Dutch newspapers and the nuclear arms debate

The representation of nuclear weapons in Dutch newspapers
and its influence on the public opinion

Jill Bergenhenegouwen

Radboud University Nijmegen
Master: Human Geography: Conflicts, Territories and Identities
Supervisor: Dr. H.W. Bomert
Student number: 1024399
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Chapter 1: Introduction

Ever since nuclear weapons have been stored in the Netherlands, there is an ongoing debate on the question: should the Netherlands withdraw from its nuclear-sharing task, and if so, how? An additional and related question has arisen in recent years: should the Netherlands sign the Treaty on the Prohibition of Nuclear Weapons (TNPW)? (Becker & Mölling, 2020). The debate is quite complicated: the Netherlands participates in a nuclear-sharing task within NATO and therefore hosts nuclear weapons of the United States (US) on Dutch territory (Van Oostwaard & Frank, 2019). Proponents of nuclear weapons argue that the Netherlands has to continue to fulfill this task, mainly because nuclear deterrence ensures (inter)national security (Colijn, 2019). Opponents, on the other hand, want the government to get rid of the US nuclear weapons. Their arguments are based on the humanitarian consequences of the use of nuclear weapons as well as on the idea that nowadays nuclear weapons are no longer relevant for national security (Van Oostwaard & Frank, 2019). Proponents thus focus on the political-military role of nuclear weapons, while opponents rather focus on ethical considerations (Van der Meer, 2019).

The (international) nuclear arms debate has been going on ever since the first use of nuclear weapons in 1945, in particular throughout the Cold War era (Van der Zeijden, 2014). After the end of the Cold War, the (international) debate received less attention; however, over the two last decades the issue received more attention – and also, the Dutch debate (Buijs, 2018). There are two main triggers for the recent upswing of the nuclear arms debate in the Netherlands: the modernization of the nuclear weapons stored in the Netherlands, and the negotiations on the TPNW (Van Oostwaard & Frank, 2019). Both are reasons for opponents to argue that now is the right time for the Netherlands to end its nuclear weapon task (Becker & Mölling, 2020). In particular the TPNW negotiations have sparked the debate. The treaty, which entered into force in 2021 (Johnson & Tregle, 2020), makes nuclear weapons officially illegal, which puts pressure on individual nuclear states and NATO in general (Shirobokova, 2018; Acheson, 2018). The Netherlands officially states that it strives for nuclear disarmament, seeing itself as a 'bridge-builder' between Nuclear Weapon States (NWS) on the one hand and Non-Nuclear Weapon States (NNWS) on the other. The issue is therefore not just a debate between opponents and proponents, but essentially also about how to stick to nuclear deterrence while at the same time still playing an important role in the process leading to a nuclear zero (Van Oostwaard & Frank, 2019).

The nuclear arms debate mainly takes place in the (inter)national political sphere. However, the debate is also reflected in public opinion and among social movements, especially non-governmental organisations (NGOs). During the 1980s, the Dutch streets were often filled with nuclear weapons protesters. The 1983 demonstration, directed against cruise missiles and nuclear warheads, even went down in history as the largest ever (550,000 people) demonstration in the Netherlands (NOS, 2010). This resistance against the deployment of cruise missiles was referred to as 'Hollanditis', as "the resistance spread like a virus among the Dutch" (*De anti-kernwapenbeweging*, 2004). Notions of anti-nuclearism, neutralism and pacifism subsequently influenced other European countries, stimulating action there as well. During the 1980s, peace groups collected over 3.7 million signatures for a petition against the deployment of US nuclear weapons on Dutch soil (Koops, 2018). Nowadays, however, peace groups have a hard time attracting people to their demonstrations (De Vries, 2019), and a recent citizen initiative to participate in the negotiations of the TPNW was 'only' signed by just over 45.000 citizens (*Teken Tegen Kernwapens*, n.d.). Opinion polls thereby show that, compared to the other European nuclear-sharing states, the Netherlands nowadays has (in comparison) the least opponents of nuclear weapons (Fihn, 2018). The question therefore arises: why is the Dutch situation so different, as compared to other, more or less similar states? An explanation for this might be found in the way the media frame, and thereby shape, the nuclear arms issue.

The nuclear arms debate is arguably also reflected in the Dutch news media, especially within newspapers (Buijs, 2018). It is interesting and relevant to analyze which frames and perspectives were (and are) most frequently used in covering the issue of nuclear weapons in Dutch newspapers, since media framing is seen as one of the main factors in constructing public opinion. News frames influence the opinions of individuals (Gamson & Modigliani, 1989). In other words, analyzing newspapers regarding the (most dominant) media frames about the nuclear weapon issue, and understanding these frames, can help to explain the above-

mentioned differences, as expressed in, for instance, opinion polls and the mobilization of anti-nuclear weapons activists (Gamson & Modigliani, 1989).

1.1 Research objective

This research aims to determine which image of nuclear weapons dominates in the (largest) Dutch newspapers, with the ultimate goal of contributing to an understanding of how this dominant image relates to the public opinion about the nuclear arms debate in the Netherlands. This is done by investigating which media frames and perspectives are used to cover news about nuclear weapons in Dutch newspapers. Determining the most commonly used media frames and perspectives in newspapers, can contribute to a better understanding of the (changes in) public opinion on, as well as activism regarding, nuclear arms (Vossen, Van Gorp & Schulpen, 2016).

The research question of this study is therefore:

> *Which frames(s) and perspectives is (are) (most) dominant in the coverage of nuclear weapons in the five largest Dutch newspapers between 2014 and 2020?*

The five largest Dutch national newspapers referred to in this question are, *Trouw*, *De Telegraaf*, *Algemeen Dagblad*, *de Volkskrant* and *NRC Handelsblad* (*Dagbladen in 2019*, 2019).

The main research question and various sub-questions are answered on the basis of a mixed-method approach: a quantitative content analysis, as well as a qualitative framing analysis are used. The research questions are partially quantitative and deductively answered, based on five generic frames as designed by Semetko & Valkenburg (2000) and Iyengar's (1990) perspectives, respectively. This research also looks for the emergence of additional, as yet unexplored, frames in the news articles on the basis of a qualitative analysis. This qualitative analysis also attempts to give an issue-specific understanding of the generic frames. All relevant news items about nuclear weapons, national as well as international, are included in the analysis, since the framing of international news can also influence how Dutch citizens think about the nuclear arms issue in the Netherlands. This research analyses each and every article with the word 'kernwapen' (nuclear weapon) or 'atoombom' (atomic bomb) in the title and includes 'regular' news articles, as well as editorials, columns, etc. In this research, we refer to all of these articles as 'news items.'

A distinction should be made between frames and perspectives. Semetko & Valkenburg (2000) have formulated five (generic) frames which are applicable to all issues being discussed in news media, being: conflict frame, human interest frame, economic consequences frame, morality frame, and responsibility frame (Semetko & Valkenburg, 2000). In addition to these five frames, various perspectives (or undertones) can be part of the news items and media frames; for instance, a distinction between so-called thematic and episodic perspectives (Iyengar, 1990). In a thematic perspective, information is based on general trends or policies, adding a historical or social context to an issue. On the other hand, an episodic perspective refers to news based on personal stories or a single event (Vliegenthart, 2012). In addition, a distinction can obviously be made between pro-nuclear (positive), anti-nuclear (negative) and neutral perspectives (Bacon, 2011).

The various sub-questions of this study are:

Q1 In reporting about nuclear weapons, which generic frame(s) as defined by Semetko & Valkenburg (2000) appear to be most dominant in the respective newspapers?

Q2 In addition to the five frames of Semetko & Valkenburg (2000), do other frames appear in the five newspapers analyzed?

Q3 Which perspectives of Iyengar (1990) and Bacon (2011) emerge most strongly within the frames, in the five newspapers analyzed?

1.2 Societal relevance

Politicians, interest groups and civil society groups all try to influence citizens, be it directly or indirectly, through media (Gamson & Modigliani, 1989). They benefit from having the public opinion on their side, since this can affect how citizens respond towards the government or to what extent they support social movements (Brewer & Gross, 2010; Gamson & Modigliani, 1989). In this specific case, the issue is how much pressure do citizens put on the government to sign the TNPW and how large is the support for civil society groups that propagate nuclear disarmament or for peace movement activists?

Understanding the media frames, and especially the dominant image of nuclear weapons, is first of all relevant for civil society groups and peace movement activists, since this might contribute to support for their actions and campaigns, which has decreased since the 1980s (De Vries, 2019). The degree of congruence between media framing and the social movement can obviously influence the support for a social movement. If they want to mobilize a movement, civil society and peace movement activists must engage in 'framing contests' with political authorities and the media (Cooper, 2002). Furthermore, civil society and peace movement activists can respond better to their target groups and supporters if they know which frames are most dominant (Pointer et al., 2016). Based on this, they might also come up with better counter-arguments than the proponents of nuclear arms. In other words, they can use the frames to their advantage (Valenzuela, Pina & Ramírez, 2017).

Getting a better grip on media framing on the nuclear arms issue can arguably also be interesting for politicians. News media often discuss political issues and debates and provide the audience with a negative or positive perspective (De Vreese & Boomgaarden, 2003). This is essential, since the assumption is that public opinion can also influence policy decisions; for instance, by putting pressure on politicians. Politicians always aim to have their point of view regarding an issue or debate widely heard and accepted, simply because it will generate more votes (Baron & Herzog, 2020). Therefore, for them it is important that the media sends out messages in line with their political agenda (Brewer & Gross, 2010).

Politicians obviously want to have the citizens on their side, and they want their narrative and perspective on an issue or debate to be 'correct' or 'real' (Schuck & De Vreese, 2006). By determining the frames and perspectives in newspapers about nuclear arms issues, stakeholders – politicians, civil society groups and the anti-nuclear movement alike – can put public opinion polls into a better perspective. Based on this, they might determine how to influence the media and the public opinion, so as to reach their own specific goals (Lecheler & De Vreese, 2012); for example, more awareness of, and support for, the campaign for nuclear disarmament, or to clarify that the strive for a nuclear-free world is complicated and that nuclear weapons still have an important role.

1.3 Scientific relevance

Quite some research has been done on the nuclear arms debate in general and the Dutch debate in particular. Yost (2011), Meyer (1995) and Lovold (2020) discuss why some are in favor of nuclear deterrence, while others strive for nuclear disarmament. Their research goes into more detail about the humanitarian consequences of nuclear weapons and the political and military arguments in favor of nuclear deterrence. Others discuss the influence of the TPNW on the nuclear weapon debate and how the TPNW has given new momentum to the movement against nuclear arms (Shirobokova, 2018; Borrie, 2014). In states across the world, researchers and civil society groups have conducted public opinion polls about nuclear weapons. Fihn (2018), for example, has focused on the public opinion among the nuclear-sharing states, while Clingendael uses its 'Buitenland Barometer' to focus on public opinion among the Dutch (Deen et al., 2020; Korteweg, Houtkamp & Ho, 2020).

The impact of media framing on public opinion in general, is another important, well-studied topic (Pan & Kosicki, 2010). Many scholars have tried to give a definition of (media) framing. De Vreese, Peter & Semetko (2001, p. 108) define it as "the selection, organization and emphasis of certain aspects of reality, to the exclusion of others", while Gamson & Modigliani (1989, p. 3) refer to it as "a central organizing idea or storyline". The main idea is that framing highlights specific elements of an issue and by doing so, creates categories constituting a 'reality' about an issue (Lecheler & De Vreese, 2012). De Vreese (2005) and

Scheufele (1999) address the factors that determine how media frames are shaped (in terms of internal and external factors shaping journalists), and the effect media frames can have on their audience. This is explained on the basis of 'frame building' and 'frame setting' (Scheufele, 1999).

Semetko & Valkenburg (2000) have designed a method for analyzing five generic news frames in the media, applicable to all discussed issues in the news. Other scholars have based their research on this specific method. For instance, Dirix & Gelders (2010) have used it to explain the framing of the notion of climate change in UN conferences, while Valenzuela et al. (2017) used it to analyze the effects of framing on social media users. Iyengar's (1990) research on thematic and episodic frames is likewise a commonly used method for studying media content.

The influence of media framing on the mobilization of social movements has often been explored, and there are many theories on how media framing is affecting these movements (Cooper, 2002). The connection between media framing and climate change movements or the anti-nuclear (energy) movement is well-studied (Gamson & Modigliani, 1989). However, so far, no research has connected Dutch media framing to nuclear weapons, and (in)directly to public opinion polls. It might be argued that this link is not as relevant, because public opinion polls show that a majority of the population in nuclear-sharing states is in favor of nuclear disarmament (Fihn, 2018). However, it is important to look at media framing of nuclear weapons and the debate on this issue in the Netherlands, since all public opinion polls show that in the Netherlands people have the lowest support for nuclear disarmament, in comparison to other nuclear-sharing states (Fihn, 2018), a finding that warrants an explanation.

Chapter 2: Context

In order to understand the concept of media framing regarding nuclear weapons, its influence on the audience, and the frames and perspectives used to cover news items about those weapons, it is important to first provide some (historical) background information on the nuclear arms issue. This chapter, therefore, gives a brief overview of the history of nuclear arms, including public opinion over time. The theoretical background, which follows next, gives a broader and deeper understanding of the frames and perspectives used in the media (newspapers), and how they might influence the public opinion on the Dutch nuclear arms debate.

2.1 Nuclear arms

The first section gives a historical overview of the nuclear weapon issue, followed by a description of the positions of proponents and opponents. The last section gives a comprehensive overview of the nuclear arms debate within the Netherlands.

2.1.1 History of nuclear arms

The United States was the first – and, so far, only – country to use nuclear weapons in a war (Second World War) (Schulte, 2015). After the Second World War, the Cold War began: an era in which nuclear arms played an important role (NOS, 2010). One of the main characteristics of the Cold War was the nuclear arms race; a competition between the United States and the Soviet Union, in which both states wanted to gain superiority in nuclear capabilities. Both global powers were convinced that strategic nuclear weapons would prohibit the actual use of a nuclear weapon, however, given the state of mutual deterrence (Dalby, 2011). During this period of the Cold War, it was important for European NATO members to be protected by the United States. Therefore, in the late 1940s, the notion of a US nuclear umbrella stretching over (Western) Europe was established. From 1952 on, the United States started to deploy nuclear arms on the territory of European allies in an effort to gain military superiority, to ensure defense for its European allies, and to build an additional deterrent against the Soviet Union (Yost, 2011). The so-called nuclear-sharing states (Belgium, Germany, Greece, Italy, the Netherlands and Turkey; Greece withdrawing its nuclear-sharing task in 2003) acted as hosts for the US nuclear arms, while they and other European allies supported the United States with artillery and aircrafts (Van Oostwaard & Frank, 2019). In times of peace, the nuclear arms would be, and still are, under US control, but during wartime they might be handed over to allies (Yost, 2011). Other states also tried to acquire nuclear weapons; the United Kingdom (UK) and France, for example, had doubts about the US protection of its NATO allies and initiated their own nuclear arms programs (Smith, 2016), while in 1964 China also started to develop its own nuclear arms. Thus, during the Cold War, five nuclear weapon states (NWS) emerged: the United States, the Soviet Union, United Kingdom, France and China (NOS, 2010).

During the Cold War, arms control was mainly about preventing nuclear war (Dalby, 2011). Despite the proliferation of nuclear weapons, the chances of an actual use of a nuclear weapon is considered to be practically zero. Nevertheless, during the Cold War resistance against these weapons increased. Even the NWS came to realize that nuclear weapons and the potential spread were very dangerous (Smith, 2016). Therefore, in 1968 the Non-Proliferation Treaty (NPT) was signed. According to the NPT, non-nuclear weapon states would refrain from acquiring nuclear weapons, in exchange for the obligation of the nuclear-armed signatories to seriously negotiate about a total and complete denuclearization (Acheson, 2018). The treaty's purpose was to limit the nuclear arms race initially to the five NWS, albeit with the ultimate goal of nuclear disarmament (NOS, 2010). Nevertheless, nowadays, more than fifty years after the NPT entered into force, there are still huge stockpiles of nuclear weapons around the world, and there are even more nuclear-armed states than ever before. Israel, India, Pakistan and North Korea never signed the NPT, and all managed to acquire nuclear weapons, while Iran is suspected of doing so (Creedon et al., 2019).

Even after the establishment of the NPT, NWS have continuously modernized their arsenals, creating ever-stronger capabilities. Some experts argue that the actual use of a nuclear weapon is becoming more real. Successful non-proliferation is a challenge, especially in times when China becomes more and more of a

superpower, Russia increasingly relies on nuclear weapons in establishing a broader geopolitical strategy, North Korea shows no intention to denuclearize, and the United States unilaterally withdrew from the Iran nuclear deal (Creedon et al., 2019). President Trump also threatened to give up the START Treaty (the only bilateral treaty between the United States and Russia on strategic nuclear arms) unless China also gets included (Detsch & Gramer, 2020). Nowadays, the American nuclear arms control policy is primarily directed at those states that might threaten US hegemony. This is, for instance, reflected in the US involvement in pressuring Iran to not acquire nuclear arms. The United States has never stopped to gain nuclear superiority over Russia (and vice versa) (Dalby, 2011).

At the same time, the nuclear rivalry between the United States and North Korea, and between India and Pakistan, are well-known. These rivalries tie in with contemporary geopolitics; there is no single global power, nor is it just two superpowers (the United States and Russia) competing with each other (Verlinden & Wouters, 2018). States like India, Pakistan, and Israel have all acquired nuclear weapons, beyond the control of the superpowers. They did, and do, not always try to challenge American or Russian hegemony, but argue they need to defend themselves against neighboring countries posing a threat, or wish to become a regional (super)power themselves (Creedon et al., 2019). In a sense, the world has become more scattered, and in the process and the nuclear threat has become more complicated and intertwined (Verlinden & Wouters, 2018). Instead of mainly focusing on denuclearization, there seems to be more and a renewed attention for achieving a nuclear balance; the re-emergence of competition between (powerful) states has resulted in a new focal point: a rebalancing of the nuclear arms stockpiles and control over its stability (Creedon et al., 2019).

Proponents of nuclear arms

Since nuclear weapons came into existence, there have been opponents and proponents. For a long time, the dominant narrative was that the atomic bombs dropped on Hiroshima and Nagasaki were needed to bring an end to the Second World War (Meyer, 1995). Since then, the weapons are said to be essential for global security; nuclear deterrence would keep states from undertaking military action (Borrie, 2014). Proponents' arguments are partly based on fear; they acknowledge that these weapons are extremely powerful, but it is precisely the fear of nuclear war and the destruction that comes with it that ensures that they are not used and that a global military balance exists. They want to obtain and control nuclear arms (Lovold, 2020). Proponents often feel threatened by the emergence of new NWS and world powers (Meyer, 1995). They particularly see Iran, Russia and North Korea as dangerous (Iran being considered to be the most threatening one, at least according to the Dutch people). Some, citizens and politicians alike, are worried that, because of Iran's nuclear plans, it will be more likely (and easier) that other states (for instance, Egypt, Syria, or Saudi-Arabia) try to acquire nuclear weapons as well. In other words, they worry about the start of a new nuclear arms race (Tertrais, 2008).

Their reason for being supportive of nuclear arms does not only consist of 'fear' or 'worries', however. According to them, nuclear arms have saved the world from many casualties and conflicts and they argue that it is an irreplaceable tool for ensuring global security (Meyer, 1995). Withdrawing from the nuclear-sharing task is therefore perceived to be too dangerous in the current geopolitical circumstances (Yost, 2011). They see no credible alternative for ensuring national security. Therefore, a nuclear zero option can only be achieved through an international agreement between all NWS, and only if there is an alternative to military deterrence (Payne, 2015).

Opponents of nuclear arms

Opponents come up with several arguments to strive for the total abolition of nuclear arms. First of all, they see nuclear weapons as old-fashioned and obsolete; nowadays, cyber security and modern, state-of-the-art missiles would pose a greater threat (Borrie, 2014). The chances of a nuclear accident are actually more significant (Waltz, 1990). They believe that all humans, even world leaders, can make mistakes with profound implications (Payne, 2015). Another argument against (the use of) nuclear arms is that a nuclear weapon is a weapon of mass destruction (WMD), which should be banned in the same way as other weapons of mass

destruction (biological and chemical). Over the previous decade, anti-nuclear activists, and some governments as well, initiated a new international discourse, based on the humanitarian consequences of the use of nuclear weapons, challenging the discourse focusing on nuclear deterrence for national security (Borrie, 2014). This new ethical narrative led to an effects-based understanding by opponents worldwide – the weapons are inhumane and devastating for mankind (Lovold, 2020).

