame co-occurrences. Graphic 3 shows an overview of the percentage of victim frame co-occurrences per actor per year. This means, for example, that in 2004 the actors belonging to the farm were framed as the victim 9,85% out of the total victim frame co-occurrences in 2004.




| | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|
| Farm | 9,85% | 22,49% | 22,80% | 28,35% |
| Industry | 11,33% | 14,06% | 20,21% | 20,08% |
| Society | 26,11% | 22,49% | 12,44% | 10,24% |
| Country | 16,75% | 15,66% | 13,73% | 4,72% |
| Animals | 10,34% | 8,43% | 13,47% | 9,84% |

*Graphic 3: overview of the percentages of victim frame co-occurrences per actor per year*

#### 5.2.1.1 Farm

> *"Pattie O'Brien, a smallholder from Yeoford, Devon, is desperate to protect her geese. She has asked a vet for a vaccine and even looked for a vaccine on the internet and the black market. She said: "I'm not prepared to let my geese get this disease. I don't want to lock them indoors. They are grazers on grass, and you can't cover that. This disease could be with us for ten years. Are we therefore saying all poultry, meat and eggs must come from birds confined to sheds?"" (Elliot, 2007c)*
>
> Example of an actor belonging to the farm being framed as the victim.

Graphic 3 shows us that the actors belonging to the farm were framed increasingly as the victim over the four years. In 2004 the actors belonging to the farm were framed 20 times – which was roughly 10% of the total victim frame co-occurrences 2004. This increased to 56 times in 2005 – roughly 22% out of all the victim co-occurrences in 2005. In 2006 it increased even further, with their identity being framed 88 times – roughly 23% out of all the victim co-occurrences in 2006, to finally being framed 72 times in 2007 – which was roughly 28% of the victim frame co-occurrences in that year.

> *"The flu is certainly hurting poultry farmers. French producers are suffering from export bans and a sharp drop in domestic demand. The Brazilian farmers who have a 35 per cent share of the Dollars 7bn-a-year world export market are seeing demand fall as stocks of frozen chicken pile up in Europe." (Beattie, 2006)*
>
> Example of an actor belonging to the farm being framed as the victim.

While the actors belonging the farm, the scientific community and the governmental actors increased the frequency of the amount of times they framed actors belonging the farm as the victim from 2004 – 2006 and decreased in 2007, the actors from the media showed the complete opposite trend: they decreased the frequency of how many times they framed the actors belonging the farm as the victim from 2004 – 2006, but relatively increased in 2007. Only the actors belonging to the business associations show a steady increase in how many times they framed the actors belonging to the farm as the victim from 2004 – 2007.

> *"Tim Wood, 63, the owner of Blackacre Farm, in Somerset, which supplies free-range eggs to 700 stores, said: "We've been told to cover our pens with netting, but my chickens run free over 75 acres. It is completely unfeasible for me to cover this whole area with wire netting. The situation is totally chaotic."" (Harrison & Copping,*

*So, is this what the government meant by 'the best-prepared nation in the world' for bird flu? 'It's chaos,' say farmers, but Defra says it is applying lessons learnt from foot and mouth, 2006)*

An example of an actor belonging to the farm being framed as the victim.

#### 5.2.1.2 Industry

*"Sir David King, the Government's chief scientific adviser, added his voice to concerns for the industry. "Organic farming and free-range farming would come to an end," he told the Mirror. "It will change farming practices."" (Derbyshire, 2006)*

An example of an actor belonging to the industry being framed as the victim.

We now turn to the actors belonging to the industry. We can see in graphic 3 that, similarly to the actors belonging to the farm, the percentage of victim frame co-occurrences for the actors belonging to the industry increased over the years: from 11% in 2004 to 14% in 2005, and 20% in 2006. In 2007 the actors belonging to the industry were framed the same percentage as in 2006. This data shows that the actors form the farm and the industry were framed similarly over course the four years.

*"The new cases have struck in the heartland of Britain's poultry industry, which produces many of the 850 million chickens and 9bn eggs consumed by Britons every year." (Jha, 2006)*

Example of an actor belonging to the industry being framed as the victim.

Interestingly, the actors from the media framed 74% of the victim frame co-occurrences of the actors belonging the industry in 2004, but in 2005 the actors from the media only framed roughly 45%. Especially the actors belonging to the business association started to frame the actors belonging to the industry as the victim (namely 7 times, 20% procent of all the victim frame co-occurrences for the actors belonging to the industry) in 2005, moving to 13% in 2006 and 14% in 2007. If we look at total numbers, we can see that the actors belonging the business associations framed the actors from the industry second most.

The governmental actors did not frame the actors belonging to the industry at all in 2005, but in 2006 and 2007 they framed them roughly 10% (8 times and 5 times) out of all the victim frame co-occurrences for the actors belonging to the industry in those years. The actors belonging to the industry especially framed their own identity in 2006, namely 8

times. The actors belonging to the scientific community only really framed the actors belonging to the industry in 2006, namely 10 times – roughly 13% of that year.

#### 5.2.1.3 Society

> *"Just when most of us thought it was safe to go back into the water (or at least eat chicken and turkey), H5N1 raises its black dorsal fin and reminds us that it has unfinished business with the human race." (Davis, 2007)*
>
> Example of a societal actor (in this case human race) being framed as the victim.

We can see in graphic 3 that the relative amount of times that a societal actor (which is when the public or you/us is mentioned) was framed as the victim decreased over the four years. While they were framed the most in 2004 (53 times, which is roughly 26% of all the victim frame co-occurrences in 2004), in 2005 this percentage dropped to roughly 22%, with 56 times. In 2006 this percentage dropped even further to about 12%, with 48 times, and it finally reached its lowest percentage in 2007 with only 10,24% and 26 times.

> *"It emerged last night that a 17-year-old girl has died from bird flu in Egypt, apparently after coming into contact with sick and dead birds and falling ill in January. The disease has now killed 166 people worldwide in the past four years." (Traynor, Vidal, Woodward, & Lewis, 2007)*
>
> Example of a societal actor (in this case the people) being framed as the victim.

The actors from the media framed the societal actors the most in all the four years. This ranged from the lowest percentage (out of all the times they were framed) of 49% in 2004 to the highest percentage of 63% in 2006. Interestingly, we can see that the actors belonging to the international organizations also framed the societal actors considerably. In 2004 the actors belonging to the international organizations framed them 12 times – which is roughly 23% of all the victim frame co-occurrences for the societal in 2004. However, this number quickly dropped to only five in 2005 (roughly 9%), to only framing one societal actor as the victim in both 2006 and 2007.

> *"Some scientists have suggested such a virus could trigger a flu pandemic and kill millions of people." (Harvey, 2007)*
>
> Example of a societal actor (in this case the people) being framed as the victim.

The actors belonging to the scientific community showed a different development, with only framing the societal actors once in 2004, to framing them eight and seven times in 2005 and 2006 (both roughly 15%) and framing them five times in 2007 (which was roughly 19%). The governmental actors had a relatively small share in framing societal actors as the victim, which is surprising because the actors from the government have a relatively big share in all the other victim frame co-occurrences. In conclusion, these results show that the societal actors were framed decreasingly as the victim over the four years and the actors who framed them varied over the years.