2.1.2 The nuclear arms debate

Since there have been supporters and opponents of nuclear arms from the very beginning, there has also been a debate in the Netherlands for decades: should the Netherlands stick to or get rid of its nuclear-sharing task? As previously mentioned, there are two prime reasons for the recent upswing of the nuclear arms debate in the Netherlands: the establishment of the TPNW and the modernization of nuclear arms deployed on European territory, specifically in the Netherlands (Van Oostwaard & Frank, 2019).

Treaty on the Prohibition of Nuclear Weapons

As mentioned, opponents initiated a new international discourse. The purpose to reframe the debate was arguably to revitalize nuclear disarmament efforts. For the first time in decades, a new international attempt was made to abolish nuclear arms (Borrie, 2014). As a result, in 2017, the TPNW got established and led to increased pressure for disarmament (Van Oostwaard & Frank, 2019). The goal of the TPNW is to achieve a 'nuclear zero' (Acheson, 2018). Acknowledging that it is very unlikely that the NWS support and sign the treaty, the supporters of a ban did nevertheless come up with a text that challenged the dominant security discourse and provided new opportunities for nuclear disarmament (Acheson, 2018). The pressure on the NWS and their allies to disarm increased and more pressure is put on NATO, and individual nuclear-weapon states, to provide more transparency regarding its nuclear policy, and, ultimately, to disarm (Borrie, 2014; Acheson, 2018).

The Netherlands participated in the TPNW negotiations in New York, despite all other NATO allies and NWS refusing to join the negotiations (Van Oostwaard & Frank, 2019). This Dutch decision was a result of parliamentary pressure, where a majority voted in favor of joining the negotiations, mainly because of a citizens' initiative set up by various civil society organizations (PAX, the Dutch Red Cross, and ASN Bank) (Shirobokova, 2018). However, in the end, the Netherlands was the only country to vote against the treaty (Van Oostwaard & Frank, 2019). One reason given for not signing the TPNW was that the treaty is "not likely to be compatible with its NATO commitments" (Shirobokova, 2018, p. 44). Nevertheless, the role of the Netherlands in the TPNW revived the debate, especially since the treaty entered into force in 2021 (Johnson & Tregle, 2020). The citizens' initiative boosted the confidence of anti-nuclear activists who see the upcoming modernization of nuclear weapons as an opportunity to withdraw from the nuclear-sharing task, and argue all the stronger that the Netherlands should sign the TPNW (Van Oostwaard & Frank, 2019).

Modernization

The US plans to modernize and replace the current nuclear explosives was yet another factor to stir up the debate (Yost, 2011). From 2020 on, the United States is in the process of replacing its nuclear arms deployed on European territory (Van Oostwaard & Frank, 2019). A topic of interest to the Dutch parliament also revolves around the expected costs involved with this modernization. Although the United States is responsible for the expenses that come along with the replacement of the B-61 bombs, the Netherlands is in charge of funding new fighter jets and pilot training programs (Van der Zeijden, 2014). In 2013, parliament adopted a motion to ensure that the new fighter jets to be acquired by the Netherlands would not be able to fulfil a nuclear task. In 2014, the Dutch parliament called for an "end (to) the Dutch nuclear weapon case", with a majority being in favor of a reduction and eventual elimination of nuclear weapons (Shirobokova, 2018). Various parties within the governing coalition argued that the new fighter jets should not be given a nuclear task (NOS, 2019). Nevertheless, a year later, in 2015, the government decided to acquire new F-35 fighter jets, including a capability to carry nuclear weapons (Shirobokova, 2018).

Activists now argue that the Netherlands should not only refuse the renewal of the US nuclear weapons, but also have them completely removed: if the government is serious in its declaration to strive for disarmament, then this is the perfect opportunity to show it (Van der Zeijden, 2014). To understand why it is difficult for the Dutch government to do so, and before diving into the main question of the debate, it is relevant to give a broader understanding of the Dutch position on nuclear arms.

Dutch position on nuclear arms

It is, first of all, important to note that the Dutch government officially does not acknowledge, nor does it deny, that there are any nuclear weapons deployed on Dutch territory. However, it is commonly known (and more or less confirmed by NATO) that there are about twenty US nuclear bombs deployed at Volkel air base (Van Oostwaard & Frank, 2019). The parliament, as well as society do not get all information about the Dutch nuclear task, which makes it difficult to have a real debate on this topic (van der Zeijden; Van Oostwaard & Frank, 2019); it also limits the possibilities for society and parliament to integrate the nuclear arms issue into a broader debate about Dutch defense and security policies (van der Zeijden, 2014).

However, the Netherlands does have an official policy regarding nuclear arms. Officially it is stated that the goal of the government is to strive for deterrence and also for a total abolition of nuclear arms. The policy is based on a 'progressive', 'step-by-step' and 'gradual multilateral' approach to achieve global nuclear disarmament. Strengthening the international legal order – for example by a plea to make the TPNW universal and being a 'bridge builder' – is seen as essential for achieving worldwide disarmament (Shirobokova, 2018; van der Zeijden, 2014). Within the international arena, the Netherlands has gained a strong reputation as a 'bridge builder', by bringing the various relevant actors closer together, for example through identifying and emphasizing shared interests (Van der Meer, 2019). The idea is to cooperate with NWS and NNWS alike, in setting up procedures and disarmament goals (Shirobokova, 2018). An example of this is the negation process in the TPNW: by participating in the New York negotiations, the Netherlands showed a willingness to disarm, while by ultimately not signing the treaty, it showed its commitment to its allies (van der Zeijden, 2014). The government thus acknowledges that nuclear arms are (ethically) unacceptable, at the same time that these weapons play a political-military role that cannot easily be undermined in the current geopolitical context. The Netherlands always tries to strike a balance between ethical and political-military considerations and is therefore struggling with its NATO obligations (van der Meer, 2019).

Should the Netherlands withdraw from the nuclear-sharing task, and if so, how?

This leads to the main point of debate within the Netherlands: should it disarm (in the sense of signing the TPNW and withdrawing from the nuclear-sharing task) and, if so, how? Proponents of the existing nuclear-sharing task take a traditional view and argue that keeping the nuclear warheads is important for the future. Withdrawal from the nuclear-sharing task can affect the remaining NATO nuclear weapon states (France, United Kingdom and United States), which obviously concerns them. Withdrawal can ignite new tensions and divisions, because it highlights the dependence of NATO on nuclear allies (Yost, 2011). They argue that nuclear arms are still essential for the political and military relationship between Europe and the United States. Deterrence is necessary, given the threat posed by others, like Russia (Mendelsohn, n.d.). Another argument is that if the Netherlands gives up the US nuclear weapons, it will clearly choose to be on the side of NNWS, which would make it a less convincing bridge builder (Van der Meer, 2019).

Among opponents the question is: how to disarm, unilateral or in consultation? As mentioned, the Netherlands argues that even if it wants to sign the TPNW, this would not be in line with its NATO obligations. This stance can be explained based on NATOs 'theory of collective action' (Oneal, 1990). Based on this notion, all allies commit themselves to contribute their military capacity, if needed. A decision-making body decides if, and when, contributions from the allied members are required. NATO obviously wants to stick to this system as much as possible. The issue is then whether the Atlantic alliance can accept the preference of some NATO member states to unilaterally opt for just 'limited participation' in the nuclear field, without undermining this idea of collective action (Schulte, 2015). In 2010 – and once more in 2012 – NATO argued that changes in the deployment of nuclear weapons in member states can only be made based

on consensus decision-making involving all allies (Van der Zeijden, 2014). Proponents of such a multilateral approach argue that, seen from a political-strategic perspective, unilateral withdrawal would be pointless and just 'symbol politics' (Van der Meer, 2019). Some allies have already expressed that they will not accept any further reductions of nuclear warheads in Europe without their approval. These states will most likely put pressure on the Netherlands. An alternative would be that other – for instance, Central and East European – states are willing to host the nuclear warheads, which would obviously not result in less nuclear weapons; it would only result in the relocation of twenty weapons (Van der Zeijden, 2014; Van der Meer, 2019). Disarmament would only be possible if other states (read: Russia) do the same. Therefore, in 2016 a majority of Dutch parliament argued that the US nuclear arms could only be removed if the Russians were willing to do the same (Shirobokova, 2018).

Opponents of unilateral removal (politicians, but mainly non-governmental organizations) often have a clear goal in mind: to get rid of the nuclear arms in the Netherlands, and preferably as soon as possible (Van Oostwaard & Frank, 2019). They argue that the nuclear warheads could be removed without consulting Russia and NATO, and call upon the government to sign the TPNW without further negotiations (Shirobokova, 2018). Opponents in general bring up two main reasons for this stance: the nuclear-sharing agreement is a bilateral deal between the United States and the Netherlands, and threatening Russia, an important trading partner, is obsolete and pointless (Van der Zeijden, 2014; Yost, 2011). First, removal of the nuclear weapons is technically compatible with its NATO obligations, since the nuclear-sharing agreement is an agreement between two states (Van der Zeijden, 2014). From a purely ethical perspective, unilateral withdrawal is thereby the most effective approach: the Netherlands would send a clear signal that it considers nuclear disarmament to be of great importance (Van der Meer, 2019). A second argument is that further negotiations on multilateral removal are pointless: Russia will not agree to reduce its current arsenal, and maintaining the nuclear weapons in Europe will not encourage Russia to negotiate about further reductions (Van der Zeijden, 2014).

2.2 The public opinion on nuclear arms

As stated in the previous chapter, the public opinion regarding nuclear arms and the anti-nuclear weapon movement has changed over the years. This section elaborates on this change in public opinion.

Before examining the public opinion regarding nuclear weapons, it is important to note that the data has to be treated with care. More often than not, surveys do not distinguish between those people that are interested in and know a specific issue, for instance nuclear weapons, and those that do not. Less interested people often say what they have just heard or what they consider to be a socially accepted answer (Everts, 1985).

2.2.1 Public opinion during the Cold War

During the first decade of the Cold War, people were convinced that the next world war would be nuclear; people perceived the chances for such a nuclear war to be about 50%. In thinking about it, human suffering was immediately envisioned (Fiske, 1986). The Soviet Union was seen as the greatest danger for 'instigating' a nuclear war and was considered the biggest threat to Dutch national security. Dutch citizens therefore had a rather negative image of the Soviet Union. Of those questioned, 43% saw the Soviet Union as the biggest threat and a significant majority of them indicated that this country wanted nuclear arms to increase its power in the world (Everts, 1985).

During the Cold War, most people thought the nuclear bombings of Hiroshima and Nagasaki had been necessary to bring an end to the Second World War. However, they also believed that the use of nuclear arms was no longer necessary. Most people favored nuclear disarmament, albeit through multi- or bilateral agreements, not on the basis of unilateral steps (Fiske, 1986). Opinion polls from the 1980s show that 36% of the Dutch citizens were against the deployment of nuclear weapons on Dutch territory; just under 10% of the electorate stated they would to vote for another party if the preferred party would be in favor of retaining nuclear arms (Everts, 1985). At that time, the Netherlands had a large anti-nuclear weapons movement. Consisting of various peace organizations, the peace movement of the 1980s grew into an influential

politicized peace culture against the deployment of nuclear weapons, in particular cruise missiles, in the Netherlands (*De anti-kernwapenbeweging*, 2004).

2.2.2 Current public opinion

Over the years, all over the world, the public opinion regarding security threats has changed. Nowadays the likelihood of a nuclear war is considered to be almost non-existent. Most people hardly think about the possibility of a nuclear explosion; when they do think about it, their first thoughts focus on the material damage (Baron & Herzog, 2020).

Today's opinions reflect the current geopolitical situation. Russia is still often negatively referred to in the news and is still seen as one of the biggest threats; slightly less so than during the Cold War, but still 35% of the population considers Russia to be the greatest threat to national security (Deen et al., 2020). Not only Russia, also China and the United States are perceived as a threat. People are concerned about the geopolitical competition between the superpowers and consider the United States nowadays (at least, when Trump was president) to be the main problem. A majority of the Dutch citizens thinks a new 'cold war' will be fought between the United States and China, and if this were to happen, they prefer to stay neutral (Korteweg, Houtkamp & Ho, 2020); unlike the actual Cold War days, when a majority chose the American side and wanted to be protected by the United States (Deen et al., 2020). The changing opinion is reflected in the fact that currently most Dutch citizens want to gain more independence from the United States. A stronger 'European military autonomy' is most commonly preferred, calling for more cooperation between EU member states (Korteweg, Houtkamp & Ho, 2020). A vast majority of 80% prefers a decrease in US protection and agree with the idea that Europeans have to have a greater responsibility for their own security. Military deterrence (not necessarily by nuclear means, however) is still considered as necessary, but preferably without being (too) dependent on the United States (Deen et al., 2020).

Every few years a poll is held by the International Campaign to Abolish Nuclear Weapons (ICAN). These polls show that over the years, citizens have spoken out more forcefully against nuclear weapons. The most recent public opinion poll (2018) shows that 56% of the Dutch citizens are of the opinion that the US nuclear warheads should be removed from Dutch territory. In comparison to other European nuclear-sharing states, this is the lowest support for nuclear disarmament (for instance, in Germany this figure is at 70%, in Italy at 65%) (Fihn, 2018). Dutch citizens are also in favor of signing the TPNW (62%); however, this is, once more, the lowest among the other nuclear-sharing states. Resistance against the signing of the TPNW (16%) is most prominent in the Netherlands (Beenes, 2019; Fihn, 2018). A large majority of the Dutch population (84%) does find the actual use of nuclear weapons unacceptable, but half of the population (50%) also considers these weapons to be necessary (Fihn, 2018).

To sum up, nowadays, citizens are stronger against the US nuclear arms on Dutch territory than back in the 1980s (1980: 36% against; 2019: 56% against) (Everts, 1985; Fihn, 2018). However, the anti-nuclear weapon movement is currently much smaller than during the Cold War (De Vries, 2019). It can be concluded that during the 1980s, the ones opposed to nuclear weapons were more outspoken and felt more compelled to take action. In addition, the anti-nuclear weapon movement in the Netherlands is smaller than in the other nuclear-sharing states, while it used to be the largest. The Netherlands thereby has nowadays the lowest percentage of opponents compared to the other nuclear-sharing states (Fihn, 2018).

Chapter 3: Theoretical background

An explanation for the changes in public opinion referred to in the previous chapter might be found in the way in which Dutch news media (in particular newspapers) frame nuclear weapons and the debate around this issue. News media are considered to be an important factor for shaping public opinion (Lecheler & De Vreese, 2012). They create a particular image of nuclear weapons by using specific frames and perspectives (Entman, 1993). This in turn influences how people interpret the issue and they thus influence public opinion, eventually also resulting in more or less support for a social movement (Meyer, 1995). The theoretical background gives a broader and deeper understanding of this (framing) process, as well as the frames and perspectives on nuclear arms.

3.1 Framing

This section starts with explaining the concept of framing, followed by a description, based on the terms 'frame-building' and 'frame-setting', of how media frames influence public opinion.

Researchers have defined 'frames' and 'framing' in different ways. Reese (2001) described frames as "organizing principles that are socially shared and persistent over time, that work symbolically to meaningfully structure the social world" (Reese, 2001, p. 11). Entman (1993) adds that it "shape(s) an individual's understanding and opinion concerning an issue by stressing specific elements or features of the broader controversy in such a way as to promote a particular problem definition, causal interpretation, moral evaluation and/or treatment recommendation" (Entman, 1993, p. 52). Frames thus reflect how one should think about a particular topic by highlighting specific elements; a frame exposes certain dimensions of a topic at the expense of others. It categorizes the topic, and in this way, shapes a constructed 'reality' (Aaroe, 2011).

A frame offers more than a simple perspective on a problem or subject; it often implies how the issue was conceived and how it should be understood (Aaroe, 2011). Framing is not necessarily about the use of persuasive arguments; it is more about the associations with the image (Bizer & Petty, 2005). It has to be noted that no communication is entirely objective. Every statement or article has an underlying perspective or frame (frame of thought), and provides suggestions and assumptions. Everyone looks at the world differently, through 'colored lenses', based on previously obtained information, as well as personal norms and values (Jenkins, 2003).

Researchers have studied the concept of framing among politicians, journalists, and stakeholders in general (Reese, 2001). It is an often studied and applied concept within social sciences. One of the main research areas is the role of 'media framing' and its effect on their audience (Aaroe, 2011). 'Media frames' can be defined as "a central organizing idea or storyline that provides meaning to an unfolding strip of events […] the frame suggests what the controversy is about, the essence of the issue" (Gamson & Modigliani, 1989, p. 143). Frames organize news and everyday reality and categorize an issue to make it understandable for the public. Media frames can thus be seen as characteristics of the news itself and are often part of the political discourse. They determine how the public receives and gives meaning to an issue (Scheufele, 1999). Political debates are often simplified in order to make it understandable for their audience (Neuman, Just & Crigler, 1992).

Media frames thus influence 'audience frames', being the "internal structures of the mind" (Kinder & Sander, 1990, p. 74) and reflect an individual's view regarding a particular subject. The individual processes information regarding a subject, leading to the development of categories and clustered ideas, resulting in specific perspectives or beliefs (Scheufele, 1999). References towards short-term, issue-related and political topics might influence the interpretation of the issue (Entman, 1993). In other words, the audience frames specify how the public gives meaning to political news (Scheufele, 1999).

The media, and therefore journalists, always have to get the public's attention, and therefore try to make an issue as interesting and salient as possible (Brewer & Gross, 2010). In doing so, they often draw additional attention to just one specific element of a topic and simplify the debate (Reese, 2001). Internal and external factors influence how they frame an issue, which then, in turn, affects the audience (Pan & Kosicki, 2010).

This process is referred to as 'media framing' and can be further explained on the basis of the notions of 'frame-building' and 'frame-setting' (Brewer & Gross, 2010).

3.1.1 Frame-building

'Frame-building' is the interaction between journalists and the 'structures' that shape them (De Vreese, 2005). In this process, journalists can be seen as the dependent factor, while the structures are the independent factor (Scheufele, 1999). These 'structures' can be divided into internal and external factors (structures). Three internal factors can be distinguished: social norms and values; journalistic routines; and the ideological or political orientation of journalists. The external factors consist of the organizational pressures and constraints, as well as the pressure of interest groups (Shoemaker & Reese, 1991). Frame-building is a continuous process of interaction between journalists, the general discourse and social movements, reflected in the content of newspapers (De Vreese, 2005). The next sections provide a more detailed understanding of the internal and external factors, respectively.

Internal factors

The internal factors – being elements originating from within the journalist itself – influence news frames: it is about personal values, believes and routines that are reflected in a journalist's work (Shoemaker & Reese, 1991). The first internal factor that might influence media content refers to the social norms, values and beliefs of a journalist. Religious, cultural and/or political background and beliefs obviously influence a journalist's views, which might influence the way he/she thinks and write about an issue (Shoemaker & Reese, 1991; De Vreese, 2005). The second factor relates to journalistic routines; the connection journalists have with the organization they work for (De Vreese, 2005). The organization (media outlets, including newspapers) have a particular orientation – it is a business where not just covering news, but marketing (i.e., selling) also plays its part, especially in contemporary Western media. Journalists might feel closer attached to the reporting or rather to the business (marketing) side of the organization, which arguably affects how they write about a specific issue (Shoemaker & Reese, 1991).

External factors

The external factors refer to outside structures; they include organizational constraints and pressure from interest groups. The organizational pressure and constraints concern the (religious and political) background of a newspaper, its internal structure and goals (De Vreese, 2005). In particular, newspapers' internal structures and goals affect journalists, since most newspapers have a top-down structure. The 'top' makes decisions about budgets, political and ideological interests, and to what extent to give in to the pressure of specific interest groups (Shoemaker & Reese, 1991). Some organizations find it important that their journalists cover items that most people are interested in; by doing so, they attract a larger audience (Scheufele, 1999). Others rather want their journalists to report what the organization considers important and relevant and in line with its own norms and values (Shoemaker & Reese, 1999). According to Shoemaker & Reese (1991), the pressure of interest groups refers to groups "composed (of) individuals who want to communicate their stance on one or more issues to the public" (Shoemaker & Reese, 1991, p. 175). Interest groups (stakeholders) often try to influence the media, the public opinion and individuals. By putting pressure on the media, they hope to impact and control the media frames, and by doing so, indirectly influence the public opinion (Shoemaker & Reese, 1991).

Nuclear weapons: stakeholders

When talking about the nuclear arms issue, two groups in particular try to influence the public discourse through the media: politicians and activists (Yost, 2011). Politicians primarily want to highlight the political debate and their parties' point of view. They want their political views and arguments on (the abolition of) nuclear weapons to be heard (Baron & Herzog, 2020). Activists (non-government organizations) generally

want a news item to focus on the arguments for disarmament and the developments in the direction of an abolition of these weapons (for example the TPNW developments) (Van Oostwaard & Frank, 2019). They try to get attention from news media through campaigns – for example, by commemorating the 75th anniversary of Hiroshima and Nagasaki, or by calling upon the prime minister to sign the TPNW (Beenes, 2020). They need to get media attention for such campaigns, protests and their points of view, in order to get more support from citizens (Cooper, 2002). Therefore, it is interesting to investigate how the media (in this case, newspapers) frame nuclear weapons issues, including the positions of politicians and activists. This might explain the change in public opinion regarding nuclear weapons, and why activists find it difficult to encourage people to take action (Meyer, 1995). The next section explains, on the basis of frame-setting, the important role of media in influencing public opinion and activism.

3.1.2 Frame-setting

'Frame-setting' refers to the interaction between the media and an individual's knowledge that is already present (Scheufele, 1999). In this process, the audience is seen as the dependent variable, being dependent on the media (frame) (De Vreese, 2005). The media thus influence the 'audience frames' and play an essential role in shaping a 'mental image' about, in this case, nuclear arms. When people visualize a nuclear war, the image is cognitive and can hardly be created in any other way than suggested by the media, since (almost) nobody directly experienced it. The image of a nuclear war is modified by propaganda and publicity and created by the media and the general public (Fiske, 1986). As explained, politicians and interest groups often try to influence the media and their news frames, in order the have some 'control' over the public opinion (Lecheler & De Vreese, 2012). However, one has to be aware that public opinion can also influence media frames; it is thus an interactive process, characterized by a constant competition between various interest groups (Zou & Moy, 2007).

This research focuses on the process of frame-setting: the content of newspapers is analyzed in order to explain public opinion results. The audience (readers of newspapers), which is part of the forming of public opinion, is thus seen as dependent on the newspaper outlet about nuclear arms.

Figure 3.1 illustrates the processes of frame-building and frame-setting.

Frame-building		Frame-setting	
Framing in the newsroom:	*Frames in the news:*		*Framing effects:*
	→ Generic frames	→	Audience frames
Internal factors	Issue-specific frames		(Public opinion)
External factors			
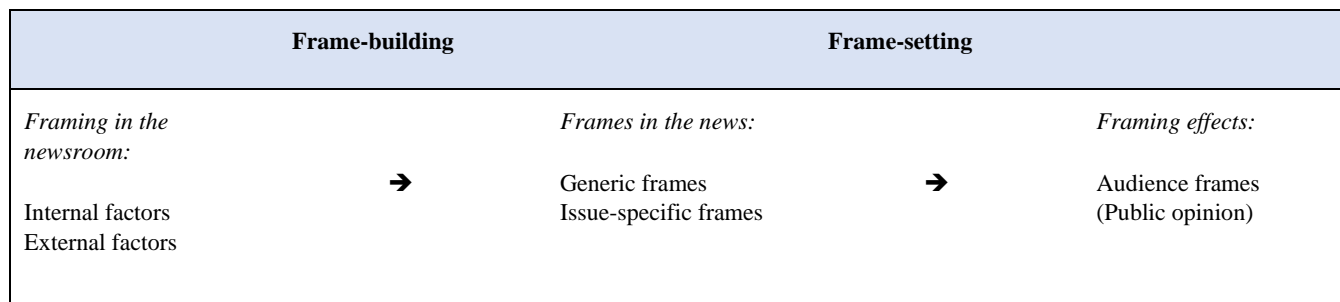
Figure 3.1: The process of framing (De Vreese, 2005)

Media framing and public opinion

The influence of media frames on their audience and on public opinion, can be further explained on the basis of the theories regarding so-called 'attribution of responsibility' and 'believe importance' (Iyengar, 1993; Lecheler & De Vreese, 2012). Academics did research on the impact of news frames on the audience's attributions of responsibilities. For political issues, the attributions of responsibility are essential because the concept of responsibility can have a particularly powerful impact on the audience's behavior (Iyengar & Simon, 1993). The attribution of responsibility influences the audiences' beliefs on the outcome of an event or issue (Iyengar, 1990). It can be divided into two concepts: causal responsibility and treatment responsibility.

Causal responsibility relates to the origins of an issue or problem; it is about who or what caused it. Treatment responsibility relates to the solution: who or what should solve the problem, and has the power to alleviate an issue (Iyengar, 1996). Media frames often (albeit sometimes implicitly) hold something or someone responsible for a problem, which can influence how responsible the audience feels to solve the issue or who they hold responsible for causing and solving it (Iyengar & Simon, 1993). The audience can attribute responsibility to themselves, to other individuals, or to groups (for example, the government) (Semetko & Valkenburg, 2000).

In addition, academics suggest that 'belief importance' forms another basis of the media's ability to influence: media frames provide the individual with ideas by suggesting that some perspectives are more important than others (Lecheler & De Vreese, 2012). The media suggest how to think about an issue and propose solutions. These ideas, perspectives and suggested solutions form the 'belief content', and public opinion is often based on this 'media-constructed' version of reality (Callaghan & Schnell, 2001). Thus, the media have a 'persuasive effect', in that they not only influence opinions but might even add new convictions to a person (Lecheler & De Vreese, 2012). Media show what is thought to be important (also by citizens) and can indicate how the public perceives the political discourse and whether to take action (Callaghan & Schnell, 2001).

The framed 'belief content' can thus lead to politically involved and activist citizens (Fiske, 1986). Whether an issue leads to a social movement depends on people's beliefs and feelings (public opinion), and the attribution of responsibility (Fiske, 1986). The more 'general' or 'mainstream' a social movement, the broader the audience it can reach (Meyer, 1995). It is important to note that there is a correlation between the amount of media coverage of an issue and the importance attached to it by the public (Neuman, Just & Crigler, 1992). Social movements can be either stimulated or restrained by the media and their discourses. Thus, getting media attention can be effective, but it might also be damaging if negatively framed, and if their actions are seen as an illegal offshoot of the public debate (Meyer, 1995). So as not to be judged by the public, politicians and activists must fit within the framework of the – broadly accepted – public discourse (Schuck & De Vreese, 2006). Interest groups thus often wish to get the attention of (news) media, but they need to make sure not to be framed negatively, to ensure the public will be on their side (Meyer, 1995).

However, as argued before, movements and public opinion can also influence public discourse and the media (Meyer, 1995). Influencing or changing a public discourse by a social movement is often achieved by reframing the debate, for instance, by giving counterarguments to the generally accepted narrative – as has been the case with the nuclear arms debate (Borrie, 2014). If a social movement is large enough, it might put pressure on politicians (and other interested parties) to respond to their citizens' concerns. The public discourse and mainstream media then reflect this, which might in turn affect citizens (Meyer, 1995). It can thus be seen as an interactive process between stakeholders, the media, and social movements.

In the case of nuclear weapons, it is important for activists (including NGOs) and politicians that their actions and points of view are displayed positively by news media, such as newspapers. It is therefore important for them to receive (positive) media attention and have their views displayed within their favorable media frame (Bizer & Petty, 2005). For politicians, this is important because it might lead to more support for their party. For activists, it might lead to more support for the anti-nuclear weapons movement. The next section explains which media frames and perspectives exist and how they could influence the nuclear weapons debate and public opinion. It also describes which frames are most beneficial for each interest group (politicians, and activists/NGOs).

3.2 Media framing of nuclear arms

Media frames can either be 'issue-specific' or 'generic'. Issue-specific frames cover arguments that are solely applicable to the subject in question; they cover a specific topic (Scheufele, 1999). Generic frames, on the other hand, are not limited to a specific theme but can be applied to various issues and multiple contexts; they can also be placed in a different time and culture (Vliegenthart, 2012). The media and the audience commonly use generic frames to categorize and give meaning to an issue (De Vreese, 2005). Various scholars have designed standard sets for detecting the appearance of generic frames in the news; for instance, Semetko &

Valkenburg (2000). Meyer (1995), in turn, established three (issue-specific) frames regarding national security.

The first research sub-question regarding the most dominant generic frame(s) will be answered on the basis of the following five frames: conflict, human interest, responsibility, economic consequences, and morality (Semetko & Valkenburg, 2000). The following sections explain these frames of Semetko & Valkenburg (2000) and describe how the frames of Meyer (1995) and the views of opponents, proponents, and interest groups, all fit within those frames.

3.2.1 Conflict frame

A conflict frame highlights the conflict between groups, institutions and/or individuals (Semetko & Valkenburg, 2000). By using the conflict frame, the conflicts between parties/individuals are often highlighted, and it stresses the points of divergence between the opponents and proponents of the debate (Dirikx & Gelders, 2010). This frame is mostly reflected in news items that cover political debates or elections (Neuman, Just & Crigler, 1992). Critics often argue that the conflict frame simplifies the complex content of a political debate. It would thus be a rather superficial representation of the various perspectives, since it places the different parties diametrically opposed to each other. This can drive the parties even further apart, as it lacks nuance and in-depth information (Kim & Wanta, 2018). Simplifying the discussion can lead to cynicism and mistrust of political leaders (Neuman, Just & Crigler, 1992).

The conflict frame tends to give less guidance than the other frames in how to feel or think about an issue, since it often aims to give a quite balanced reflection of the debate. Such a frame is obviously not likely to take a side within the debate or issue (Kim & Wanta, 2018). A reason to use this frame is to instigate interest among the audience. Journalists clearly use this frame to draw attention to a conflict and debate between those in favor and those opposed to nuclear arms (Semetko & Valkenburg, 2000).

The 'Cold War' frame of Meyer (1995) fits within this notion of a conflict frame. The Cold War frame focusses on the US image of the Soviet Union/Russia capable of doing everything to gain power. As a result, military power is necessary to fight the imperialist character of modern-day Russia. The main argument behind the Cold War frame is that the use of any weapon might be legitimized, regardless of its strength and devastation, in order to ensure peace and security (Meyer, 1995). The United States (or Russia) thus puts its opponent in a negative light, in order to gain support for, and legitimize, its own policies. The conflict frame will highlight the contrast between the two powers, where it reflects on both sides, and tries to be neutral, although might also be more positive for one of the two (Kim & Wanta, 2018).

Looking at the nuclear arms debate, such a conflict frame highlights the contradictions between opponents and proponents, between anti-nuclear activists and politicians. It can also focus on the differences and frictions between East and West, and/or between the United States and other (upcoming) superpowers, such as China. Such a frame might also address the differences between the 'First World' and the 'Third World' – in that case, it is referred to as 'nuclear orientalism', arguing that the possession of nuclear arms by Third World countries is more dangerous than by First World states (Gusterson, 1999). The conflict frame is generally widely used in news media (Kim & Wanta, 2018). The assumption is therefore that newspapers will use this frame quite frequently when portraying the nuclear arms debate, especially when it comes down to the debate between politicians; the discussion between supporters and opponents; the different viewpoints of the Dutch government and activists; or the discussion on how to withdraw from the nuclear-sharing task, and whether or not to sign the TPNW.

3.2.2 Human interest frame

The human interest frame "brings a human face or an emotional angle to the presentation of an event, issue or problem" (Semetko & Valkenburg, 2000, p. 95). It personalizes an issue and refers to how people are directly affected (Dirikx & Gelders, 2010). This one is about emphasizing the issue and connecting it to a personal story or face. It often provides more emotion or even drama to a topic (Semetko & Valkenburg,

2000). More specifically, "it is used to increase issue relevance by emphasizing perspectives of individuals with their personal experience along with the issue-related problems and potential solutions" (Kim & Wanta, 2018, p. 93). Journalists might use such a frame to attract and, above all, retain the public's attention (Kim & Wanta, 2018). The focus on personal circumstances is often considered to be the opposite of the traditional and systemic approach of journalism. Within the traditional approach, it is generally said that news frames should be non-personalized, but should rather focus on the broader consequences for an entire community or society. The human interest frame is mainly used to clarify the problem and to give a possible solution (Dirikx & Gelders, 2010).

Activists have put a lot of effort into challenging the internationally accepted security discourse by reframing the debate and focusing on the humanitarian consequences. Activists therefore tend to focus on the personal stories of victims and this frame is thus primarily used by opponents (Borrie, 2014), which makes it likely that newspapers use this frame in reporting about the opponents' views and actions. Opponents concentrate on and give an effects-based understanding of the debate: the aim of disarmament is to focus on the destruction caused by the atomic bombs on Hiroshima and Nagasaki, as well as on the dangers of nuclear testing. It places particular emphasis on the appeals made by the so-called Hibakusha, the survivors of Hiroshima and Nagasaki (Lovold, 2020).

It is therefore likely that news items using such a frame quote the Hibakusha, show the harm that has been done to them, and how even the second and third generations still suffer. Such a frame uses pictures of the victims and the severe environmental consequences (Lovold, 2020). It is based on stories about how people, even after 75 years, still suffer from chronic diseases, such as cancer, and how the day of the nuclear bombings never left their minds. It is all meant to relate to people's feelings in order to gain support for the anti-nuclear weapon movement (Borrie, 2014). An example of this is paying attention to the involvement of Hibakusha Setsuko Thurlow in the negations of the TPNW. She has played a significant role in the plea for a legal ban on nuclear arms by telling her personal story to politicians and the media (Beenes, 2020). The human interest frame thus responds to the 'attribution of causal responsibility' in order to call upon citizens to reject nuclear weapons. It is used to activate citizens to pressure the government to sign the TPNW and to a unilateral withdrawal from the nuclear-sharing task. The 'attribution of treatment responsibility' is thus partly directed at citizens to take action, and at the government to actually do something.

Research shows that the human interest frame is seldom the sole frame in news media (Kim & Wanta, 2018). However, the assumption is that this frame does appear to be a dominant (and sole) frame when covering the nuclear arms issue, as opponents (activists) have tried to obtain a fair amount of media attention for this frame. It is certainly a perspective that the opponents (activists) are committed to and which they prefer to push (Borrie, 2014). It is therefore quite likely that the frequent use of such a frame will lead to more pressure on the government on the one hand and calling upon opponents of nuclear arms in the Netherlands to more activism on the other.

3.2.3 Responsibility frame

The third frame is the so-called responsibility frame, which emphasizes that the cause or solution of a particular issue lies with the government, a specific group or individual (Semetko & Valkenburg, 2000). Holding a particular group, often the government, responsible for causing or solving the problem can be crucial for understanding the news coverage of the (nuclear arms) debate, since it can have a strong influence on the mobilization of citizens (Kim & Wanta, 2018). When faced with threatening but treatable problems, people will be motivated to change their behavior and take action. However, when the threat seems to be greater than the ability to do something about it, it can lead to passiveness. Thus, by frequently holding the government responsible for solving the problem, citizens may feel that it is a problem beyond their control. In that case it seems to be an issue that they cannot influence anyway, and therefor mobilizing would be pointless (Dirikx & Gelders, 2010). In the case of the nuclear arms issue, the question is thus whether newspapers primarily call upon citizens to feel responsible for solving the problem or if they call upon the government. If they call upon the citizens, they might likely mobilize. If they call upon the government,

however, it is most likely that citizens feel like it is not in their power to influence and solve the issue. Thus, such a frame can strongly influence the 'attribution of treatment responsibility' (Iyengar & Simon, 1993).

The second frame suggested by Meyer (1995), the 'managed rivalry' frame, is in line with the responsibility frame. Managed rivalry focusses on a state's foreign policies. It calls upon NWS to balance their arms arsenals and it acknowledges the danger of geopolitical rivalries (Meyer, 1995). The government must protect its citizens. However, having such weapons also brings along the responsibility not to use them; the threat as such will secure the non-use of nuclear weapons and reaching quota (Lovold, 2020). The managed rivalry frame highlights the two extremes and calls for nuclear states to work together and reach for a nuclear balance. The solution is in the hands of world leaders (Meyer, 1995). In the end, it is up to world leaders and politicians in general to strive for nuclear deterrence and work together towards a nuclear zero; politicians are responsible for the solution, they are the medicine (Payne, 2015).

In general, activists believe that governments are at the root of the problem; they are the ones that create the danger of nuclear war. However, they also believe that citizens are the ones to hold accountable for taking action and preventing it. Moreover, they are convinced that a nuclear war can be avoided and prevented by citizens working together, influencing governments' policy decisions. (Fiske, Pratto & Pavelchak, 1983). Activists thus hold governments responsible for solving the problem; they are the ones who can actually do something about it, by signing the TPNW, for instance, or by withdrawing from the nuclear-sharing agreement (Borrie, 2014).

Although the government is responsible for nuclear disarmament, news items might also suggest that it is up to the people, the citizens and civil society to act and to put pressure on and negotiate with the government. But in the end, the Dutch government brought the nuclear problem to the country by agreeing to host nuclear arms and is thus primarily responsible for the cause and the solution. The Dutch government is the only one that can sign disarmament treaties (like TPNW) and negotiate withdrawal (Fiske, Pratto & Pavelchack, 1983). Such a frame thus probably mainly focusses on the 'attribution of treatment responsibility'. The assumption is that the government is primarily held responsible for solving the nuclear arms issue, since it has to sign disarmament treaties. It is therefore likely that such a frame is frequently visible in Dutch newspapers, just as the conflict and human interest frame.

3.2.4 Economic consequences frame

The economic consequences frame has a financial perspective, by focusing on the economic implications of an issue for a country, institution, region, group or individual (Semetko & Valkenburg, 2000). Focus is placed on the economic impact of actions, events, or policies, and has a high news value. An economic issue often directly affects the audience (citizens). News media use such a frame to make an issue relevant to their public (Kim & Wanta, 2018).

In using an economic consequences frame, a news article addresses the financial implications of the modernization of nuclear arms. It is likely to raise questions of defense spending and whether money should be spent on new fighter jets with nuclear capabilities, or the training of personnel (Shirobokova, 2018). Such a frame will not concern the economic implications for an individual, group or institution, but rather reflect national spending and costs for the Ministry of Defence. For example, it can raise questions about whether the government should still spend money on nuclear arms-related tasks or if it should invest in other means of deterrence (Van Oostwaard & Frank, 2019). The debate that this frame depicts is mainly held within political circles and is not a significant item on the agenda of anti-nuclear weapon activists.

The expectation is that in news items about nuclear arms, the economic consequences frame will not appear very often. The debate on the additional costs of the US nuclear arms mainly takes place within the government and the defense expenditures do not directly affect citizens economically (Acheson, 2018). The debate on whether or not (and how) to strive for nuclear disarmament is often considered to be more relevant and is therefore likely to appear more in the Dutch newspapers.

3.2.5 Morality frame

More often than not, the morality frame is represented in a less explicit way than the other frames (Semetko & Valkenburg, 2000). This frame places issues in a religious or moral perspective and conveys a message on how people should act and behave – it is basically about what is considered to be wrong and what is right. It is often implicit, because journalists are expected to be objective and not give moral or religious prescriptions to an issue (Neuman, Just & Crigler, 1992).

The Common Security frame, as described by Meyer (1995), fits this notion. Meyer (1995) assumes that nuclear weapons have shaped a new international order, in which states have to face the moral choice of political cooperation or destruction. The basic idea is that states want to avoid nuclear warfare because of the immense destruction it entails. This is also what makes nuclear 'deterrence' work: the constant ethical and moral dilemma over the use of these weapons; arms control and negotiations are necessary to keep world leaders aware and, in the end, to maintain peace (Meyer, 1995).

The morality frame implicitly expresses journalists' preferences or describes the ethical debate. An example of such a frame can be the link to the horrific effects of poison gas used during World War I and the extremely destructive force of nuclear weapons (Lovold, 2020). Such a perspective responds to the reader's moral awareness and therefore suggests to reject (the use of) nuclear weapons. Another example is when journalists subtly refer to the fact that everyone is a human being, world leaders included, and that human beings can make mistakes or can get caught up in irrational thoughts that can result in the use of nuclear weapons. Therefore, based on a moral issue, these journalists question the nuclear deterrence theory (Payne, 2015). The assumption is that the morality frame will not be frequently used when covering the nuclear arms issue, since it refers to religious tenets or morality, and such arguments are not likely to appear often in newspapers (Semetko & Valkenburg, 2000).