#### 5.2.1.4 Country

> *"But some estimates said the overall financial damage to the country's [Dutch] poultry sector, once one of the biggest in the world, could be as high as Euros 400m-Euros 500m." (Buck, 2004)*
>
> An example of a country (in this case the Netherlands) being framed as the victim.

When we look at graphic 3, we can see that the results of the victim co-occurrence analysis of the country show that the percentage of frames per year decreased over the four years. In 2004 countries were framed 34 times, which is roughly 17% of all the victim frames in that year. However, this dropped to roughly 16% in 2005 with 39 times, and to 14% in 2006, with 59 times. The biggest decrease was in 2007, when the countries were framed as the victim only 12 times, which was roughly 5% of all the victim frame co-occurrences in that year. Although the countries were framed less than the societal actors, they show the same decrease over the years.

> *"Yet it could destroy Britain's poultry and decimate its wildlife. The countryside could become a no-go area, with animal pyres scattered across the septic isle, the sale of chicken kievs could plummet, farmers could be ruined." (Thomson, 2006)*
>
> An example of a country (in this case Britain) being framed as the victim.

Actors belonging to the international organizations framed the countries as victim similarly to how they framed the societal actors as victim. This is interesting because the actors belonging to the international organizations did not really frame any other identity as the victim during 2004-2007.

> *"Britain is powerless to stop turkey imports" (Derbyshire, Britain is powerless to stop turkey imports, 2007)*
>
> An example of a country (in this case Britain) being framed as the victim.

The actors from the media framed the countries as the victim the most each year, ranging from roughly 56% in 2004 to roughly 60 in 2006. Another actor that framed the country considerably were the governmental actors. Lastly, it is interesting to see that actors belonging to the scientific community increased their frequency in how many times they framed the countries as victim over the years.

#### 5.2.1.5 Animals

> *"The Vietnamese Government confirmed yesterday that more than a million chickens have been affected." (Lewis, 2004)*
>
> An example of animals (in this case chickens) being framed as the victim.

Lastly, we will take a closer look at how the animals have been framed as the victim per year. Looking at graphic 3, we can see that they were framed variably over the four years. In 2004, the animals had roughly 10% out of all the victim frame co-occurrences in that year. However, in 2005 this dropped to roughly 8%, only to increase again to roughly 13% in 2006. In 2007 it decreased back to 2004 levels, namely 10% out of all the victim frame co-occurrences in that year. This data suggests that while over the four years the animals were framed as the victim, the intensity with which they were framed as the victim varied. Compared to the other three years, the animals were framed the most as the victim in 2006, being at approximately the same level as the societal actors and the country in that year.

> *"More than 2,600 turkeys have died, all from the same shed. All 160,000 on the farm will be slaughtered." (Harrison, 2007)*
>
> An example of the animals (in this case turkeys) were framed as the victim.

The actors from the media framed the animals the most in 2005 (62%), 2006 (50%) and 2007 (64%). In 2004 the governmental actors framed the animals 10 times, which was the most in that year. After that, they decreased how many times they framed the animals as the victim: in 2005 they framed the animals as victim three times, in 2006 five times, and finally in 2007 only two times. In 2006 two other actors also framed animals as victim, namely

actor belonging to the scientific community and the other civil society actors, who framed the animals 7 and 6 times.

> *"Life is so unfair. I am not thinking about me, but all those thousands of "bootiful" wildfowl flying around East Anglia that, according to the manic metropolitan media, were the first suspects for giving Bernard Matthews - or at least his turkeys - avian flu. Those innocent birds were wrongly accused by barmy BBC reporters who, amazingly, believed all they heard from Defra. And, because of this, many people found themselves caught up in yet another food scare." (Page, 2007)*
>
> An example of the animals (in this case the wildfowl) being framed as the victim.

## 5.3 Problem-solver frame co-occurrence analysis

The third and last set of co-occurrence analyses studied how many times an actor speaking co-occurred with the problem-solver frame between 2004-2007. Table 3, color-coded just like table 1 and 2, shows an overview of this analysis.

| | 1. Farm | 2. Product | 3. Industr | 4. Other b | 5. Worker | 6. Retaile | 7. Consum | 8. Govern | 9. Europe | 10. Intern | 11. NGOs | 12. Busine | 13. Trade | 14. Other | 15. Societ | 16. Counti | 17. Media | 18. Scienc | 19. Source | 20. Critic | 21. Other | 24. System | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Farm | 7 | 0 | 1 | 0 | 0 | 0 | 2 | 7 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 2,38% |
| 2. Production chain | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 2,51% |
| 3. Industry | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0,53% |
| 4. Other business | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0,26% |
| 5. Worker | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0,00% |
| 6. Retailer | 0 | 1 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 1,98% |
| 7. Consumer | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0,13% |
| 8. Government | 23 | 2 | 3 | 0 | 2 | 1 | 4 | 135 | 4 | 3 | 0 | 0 | 0 | 9 | 14 | 3 | 0 | 3 | 0 | 0 | 4 | 0 | 210 | 27,78% |
| 9. European authorities | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 8 | 32 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 6,35% |
| 10. International organizations | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 6 | 0 | 12 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 3,04% |
| 11. NGOs | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 1,46% |
| 12. Business association | 7 | 0 | 2 | 1 | 0 | 1 | 2 | 12 | 0 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 33 | 4,37% |
| 13. Trade union | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0,13% |
| 14. Other civil society actors | 4 | 0 | 1 | 1 | 2 | 0 | 0 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 3,17% |
| 15. Society | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0,13% |
| 16. Country | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 1,98% |
| 17. Media | 25 | 7 | 3 | 4 | 2 | 4 | 1 | 126 | 23 | 11 | 3 | 1 | 0 | 13 | 7 | 59 | 0 | 11 | 0 | 0 | 2 | 0 | 302 | 39,95% |
| 18. Science/Scientific Community | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 13 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 2 | 0 | 0 | 0 | 0 | 27 | 3,57% |
| 19. Source | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0,26% |
| 20. Critic | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0,00% |
| 21. Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0,00% |
| | 72 | 20 | 12 | 8 | 6 | 22 | 10 | 340 | 64 | 32 | 3 | 8 | 0 | 22 | 29 | 85 | 1 | 16 | 0 | 0 | 6 | 0 | 756 | |
| | 9,52% | 2,65% | 1,59% | 1,06% | 0,79% | 2,91% | 1,32% | 44,97% | 8,47% | 4,23% | 0,40% | 1,06% | 0,00% | 2,91% | 3,84% | 11,24% | 0,13% | 2,12% | 0,00% | 0,00% | 0,79% | 0,00% | | |

*Table 3: overview of the problem-solver frame co-occurrence analysis*

As can be seen in table above, the problem-solver frame co-occurrences came up 756 times during 2004 – 2007. This is roughly 35% of all the identity frame co-occurrences that came up in that period. Of all the time an actor spoke, 107 times it was a foreign actor was speaking (roughly 14% of all the problem-solver frame co-occurrences between 2004-2007). Of all the actors that were framed as the problem-solver, 171 times a foreign actor was framed (roughly 23% of all the problem-solver frame co-occurrences). 63 times a foreign speaker co-occurred with a foreign problem-solver.

> *"Then in October, Vietnam launched an expensive, logistically complicated campaign to vaccinate domestic poultry. The measures appear to have checked the virus." (Kazmin, 2006)*
>
> An example of a foreign (in this case Vietnam) country being framed as problem-solver.

A rather surprising result is the division of speakers in the problem-solver frame co-occurrences. Although the actors from media (unsurprisingly) framed the most problem-solvers during 2004-2007, compared to the victim and villain frame co-occurrence analysis they framed relatively less problem-solvers. They have framed 302 problem-solvers, which is roughly 30% of all the times they framed an actor between 2004-2007. However, compared to the victim frame co-occurrence analysis their share of the co-occurrences is 10% less and compared to the villain frame co-occurrence analysis 3% less.

The governmental actors framed 210 problem-solvers, which is roughly 54% of all co-occurrences between 2004-2007. This means that they had the most problem solver co-occurrences. Compared to the victim frame this is 22% more and compared to the villain frame this is 31% more. The last rather surprising speaker were the actors belonging to the European authorities, who framed 48 problem-solvers between 2004-2007 – which was more than half of all the times they framed an actor.

Out of all the actors they framed, seven actors framed themselves the most as problem-solver. This is similar to results of the victim co-occurrence analysis. The actors belonging to the retailer framed themselves 14 times out of the 15 times that they framed an actor as the problem-solver. The countries framed themselves as the problem-solver 10 times out of the total 15 times that they framed an actor as the problem-solver.

It is apparent from table 3 that the governmental actors were framed as the problem-solver the most, namely 340 times. This is roughly 45% of all the problem-solver frame co-occurrences between 2004-2007. The countries were framed as the problem-solver 85 times – which is roughly 11% – and the actors belonging to the farm were framed as the problem-solver 72 times – which is roughly 10%. Lastly, actors belonging to the European authorities were framed as the problem-solver 64 times, which is roughly 8%.

> *"The government announced last month that it was offering free flu jabs for poultry workers in an attempt to stop new forms of the disease emerging," (Harrison, 2007)*
> An example of a governmental actor (in this case the government) being framed as the problem-solver.

The governmental actors were framed as the problem-solver the most, namely 340 times – which is roughly 45% of all the problem-solver frame co-occurrences between 2004-2007. Out of all the actors they framed during that period, eight actors framed the governmental actors the most as problem-solver. Surprisingly, it was not the actors from the media who framed governmental actors the most as the problem-solver, but the governmental actors framed themselves as problem-solver the most. They framed their own identity 135 times, which is roughly 40% of all the problem-solver frame co-occurrences for the governmental actor, while the actors from the media 'only' framed them 126 times, roughly 37%. This is a surprising result, because in all the other co-occurrence analyses the actors from the media were always the actor who had the most co-occurrences.

The countries were framed as the problem-solver 85 times, which is roughly 11% of all the problem-solver frames during 2004-2007. The actors from media framed them as the problem-solver 59 times, which is 69% of all the times that actors from the country co-occurred with the problem-solver frame. The countries were the only other actors who framed themselves considerably as the problem-solver: they framed the countries as problem-solver 10 times, which is roughly 12% of all the problem-solver frame co-occurrences for the country. This result is rather astonishing, because it suggests that besides themselves, only the media really framed the countries as being the problem-solver. The countries are the only actor that was considerably framed as all three identities: they have been framed as the villain, as the victim, and as the problem-solver.

> *"Sainsbury's, which uses Thai poultry in frozen chicken nuggets, has said it will find a new supplier." (Aglionby & Brown, 2004)*
> Example of an actor being framed as the problem-solver.

Moving on to the actors belonging to the farm; they were framed as the problem-solver 72 times, which is roughly 10% of all the problem-solver frame co-occurrences that came up in our data set. They were framed most by the actors from media, namely 25 times. The

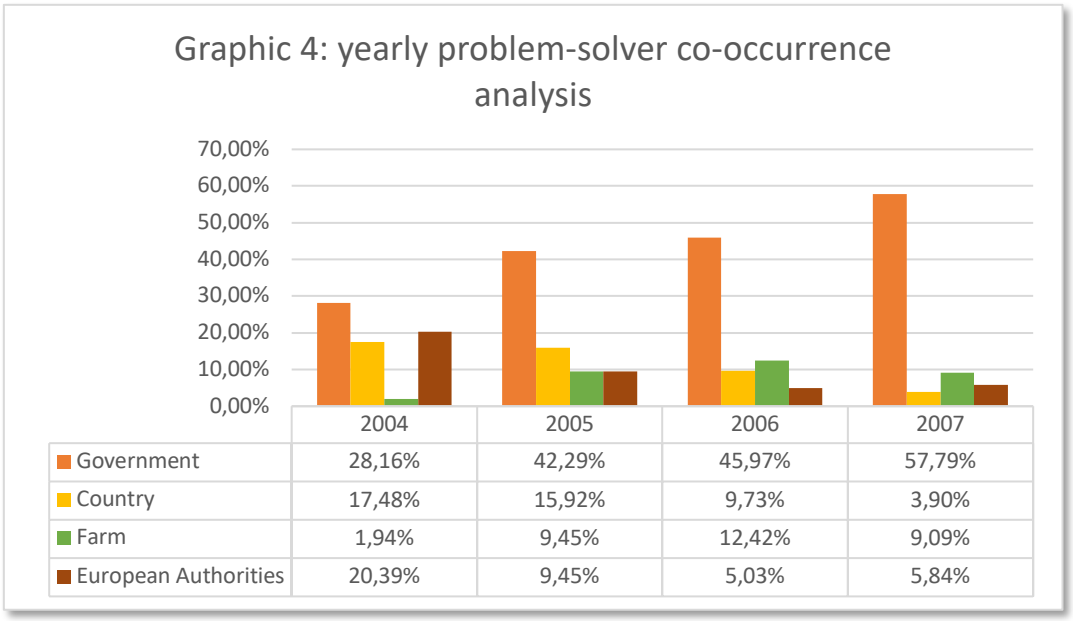
governmental actors framed them 23 times. They framed themselves as the problem-solver 7 times. The actors belonging to the business associations also framed the actors belonging to the farm 7 times.

The actors belonging to the European authorities were framed as the problem-solver 64 times, which is roughly 8% of all the problem-solver frame co-occurrences between 2004-2007. Out of all the actors that framed them, they framed their own identity the most. They framed themselves 32 times, which is roughly 50% out of all the problem-solver frames for actors belonging to the European authorities. This is more than the 23 times that the actors from the media framed them as problem-solver, which was only roughly 36% of all the times that the actors belonging to the European authorities were framed as problem-solver. Besides themselves and the media, only nine other times an actor framed them as the problem-solver over the span of the four years.

### 5.3.1 Problem-solver frame co-occurrence analysis for specific actors per year

The next step was to analyze the problem-solver frame co-occurrences per year for specific actors. In this section the findings of yearly problem-solver co-occurrence analyses of governmental actors, the country and actors belonging to the farm and the European authorities will be discussed. Combined they represented 74% of all the problem-solver frame co-occurrences. The actors belonging to the European authorities are included as well, because I found their results interesting enough to inspect closer.