As indicated in the sections above, the assumption is that the conflict, human interest, and responsibility frame are used most frequently. Furthermore, the expectation is that all frames, except for the conflict and economic consequences frame, are more in line with the thoughts of opponents than with the thoughts of proponents. Therefore, it is likely that more frames show up in the news coverage of the nuclear arms debate. This has resulted in the formulation of the second research sub-question: '*In addition to the five generic frames of Semetko & Valkenburg (2000), do other frames appear in the five newspapers analyzed*?'

3.3 Perspectives on nuclear arms

Iyengar (1990) distinguished two generic frames: the thematic and episodic frame. This research refers to and uses these frames as perspectives; in line with this, Bacon (2011) argues that news articles always offer either a positive, negative or neutral perspective. The third research sub-question – '*Which perspectives of Iyengar (1990) and Bacon (2011) emerge most strongly within the frames, in the five newspapers analyzed*?' – will therefore be answered on the basis of the perspectives of Iyengar (1990) and Bacon (2011).

3.3.1 Episodic and thematic perspectives

This section first explains the episodic and thematic perspective and indicates how these perspectives fit within the five frames and how both perspectives might influence public opinion.

Episodic perspective

The episodic perspective gives a face to a particular issue and often invokes compassion (Iyengar, 1990). This frame is event-oriented, focusing on a single incident, a specific example or event (Van Gorp, 2007). It often focuses on the story of a single person and gives a face to the issue. In such an article, the story is, for example, centered around a homeless person, an unemployed worker, the bombing of an airliner, or a victim of the nuclear attack (Iyengar & Simon, 1993). Journalists might use an episodic perspective because they

think it is more compelling and it will attract more attention from the reader; it is emotionally appealing. It thus leads to a 'moralized' understanding of (political) issues or debates. It is a way to identify a larger problem and make it understandable for the broader public (Gross, 2008).

In the case of nuclear arms, this might, for instance, concern the opinions of opponents focusing on the humanitarian consequences and linking this to the personal testimonies of Hiroshima survivors (Williams, 2018). It thus portrays the issue in terms of a specific case, for instance, a nuclear attack or accident (Van Gorp, 2007). An example is a picture of the damage caused by a nuclear weapon, or injured and suffering individuals (Aaroe, 2011). In that sense, the episodic perspective is more in line with the human interest frame of Semetko & Valkenburg (2000).

Thematic perspective

A news article has a thematic perspective if it is primarily informative and based on general trends and facts or reflects the public policy (Iyengar, 1990). Issues are placed within a general or abstract context and focus on global results or conditions (Van Gorp, 2007). By placing issues within a historical, economic, geographic or political perspective, it gives a broader scope of the problem. A thematic article generally takes the form of a 'takeout' or 'background' report, focusing on an issue's origin or solution (Iyengar & Simon, 1993).

An example of this is the position of a state in terms of nuclear arms, the government's defense policy or the expenditures on fighter jets. The assumption is that the economic consequences frame (regarding nuclear arms) is mainly written from a thematic perspective. Such a frame most likely focuses on the national defense expenditures of the nuclear-sharing task; a national topic that cannot be properly explained without some economic and political background information.

The effect of episodic and thematic framing

Episodic or thematic reporting is an essential part of journalism (Iyengar, 1990). It has quite some influence on citizens' policy views, their emotional reactions and feeling of responsibility towards an issue (Gross, 2008). Some frames have a more substantial effect on public opinion and emotions than others; some are thus more influential and have a greater potential to influence the citizens' feelings. Emotion can play a fundamental role in the way a person perceives (political) information and makes (political) judgments (Aaroe, 2011). Episodic items imply individual solutions for political issues, while thematic articles provide social aspects and solutions (Iyengar, 1990). On the other hand, thematic perspectives tend to have more 'depth' and give a deeper understanding of an issue on the political level (Gross, 2008).

The thematic perspective shows abstract information, which triggers fewer emotions. People are less likely to have a particular conviction or support for a specific political party or government policy (Aaroe, 2011). Episodic perspectives are more persuasive than thematic ones and have more effect on an individual (Gross, 2008). Items written from an episodic perspective thus have a more significant influence on the public and provoke stronger emotional reactions than items with a thematic perspective (Gross, 2008). The episodic perspective does not only lead to more intense emotional reactions; it also directs the individual more towards the support of the advocated policy (Aaroe, 2011).

Iyengar & Simon (1993) focused on the impact of thematic and episodic perspectives on the attributions of responsibility. Constant exposure to the episodic perspective in news items leads to a public holding themselves, other individuals, or specific groups responsible (Iyengar & Simon, 1993). The public will not think about an issue's broader characteristics, such as the historical, political or social context or illustrations. The audience will identify with the single person or event quoted or depicted in newspapers (Iyengar, 1996); this draws attention away from governmental responsibility (Gross, 2008). Individuals feeling 'treatment responsibility' can express more support for NGOs which are seeking for a solution to the issue (Gross, 2008). Episodic perspectives might thus lead to members of the public holding themselves, or other individuals, responsible for solving a problem, rather than politicians (Aaroe, 2011).

The thematic perspective mostly attributes responsibility for national issues to societal factors, including cultural norms, economic circumstances and the acts or omissions of government officials (Iyengar & Simon, 1993). Referring to national problems, where a broader context is given, leads to the public focusing on social and political responsibility for causing and solving the issue (Iyengar, 1996). An abundance of thematic articles can thus lead to more focus (sometimes support) for the government; resulting in the public holding political parties and leaders responsible for the issue's causes and solution (Gross, 2008).

Episodic articles can trigger more emotions, which implies that the public is more easily 'persuaded' to show support for a specific group, political party, or point of view (Gross, 2008). In the case of nuclear arms, frequent exposure to, for example, victims of Hiroshima can thus more easily lead to more opponents of nuclear arms, as compared to articles written from a thematic perspective. In addition, the episodic perspective can lead to the audience holding themselves, or other individuals, responsible for taking action against the nuclear arms in the Netherlands, for example by showing support for anti-nuclear groups and mobilization. On the other hand, frequent exposure to the thematic frame can lead to the public holding the government responsible for solving the issue. However, it can also lay trust in the government for taking adequate decisions in its nuclear arms policy. Both can lead to a passive audience, since their attribution to treatment responsibility is limited (Gross, 2008; Iyengar, 1993).

3.3.2 Pro-nuclear, anti-nuclear and neutral perspectives

News articles always have a positive, negative or neutral tone (Bacon, 2011). Framing political issues or debates in either negative or positive terms is referred to as 'valence framing' (De Vreese & Boomgaarden, 2003). News articles with either a positive or negative undertone can affect the 'attribution of treatment responsibility' (Levin, 2001). It instigates emotional responses and can influence the choice for supporting a political party or NGO (Schuck & de Vreese, 2006).

News articles can have a pro-nuclear (positive), anti-nuclear (negative) or informative (neutral) perspective (Culley et al., 2010). Exposure to mostly negative news items can strengthen social movements because it intensifies cynicism about the ones responsible for a specific problem (Schuck & De Vreese, 2006). Anti-nuclear activists have a negative perspective on nuclear arms and provide arguments in favor of nuclear disarmament – often based on humanitarian consequences –, while pro-nuclear individuals have a positive view on this debate – primarily based on a security narrative (Lovold, 2020). If media, for example, give much attention to civil society and mainly offer a negative perspective on nuclear arms, the support for social movements might increase (Culley et al., 2010). In particular activists try to reach news media so as to generate political action or rather anti-nuclear activity. They try to evoke compassion by using emotional appeals about nuclear war, while proponents of nuclear arms respond to the emotion of fear of superpowers such as Russia and China (Fiske, Pratto & Pavelchak, 1983).

Research shows that negative undertones affect the public more than positive undertones (of an equal extremity). A subject portrayed in a negative light generally leads to great resistance, while a subject portrayed in a positive light does not always lead to as many supporters (Bizer, Larsen & Petty, 2010). People are often sensitive to the so-called 'negativity bias' or 'negativity effect': there is a notion that "losses loom larger than gains", making a negative article more persuasive (Bizzer & Petty, 2005; Bacon, 2011). A negative undertone is simply more triggering, regardless of whether the article says something negative or positive about the subject (Bizer, Larsen & Petty, 2010). Negative undertones lead to greater resistance and more potential to stir up a social movement. However, if there is too much negativity on the topic, it might lead to more cynicism and might demotivate citizens to mobilize (Bizer & Petty, 2005). It must be noted that a critical undertone is not automatically perceived as negative (Bacon, 2011); news articles can show support for nuclear arms, while at the same time be critical about its function.

News articles can also offer a neutral perspective; in this case, the arguments are balanced, giving positive and negative arguments or give arguments based on 'facts and numbers'. Neutral articles mainly serve to inform (Schuck & De Vreese, 2006). The informational perspective is 'balanced' and has the intention to be

unbiased. It covers arguments of the anti- as well as the pro-nuclear perspective and does not emphasize one of those individuals or groups (Culley et al., 2010).

Exposure to mostly two-sided (informational) messages will have a longer-lasting impact than one-sided messages (be it anti-nuclear or pro-nuclear). A two-sided message ensures that the public is familiar with the content of the pros and cons and will thus be less influenced when reading a one-sided message. This makes people feel that they can make their own judgments and feel better informed compared to a case where they only read one-sided articles. The public will stand stronger behind its point of view and be less sensitive to messages that go against its beliefs (Bizer, Larsen & Petty, 2010). On the other hand, a one-sided message will lead to stronger emotional reactions, and people will act more quickly; they are easily triggered and can feel more strongly about an issue (Culley et al., 2010).

The assumption is that the human interest frame has the most negative undertones since it is most likely that such a frame is used by anti-nuclear activists and focuses on the personal stories of Hiroshima and Nagasaki survivors. Another assumption is that the conflict frame has the most neutral undertones, and it is thus more likely to give a two-sided message since such a frame is likely to highlight two or more sides of the issue.

3.4 Conceptual model

In summary and as a way of explaining what these academic and theoretical insights mean for this particular research, the following has to be kept in mind. Media framing is an interactive process, various factors determine how media frames are shaped. The internal factors (social norms, values and beliefs of journalists; journalistic routines; religious, cultural and political background of journalists) and external factors (organizational constraints; pressure from interest groups) shape the portrayed frames of an issue in the media. Stakeholders regarding nuclear arms are either politicians or anti-nuclear activists (NGOs). The process of internal and external factors influencing media content is called frame-building (De Vreese, 2005).
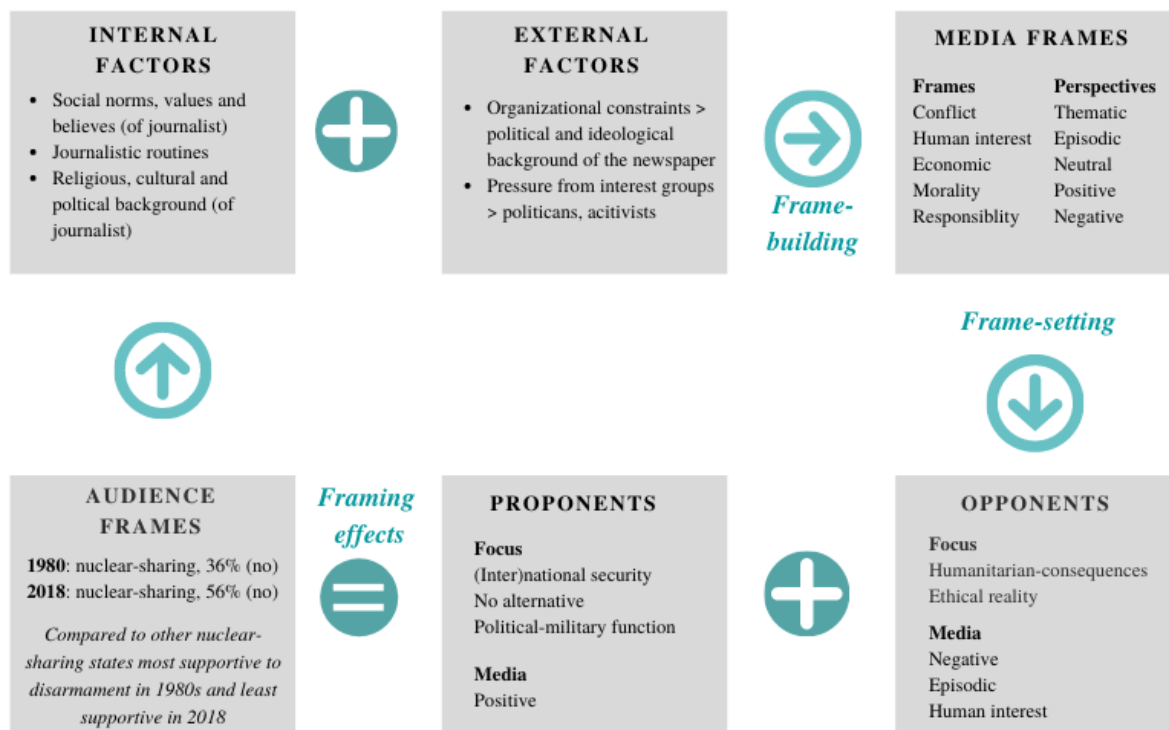
Figure 3.2: Conceptual model: media framing process, nuclear weapons (source: author)

There are five generic frames which often appear in the media: conflict, human interest, economic, morality, and responsibility (Semetko & Valkenburg, 2000). In the case of nuclear weapons, the expectation is that conflict, human interest, and morality appear most often in newspapers. The conflict frame highlights the conflicts between individuals or groups. This will, most likely, be between opponents and proponents of nuclear arms, or between different political parties. The human interest frame focuses on the attribution of causal responsibility; it portrays personal stories of Hiroshima survivors to draw attention to the humanitarian consequences of nuclear weapons. The responsibility frame focuses on the attribution of treatment responsibility; it suggests whom to hold responsible for solving the problem, which can be citizens or the government (Semetko & Valkenburg, 2000; Dirikx & Gelders, 2010). Each news item, and frame, is also written from a thematic or episodic perspective and can have a positive, negative or neutral undertone (Iyengar, 1990; Bacon, 2011).

The media frames (and perspectives within these frames) influence the audience frames; this is referred to as frame-setting (Shoemaker & Reese, 1991). If the audience mobilizes, it can, in turn, influence the internal and external factors again (De Vreese, 2005). In this research, the audience frames are the readers of newspapers, representing Dutch citizens. Among Dutch citizens, there are proponents as well as opponents of nuclear arms. These opponents and proponents, among others, form the public opinion. This research examines the media frames and perspectives regarding nuclear weapons. By determining the presented image of nuclear weapons in the media, an explanation for the change in public opinion might be found. In other words, this research focuses on the media framing of nuclear weapons, and its framing effects on public opinion.

Chapter 4: Methodology

The research question and related sub-questions can best be answered by means of content and framing analysis (being a specific approach to textual analysis). A quantitative, content analysis and a qualitative framing analysis were used to answer the research question. The written text and the images, maps, tables, and graphs included in the written text were analyzed. This chapter describes the choice of method, its advantages and limitations, and how the analyses have been implemented.

4.1 Textual analysis

This research aims to answer the question: '*In the coverage of nuclear weapons in the five largest Dutch newspapers between 2014 and 2020, which frame(s) and perspectives appear most dominant?'* It is thus important to determine which image of nuclear weapons dominates in the (largest) Dutch newspapers. Therefore, the five largest newspapers have been analyzed, focusing on which frames and perspectives are (most dominantly) reflected in the written text, images, maps, tables, and graphs (Smelik, 1999). A mixed-method approach is used to map the frames and perspectives in newspapers as precisely as possible. More specifically, two approaches to textual analysis have been applied to answer the sub-questions: the data is partly (1) deductive and quantitatively analyzed, on the basis of a content analysis; as well as (2) inductive and qualitative, on the basis of a framing analysis. This section first elaborates on the two variants of textual analysis used. Next, it explains why this method suits this research better than other approaches to textual analysis.

Textual analysis is a research method that focusses on how language, symbols, and images in texts have been established and how they can be perceived; it is about understanding the communication tool (Bergström & Boréus, 2017). As Bergström & Boréus (2017) describe, there are various approaches to conduct textual analysis. Examples are narrative analysis, discourse analysis and content analysis. The latter approach, content analysis, is the best suited for this research; it is also the most commonly used method by framing scholars (Matthes & Kohring, 2008). One of the reasons to opt for content analysis is because it is well suited to study the coverage given to a specific topic. Hence, it is a useful approach for research that aims to understand *how* a topic is evaluated or presented, rather than focusing exclusively on *how often* the topic comes up. The method is often used to either investigate (and compare) different corpora or analyze changes over time. (Boréus & Bergström, 2017). Although this research solely analyzes content over the past five years, it does try to explain a trend (in the sense of a change) that occurred over time. In addition, the purpose of this research is to examine the attention paid to the nuclear arms debate in newspapers and give meaning to how the issue is evaluated and presented in newspapers.

4.1.1 Quantitative content analysis

Content analysis is a method to distinguish various categories about a topic in written materials (Cho & Lee, 2014). There are, however, various forms of this method, "all using coding to systematically break down, categorize and describe the content of texts" (Boréus & Bergström, 2017, p. 24). It thus puts texts with the same views and perspectives in one category and can be used to ascertain media frames (Cho & Lee, 2014). In looking for frames, three important factors determine the approach to content analysis. The first is the distinction between a quantitative and a qualitative approach; next, whether a deductive or inductive method is used; and finally, the distinction between generic and issue-specific frames (Linström & Marias, 2012).

The first approach used in this research is a (deductive) quantitative content analysis. Since there has been little (if any) research on the representation of the Dutch nuclear arms debate in the media, there are no issue-specific or well-drafted existing frames on this subject yet. This is why it was decided to initially analyze the newspapers based on generic frames. Semetko & Valkenburg (2000) likewise make use of quantitative content analysis, in which binary coding is used (by asking 'yes' or 'no' questions to the texts); this will be further explained in the operationalization (Section 4.4). The perspectives were analyzed on the basis of a

simple deductive quantitative content analysis. The thematic and episodic perspectives were analyzed by examining whether the news item is mainly written from an episodic or thematic perspective, coding them with values (0) and (1), respectively. The positive, negative or neutral undertones of an article were simply analyzed by counting the dominant undertone for each news item, likewise valued by (0), (1) or (2). The implementation of this quantitative approach is also further explained in the operationalization.

Content analysis has been a quantitative method from its origins, defined by Berelson (1952, p. 18) as "a research technique for the objective, systematic, and quantitative description of the manifest of content communication". The purpose of quantitative content analysis is to detect frames and "to enable similar results established cross a group of text coders" (Priest et al., 2002, p. 35). An asset of this method is that it gives the opportunity to systematically categorize and describe the material (Cho & Lee, 2014). Generic news frames are mostly generated through a quantitative method, since this allows making the issue more abstract and applicable to multiple topics (Vliegenthart, 2012). The generic news frames from Semetko & Valkenburg (2000) are applicable to any subject and thus provide the opportunity to make systematic comparisons, based on a higher degree of reliability (Vliegenthart, 2012). These frames form a set of indicators for analyzing how issues in the news are discussed, with the advantage that they can quite easily be repeated. This makes it possible to make comparisons over time, and between other topics or countries. It is therefore easier to reproduce and replicate (Semetko & Valkenburg, 2000).

4.1.2 Qualitative framing analysis

This research not only examines how frequent frames and perspectives appear but, in addition, it aims to determine how the frames cluster together and how the frames describe and present the nuclear arms debate. A qualitative framing analysis, being a specific form of (qualitative) content analysis, was used to give an issue-specific description of the generic frames. An advantage is that issue-specific frames can provide a more detailed insight into an issue (De Vreese, 2005). The same method was used to discover (possible) new frames.