Graphic 4 shows an overview of the percentage of problem-solver frames per actor per year. This means, for example, that in 2004 the identity of the governmental actors was framed as the problem-solver 28,16% out of the total problem-solver frames in 2004.




| | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|
| Government | 28,16% | 42,29% | 45,97% | 57,79% |
| Country | 17,48% | 15,92% | 9,73% | 3,90% |
| Farm | 1,94% | 9,45% | 12,42% | 9,09% |
| European Authorities | 20,39% | 9,45% | 5,03% | 5,84% |

*Graphic 4: overview of the percentages of problem-solver frame co-occurrences per actor per year*

While the actors belonging to the retailers are not included in the specific actor co-occurrence analysis (considering that they only represent 2,9% of all the problem-solver frame co-occurrences over the four years), I believe they are worth mentioning. It is interesting to see that they framed their own identity in 2006 as the problem-solver, while no other actor framed them as the problem-solver in that year. This shows that the problem-solver role can be claimed, even when no one else thinks you should have it.

#### 5.3.1.1 Government

> *"The Department for Environment, Food and Rural Affairs is planning a simulation exercise to test the country's preparedness for an avian flu outbreak." (Swinford, 2006)*
>
> Example of a governmental actor (in this case the department for environment, food and rural affairs) being framed as the problem-solver.

The governmental actors were framed as the problem-solver the most by far. In graphic 4 we can see that the governmental actors were framed as the problem-solver increasingly over the four years. In 2004 they were framed as the problem-solver 29 times, which was roughly 28% out of the problem-solver co-occurrences in that year. This increased to roughly 43% in 2005 with 85 times, 46% in 2006 with 137 times and finally to roughly 58% in 2007 with 89 times.

The governmental actors framed their own identity the most out of all the actors that framed the governmental actors as problem-solver, as well as increasingly over the four years (from roughly 38% out of all the government problem-solver frame co-occurrences in 2004 to roughly 49% in 2007). The other actors who framed them considerably were the actors belonging to the media, with 9 times and roughly 31% in 2004, to 36 times and roughly 42% in 2005, 52 times and roughly 38% in 2006 and finally dropping back just above 2004 levels in 2007 with 29 times and roughly 33%. Interestingly, no other actor considerably framed the governmental actors as the problem-solver, which means that the governmental actors themselves and the actors from the media were the only actors who framed them as the problem-solver.

#### 5.3.1.2 Country

> *"Countries have differed on whether to vaccinate poultry flocks, however. The Netherlands launched preventative vaccination on March 16 for its backyard poultry population of between one and three million, plus about five million free-range birds. France also moved to vaccinate its domestic flock." (Pavia, 2006)*
>
> Example of countries (in this case the Netherlands and France) being framed as the problem-solver.

Graphic 4 shows that the countries were decreasingly framed as the problem-solver over the four years. It went from roughly 17% of all the problem-solver frame co-occurrences in 2004 to only 4% in 2007. If we compare these percentages to the villain frame co-occurrence analysis and victim frame co-occurrence analysis, we can see a similar trend where they were framed in that identity decreasingly over the four years.

> *"Japan has become the first country to ban imports of British poultry amid growing concerns about the threat of avian flu. [...] The ban is an attempt to prevent the spread of avian flu to Japan's domestic birds. Hundreds of thousands of birds were culled last year as the H5N2 strain of avian flu was found in farms near Tokyo." (Jha, 2006)*
>
> Example of a country (in this case Japan) being framed as the problem-solver.

Interestingly, mainly the actors belonging to the media framed them as the problem-solver: in 2004 they framed the country 15 times, which was roughly 83% out of the problem-solver co-occurrences for the country in that year, in 2005 this decreased a bit and they

framed the identity 17 times, which was roughly 53%, in 2006 the framing increased again to 23 times, which was roughly 79%, and lastly in 2007 they framed the identity 4 times, which was 67% of the problem-solver frames for the country in that year. We can see that in 2005 the country framed their own identity as the problem-solver six times – which was roughly 19% of all the problem-solver frames for the country in that year.

#### 5.3.1.3 Farm

When we look at graphic 4, we can see that the actors belonging to the farm were framed as the problem-solver third most during 2004-2007. In the first three years the percentage of the problem-solver frame co-occurrences per year increased: from 1,94% in 2004, to roughly 9% in 2005 and to roughly 12% in 2006. However, in 2007 it decreased to 2005 levels again, with roughly 9% out of all the problem-solver frames in that year.

> *"Defra is advising farmers to feed and water birds inside and prepare to bring birds inside if the disease spreads. If farmers cannot provide shelter, it recommends adapting outbuildings, erecting lean-to verandas and creating temporary structures. It also suggests temporary outdoor pens using straw bales, a tarpaulin and a windbreak." (Derbyshire, 2006)*
>
> Example of actors belonging to the farm (in this case farmers) being framed as problem-solver.

Especially the actors belonging to the media and the governmental actors framed them as the problem-solver. This can be seen in the example above, where a governmental actor frames actors belonging to the farm. In 2006 the actors belonging to the farm framed their own identity five times, which was roughly 14% of all the problem-solver frames for them in that year. In that same year, we can see that the actors belonging to the business associations framed them four times, which is roughly 11%. Besides these actors, no other actor framed the actors belonging to the farm considerably as problem-solver.

#### 5.3.1.4 European authorities

As shown in graphic 4, the actors belonging to the European authorities were framed as the problem-solver decreasingly over the first three years, but showed a small increase in 2007. In 2004 the they were framed as the problem-solver 21 times, which is 20,39% of all the problem-solver frame co-occurrences for that year. In 2005 this percentage declined to

roughly 9%, with 19 times. In 2006 this declined even further to only 5%, with 15 times. Then in 2007 the absolute number declined to 9 times that their identity was framed, but the percentage of all the problem-solver frame occurrences that year increased to roughly 6%. This data shows that especially in 2004 the actors belonging to the European authorities were framed as the problem-solver, which (even though the absolute numbers did not decrease that much) relatively decreased over the years.

> *"European Union officials said they were confident Europe's "tried and trusted" defences against avian flu would minimise any impact on trade." (Clover & Waterfields, 2007)*
>
> Example of actors belonging to the European authorities (in this case Europe) being framed as problem-solver.

What is striking is that the actors belonging to the European authorities were framed especially by themselves. Even more so, the only actor who considerably framed them as the problem-solver were they themselves (even more so than for example the actors belonging to the media, who normally always have the most co-occurrences). This can be seen in the example above, where Europe is framed as the problem-solver by European officials.

Besides the actors belonging the media, no other actor really framed the actors belonging to the European authorities as the problem-solver. But even if we look at who the actors belonging to the media framed, we can see that even the media did not frame the actors belonging to the European authorities more than 7% out of all the actors they framed as problem-solver in 2005, 2006 and 2007 (except in 2004, when they framed them 19% out of all the actors that the actors from the media framed).

# 6. Discussion

In this chapter I will discuss and interpret the findings and answer the sub-questions that have been formulated to answer the main research question. Lastly, I will discuss the limitations of this study.

## 6.1 Who was constructing the social conflict?

The actors belonging to the media, the governmental actors and the actors belonging to the scientific community and business associations constructed the social conflict mostly, because they framed the most actors between 2004 and 2007. In the next paragraphs I will shortly discuss these actors and the role that they played.

The findings show that the actors belonging to the media were constructing the social conflict the most: they co-occurred with any of the identity frames a total of 996 times out of the 2170 total co-occurrences during 2004-2007. However, on some level this was expected because statements in newspaper articles were studied and, in those newspaper articles, the journalist was usually speaking. Because the journalist is an actor belonging to the media, this means the actors belonging to the media are predominantly speaking. However, it is interesting to see that in some cases no other actor framed a certain actor, besides from the actors belonging to the media. For example, the framing of the country as the problem-solver: this was almost solely done by the actors belonging to the media. This begs the question why only they framed the country as the problem-solver, and whether this influences others to think the same? So even though it was expected that the actors belonging to the media framed the most actors, it is still important to realize the role they play in the public debate and in creating a social conflict. It makes me wonder if it would not be better to let the sources speak for themselves, while the journalists speak as little as possible.

The governmental actors were also constructing the social conflict during 2004-2007 (they co-occurred 387 times with any of the identity frames). But out of all the actors they framed

as the villain or problem-solver, they actually mostly framed themselves. This suggests that the governmental actors have constructed themselves as being a part of the social conflict as the villain and the problem solver. Being the villain does not seem like a favorable position to have, which makes it feel counterintuitive that the governmental actors have framed themselves as the villain. However, this can be explained by the fact that in these co-occurrence analyses different governmental actors were considered as one single actor. This means that local government could have been framing national government, or different political parties could have been pointing fingers at each other.

However, from 2006 onwards we can see that the governmental actors did not frame other governmental actors as the villain as much anymore. Instead, the governmental actors framed the country and the actors belonging to the product chain: in 2007 they only framed themselves 2 times, while they framed the actors belonging to the production chain 14 times. This might be explained by the outbreak at the Bernard Matthew's farm, which occurred at the same time. The example below shows a governmental actor framing actors belonging to the production chain as the villain, because they hindered the government from acting swiftly. By framing them as the villain (because in this case they delay the process of taking action) they place the blame with them, instead of with the UK government. It might have been that the governmental actors wanted to reframe the social conflict with the actors belonging to production chain being responsible, instead of themselves.

> *"One Whitehall official described "quiet rage" over delays by the company in handing over transport documents listing the consignments that have travelled between Britain and Hungary. It took three days for the company to accede to requests for information." (Elliott, 2007a)*
>
> Example of the actors belonging to the production chain being framed as villain, because they delayed the process of taking action.

The fact that the governmental actors also framed themselves as the problem-solver might indicate that they believe that it is either their responsibility to bring a solution, or they want to be seen as such in order to create trust in the government. The quote below is a good example, as the animal welfare minister says that the UK has a good contingency plan and

that they have learned from previous outbreaks: meaning that people can trust the government.

> *"Ben Bradshaw, animal welfare minister, said that the UK had a "good" contingency plan that drew on lessons learnt from previous animal disease outbreaks, such as foot and mouth." (Arnold & Studemann, 2006)*
>
> Example of a governmental actor (in this case the animal welfare minister) being framed as the problem-solver.

The actors belonging to the scientific community and the business associations were the third largest group to construct the social conflict. They both co-occurred the most with the victim frames.

It has been mentioned previously that actors tended to frame themselves as the victim and problem-solver frame. By doing so, the social conflict was constructed with their perceived interests being involved. Considering that many actors were framing themselves as the victim, they constructed the social conflict with their own perceived interests being harmed. If they then also constructed an actor as the villain, they constructed the conflict by pitting themselves against another actor. Especially actors from the farm framed themselves as the victim, while framing the governmental actors as the villain. By doing so, they placed them opposite of which other. I will go further into this is section 6.3, when I answer the question which actors were pitted against each other.

Actors belonging to the European authorities especially framed themselves as the problem-solver. By doing so they constructed the social conflict with actors belonging to the European Union as the one who can bring the solution. Whenever actors belonging to the European authorities were framed as the problem-solver, it stated how Europe's measures could protect its member states. An example of this is shown below, where the European Health Commissioner insists on the effectiveness of Europe's measures.

> *"European Health Commissioner Markos Kyprianou has insisted that Europe's measures to isolate and restrict regions hit by bird flu will reduce the likelihood of non-EU trade blockades on UK produce." (Clover & Waterfields, 2007)*
>
> Example of an actor belonging to the European authorities (in this case Europe) being framed as the problem-solver.

In this sense it could seems to serve the same reason as the governmental actors framing themselves as the problem-solver: increasing the trustworthiness of the European Union as legitimate problem-solver.

## 6.2 Which actors were constructed as being part of the conflict?

In the co-occurrence analyses we can see that the governmental actors, the country and actors belonging to the product chain were framed the most often as villain. The societal actors, country, animals and actors belonging to the farm and the industry were framed the most often as victim. Lastly, the governmental actors and actors belonging to the farm and the European authorities were framed the most often as problem-solver. This means that these actors were constructed as being part of the social conflict. I will discuss these actors more in detail in the following sections.

### 6.2.1 Which actors were framed as the victim, villain and problem-solver?

As mentioned in the theoretical framework, a great variety of actors is involved in a wicked problem. These actors all own part of the problem (Rittel & Webber, 1973). The framing of different actors as the villain is constructing them as owning a different part of the problem. In the many examples given, we can see for example that the governmental actors are framed as the villain because they fail to take legislative measures, the country does not protect their people and the actors belonging to the production chain hinder the process by not providing much needed information. Despite them all owning a different part of the problem, they are connected and their collaboration could provide an integrative approach.

When we look at which actors were constructed as the villain more specifically, one of the most striking findings to emerge from the data is that the governmental actors were framed as the villain most often, as well as by the greatest variety of actors. They were framed as the villain 107 times, which represents roughly 33% of all the villain frame co-occurrences with speakers. This means that out of all the villain frames mentioned by our speakers in the data, 1 out of 3 were constructing the governmental actors as the villain. The country

was also framed as the villain, albeit less often than the governmental actors were framed as the villain. They were framed as the villain 50 times, which was roughly 16% of the villain frame co-occurrences. The actors belonging to the production chain were also framed as the villain: they were framed as the villain 40 times, which was roughly 12% of the villain frame co-occurrences. Interestingly, we can see that even these two actors combined do not match how many times the governmental actors were framed as the villain. In conclusion, the actors from the government were the ones most often framed as the villain and therefore the one most often constructed harming the perceived interests of the victim. However, the country and actors belonging to the production chain were also constructed as responsible for a (smaller) part of the problem.