The approach used to qualitative framing analysis is based on the research of Van Gorp (2007) and Gagestein (2015). Van Gorp's approach is based on open and axial coding, where one searches for 'framing devices' and 'reasoning devices' in news items. The establishment of a frame starts with framing devices (Vossen, Van Gorp & Schulpen, 2016), which "manifest (themselves) in media content […] such as word choice, metaphors, examples, descriptions, arguments and visual images" (Van Gorp, 2007, p. 64). Thus, the framing devices consist of 'visual framing devices' and 'textual framing devices'. The visual framing device displays the choice for a particular image, map, table or graph. The textual framing device displays the choice in words or phrases about a topic or issue. The reasoning devices are the underlying ideas of the framing devices (Vossen, Van Gorp & Schulpen, 2016), defined by Van Gorp (2007) as "implicit statements that deal with justifications, causes and consequences in a temporal order, and which complete the frame package" (Van Gorp, 2007, p. 64). Thus, one can state that the framing devices are explicitly displayed in the newspapers, while the reasoning devices are rather implicit. The framing and reasoning devices together result in the establishment of a frame, which presents the central idea around a topic or issue (Vossen, Van Gorp & Schulpen, 2016). Gagestein (2015) designed a coding matrix based on the theory of framing devices and reasoning devices. This matrix was used to give an issue-specific understanding of the generic frames, and to detect (possible) new frames in the news items. The matrix will also be further explained in the operationalization.

To sum up, this research aims to determine which image of nuclear weapons dominates in the (largest) Dutch newspapers. Therefore, every news item was analyzed by looking at the most dominant perspective(s), the generic frames of Semetko & Valkenburg and an interpretation of these frames. Furthermore, it has also been analyzed how the perspective(s) appear within the frames; which perspective is most dominant within the various frames? In addition, how the generic frames relate to the Dutch nuclear arms debate and whether or not new frames appear has also been part of the analysis. This research is based on the content of news items, and it will discuss – specifically in the sections dealing with the theoretical background, results and discussion

– the effect the frames might have on the (change in) public opinion and how these news frames might have been established (Matthes, 2009).

4.2 Methodological limitations

To determine how often the generic frames appear in the news items, a binary coding system has been used. An advantage of this approach is that the intercoder reliabilities are relatively high, while an arguably disadvantage is that of a potential greater measurement error. This implies that there is a higher risk of the correlation between the variables being low(er), in comparison to measuring with ordinal or interval variables (Semetko & Valkenburg, 2000). An approach with more variables ensures a higher reliability score (Matthes & Koring, 2008). Nevertheless, it is the most commonly used method to analyze Semetko & Valkenburg's frames in media outlets, making it easier to generalize, and to detect the frames.

The method of qualitative framing analysis is based on an approach of open and inductive coding. This approach is well suited for small samples, despite the disadvantage of being subjective and (more) difficult to reproduce and generalize (Semetko & Valkenburg, 2000; Boréus & Bergström, 2017). However, a qualitative approach is needed in order to attribute meaning to the generic frames; just counting the frames is not sufficient. In addition, the qualitative framing analysis is based on Gagestein's approach, in which a standardized (element) matrix is used. This matrix aims to increase the reliability and decrease the subjectivity (Gagestein, 2015).

Another limitation is that this research only examines newspapers. Online news content, just as social media, is becoming a more popular source to obtain information. Reading online news content (such as NOS.nl, or nu.nl) instead of newspapers is on the rise among Dutch citizens. The role of online news and social media in shaping public opinion thus increases. Another trend is that printed newspapers are more often read by people over the age of 50, and substantially less so among the younger generations (*Mediamonitor 2019*, 2019). A final limitation, related to the previous one, is that this study does not include news on TV or radio.

Nevertheless, although only printed newspapers were included, they still reach a considerable part of the population: more than 40% of the Dutch citizens. The five largest newspapers combined reach more than a quarter (25.8%) of the population (*Dagbladen in 2019*, 2019), a fair representation.

4.3 Dataset

This research focuses on the five largest newspapers in the Netherlands. Newspapers are chosen because they can "communicate more complex ideas" than other media – like radio and television (Linstrom & Marais, 2012, p. 29). They are therefore most interesting because newspapers in general give more elaborated and detailed information than other media outlets (Dirikx & Gelders, 2010). The choice has been made to analyze the five largest (printed) national newspapers in the Netherlands, because combined they reach the majority of the readers of newspapers (*Mediamonitor 2019*, 2019). *De Telegraaf*, *Algemeen Dagblad*, *de Volkskrant*, *NRC Handelsblad* and *Trouw* have the highest circulation rate in the Netherlands (*Dagbladen in 2019*, 2019).

The specific time frame (2014-2020) has been chosen because from of 2014 the anti-nuclear arms movement began to draw more attention to the nuclear arms issue, by starting the citizens' initiative against nuclear weapons (*Teken Tegen Kernwapens, n.d.*). This is also the year that the nuclear security summit, the largest international summit ever held in the Netherlands, was held (NOS, 2014). All news items in these five newspapers with a core content about nuclear weapons were analyzed; in other words, as mentioned before, it includes 'traditional' news articles, editorials, columns, etc. In particular editorials and columns are also important to analyze, because they are more likely to persuade the reader of a specific opinion or point of view, rather than having the intention of informing them. An entire article (one news item) was seen as the unit of analysis (Dirikx & Gelders, 2010). All news items with a title referring to nuclear weapon(s) or atomic bomb(s) were initially investigated, thus not only those articles referring to the Dutch nuclear arms debate.

The dataset was obtained from LexisNexis Uni (NexisUni). Within NexisUni, news items were selected on the basis of three criteria: (1) the word 'kernwapen' (nuclear weapon), or 'atoombom' (atomic bomb), or a word with one of the two terms in it (for instance, nuclear arms race, nuclear weapons treaty or nuclear strike), needs to be mentioned in the title; (2) the selected timeframe is 2014-2020; and (3) it needs to be a news item in one of the five main newspapers. An exploratory investigation showed that *NRC Handelsblad* and *Trouw* had the largest number of news items (news article, editorial, column, etc.) referring to nuclear weapons in the title (in both cases, 55 times over the past seven years), followed by *de Volkskrant* (40), *De Telegraaf* (25), and *Algemeen Dagblad* (24) – combined, a total of 199 news items were selected to analyze.

4.4 Operationalization

As said, NexisUni was used to select the news items and create the dataset. Within the database, the news items were selected along the following steps:

1. Search for 'headline (kernwapen! or atoombom!)'. By placing an exclamation mark behind 'kernwapen' and 'atoombom', all words containing 'kernwapen' or 'atoombom' are selected. Dutch words as 'kernwapenverdrag' (nuclear weapon treaty), 'kernwapenwedloop' (nuclear arms race) and VN-kernwapenverbod (TPNW) are therefor also included in the dataset.
2. Select newspapers: *NRC Handelsblad*, *Trouw*, *de Volkskrant*, *AD/Algemeen Dagblad*, and *De Telegraaf*
3. Select the time frame: 01/01/2014 until 31/12/2020

For analyzing the selected newspapers, two matrices were used: the first one for a quantitative analysis, the second for a qualitative one. The next section explains the content of these two matrixes and how they have been used for detecting the frame within the news items. This is followed by a section explaining how the perspectives were coded and analyzed.

4.4.1 Frame matrices

As stated previously, Semetko & Valkenburg (2000) designed five media frames (conflict, human interest, attribution of responsibility, economic consequences and morality), which can be traced by posing questions to the news item. The questions are asked for the entire news item, including all written texts, images and graphs (Linstrom & Marais, 2012). They formulated three to five yes-or-no question for each frame, for example, 'Does the article reflect disagreement between parties, individuals, or groups?' (conflict), or 'Does the story suggest that some level of government is responsible for the issue or problem?' (attribution of responsibility) (Semetko & Valkenburg, 2000, p. 98). In total, twenty questions have been formulated to detect which frame is most dominant; these questions are included in Figure 4.1.

The analysis is based on all twenty questions; three to five questions have been formulated for each frame. These questions were 'asked' to each news item. If more than two questions are answered with 'yes', it means that the frame is represented in the news item. It is possible of course that more than one frame appears in one news item. A Cronbach's Alpha and a Principal Component analysis with Varimax Rotation used to determine whether the questions actually cluster into the five generic frames. It might be, for example, that one frame hardly emerges in this study. Another possibility is that one of the formulated questions is often answered with 'no', while the other questions belonging to the same frame are answered with 'yes'. In that case, the corresponding question is omitted from the analysis and thus does not apply to this study. An example can be that the conflict frame does not 'refer to two sides or to more than one side of the problem or issue' (Q3). The Principal Component Analysis with Varimax Rotation contains a threshold of 0.50, which means that only items (questions) scoring higher than 0.50 are included in the analysis and are present in the corresponding frame. Values can range from 0.00 (meaning, the question not being present in the corresponding frame) to 1.00 (the question is present in the corresponding frame). The Cronbach's Alpha measures the internal consistency and reliability of each frame and its corresponding questions. Values can

again range from 0.00 (referring to a low internal consistency) to 1.00 (high internal consistency) (Semetko & Valkenburg, 2000).

Conflict frame

#1: Does the story reflect disagreement between parties/individuals/groups/countries?
#2: Does one party/individual/group/country reproach another?
#3: Does the story refer to two sides or to more than one side of the problem or issue?
#4: Does the story refer to winners and losers?

Human interest frame

#5: Does the story provide a human example or 'human face' on the issue?
#6: Does the story employ adjectives or personal vignettes that generate feelings of outrage, empathy, caring, sympathy, or compassion?
#7: Does the story emphasize how individuals and groups are affected by the issue/problem?
#8: Does the story go into the private or personal lives of the actors?
#9: Does the story contain visual information that might generate feelings of outrage, empathy, caring, sympathy or compassion?

Attribution of responsibility

#10: Does the story suggest that some level of government has the ability to alleviate the problem?
#11: Does the story suggest that some level of government is responsible for the issue/problem?
#12: Does the story suggest solution(so) to the problem/issue?
#13: Does the story suggest that an individual (or group of people in society) is responsible for the issue/problem?
#14: Does the story suggest that the problem requires urgent action?

Economic consequences frame

#15: Is there a mention of financial losses or gains now or in the future?
#16: Is there a mention of the costs/degree of expense involved?
#17: Is there a reference to the economic consequences of pursuing or not pursuing a course of action?

Morality frame

#18: Does the story contain any moral message?
#19: Does the story refer to morality, God, and other religious tenets?
#20: Does the story offer specific social prescriptions about how to behave?

Figure 4.1: Content analysis measure for frames (Semetko & Valkenburg, 2000)

To provide an issue-specific understanding of the above-mentioned frames, and also to detect (possible) new frames, a qualitative framing analysis was used. Figure 4.2 shows the frame matrix, which is the basis of the coding. For each news item, the matrix was filled in. First, the news item was analyzed for the reasoning devices, followed by the framing devices. In other words, the issue/problem, cause, solution, context and moral or emotional judgment, as described in the news item, were first noted (Gagestein, 2015). Next, the characteristic text elements and images of the news items were noted. It was determined how the reasoning and framing devices mainly occurred, and corresponded, for each generic frame. Regarding the news items that did not clearly correspond with one of the five generic frames, the establishment of new frame(s) was considered.

Elements	Frame
Reasoning devices	- Event (issue/problem, or situation) - Cause (or motivation) - Context of the event (issue/problem, or situation) - Moral & emotional judgement - Solution (what should one think or find?)
Framing devices	- Characteristic text elements - Characteristic images

Frames often refer to issues or problems, but that is not always the case. Therefore, the reasoning devices in the matrix are both worded in neutral and negative terms. A frame can obviously also have a positive character or perspective on the topic (Gagestein, 2015).

4.4.2 Coding of the perspectives

All perspectives were only deductively and quantitatively measured, based on a basic content analysis. The thematic and episodic perspectives were counted, based on a binary coding system. If the news article was mainly written from an episodic perspective, 'episodic' was coded as (1) (meaning present) – and thematic was coded as (0) (not present). If it was mainly written from a thematic perspective, 'thematic' was coded with (1) and 'episodic' as (0) (Boréus & Bergström, 2017). Only the dominant perspective in the entire news item was valued. If the news item was personalized, given a human face, focused on a single incident, a specific example or event, it was coded as episodic. An article was written from a thematic perspective if it was informational, based on trends and facts, or if the (nuclear arms) issue was placed within a historical, economic, geographical or political background. (Iyengar & Simon, 1993).

Likewise, the negative, positive and neutral perspectives (undertones) were simply counted on the basis of a binary coding system (Bacon, 2011). If an article mainly had a positive perspective, 'positive' was coded with (1); the same goes for a negative and neutral perspective, respectively. Again, only the dominant undertone of the news item was valued, with either (1) (present), which by consequence means the others were coded with (0) (not present). If the news item mainly had a pro-nuclear undertone, showing support for nuclear weapons, it was coded as positive. A news item was coded as negative if the undertone was mainly anti-nuclear. If a news item was neither pro-nuclear nor anti-nuclear (showing both sides, or being solely informational), it was coded as neutral (Culley et al., 2010). Figure 4.3 gives an overview of the approach and operationalization for answering each sub-question.

Sub-question	Approach to textual analysis	Operationalization
Q1: When the five Dutch newspapers reported about nuclear weapons, which generic frame(s) of Semetko & Valkenburg (2000) appear to be most dominant?	1. (Deductive) quantitative content analysis 2. (Inductive) qualitative framing analysis	1. Matrix 1 (Table 4.1) 2. Matrix 2 (Table 4.2)
Q2: In addition to the five frames generic frames of Semetko & Valkenburg (2000), do other frames appear in the five newspapers analyzed?	3. (Inductive) qualitative framing analysis	3. Matrix 2 (Table 4.2)
Q3: Which perspectives of Iyengar (1990) and Bacon (2011) emerge most strongly within the frames, in the five newspapers analyzed?	4. (Deductive) quantitative content analysis: counting the dominant perspective per news item	4a. Binary coding system (counting) 4b. Binary coding system (counting)

Figure 4.3: Analyses used to cover the sub-questions (source: author)

The news items were analyzed (coded) with the program Atlas.ti, in order to detect the frames and perspectives. The following items were included in the analysis:

1. Source: which newspaper
2. Kind of news item: news article / editorial / column, etc.
3. Date

4. Section: national / international
5. Frames by Semetko & Valkenburg: binary coding system on the basis of 20 questions, quantitative approach to detect the generic frames
6. Frames: framing elements matrix, qualitative approach to detect new frames, and giving an issue-specific understanding of the (generic) frames
7. Positive, negative or neutral undertone: binary coding system
8. Episodic or thematic perspective: binary coding system.

The news items were thus analyzed using a mixed-method approach and coded on the basis of the eight items listed above in Atlast.ti. The quantitative analyses were conducted using SPSS and the qualitative ones using Atlas.ti. The following chapter discusses the results of the analyses – and thus of this study.

Chapter 5: Results

This chapter discusses the results of this framing study. Each section answers one of the sub-questions to answer the main question: '*Which frames(s) and perspectives are (most) dominant in the coverage of nuclear weapons in the five largest Dutch newspapers between 2014 and 2020?*' First of all, the frames of Semetko and Valkenburg (2000) are discussed, determining which frame is most dominant. The following section discusses if other, new frames are presented and whether there is a difference in reporting between articles on the Dutch nuclear weapons and articles on (other) nuclear weapon states. In the final section of this chapter, the episodic and thematic perspectives are presented, as well as whether the articles are mainly written with a positive, negative or informative undertone.

A total of 164 articles have been analyzed. Originally, 199 articles with the word 'nuclear weapon' or 'atomic bomb' in the title were published in one of the five largest Dutch newspapers between 2014 and 2020. However, 35 articles were deleted because they had no connection with nuclear weapons. The distribution of the deleted documents is as follows: *NRC Handelsblad* 9, *Trouw* 11, *de Volkskrant* 7, *De Telegraaf* 4 and *Algemeen Dagblad* 4. In such articles, the word 'nuclear weapon' or 'atomic bomb' did appear in the title, but the main focus was laid on a different subject, or it was used as a metaphor for a different problem, which the article then discussed. Although no distinction is made between the five newspapers in answering the main question, it is important to note that the articles are not equally distributed across the newspapers. *Trouw* and *NRC Handelsblad* published twice as many articles about nuclear weapons (46 and 43 articles, respectively) as *Algemeen Dagblad* and *De Telegraaf* (20 and 21 articles).

In analyzing the articles, in addition to identifying the frames and perspectives, two aspects were taken into account. First, a distinction has been made between articles that cover the Dutch nuclear weapons debate (national) and those articles that address the situation or issues around nuclear weapons elsewhere (international). Just over a third of the articles (39.0%) concerned the Dutch nuclear weapons debate and were therefore coded as national, which obviously means that a majority of the articles (61.0%) were coded as international. Another distinction that has been made is between opinion pieces and news articles. The majority of the articles were news articles (65.2%), the remainder (34.8%) being opinion pieces.

5.1 Frames

This section answers the first sub-question: '*In reporting about nuclear weapons, which generic frame(s) as defined by Semetko & Valkenburg (2000) appear to be most dominant in the respective newspapers?*' Before discussing which frame appears to be the most dominant, it is important to verify whether the questions formulated by Semetko and Valkenburg cluster into the same frames. To verify this, two tests were performed in SPSS: a Principal Component analysis with Varimax Rotation, and one to determine Cronbach's Alpha.

A so-called Principal Component analysis with Varimax Rotation on the 20 questions was conducted to determine to what extent these reflect underlying dimensions. The results of this analysis are presented in Figure 5.1. This analysis yielded a factor solution in which the framing questions clustered into four distinguishable frames: conflict, human interest, responsibility, and morality. The value for each question can range from 0.00 (meaning, not present in the corresponding frame) to 1.00 (present in the corresponding frame). In this study, a factor threshold of 0.50 was maintained. That means, if a factor value exceeded this threshold, then this question was included within the corresponding frame (Semetko & Valkenburg, 2000). As Figure 5.1 shows, a couple of questions did not meet the threshold, depicted in grey in the figure. Question 4 ('Does the story refer to winners and losers?') was therefore not included in the conflict frame, question 9 ('Does the story contain visual information that might generate feelings of outrage, empathy-caring, sympathy, or compassion?') was left out of the human interest frame, while question 11 ('Does the story suggest that some level of government is responsible for the issue/problem?') and 13 ('Does the story suggest that an individual (or group in the society) is responsible for the issue-problem?') were not included in the responsibility frame.

	Factors				
	1	**2**	**3**	**4**	**5**
	Conflict	*Human interest*	*Responsi-bility*	*Morali-ty*	*Econo-mic*
Conflict frame					
#1 – Does the story reflect disagreement between parties/ individuals/groups/countries?	**.741**	.149	.160		
#2 – Does one party/individual/group/country reproach another?	**.625**	.114	.125	-.338	.162
#3 – Does the story refer to two sides (or more) of the problem or issue?	**.723**	.158	-.163		-.254
#4 – Does the story refer to winners and losers				-.148	
Human interest frame					
#5 – Does the story provide a human example or 'human face' to the issue?		**.928**	-.139	.155	
#6 – Does the story employ adjectives or personal vignettes that generate feelings of outrage, empathy-caring, sympathy or compassion?		**.870**	-.182		
#7 – Does the story emphasize how individuals and groups are affected by the issue/problem?		**.829**	.186		
#8 – Does the story go into the private or personal lives of the actors?		**.835**	-.274		
#9 – Does the story contain visual information that might generate feelings of outrage, empathy-caring, sympathy, or compassion?		.207		.366	
Responsibility frame					
#10 – Does the story suggest that some level of government has the ability to alleviate the problem?	.127	-.126	**.684**		-.121
#11 – Does the story suggest that some level of government is responsible for the issue/problem?	.172	-.130	.180	-.251	.238
#12 – Does the story suggest solution(s) to the problem/issue?	-.214	-.121	**.778**		
#13 – Does the story suggest that an individual (or group in the society) is responsible for the issue-problem?					
#14 – Does the story suggest the problem requires urgent action?	.110		**.728**		-.116
Morality frame					
#18 – Does the story contain any moral message?	-.190	.283	.133	**.612**	.324
#19 – Does the story make reference to morality, God, and other religious tenets?			-.164	**.788**	-.141
#20 – Does the story offer specific social prescriptions about how to behave?	-.128			**.801**	
Economic consequences frame					
#15 – Is there a mention of financial losses or gains now or in the future?			-.108		**.709**
#16 – Is there a mention of the costs/degree of expense involved?					**.715**
#17 – Is there a reference to economic consequences of pursuing or not pursuing a course of action?	-.380	-.105			

Figure 5.1: Results of the Principal Component analysis with Varimax Rotation for the 20 framing items of Semetko & Valkenburg (source: author)

The three questions related to the economic consequences frame did not cluster. This means that #15-#17 were answered with 'yes' at times, but that it was rare for all three questions to be answered with 'yes' in one article. Only #15 and #16 exceeded the threshold of 0.50 and clustered into the economic responsibility frame. However, this frame is not included and discussed further in the results section, because the Cronbach's Alpha is very low (0.231), and thus has a very low internal consistency and reliability. In addition, not once does the frame occur as the dominant frame of an article. In other words, not enough articles have been written from this perspective to be able to say anything conclusive about it.

Figure 5.2 gives the results of the Cronbach's Alpha analysis, which supports the results of the Principal Component analysis with Varimax Rotation. The Cronbach's Alpha was used to measure the internal consistency for the five frames. This analysis shows that the questions of the human interest frame have the highest internal consistency, the economic consequences frame the lowest. The Cronbach's Alpha's of the conflict and responsibility frame are probably slightly distorted as these frames often co-occur. This is also reflected in Cronbach's Alpha of #10, #11, #12, #14 (responsibility), #1 and #2 (conflict). This means that the responsibility frame correlates strongly with #1 and #2 of the conflict frame. Section 5.1.3 elaborates further on the co-occurrence of these two frames.

Frame	Cronbach's Alpha	If #… is left out of the analysis	Cronbach's Alpha
Conflict	0.539	#4	**0.628**
Human Interest	0.852	#9	**0.895**
Responsibility	0.510	#11 and #13	**0.649**
Economic	0.211	#17	**0.231**
Morality	**0.653**	#19	0.637
Responsibility + conflict	#1, # 2, #10, #11, #12 and #14		**0.609**

Figure 5.2: Cronbach's Alpha for the frames of Semetko & Valkenburg (source: author)
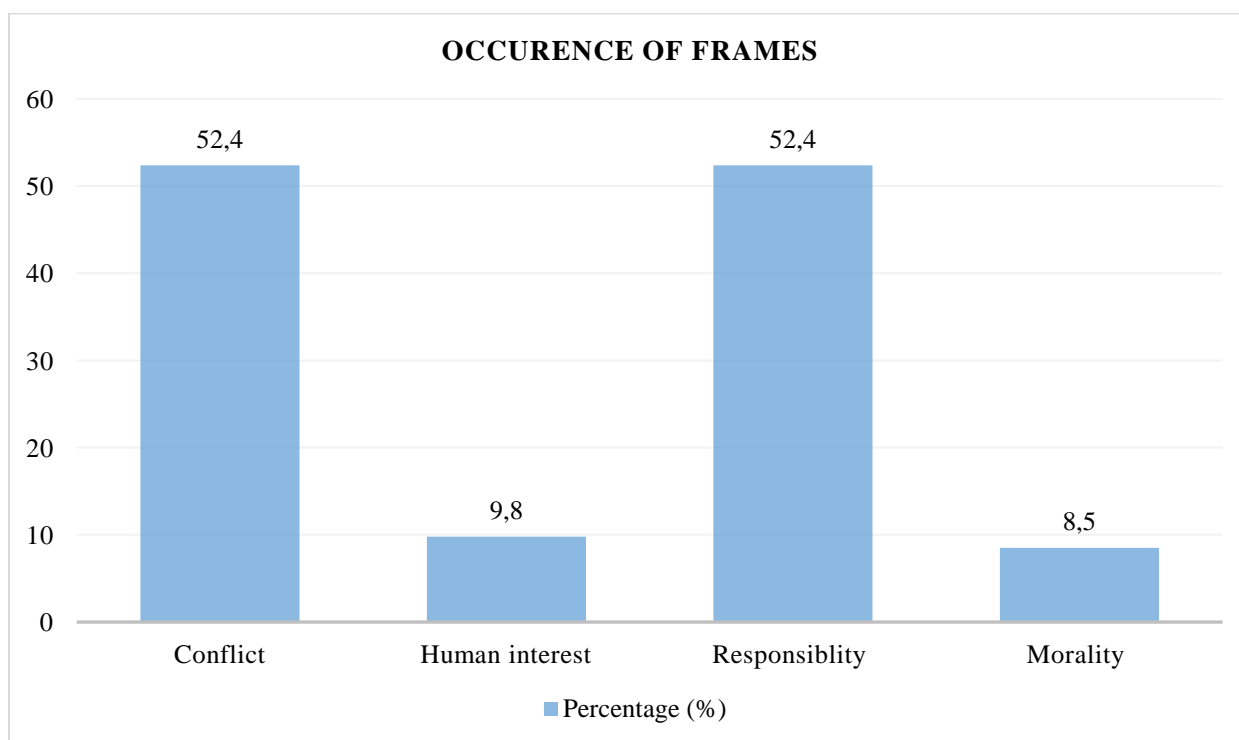
Figure 5.3: Occurrence of the five frames of Semetko & Valkenburg (source: author)

As said, a frame occurred in an article when two or more corresponding questions were answered with 'yes'. As Figure 5.3 shows, a total of 202 frames were counted within the 164 documents. Thus, in many articles, more than one frame appears; in fact, this was the case in 58 out of 164 articles. The responsibility frame and the conflict frame appear side by side most often in the analyzed newspapers, in total in 40.2% of the articles. This is not surprising, since most articles are written from the perspective of one of these two frames. The responsibility and conflict frames appear to be most dominant, in 52.4% (86 out of 164) of the articles. The human interest and morality frames are underexposed and appear in just 18.3% (combined total) of the articles (in 30 out of the 164 articles). The following sections elaborate on the four frames and describe how often they emerge, and also which nuclear weapons issues are predominant within the frames.

5.1.1 Conflict frame

As mentioned, the conflict frame appears in more than half of the articles. Such a frame in an article implies that it mentions disagreement between two or more countries or groups. Articles mostly refer to both sides of the story, discussing the positions of both sides and giving examples of the accusations being made on both sides (Semetko & Valkenburg, 2000). An example of the nuclear conflict between countries, and the accusations being made, is shown in an article from *de Volkskrant* from 2018:

> "*Iran, according to Israel, has been secretly developing nuclear weapons, despite all previous denials.*" (Lanting: Israël zegt bewijs te hebben voor kernwapenproject Iran, *de Volkskrant*, 1 May 2018)

Since such a frame often shows both sides of the story, it is not surprising that more than half of the articles containing the conflict frame (57.0%) are written with a neutral undertone and are solely informational. This frame is thereby predominantly written from a thematic perspective (89.5%). The disagreements between individuals, groups or countries are thus placed within a historical, geographic or political perspective, it gives a broader scope of the problem (Iyengar & Simon, 1993).

Elements - Conflict frame	
Reasoning devices	
Event	Nuclear weapon states/leaders
	Nuclear weapon treaty
Cause	Nuclear weapon development / modernization
Context	Geopolitics
Judgement	Geopolitical development
Solution	International agreement(s)
Framing devices	
Arguments	Nuclear disarmament
Descriptions	Nuclear strategy
Word choice	Power
Images	World leaders

Figure 5.4: Conflict frame – qualitative analysis (source: author)

Figure 5.4 show the results of the qualitative analysis for the conflict frame. The framing devices are explicitly presented in the text. It is mainly about arguments given, descriptions and word choice. The reasoning devices are more implicit, it is about the event of the article, the given cause and context, the moral or emotional judgements that are made, and the given solutions to the problem or event (Gagestein, 2015). It is important to note that not every article gives a solution. In these cases, the 'action perspective' was examined (what should one do or think?).

The events mostly referred to in the conflict frame are the disagreement between or actions of nuclear weapon states and/or leaders, more specifically disagreement between or statements of Kim Jung-Un, Trump and Putin. Another event often referred to are nuclear weapon-related treaties (for instance, INF treaty, New START, Singapore Summit, Joint Comprehensive Plan of Action), and more specific, withdrawal from or non-compliance with a treaty. The actions or statements of nuclear weapon states and /or leaders and nuclear weapon treaties are thus the most covered topics in articles written from the conflict frame. An example of this is an article from *AD* in 2016, which describes how tensions are rising and how North Korea is responding by having its nuclear arsenal on high alert, ready to fire:

> "*North Korean forces must be ready to launch nuclear weapons 'at any time' [...] Kim's statement follows after new sanctions against his country.*" (''Jung-Un: klaar voor kernwapens'', *Algemeen Dagblad*, 4 March 2016)

Reasons to write about this subject (the cause) are the development and/or modernization of nuclear weapons, or nuclear weapon testing by one of the nuclear weapon states. The articles primarily give a geopolitical context to the situation. It explains the nuclear arms race, the tension between countries and/or individuals, the (economic) sanctions in response to nuclear weapon testing and development, or it describes the consequences of withdrawal from a treaty. Judgements are made about the current geopolitical developments,

mainly about the nuclear threat posed by the actions in question. The given solution is that new or stricter international agreements, a summit, or the extension of current treaties are necessary to solve the conflict between nuclear weapon states and its leaders.

Each article describes a topic or gives arguments for or against the issue. Framing devices show that articles in which the conflict frame appear, either give arguments for nuclear disarmament or describe the nuclear strategy of nuclear weapon states' leaders. The nuclear strategy of Kim Jung-Un or Trump is described most often. These descriptions or arguments often use words related to power, such as 'threat'. Commonly used images are of world leaders, for example of Kim Jung-Un (Figure 5.5).

Figure 5.5: North Korea leader Kim Jong-Un (source: Lanting: N-Korea moet kernwapens binnen een jaar opgeven, *de Volkskrant*, 2 July 2018)

Another characteristic image attached to the conflict frame is, for example, an image of Israeli Prime Minister Netanyahu. The image (Figure 5.6) shows the prime minister giving a presentation on Israeli television about Iran's secret nuclear developments. Netanyahu accuses Iran of expanding its nuclear program.

Figure 5.6: Prime minister Netanyahu on Israeli television (source: Lanting: Israel zegt bewijs te hebben voor kernwapenproject Iran, *de Volkskrant*, 1 May 2018)

To sum up, the conflict frame is mainly about the disagreement between nuclear weapon states, or about withdrawal from a nuclear weapon treaty. The accusation is often that one of the parties has caused the problem, by not complying with a treaty or by developing or modernizing nuclear weapons. These articles are mostly informational (thematic and neutral), show both sides of the story and give a deeper understanding of the geopolitical issue.

5.1.2 Human interest frame

The human interest frame only appears in 9.8% of the articles. The articles in which this frame does appear are often long and written from a different perspective than the conflict frame. They provide a 'human face' to the issue, employ adjectives that generate feelings of compassion, and emphasize how individuals and groups are affected (Semetko & Valkenburg, 2000). It is therefore not surprising that it is the only frame mainly written from an episodic perspective (81.3%), it goes into people's life stories and lets them speak. It is thereby predominantly written with a negative undertone (75.0%).

Elements – Human interest frame	
Reasoning devices	
Event	Hiroshima/Nagasaki
Cause	Second World War
Context	Consequences nuclear weapons
Judgement	Consequences nuclear weapons
	Take action
Solution	Nuclear disarmament
Framing devices	
Arguments	Nuclear disarmament
Descriptions	Hiroshima / Nagasaki
Word choice	Hiroshima / Nagasaki
Images	Victim or survivor

Figure 5.7: Human interest frame – qualitative analysis (source: author)

Figure 5.7 show the results of the qualitative analysis for the human interest frame. As said, this frame focuses on the bombing of Hiroshima and Nagasaki in 1945. The reason for writing about this subject can be the commemoration of the bombing (70 or 75 years), the death of a survivor or veteran, or the Second World War. In the given context, reference is made to the consequences of nuclear weapons. For example, the human suffering of survivors or the consequences of the radioactive radiation of nuclear bombings. Phrases to describe the bombing of Hiroshima and Nagasaki are for example 'blackened landscape' and 'hell'. The articles thus focus on the personal stories of victims and emphasize how bad the situation was, by using words like 'smell of burned meat':

> *"There were injured people lying everywhere, with terrible burns. The suffering of women and children stayed with Ronald the most. For a long time, he did not want to eat roast meat because it reminded him of the smell of all the corpses that were cremated on the spot."* (Velthuis: Harde vechtersbaas smelt na atoombom, *Trouw*, 10 December 2018).

To show empathy, images of victims of the bombing or of survivors are shown. Examples are the following images of Hiroshima after the bombing and pictures of wounded victims during an exhibition marking the 75th anniversary of the commemoration of Hiroshima and Nagasaki.

Figure 5.8 (left): Hiroshima Nagasaki exhibition (source: Hoekema: Stilte over kernwapens is Russisch roulette, *de Volkskrant*, 6 August 2020)

Figure 5.9 (right): Hiroshima after the bombing (source: ''Help kernwapens de wereld uit'', *Trouw*, 6 August 2018)

Moral and emotional judgements are made about the bombings of Hiroshima and Nagasaki, condemning them by describing the humanitarian consequences of nuclear weapons or by stating that the use of these weapons is not ethical. Another common judgement within this frame is that actions are needed, for example, that one should hold on to the ambition of nuclear disarmament or that one should take the lead in the fight against nuclear weapons. Articles in which the human interest frame emerge, therefore give arguments for nuclear abolition or describe what survivors experienced during the bombings in 1945. The only solution to

ensure that no one has ever to experience anything like the victims of Hiroshima and Nagasaki is nuclear disarmament. The total elimination of nuclear weapons is the solution and it can be achieved by spreading the story of victims, advocating non-violence or activism, and through treaties. For example, a Hiroshima survivor suggests in *NRC Handelsblad* that a nuclear-free world can only be achieved through treaties:

> "*Behind him is the Peace Museum. He has never been inside, Murakami tells us. He doesn't want to see the pictures of mutilated Hibakusha. The museum advocates for peace and a nuclear-free world. Does he think he will live to see that? Murakami shakes his head [...] Much will depend on international arms control treaties.*" (van der List: Na 75 jaar gaan de kinderen van Hiroshima eindelijk praten, *NRC Handelsblad*, 6 August 2020)

5.1.3 Responsibility frame

The responsibility frame occurs in 52.4% of the analyzed articles, by coincidence exactly the same as the conflict frame. This already answers the first sub-question: '*In reporting about nuclear weapons, which generic frame(s) as defined by Semetko & Valkenburg (2000) appear to be most dominant in the respective newspapers?*' This frame suggests that some level of government can alleviate the problem, gives solutions to the problem and requires that urgent action is needed. It is primarily written from a thematic perspective (90.7%) and has a negative (61.6%) or neutral (33.7%) undertone. The responsibility frame often appears in articles about the Dutch nuclear weapon issue, with 47.7% of the responsibility frames occurring in articles coded as 'national'.

Most of the articles are written from either a conflict or a responsibility frame; in total 126 out of 164 articles (76.8%) were coded as containing a conflict and/or responsibility frame(s). They, therefore, have a lot of similarities. There are 66 articles (40.2%) in which both the conflict frame and the responsibility frame occur, in more than half of the time the responsibility frame is the dominant one. This means, for example, that within these articles three questions from the responsibility frame were answered with 'yes' and two questions from the conflict frame were answered with 'yes'. In other words, the responsibility and conflict frame appeared to be most dominant. In cases where both frames co-occur, the responsibility frame is dominant over the conflict one.

Elements – Responsibility frame	
Reasoning devices	
Event	Nuclear weapon treaty (s)
	Nuclear weapon states/leaders
Cause	Nuclear weapon development / modernization
Context	Geopolitics
Judgement	Negative
Solution	International agreement(s) or treaty(s)
Framing devices	
Arguments	Nuclear disarmament / treaties
Descriptions	Nuclear weapon development
Word choice	Negative consequences nuclear weapons
Images	World leaders

Figure 5.10: Responsibility frame – qualitative analysis (source: author)

Figure 5.10 show the results of the qualitative analysis for the responsibility frame. The main issue or event within the responsibility frame are nuclear weapon treaties and nuclear weapon states and/or leaders. In comparison to the conflict frame, the responsibility frame addresses nuclear weapon treaties more often than nuclear weapon states and/or leaders. It suggests, for example, that withdrawal from the INF treaty and/or the START treaty creates a problem that needs to be resolved quickly and it is the responsibility of one of the states' leaders to do so. The cause of the problem is nuclear weapon development or modernization, because of which a treaty is violated. To give a deeper understanding of the problem, the issue is placed within a geopolitical context. This context is needed to explain the actions of nuclear weapon states' leaders. The judgements about the actions of nuclear weapon states are negative and suggest, for example, that these

actions are a mistake or dangerous. An example is former Soviet leader Gorbachev making a judgement about president Trump's action to withdraw from the INF treaty:

> "*According to Gorbachev, Trump is 'making a mistake'. We should not withdraw from existing disarmament agreements under any circumstances.*" (van Zon: Gorbatsjov betreurt Trumps nieuwe kernwapenstrategie, *Algemeen Dagblad*, 24 October 2018)

The solution is to extend existing treaties or the establishment of new international agreements. The establishment of such treaties and agreements is, again, of urgency and governments of nuclear weapon states are responsible for making it happen. An example of highlighting the urgency of the issue is shown *de Volkskrant* in 2018:

> "*This is the first time the U.S. government has mentioned a timetable for the 'complete denuclearization' of the Korean peninsula. Trump reached an agreement with North Korean leader Kim Jong-Un in Singapore last month.*" (Lanting: N-Korea moet kernwapens binnen een jaar opgeven, *de Volkskrant*, 2 July 2018)

Words to describe the urgency of the problem, and also to describe why governments should solve the problem, are that nuclear weapons are 'destructive' and 'inhumane'. The responsibility frame gives arguments for nuclear disarmament or arguments to sign, negotiate or preserve treaties (mainly TPNW and the INF treaty). In addition, it gives descriptions of nuclear weapon deployment or modernization. Common images (see below) are of (former) world leaders, for example of US president Reagan and Gorbachev signing the INF treaty.

Figure 5.11 (left): Reagan and Gorbachev singing the INF treaty (source: van Zon: Gorbatsjov betreurt Trumps nieuwe kernwapenstrategie, *Algemeen Dagblad*, 24 October 2018)

Figure 5.12 (right): Reagan and Gorbachev (source: Duurland: Zo makkelijk verdwijnen die kernwapens niet, *Trouw*, 10 October 2018)

5.1.4 Morality frame

The remaining frame is the morality frame, which is the least prevalent and only occurs in 8.5% of the articles. The morality frame contains a moral message, makes references to morality and offers specific social prescriptions on how to behave. This frame is more difficult to trace, because moral aspects are often implicitly mentioned in newspapers, which more often than not tend to be objective (Semetko & Valkenburg, 2000). This frame is predominantly thematic (85.7%) and has a negative undertone (78.6%).

Elements – Morality frame	
Reasoning devices	
Event	Nuclear weapon investment
Cause	Sustainable investment
Context	Anti-nuclear weapons (changes in society)
Judgement	Consequences nuclear weapons
Solution	Nuclear disarmament (sustainable investment)

Framing devices	
Arguments	Nuclear disarmament (sustainable investment)
Descriptions	x
Word choice	Consequences nuclear weapons
Images	x

Figure 5.13: Morality frame – qualitative analysis (source: author)

Exactly half of these articles are about the Dutch nuclear weapon issue and coded as 'national'. This is also reflected when examining the qualitative interpretation of this frame. Figure 5.13 shows the results of the qualitative analysis of the morality frame. The main event or issue addressed with this frame is nuclear weapon investments by banks or other financial actors. The reason to write about this issue is the shift from nuclear weapon investment to sustainable investment by actors like the Dutch pension fund ABP. This means that these institutions will no longer invest in nuclear weapons. The given context, or reason to undergo this sustainable transition, are the changes in society. In this frame, the main focus is on the investments of pension funds ABP and APG, as also mentioned in *NRC Handelsblad*:

> "*According to Erik van Houwelingen of the Investment Policy Committee, there has been 'a dilemma' for some time. Pension members and employers were having more and more difficulty with the investments. That is why APG is now measuring its own investments against a new yardstick. Investments that meet four criteria (such as 'are by definition harmful to people') are now excluded*." (''Beleggen ABP stapt uit tabak en kernwapens'', *NRC Handelsblad*, 12 January 2018)

Judgements are made about the consequences of nuclear weapons, which are simply not ethical. Words used to emphasize this are 'inhumane' and 'immoral'. The solution for actors like ABP logically lies in no longer investing in nuclear arms and making the transition to sustainable investment. This frame, therefore, gives a description of what sustainable investment looks like and arguments for no longer investing in nuclear weapons.