The construction of the victim during the social conflict was more ambiguous, because there was a greater variety of actors that were framed as the victim most often: the actors belonging to the farm were framed as the victim 236 times, actors belonging to the industry 187 times, societal actors 183 times, the country 138 times, and the animals 119 times. De Bruijn (2018) offers a possible explanation for this, as he states that being the victim is an appealing identity to have: they have the moral right to be protected and safeguarded. Eight out of 21 actors framed themselves the most as victim. If an actor constructs the conflict with themselves as the victim, they state that their interests are being harmed, and that they need to be protected (De Bruijn, 2017). If they then construct another actor as the villain, they are constructing the social conflict between themselves and other actors with themselves as victim and another actor as harming their perceived interests.

As different actors own a part of the wicked problem, different actors also own part of the solution (Rittel & Webber, 1973). When an actor owns part of the problem, they might be able to the solve that part of the problem. The villain, (the actors who are held responsible for harming the perceived interests of the victim by pursuing their own interests) is expected to either change their own interests or to stop pursuing them. Alternatively, the villain could be forced to change their behavior by the problem-solver through legislation for example.

In this particular case the governmental actors, the country and the actors belonging to the farm were framed as both the villain and the problem-solver, which suggests that they were

constructed as the one responsible and the one who should fix it. The quotes below show an example of a governmental actor being framed as both the villain and the problem-solver. A governmental actor was framed as the villain, because their response to the avian flu was slow and inefficient. A logical problem solution would have been if the governmental actor *had* reacted swiftly, which could be argued for in the second quote where the government offered free flu jabs for poultry farmers. Because they are held responsible for causing the problem, they are held responsible for resolving it. Therefore, if they are constructed as the villain they are also constructed as the problem-solver.

> *"The department's 'swift' response to avian flu has actually been slow and inefficient" (Linklater, 2006)*
> Example of a governmental actor being framed as the villain.

> *"The government announced last month that it was offering free flu jabs for poultry workers in an attempt to stop new forms of the disease emerging," (Harrison, 2007)*
> An example of a governmental actor (in this case the government) being framed as the problem-solver.

Because seven actors framed themselves as problem-solver the most out of all the problem-solvers they framed, the problem-solver frame appears to be an attractive identity to have. The governmental actors were by far framed most often as the problem-solver: they were framed as the problem-solver 340 times, which was 45% of all the problem-solver frame co-occurrences, and more than all the following actors combined. The other actors framed as problem-solver most often were the country (framed as the problem-solver 85 times), actors belonging to the farm (framed as the problem-solver 72 times) and actors belonging to the European authorities (framed as the problem-solver 64 times). When an actor is constructed as the problem-solver, they are expected to solve the problem. However, as a variety of actors is framed as the problem-solver this suggests that these actors *together* should solve the problem.

The global scale of the H5N1 avian flu outbreak as a wicked problem is reflected in the data when we look more closely at the percentage of the actors involved that were foreign. 13,5% of all the times an actor spoke it was a foreign actor, and 30% of all the actors that were framed were foreign. The problem is being constructed as a problem that involves actors in

multiple countries. In less than 5 years the H5N1 strain has reached more than 60 countries, which is illustrated in the image below, showing the global spread of the H5N1. The global scale of the H5N1 virus might complicate finding a solution, because it implies the collaboration between countries.

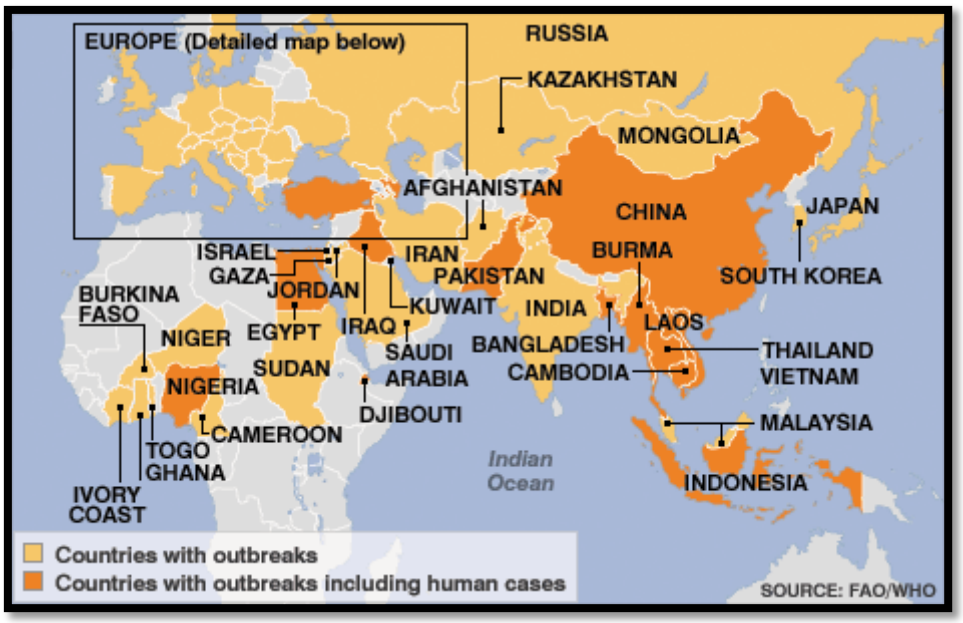



*Figure 3: bird flu outbreaks in the world (BBC, 2008)*

## 6.2.2 How have these frames changed over time?

The actors that were constructed as either the villain, victim and/or problem-solver changed during 2004 and 2007. For example, the frequency with which the governmental actors were framed as the villain varied every year, while the frequency with which a country was framed as the villain steadily decreased in the four years. Although the governmental actors framed themselves as the villain 15 times, the frequency with which they framed themselves as the villain decreased over the years (while for example the actors belonging to the media kept framing them as the villain consistently throughout those four years).

However, the biggest change that I found in the data was the framing of the actors belonging to the product chain as the villain. In 2004-2006 the actors belonging to the production chain did not get framed as the villain at all, but in 2007 they were framed as the villain the most out of out of all the actors. This sudden framing of the actors belonging the product chain as villains might have been caused by the 2007 H5N1 outbreak at Bernard Matthews farm,

shown in the quote below. When the governmental actors, the country and the actors belonging to the production chain are compared to each other, it would suggest that the social conflict was reframed in 2007. The blame shifted from the governmental actors and the country to the actors from the production chain.

> *"[...] angered MPs of all parties after official veterinary reports identified flagrant breaches of biosecurity on the poultry company's premises at Holton, Suffolk" (Elliott, 2007b)*
>
> An example of a governmental actor framing an actor belonging to the product chain as the villain.

The framing of victims also changed. The frequency with which societal actors (which is when the public or you/us is mentioned) were framed as the victim decreased over the four years, although they were framed as the victim most in 2004. This suggests that while the societal actors were considered as the victim of the avian flu in 2004, in later years the victim framing shifted away from the public and you/us. The frequency with which the country was framed as the victim decreased similarly to the societal actors, while the framing of the animals fluctuated over the four years. The fluctuation could be explained by certain outbreaks of the avian flu. When this outbreak would lead to poultry being culled, or wild animals being shot, the animals would be framed as the victim. An example of this is shown in the citation below.

> *"More than 2,600 turkeys have died, all from the same shed. All 160,000 on the farm will be slaughtered." (Harrison, 2007)*
>
> An example of animals (in this case the turkeys) being framed as the victim.