5.2 Dutch nuclear arms debate

This section answers the second sub-question: '*In addition to the five frames of Semetko & Valkenburg (2000), do other frames appear in the five newspapers analyzed?*' To answer this question, the articles in which none of the frames of Semetko and Valkenburg could be found, were examined once more. The articles were compared based on the so-called elements' matrix by Gagenstein, by looking at similarities between the framing and reasoning devices. There are just 18 articles (11.0%) in which none of the frames appears. However, no clear similarities were found based on the element matrix. In general, it concerned articles in which brief information was given about, for example, the revelation of nuclear weapons being stored at the military base in Volkel, or of a demonstration, or that the Minister of Foreign Affairs Koenders called upon the international community to stick to the ambition to dismantle all nuclear weapons. A notable similarity, however, was that more than half of the articles without a frame related to the Dutch nuclear arms debate (61.0%). This means that 17.2% of the articles coded as 'national' do not contain a frame of Semetko & Valkenburg. Because this research tries to identify how newspapers discuss nuclear weapons in general, but more specifically the Dutch nuclear arms debate, this section goes into more detail on how the latter is reflected in the analyzed articles.

In general, two elements are noticeable about articles concerning the Dutch nuclear arms debate. First of all, opinion pieces most often focus on the Dutch nuclear weapon debate; 54.4% of the opinion pieces are also coded as 'national'. News articles, on the other hand, more often focus on nuclear weapons elsewhere: 69.2% of the articles are coded as 'international'. The second notable element is that in particular opinion pieces about the Dutch nuclear arms debate have a negative undertone; it being the case in 80.7% of the opinion pieces coded as 'national'. Figure 5.14 show the results of the qualitative analysis of articles coded as 'national'. The next two sections discuss these results, looking at news articles (with as the main topic: sustainable investment) and opinion pieces (with the main issue being: the responsibility of the Dutch government).

Elements – Dutch nuclear arms debate		
Reasoning devices		
	Sustainable investment	*Responsibility*
Event	Nuclear weapon investment	Dutch nuclear weapons
Cause	Companies / banks (ABP)	Citizen initiative Dutch government
Context	Sustainable investment	Nuclear-sharing task
Judgement	Consequences nuclear weapons	Dutch policy Take action
Solution	Sustainable investment	Negative towards nuclear sharing
Framing devices		
Arguments	Sustainable investment	TPNW National nuclear weapon ban
Descriptions	x	Dutch nuclear weapons debate Demonstration(s)
Word choice	Consequences nuclear weapons	Consequences nuclear weapons
Images	x	Demonstration(s)

Figure 5.14: Dutch nuclear arms debate – qualitative analysis (source: author)

5.2.1 Sustainable investment

One topic that is presented in news items coded as 'national' is investment in nuclear weapons (by banks and pension funds). Not surprisingly, this overlaps with the morality frame; exactly half of the articles with the morality frame are news articles coded as 'national'. This also includes the transition of (financial) actors like the pension fund ABP to sustainable investments. Reports indicate that nuclear weapons, and therefore nuclear weapon investments, are outdated, given the changes in society as these weapons are seen as immoral and unethical.

Other covered subjects in news articles on the nuclear arms debate are the revelation of the nuclear weapons being stored at Volkel airbase and the wish for more transparency on nuclear weapons and their modernization. The first is about a NATO report in which it is accidentally revealed that American nuclear weapons are stationed at Volkel. These articles are thematic and informational, and therefore do not (often) express an opinion on the debate.

5.2.2: Responsibility of the Dutch government

In addition to the morality frame, the responsibility frame frequently appears in articles about the Dutch nuclear arms debate. The responsibility frame appears to be most dominant when looking at articles coded as 'national', appearing in two-thirds (64.0%) of these articles. Especially opinion pieces place the responsibility for disarmament on the Dutch government and call on to sign the TPNW, or they call for a national nuclear weapon ban. An example of this can be found in an opinion piece in *de Volkskrant* in 2016, in which mayors of several Dutch cities call upon the government for a national nuclear weapons ban:

> "*We, mayors of very diverse municipalities and political parties, therefore call on our government to show during the debate that it is serious about protecting its population. A national ban on nuclear weapons shows that besides words, the Dutch government is also prepared to take action.*" (Blasé et al.: Stel nationaal verbod o kernwapens in, *de Volkskrant*, 20 April 2016)

As mentioned before, these articles have primarily a negative undertone. The events of opinion pieces coded as 'national' thus often refer to Dutch nuclear weapons. The reason to write about this subject can be the citizen initiative against nuclear weapons, or because individuals or groups want to put pressure on the Dutch

government. These articles provide context on the nuclear-sharing task and the Dutch role in it. Here, judgements are made about Dutch policy, for example, that the disarmament process is too slow, that more transparency is needed or that the government has double standards by trying to be a 'bridge builder'. An example of such a judgement, by politicians, towards the Dutch government can be found in *NRC Handelsblad*:

> "*It is remarkable that in other countries a more open discussion on the nuclear issue is possible […] It is time to be more transparent and leave this secrecy behind us.*" (Servaes & Sjoerdsma: Zeg eerst eens waar die kernwapens liggen, *NRC Handelsblad*, 29 January 2014)

Other judgements are that the government should hold on to the ambition of nuclear disarmament or that the Netherlands should take the lead in this process. What one has to do or think, is having a negative attitude towards nuclear weapons. The solutions are, for example, unilateral disarmament or a national nuclear weapon ban. Arguments are therefore given for signing the TPNW or striving for a national nuclear weapon ban, while descriptions are about the context of the Dutch nuclear arms debate or demonstrations at Volkel.

To sum up, overall, articles about nuclear weapons do fit within the frames as suggested by Semetko and Valkenburg, but no new frames emerge. When looking at articles coded as 'international', the conflict and responsibility frame are most dominant, whereas in case of articles coded as 'national', the responsibility frame is most dominant, mainly focusing on the Dutch government to disarm.

5.3 Perspectives

This section presents the results of the perspectives and answers the final sub-question: '*Which perspectives of Iyengar (1990) and Bacon (2011) emerge most strongly within the frames, in the five newspapers analyzed?*' For each article, it was coded whether it has an episodic or thematic perspective and whether it has a negative, positive or neutral undertone. Only the main perspective of Iyengar and Bacon was counted; in other words, an article cannot be coded as both episodic and thematic.

5.3.1 Episodic and thematic perspectives

Of the 164 articles, 142 were coded as thematic and 22 as episodic, which means that the vast majority (86.6%) of the articles provide a geographical, political or historical context to the subject. These articles are thus primarily informative and based on general trends and factors (Iyengar & Simon, 1993). Articles with a thematic perspective bring in nuclear weapons history or explain the nuclear weapons strategies of the superpowers. It provides for example information on the establishment of the INF treaty or gives geopolitical context to the tensions between nuclear weapon states. Especially the conflict and responsibility frame have a thematic perspective. A good example of a thematic approach can be seen in *AD*'s 2018 article 'Gorbachev laments Trump's new nuclear arms strategy'. This article answers and discusses questions about the INF treaty, and president's Trump's announcement to withdraw from it. The questions are as follows: what is the INF treaty?; why does Donald Trump want to withdraw?; what is the Russian response?; are Trump's accusations true?; is there a chance of a new nuclear arms race? (Hans van Zon: Gorbatsjov betreurt Trumps nieuwe kernwapenstrategie, *Algemeen Dagblad*, 24 October 2018). It provides a geopolitical context and in answering these questions, informatively illustrates how tensions are rising between the two nuclear weapon states. When thematic articles cover the Dutch nuclear arms debate, additional explanation is often given about the nuclear-sharing task or the current situation. This is also reflected in an article by *de Volkskrant*, in which members of parliament explain why they want openness about nuclear weapons in the Netherlands:

> "*Against the estimated 150 U.S. nuclear weapons stored in a number of European countries, Russia has between 1,500 and 2,000 sub-strategic nuclear arms (short and medium range), according to NATO estimates. The nuclear weapons in the Netherlands are meant for deterrence.*" (Brouwers: Kamer wil info over kernwapens, *de Volkskrant*, 4 July 2020)

The thematic perspective is supported, although at a bare minimum, by maps or graphs to explain the general trends and nuclear strategies. These maps and graphs show the number of nuclear weapons by country or

visualize the arguments for and against nuclear weapons. Even though these maps and graphs are not commonly used, it is an important difference compared to the episodic perspective, which mainly shows images of individuals. Figure 5.15 shows a map that supports the informative, thematic approach in an article written from the conflict and responsibility frame. It uses a map showing the number of nuclear weapons per country to explain why it is important for the START treaty to continue to exist.
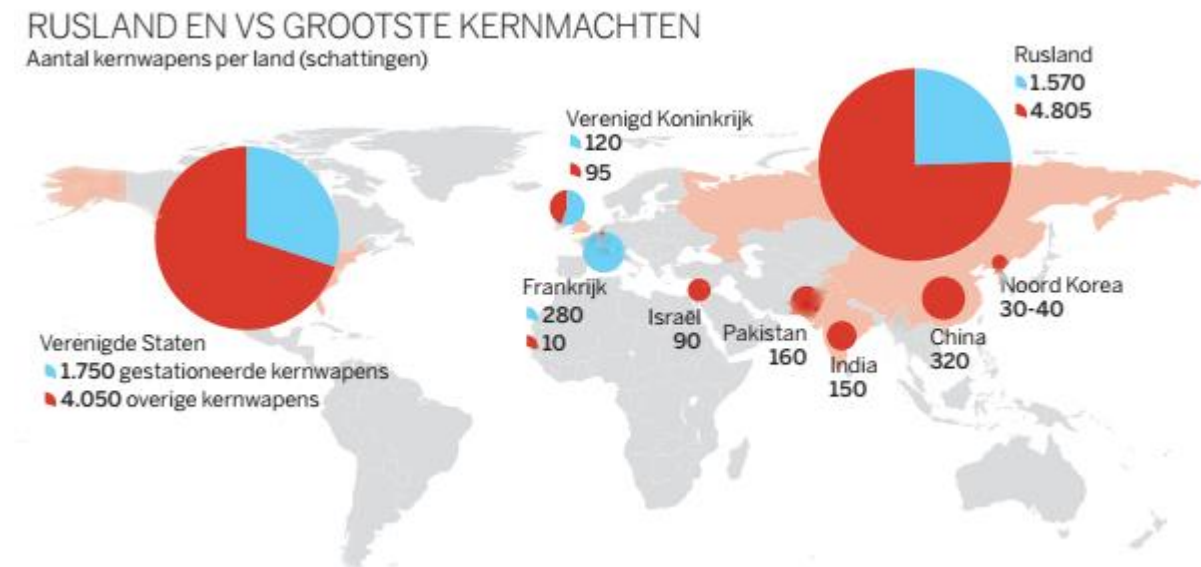
Figure 5.15: number of nuclear weapons per country (source: Brouwers: Het allerlaatste kernwapenverdrag, *de Volkskrant*, 24 June 2020)

Figure 5.16 shows characteristic (albeit blurred) images used in articles written from the episodic perspective. These are mainly images of victims and survivors of Hiroshima and Nagasaki. By using such images, the personal stories are supported by – literary – a human face. This perspective is rather event-oriented, focusing on a single incident, a specific example or event (Van Gorp, 2007). The personal stories and single incidents, are most commonly about the bombing of Hiroshima and Nagasaki. Survivors describe the situation at the time, just like the following quote:

> "*The skin was hanging from their bodies and their hair was carbonized. All they could say was, 'water, water'. I went and got water from the well and gave it to two people. Immediately they collapsed and died. Only later did I learn that we should not have given them water. I was in shock. I blamed myself for their deaths. That trauma lasted for more than ten years.*" (Visser: Kernwapens veroorzaken angst die je nooit meer loslaat, *de Volkskrant*, 6 August 2020)

The human interest frame is the only frame that offers primarily an episodic perspective (in 81.3% of the cases). This is not surprising, since this frame puts a 'human face' to the issue.

Figure 5.16: Images of a Hiroshima survivor (source: Velthuis: Harde vechtersbaas smelt na atoombom, *Trouw*, 10 December 2018)

5.3.2 Pro-nuclear, anti-nuclear and informational

This section presents the results of the positive, negative and neutral undertones in the news items analyzed. It discusses the dominant undertone(s) and gives an overview of the perspectives' distribution by frame. Figure 5.17 shows the distribution of all perspectives (thematic, episodic, neutral, negative and positive) by frame. As discussed in the previous section, in general, the thematic perspective is most dominant. However, looking at the distribution by frames, the episodic perspective is a much stronger presence in the human interest frame than the thematic perspective. Figure 5.17 thus shows that a negative and neutral undertone are most dominant. Especially the human interest and morality frame are anti-nuclear.
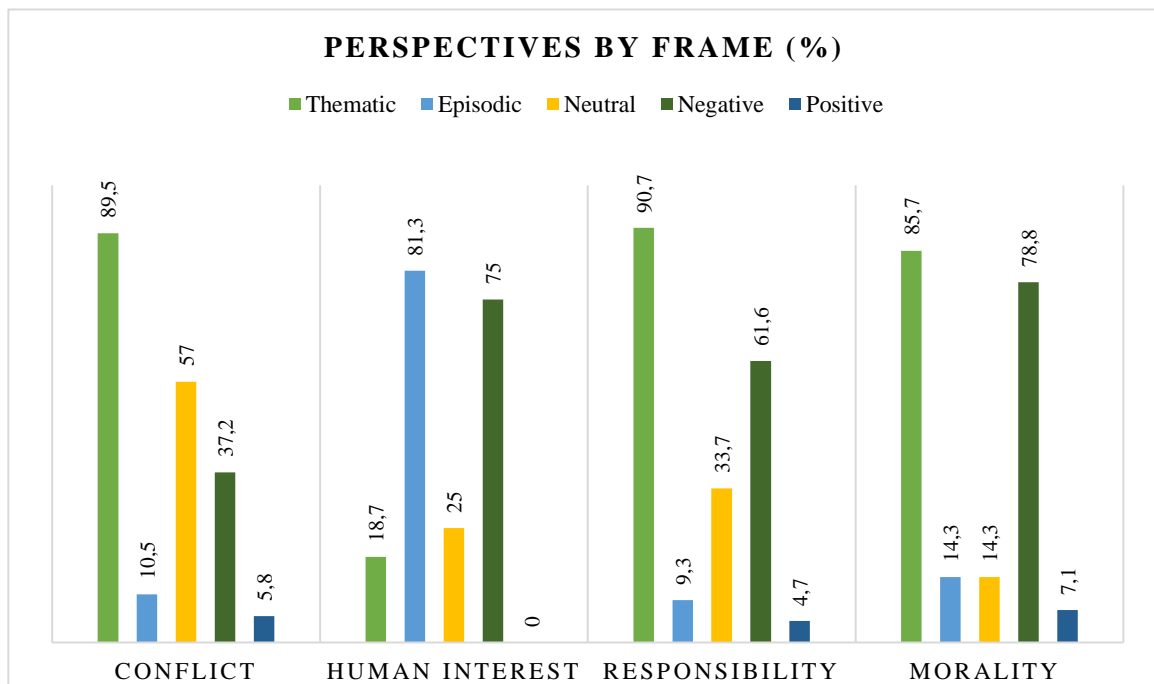
Figure 5.17: Perspectives by frame in percentages (source: author)

Of the 164 articles, 10 were coded as positive, 79 as negative and 75 as neutral. Pro-nuclear articles (positive) rarely appear, most of the articles are anti-nuclear (48.2%) and informational (45.7%) in character. The assumptions were that the conflict frame would be most neutral and the human interest frame most negative. The results of this study show that both assumptions are correct. Especially the human interest frame and morality frame have a negative undertone. In both frames, more than 75.0% of the articles are anti-nuclear. This differs from the conflict and responsibility frame, where the conflict frame has a primarily neutral undertone and is more informative (in 57% of the cases). The responsibility frame is mostly written with a negative undertone (in 61.6% of the cases). Thus, compared to the other frames, the conflict frame is written mainly with a neutral undertone, while the other frames mainly have a negative undertone. Generally speaking, articles coded as 'national' are more often written from a negative perspective than articles coded as 'international'. When looking at opinion pieces coded as 'national', this becomes even clearer: 80.7% is anti-nuclear. In these articles, citizens, politicians and activists call on the government to take responsibility for disarmament or transparency about the Dutch nuclear arms.

Anti-nuclear articles state that nuclear disarmament is necessary or condemn the current geopolitical developments, where treaties are violated and the constant threat of nuclear weapon states. An example of an article with a negative undertone, condemning the actions of nuclear weapon states, is an article from *de Volkskrant* from 2017. In this article a nuclear weapon activist visits Volkel airbase to reminisce about the large-scale nuclear arms demonstrations of the 1980s, in which he also gives his opinion about the current situation:

> "*What I think is the biggest scandal is that all nuclear powers are in constant violation of the non-proliferation treaty (NPT). They have promised to reduce the numbers, but they are not doing it.*" (Heijmans: Kernwapens: Wie is er nog bang voor de bom?, *de Volkskrant*, 7 March 2017)

Pro-nuclear articles state that these weapons are still necessary for securing safety, especially because of the constant threat of nuclear weapon states. Even though there are only 10 articles with a positive undertone, they have a clear message: nuclear weapons are still important and a European army with nuclear arms should even be a top priority (Frank Ankersmit: Europees leger met eigen kernwapens is topprioriteit, *de Volkskrant*, 5 Februari 2019). Another example of an article with a positive undertone, focusing on the nuclear-sharing task, is an article in *De Telegraaf*. This article suggests that, even though there has been a fierce debate about the modernization of nuclear arms in Germany, Chancellor Merkel already knew that modernizing and keeping nuclear arms would be the only and best option:

> "*Yet, Merkel had already told the Americans (through advisor Cristoph Heusgen) in deepest secret that it was actually nonsense to remove the nuclear weapons from the Federal Republic of Germany, while Russia still has thousands of them. Recently the Chancellor asked: wouldn't the balance and security be jeopardized?*" (Savelberg: Rumoer rond nucleaire bom: Duitsland krijgt krachtigere kernwapens, *De Telegraaf*, 22 September 2015)

Informational articles are more descriptive and give, for example, an explanation of nuclear weapon treaties, developments and disagreements – where both sides of the story are told. Especially articles from the conflict frame highlight disagreements by showing both sides of the story, or describe the current tensions between nuclear states. Articles from the responsibility frame are more likely to describe the current geopolitical situation and events. These articles give, for example, an analysis of the current situation concerning nuclear arms by supporting their arguments with numbers, figures and studies. Similarly, an article by *Trouw* argues that states are not investing in expanding their nuclear arsenal, but that they are investing in modernizing it. This article supports this claim with the following facts:

> "*Once again, the world's nuclear arsenal is declining. Last year, the eight nuclear powers (U.S., Russia, U.K, France, Pakistan, India, Israel and North Korea) collectively held 14,935 nuclear weapons. That is a decrease of about 3% from 2016, reports the International Institute for Peace Research (Sipri). However, all countries continue to put a lot of money into modernizing their arsenals. 'It implies that the nuclear powers have no intention of surrendering their nuclear arms for the time being,' says researcher Shannon Kile.*" (''Minder kernwapens in de wereld maar wel veel krachtiger'', *Trouw*, 4 July 2017)

Thus, to conclude, the articles are predominantly written from a thematic and negative or neutral perspective. However, this does not apply to every frame, with the human interest frame being the main exception: these articles are almost exclusively anti-nuclear and episodic in character. The next chapter, the conclusion and discussion, elaborates on the results as it discusses the main research question and sub-questions and gives context to the findings of this study.

Chapter 6: Conclusion and discussion

This final chapter elaborates on the results and findings of this study. The first section answers the various sub-questions, followed by the answer to the main research question of this study: '*Which frames(s) and perspectives are (most) dominant in the coverage of nuclear weapons in the five largest Dutch newspapers between 2014 and 2020?*' The second section gives meaning to the findings, it provides context: what do the results imply and how do they relate to the literature study? The final two sections discuss the limitations of this study, gives recommendations for further research, and discusses the societal and scientific impact of this research.