In contrast to the societal actors, the country and the animals, the frequency with which the actors belonging to the farm and the industry were framed as victim increased steadily in the four years. While this might be explained by the development of the H5N1 avian flu itself, or example that a new outbreak spurs framing the animals as the victim, further research is necessary to explain these fluctuations.

Besides a smaller variety of actors being framed as the problem-solver, there has also been less change in *who* was framed as the problem-solver over the years. The actors from the

government were framed as the problem-solver increasingly over the four years, while the framing of the country and the actors belonging to the European authorities as the problem-solver decreased. This would suggest that in the social conflict especially the governmental actors were constructed as the problem-solver, although other actors were also recognized in having a part to play. Similarly to the victim and villain frame, changes in the avian flu, for example a new outbreak, could spur the framing of new actors: the actors belonging to the farm were rarely framed as the problem-solver in 2004, but were framed as a problem-solver in the other three years.

### 6.2.3 Which actors were framed in multiple identities?

During 2004-2007 the governmental actors, the country and the actors belonging to the farm were framed in multiple identities. This adds to the complex nature of the conflict, because it suggests that identities are not singular. When one actor is framed in multiple identities, it might become increasingly difficult to solve the conflict. What happens when actors are constructed as opposing themselves? When an actor is not just the villain, but also the victim, it might construct a social mess because it is unclear what role they should play in resolving the problem. Should they be protected or condemned? Or should they take action and resolve the problem? However, by taking this closer look at which actors are framed in multiple identity roles, we can better understand which role they were constructed to play in the social conflict. A more unified approach can be designed in which all these different identities are considered.

The governmental actors were framed most often as the villain and as the problem-solver (respectively 33% and 45% of all the villain and problem-solver co-occurrences). This would suggest that even though other actors were also framed as villain and problem-solver, the governmental actors were constructed as playing a central role in this social conflict (and therefore, the wicked problem). They were constructed as having harmed the perceived interests of the victim, and also as the ones who should bring the resolution. However, because all the different governmental actors have been regarded as one actor during the analyses, a potential avenue for further research would be to conduct a second study that

analyses the different governmental actors (like the different executive, legislative and the judicial actors).

The country was framed as both the villain, victim and problem-solver, suggesting that they were constructed as an integral part of the conflict as well. When an entire country is constructed as part of the conflict, it suggests that everybody in this country is affected. These findings suggest that country is constructed as being responsible for harming their own perceived interests, and they are also the ones who hold part of the solution. However, a note of caution is due here, because these results could be explained by the fact that in many occasions a speaker simply referred to the UK, Great Britain, or a foreign country when they might have meant a more specific actor. For example, when a speaker framed Hungary as the villain, did they truly mean the entire country, or did they perhaps mean the Hungarian government or product chain? Likewise, Hungary could have been framed as the villain, while the UK was framed as the victim, while they were both coded as the country. Although the data was coded at a much more specific level, during this study there was not the time to study this more in detail. I would recommend this being done in future research.

Lastly, the actors belonging to the farm were framed as the villain, the victim and the problem-solver as well. Actors belonging to the farm are constructed to have suffered enormous losses, as well as having direct access to certain simple resolutions (e.g. bringing the poultry inside (Swinford, 2006)).

> *"The flu is certainly hurting poultry farmers. French producers are suffering from export bans and a sharp drop in domestic demand. The Brazilian farmers who have a 35 per cent share of the Dollars 7bn-a-year world export market are seeing demand fall as stocks of frozen chicken pile up in Europe." (Beattie, 2006)*
>
> An example of actors belonging to the farm (in this case farmers) being framed as the victim.

> *"Defra is advising farmers to feed and water birds inside and prepare to bring birds inside if the disease spreads." (Derbyshire, 2006)*
>
> An example of actors belonging to the farm (in this case farmers) being framed as the problem-solver.

This also means that if they do not take the necessary precautions (or are blamed of doing so) they are framed as the villain. How the actors belonging to the farm are constructed is yet again illustrating the complexity of this wicked problem. If they are the villain it is unsure if they compensated for their economic loss. When Bernard Matthews was compensated for his economic loss due to the outbreak at one of his plants, it caused a public outrage. People held him responsible and thought it was unfair that he was compensated (Elliott, 2007b). When they are the victim, it is also unclear whether they should themselves be responsible for resolving it. These multiple identities should be fully understood before an approach towards solving the problem can be designed that includes everybody.

## 6.3 Which actors were pitted against each other?

The last question sought to determine which actors were pitted against each other. These findings suggest that several actors have been pitted against each other. This pitting against each other refers specifically to actors that were often framed as victims being harmed by those actors framed as villains. So, for example, from the actors that framed themselves as victim, who did they frame as harming their perceived interests? And for the actors that framed themselves as villain, who did they frame as the victim they were harming?

The governmental actors were pitted against the actors belonging the farm, especially when we consider that the actors from the farm framed themselves as the victim and the governmental actors as the villain, as well as that the governmental actors framed themselves as the villain and the actors belonging to the farm as victim. This would suggest that they constructed the social conflict with them pitted against each other: the actors belonging to the farm being the victim and the governmental being the villain. The governmental actors were also pitted against the societal actors and the actors belonging to the industry. However, these actors were framed as the victim less frequently during the four years. This might suggest that even though they were constructed as the victim at first, they were not constructed as being opposite to the governmental actors in later years.

Actors have also framed the governmental actors as problem-solver, which means they expect them to solve the problem. However, considering that the governmental actors were framed as the villain most by far, it can be argued that especially they have been pitted

against other actors. This could severely complicate their ability to implement new policies to prevent future outbreaks. By framing the governmental actors as the villain, the trust in the government could decrease, making it more difficult for them to create and implement policies to resolve the wicked problem. A lot of public policies rely on behavioral responses from the public and if actors do not trust the government, they do not trust their new policies, which can lead to them not implementing them (Organisation for Economic Co-operation and Development, 2018).

Actors belonging to the product chain were framed as the villain only in 2007, while in that year the actors belonging to the farm and the industry were framed as the victim most often. Though this construction it could be argued that they were pitted against each other in this year.

Lastly, the animals have been framed as the victim as well as the villain (which can be explained by the fact that they carry and spread the H5N1 strain). How they are framed means that their interests are being constructed as something that matters, and that as victims they should be protected. They are framed as this by other's however, and while some construct their interests as something that matters, others might think differently. When the animals are framed as villain it leads to people being pitted against the animals, leading to, for example, the shooting of wild fowls.

## 6.4 Limitations

In this section I will shortly discuss the limitations of this study. First of all, I want to acknowledge that even though the data offered much more detail, because of the timeframe of this study I was not able to analyze it as detailed as I would have liked. In hindsight it might have been better to focus only on certain actors, which would have enabled me to reach more detailed conclusions. For example, the actors belonging to the government and media should be studied in more detail, considering the major role they play in the social conflict.

The second limitation is my fluency in English. The data has been coded in English and this entire work is in English, but I am not scientifically fluent in English. This may have caused

some confusion on my side during the interpretation and confusion on your side when reading my work.

The third limitation is that I did not code the data myself. Because of this I might have missed a certain understanding of the data that would have been needed to reach a certain depth of analysis. It could have also caused me to interpret the data differently than the person who has coded the data. I am also not sure if I would have coded all the statements exactly the same.

# 7. Conclusion

The H5N1 is an especially virulent strain of the avian flu, which has had major consequences all over the world for both animals and humans alike (Webster & Walker, 2003). Some even say that it is the biggest risk we have at this moment for a new pandemic (Li, et al., 2004). In 2005 the first case was found in the UK, but the most devastating outbreak was in 2007 (Dudley, 2006; Vidal, 2007). The H5N1 is a typical example of a wicked problem, in which many actors are involved. All these actors own a part of the problem and the solution (Walter-Toews, 2017). However, how the actors involved can be constructed in different roles has not been properly researched. The aim of this research therefore was to address this knowledge gap of the H5N1 avian flu as a wicked problem in the UK: it focused on the actors of the problem, by studying how a social conflict was constructed in newspaper coverage about the avian flu, using identity framing as an analytical tool. To address this knowledge gap, the following research question was formulated: *"Using identity framing as an analytical tool, how is a social conflict constructed in UK newspaper coverage about the avian influenza during 2004-2007?"*

Using the data set from the PhD project 'Who Framed Chicken Little' (in which statements in UK newspaper articles have been coded), several co-occurrence analyses have been conducted. During these analyses I have studied how many times the code for the speakers co-occurred with an identity frame (either villain, victim or problem-solver) for the actors. I have used the concepts of the wicked problem, social conflict and identity framing to analyze the co-occurrences and understand their relevance.

Through these analyses I found that especially the governmental actors, the country, societal actors, animals and actors belonging to the product chain, the farm, the industry and European authorities were constructed as being part of the social conflict. The governmental actors were framed the most frequent as the villain and the problem-solver, the the country was framed as the villain, victim and problem-solver, the actors belonging to the product chain were only framed as the villain in 2007, the actors belonging to the farm were framed

as the victim and problem-solver, the actors belonging to the industry were framed as the victim, the societal actors were framed as the victim most frequent in 2004 and 2005, and, lastly, the animals were framed as the victim. I have created a social conflict triangle, which is shown in figure 3 below. The triangle shows by pursuing their perceived interests the villains are harming the perceived interests of the victim, and that the problem-solver should safeguard the victim and resolve the problem.

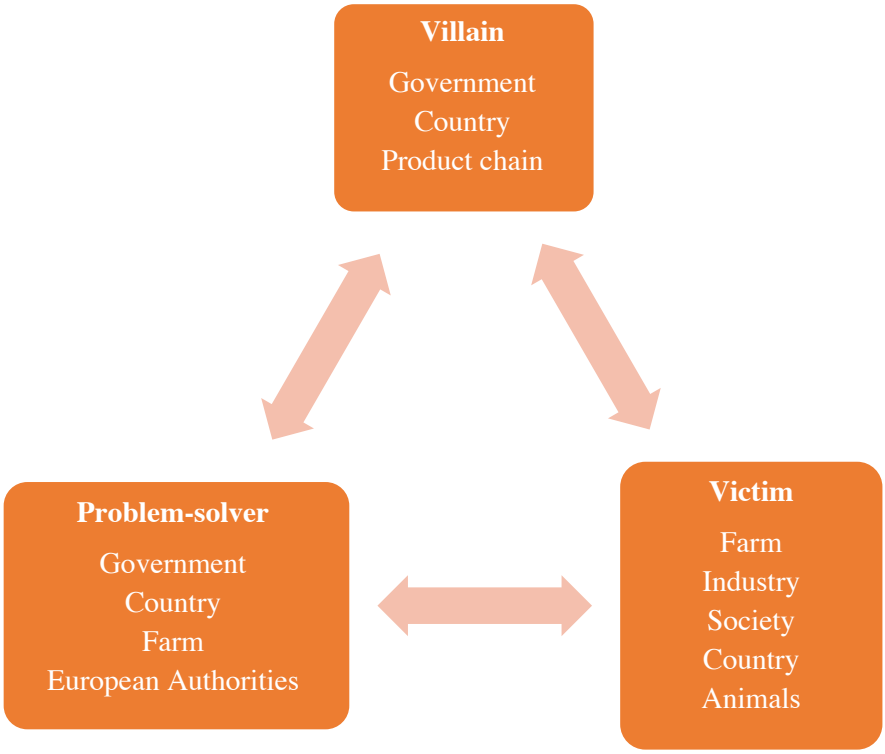



*Figure 4: The H5N1 social conflict triangle*

Because the governmental actors were framed as the villain most often, it can be argued that they are pitted against other actors (especially when actors framed themselves as the victim). This could become problematic if this hurts the trust that actors have in the government, because their new policies need public behavioral change to work. There seems to be a consensus that the governmental actors should solve the problem, because they were most frequently as the problem-solver. A great variety of actors who were framed as villain were also framed as the problem-solver, which is consistent with the theory of the wicked problem that actors who own part of the problem, also own part of the solution.

At least one third of the actors that were framed were foreign, which shows the international character of the H5N1 avian flu is: the problem is not just in one country, but it is a global issue, which complicates finding a unified resolution in the future. A European approach might be desirable because of this internationa character (especially with the open borders of the EU in mind).

Especially the actors belonging to the media and governmental actors constructed the social conflict, as they framed the most actors during 2004-2007. However, a great variety of actors tried to construct the conflict with themselves involved (the actors from the government and farm included) as the victim and problem-solver. The actors who framed themselves as victim and framed the other actors as the villain constructed the conflict with them opposing each other. The actors belonging to the media framed actors who were not framed by any other actors. This raised the question why the actors belonging to the media framed these actors.

How actors were framed changed over time, showing that how the social conflict was constructed is subject to change. New outbreaks spurred the framing of new villains, victims and problem-solvers. From every outbreak and how the social conflict is constructed around it, we can learn new things and understand how actors are involved.

How the social conflict is constructed is consistend with the complexity of the wicked H5N1. The changes over the years show that it has not been a single, simple story, but a true social mess. The problem becomes even more complicated when we consider the great variety of actors that are constructed as part of the social conflict. So many different actors, who all have their own worldview and frames on who is responsible and who should solve the problem (of which many consider themselves as the true victim in the situation), only makes it more difficult to create a unified approach and policy to resolve this matter.

However, showing how wicked and complex the problem is, does not necessarily provide the answer for a unified approach. By showing how the actors were constructed as part of the social conflict, I hope that policies and strategies can be adapted in order to maximize their effect and effeciency. Including the different actors who were constructed as part of the social conflict could enable an approach wich adresses all the different problem aspects

of the wicked H5N1 avian flu. Further research could study the actors from the government seperately, to get a more precise image of which actors are framed as the villain and which actors are considered as responsible for solving it. By increasing this understanding even more, all involved parties can be recognized and included, which is highly needed in order to tackle something as wicked as the H5N1. This study has raised more questions that it has answered, but it has hopefully also laid a foundation for future research to truly understand this wicked problem.

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