6.1 Research questions

This section answers the three sub-questions of this research and the overall research question. It discusses which generic frame(s) as defined by Semetko & Valkenburg (2000) are most dominant in the analyzed news items (Q1), if other frames appear in the news items (Q2) and which are the dominant perspectives within the frames (Q3). The answers to the three sub-questions are listed below:

> **Q1**: *In reporting about nuclear weapons, which generic frame(s) as defined by Semetko & Valkenburg (2000) appear to be most dominant in the respective newspapers?*

The conflict and responsibility frame both appear in 52.4% of the analyzed news items, making them the dominant frames. Both appear exactly in the same amount of news items: 86 out of 164. Relevant question #4 (does the story refer to winners and losers?) did not meet the threshold of 0.50 and thus did not correspond with the conflict frame. The same applies to #11 (does the story suggest that some form of government is responsible for the issue/problem?) and #13 (does the story suggest that an individual or group in society is responsible for the issue/problem?) of the responsibility frame. The conflict frame and responsibility frame often appear side by side within one article. This co-occurrence primarily concerns #1, #2, #10, #11, #12 and #14, as reflected in the relatively high Cronbach's Alpha score of 0.609. When looking at the articles coded as 'national', the responsibility frame is most dominant, appearing in 64.0% of these news items.

> **Q2**: *In addition to the five frames of Semetko & Valkenburg (2000), do other frames appear in the five newspapers analyzed?*

In reporting about nuclear weapons, no new frames emerge in the five largest Dutch newspapers, besides the frames of Semetko & Valkenburg. There were some articles (18 out of 164) that did not contain a frame. However, no apparent correlations and connections could be found between these articles. Nonetheless, a notable similarity was that more than half of the articles (61.0%) of the articles without a frame related to the Dutch nuclear arms debate.

> **Q3**: *Which perspectives of Iyengar (1990) and Bacon (2011) emerge most strongly within the frames, in the five newspapers analyzed?*

The vast majority (86.6%) of the analyzed articles provide a geographical, political or historical context to the subject; they are written from a thematic perspective. The exception to this is that in the human interest frame, as the only one, the episodic frame emerges most strongly. When looking at the perspectives of Bacon (2011), it appears the articles are primarily written from an anti-nuclear (48.2%) or neutral (45.7%) perspective. The conflict frame is most neutral and the morality and human interest frame are the most negative towards nuclear arms.

Based on the three sub-questions, the main research question of this study can now be answered: '*Which frames(s) and perspectives are (most) dominant in the coverage of nuclear weapons in the five largest Dutch newspapers between 2014 and 2020?*'

When reporting about nuclear weapons in the five largest Dutch newspapers, between 2014 and 2020, the conflict and responsibility frame are the most dominant ones. Looking at this entire study, news items are predominantly written with a thematic view and have a neutral or anti-nuclear undertone. A difference between the two dominant frames is that the conflict frame is more neutral than the responsibility frame, the latter being more anti-nuclear in character. A similarity is that both frames offer a strong thematic view on

the subject. Another difference is that the responsibility frame, in comparison to the conflict frame, more often covers the Dutch nuclear arms debate.

6.2 Media framing of nuclear weapons, public opinion and social movements

Ever since the existence of nuclear arms, there is an ongoing debate between proponents and opponents of such weapons. Proponents focus on the political-military function and believe that nuclear arms are important for (inter)national security and maintenance of the status-quo (Van der Meer, 2019; Colijn, 2019). Opponents rather focus on an ethical reality, believing that nuclear weapons should be eliminated and that the consequences of these weapons are too dangerous and harmful to people and nature (Van der Meer, 2019; Borrie, 2014). This rather clear division between supporters and opponents can also be seen in the Dutch nuclear arms debate. Where some argue that the Netherlands should sign the TPNW and actively work towards disarmament (Van Oostwaard & Frank), others think that the nuclear-sharing task still has an important function given the current geopolitical situation (Borrie, 2014).

An upswing in the attention for the Dutch nuclear arms debate can be noted, mainly due to the TPNW and the modernization of the U.S. nuclear weapons at Volkel airbase (Van Oostwaard & Frank, 2019). Nuclear weapon activists are waging a fierce battle in this regard, and strongly argue that the Netherlands should withdraw from its nuclear-sharing task. A boost for the anti-nuclear weapons movement was arguably the Dutch participation in the TPNW negotiations as a result of a citizens' initiative (*Teken Tegen Kernwapens*, n.d.). However, it is notable that, where the Netherlands, in comparison with the other nuclear-sharing states, during the 1980s used to have the largest number of opponents, while nowadays it has (once more in comparison) the least (Fihn, 2018). Moreover, peace groups nowadays have a hard time attracting people to their demonstrations (De Vries, 2019); striking, since the largest Dutch demonstrations ever held were against cruise missiles and nuclear warheads (NOS, 2010).

A question that arises therefore is: why is the Dutch situation so different, as compared to other, more or less similar states? An explanation for this might be found in the way the media frame, and thereby shape, the nuclear arms issue. This research determined which image of nuclear weapons dominates in the largest (Dutch) newspapers, with the ultimate goal of getting to a better understanding of how this dominant image might have influenced the public opinion about the Dutch nuclear arms debate. The assumption is that determining the most commonly used media frames and perspectives in newspapers, the results of which are described in Chapter 5, can contribute to a better understanding of the (changes in) public opinion (and activism) on nuclear arms, since these media frames can influence the opinions of individuals (Vossen, Van Gorp & Schulpen, 2016; Gamson & Modigliani, 1989).

6.2.1 Media framing of nuclear weapons and public opinion

This section elaborates on the impact of media framing of nuclear weapons (in newspapers) on the public opinion of this issue. The conflict and human interest frame are most likely to influence public opinion, Especially the conflict frame (being the dominant frame), which focuses on the disagreement between nuclear weapon states' leaders, can have an impact. The conflict frame is, in general, widely used in news media (Kim & Wanta, 2018). The assumption was therefore that newspapers will use this frame quite frequently in portraying the nuclear arms debate, especially when it comes down to the debate between politicians; the discussion between supporters and opponents; and the different viewpoints of the Dutch government and activists. However, as the results of this study show, the conflict frame is not widely used in discussing the Dutch nuclear arms debate. It is mainly used to address the international tensions and conflicts between nuclear armed states. Within Dutch newspapers, the conflict frame primarily addresses the disagreements and conflicts between nuclear weapons states and the geopolitical situation, threats and withdrawal or violations of international treaties.

Academics often argue that the conflict frame simplifies the complex content of a political debate. It is more often than not a rather superficial representation of the various diverging perspectives, since it places the different parties diametrically opposed to each other. In other words, this frame often lacks nuance and in-

depth information (Kim & Wanta, 2018). This research shows however that the conflict frame does try to give more 'in-depth' information by providing context to the issue. For example, by describing why there is a disagreement between presidents Trump and Putin, or what the consequences of economic sanctions or a withdrawal from a specific treaty are. However, such a frame does tend to 'simplify' the issue. It places nuclear weapon states and its leaders directly opposed to each other, highlighting the threats and disagreements and/or conflict, or highlighting the chances of a renewed nuclear arms race. Readers might feel repelled by the tensions and threats as presented in the Dutch newspapers, and therefore want to keep the U.S. nuclear weapons; disarming in times of geopolitical turmoil would be unwise. This could – eventually – weaken the support of opponents in opinion polls. On the other hand, frequent exposure to news items containing a conflict frame might strengthen those favoring disarmament and international treaties; the idea sinks in that the current situation is becoming (too) dangerous. This than should make the number of opponents rise in the opinion polls (Kim & Wanta, 2018).

It should be noted that exposure to two-sided (informational) messages, such as news items containing the conflict frame, will most likely have a longer-lasting impact than explicit anti-nuclear messages, since it does leave readers with the feeling that they are well informed and can make their own judgements about the issue (Bizer, Larsen & Petty, 2010). Based on the results of this study, it is difficult to determine the direct influence of neutral and negative undertones on nuclear weapon opinion polls. It is, however, noteworthy that hardly any of the news items have been written from a positive perspective. In other words, readers are not directly pushed into a pro-nuclear direction, which would lead to the conclusion that there is no increase in the number of people in favor of the nuclear-sharing task in opinion polls.

The second frame with an ability to influence public opinion is the human interest frame. An assumption was that the human interest frame would also show up strongly in news items about nuclear weapons, as opponents (activists) have tried to get a fair amount of media attention for this frame. It is a perspective that the opponents (activists) are committed to and which they prefer to push in their fight against nuclear weapons (Borrie, 2014). Frequent exposure to the stories of victims of Hiroshima and Nagasaki creates empathy and a 'moralized' understanding of (political) issues or debates (Gross, 2008). Eventually, it can lead to a stronger anti-nuclear image. This can, in turn, lead to more opponents of nuclear arms in the Netherlands and might, eventually, lead to more activism (Lovold, 2020). The human interest frame offers a perspective, unlike the conflict or responsibility frame. However, this research shows that this frame and image are underexposed in the analyzed newspapers. Thus, it is unlikely that Dutch citizens (in the form of readers of newspapers) are frequently exposed to this perspective. This can lead to citizens who have little (or less) understanding of the humanitarian consequences of nuclear weapon use and therefore may not feel comfortable in pressuring the government on a path towards disarmament. The assumption is that mainly young people, who did not experience the Cold War themselves, should be more exposed and 'open' to this frame, to become opponents of nuclear weapons and gain affinity with the issue – eventually showing in mobilization and demonstrations. It is important to note that young people read printed newspapers less often and obtain information more often through social (or online) media (*Mediamonitor 2019*, 2019). It is therefore important to examine, for example in follow-up research, whether the human interest frame is also underexposed in online media content. However, Dutch people (including the young) are thus more frequently exposed to the image of increased threats and disagreement between nuclear armed states, at the same time by nuclear weapons activists and some politicians calling upon the Dutch government to disarm. In combination, this can lead – as argued before – to the notion that disarmament is the responsibility of the government and as a result, citizens may have less engagement with this issue and debate.

To sum up, the conflict and human interest frame have the ability to influence public opinion on nuclear arms. Readers of Dutch newspapers are more frequently exposed to the conflict frame than the human interest frame. The conflict frame could weaken, paradoxically also strengthen opponents of nuclear weapons. It is however difficult to determine, solely on the basis of this research, how it exactly influences public opinion, let alone, to what extent. More obvious is the absence of the human interest frame – depicting one of the main perspectives of the anti-nuclear movement. This is striking, since such a frame can arguably contribute to a strengthened anti-nuclear image.

6.2.2 Media framing of nuclear weapons and social movements

In looking at the influence of media framing and the anti-nuclear weapon movement, the responsibility frame shows up strongly when it comes to geopolitical developments among nuclear armed states. This frame addresses the responsibility of nuclear weapon states and its leaders to not withdraw from international treaties, and/or to actually disarm. In addition, this frame appears most dominant when looking at news items on the Dutch nuclear arms debate or the nuclear-sharing task. Responsibility is placed on the government to be more transparent about the nuclear warheads deployed at Volkel airbase, to actively strive for disarmament, or to sign the TPWN. Two assumptions were made about the responsibility frame in Dutch newspapers in covering nuclear weapons; the first being that such a frame is frequently visible and the second, that the government is primarily held responsible for solving the nuclear arms issue since it needs to sign disarmament treaties and is the one who can do something about the problem.

Holding the government responsible for solving the problem is crucial for understanding the news coverage of the (nuclear arms) debate, since it can have a strong influence on the mobilization of citizens (Kim & Wanta, 2018). This frame can strongly influence the 'attribution of treatment responsibility': who or what should solve the problem and has the power to alleviate the issue? (Iyengar & Simon, 1993; Iyengar, 1996). When faced with threatening problems that can be solved however, people will be motivated to change their behavior and take action. However, when the threat seems to be greater than the ability to do something about it, it can lead to resignation and passiveness. Thus, by frequently holding the government responsible for solving the nuclear arms issue, citizens may feel that it is a problem beyond their control (Dirikx & Gleders, 2010). Since the responsibility frame is dominantly present in Dutch newspapers when covering the (Dutch) nuclear arms issue, it is likely that Dutch citizens feel like it is not in their power to influence, let alone solve the issue, or to get actively involved in the debate.

A vast majority of the news items analyzed are written from a thematic perspective. Such a thematic perspective shows abstract information, which triggers fewer emotions than an episodic perspective. The thematic perspective is therefore less persuasive and has less effect on the individual (Gross, 2008). Frequent exposure to the (Dutch) nuclear weapon issue, when a broader context is given, can lead to the public focusing on social and political responsibility for solving the problem (Iyengar, 1996); it is the politician's and governments' job to choose the right policy. It can thus lead to the public holding the government responsible for solving the nuclear arms issue and to disarm. However, it can also lay trust in the government for taking adequate decisions in its nuclear arms policy. This can, just like the responsibility frame, lead to passive and less involved citizens (Gross, 2008; Iyengar, 1993).

Finally, most articles are written with a negative or neutral undertone. Especially opinion pieces focus on the Dutch nuclear arms issue and often have a strong anti-nuclear perspective. Exposure to a predominantly anti-nuclear perspective can strengthen social movements, because it intensifies cynicism about the ones responsible for the issue, primarily the government (Schuck & De Vreese, 2006). However, if there is too much negativity, it can make citizens too cynical and demotivate them to mobilize – again, just like the responsibility frame (Bizer & Petty, 2005).

6.3 Limitations and recommendations

This section first reflects on the scientific and societal relevance of this study. Next, it addresses the limitations of this research and suggests recommendations for follow-up research.

It is important to mention the scientific and societal implications of this research. This research is scientifically important because this is the first research that discusses the media framing of nuclear arms in the Netherlands, in the sense that the well-accepted frames of Semetko & Valkenburg have until now not been linked to this topic. In addition, it is the first study trying to link the results – in Dutch newspapers is a predominant emphasis on the (Dutch) government to disarm (responsibility frame) and the disagreements between nuclear armed states (conflict frame) – to (potential changes in) mobilization and opinion polls. As indicated in Section 1.2 (societal relevance), it is relevant for the government and politicians to be aware of the perspectives regarding their stance on the nuclear arms issue in news content. This research shows that politicians and the government are confronted with (quite a bit) of criticism towards their policy; in particular,

considering the strongly anti-nuclear opinion pieces in newspapers that try to pressure the Dutch government. Furthermore, it is also of interest to the anti-nuclear arms movement, including organizations like PAX and the Red Cross, to gain more insight into the media framing of nuclear weapons. If civil society, peace organizations and activists want more people to mobilize and public opinion to become more anti-nuclear, they need to provide a complementary perspective to the dominant picture in the Dutch newspapers. For example, they can focus (even stronger) on the human interest and morality frame, and make sure these perspectives reach citizens better. In addition, it is notable that the TPNW and the Dutch role in it received less attention than expected (and also less in comparison to events like the INF treaty), while the TPNW negotiations and the Dutch participation in it are seen as one of the great victories for the anti-nuclear arms movement (Borrie, 2014). Another focus point for actors in this field is to give citizens the idea that individuals can also do something about the nuclear arms issue themselves, and that it might be effective for individuals to pressure the government, or to take action in other ways. This can be important, since the dominant image of the nuclear arms issue in newspapers can lead to citizens who might feel that they cannot do anything about this issue, making them passive.

In this study, a mixed-method analysis was conducted. In doing so, the articles were first analyzed by asking questions to the text, to determine the five generic frames as formulated by Semetko & Valkenburg (2000). In addition, based on a framing matrix as formulated by Gagenstein (2015), each frame was provided with a qualitative interpretation. Based on the quantitative analysis as conducted in this study, more than one frame per news item may emerge. The conflict frame and responsibility frame emerged most strongly. The two frames overlap; both frames often appeared side by side in one news item. The results of the study might have been different if only one (dominant) frame per news item had been included in the analysis; in that case, one of the two frames might have ended up being more dominant than the other. However, it is assumed that both frames would still emerge as dominant, given that combined they came up in almost four out of five (76.8%) news items analyzed.

In addition, only the dominant perspective (as formulated by Iyengar and Bacon) per news item was coded and only one event, cause, solution (framing matrix of Gagenstein) was coded. Thus, looking back, it might have been more suitable if only the most dominant (generic) frame per article had been included in the analysis. However, this research still reached distinct results, in which the conflict and responsibility frame, in combination with a thematic perspective and a negative or neutral undertone, emerge most strongly. Distinctions could thereby still be made between the two dominant frames based on the qualitative analysis, which showed the different focus and perspectives of the two frames on the nuclear weapons debate.

Another limitation of Semetko & Valkenburg's method is that it analyses for generic frames and therefore an open and inductive analysis was needed to make it issue-specific. Because this study is partly inductive and was only conducted by one researcher, the results may be less objective and therefore more difficult to reproduce. Although the framing matrix of Gagenstein (2015) offers more structure (trying to increase the reliability and decrease the subjectivity), a deductive issue-specific analysis would increase the reliability of this study. However, the choice of the mixed-method analysis used in this study was made deliberately, because media framing studies focusing on (the Dutch) nuclear arms (debate) are scarce (read: non-existent) or outdated (such as Meyer (1995)).

Other limitations of this study can be found in the dataset. First, 'only' articles with nuclear weapon(s) or atomic bomb(ing) were included in the analysis. It might very well be that articles dealing with nuclear weapons, but which do not have the word nuclear weapon(s) or atomic bombing(s) in their title, were missed and were therefore not included in this study. In addition, articles with titles containing words as 'nucleaire tijdperk' (Atomic Age), 'VN-Verdrag' (UN Convention) and 'Nuclear Security Summit', were not included in the dataset. However, this most likely does not have much impact on the results, given the complete dataset consisted of 164 news items. The second limitation to this dataset is that this research is limited to newspaper items only and does not include other media outlets. To completely map the image about nuclear weapons portrayed by the media, other outlets, such as social media, television and radio, should also be examined. Online content in particular is an increasingly important source of information for Dutch citizens. This includes not only social media but also online news (such as NOS.nl or nu.nl). In particular young citizens gather their knowledge (and often opinion) from such online sources; nowadays, printed newspapers are

primarily read by people over fifty (*Mediamonitor 2019*, 2019). Follow-up research could therefore analyze (using the same methods) the dominant image of nuclear weapons in online (news) content and/or television. In combination with this research, more (if not all) layers of the population would be included, creating a more solid image of the media framing of (the Dutch) nuclear arms (debate). More concrete conclusions could then be formulated about the impact of media framing on the public opinion of nuclear arms.

Finally, content analyses, as used in this study, are well suited for making comparisons over time or with other countries. Follow-up research could therefore focus on one of these topics. By researching the dominant image of nuclear weapons in Dutch newspapers in the 1980s, a comparison over time could be made. On this basis, explanations can (possibly) be found for the changes in time in public opinion and the anti-nuclear movement in particular. This could be complemented by an interview-based study: in addition to the possible impact of the media (newspapers), why do people nowadays hardly demonstrate against nuclear arms? Furthermore, based on similar research (same method) in the other nuclear-sharing states, statements could be made about the differences and similarities in media framing (in newspapers) in these countries. This may help in explaining the difference in opinion poll numbers. This study gives information on the dominant image of nuclear arms in Dutch newspapers, and its impact on Dutch public opinion (and social movement). However, it is relevant to compare these results with the other nuclear-sharing states, to be able to explain why the anti-nuclear voice from the Netherlands is not as loud as in the other countries.

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Appendix I

Code tree 1: Event (reasoning device)

Code tree 1 is shown below. It concerns all codes and code groups for the 'events' (reasoning device). The numbers after the codes indicate how often a code or code group occurred in the analyzed documents.

Event

Anti nuclear weapons (12)
- Dwell on the issue (1)
- Day elimination[3] (1)
- Nobelprize (2)
- Demonstration Commemoration (5)
- Risk nuclear war (3)

Church (2)
- NW tradition (1)
- Pope franciscus (1)

Development (15)
- Detect development (1)
- Development (4)
- Modernization Strengthening (10)

Hiroshima Nagasaki (17)
- 70/75 years (2)
- Bombing Hir. & Naga. (11)
- Compensation (1)
- Half century after Cold War (1)
- Hibakusha certificate (1)
- Shinzo-Abe (1)

Nuclear sharing (7)
- Defense expenditures (1)
- Dutch NWs (10)
- EU NWs (7)
- F-35's (1)
- Germany own NWs (1)
- Secret NWs volkel (7)

Treaties (42)
- INF treaty (10)
- New START (2)
- Agreement Iran (5)
- Nuclear Security Summit (1)
- Signapore Summit (6)
- TPNW (13)
- UN Conference (5)

Sust.[1] Investment (8)
- NW investment (7)
- Report DBOTB (1)

NW[2] states and leaders (35)
- Iran (7)
- Kim Jong-Un / N-Korea[4] (12)
- NW states (1)
- Obama (2)
- Pakistan (1)
- Putin / Russia (6)
- Trump / USA (6)

Pro nuclear weapons (5)
- Nulcear free is utopia (3)
- NW for safety (2)

[1] Sustainable

[2] Nuclear weapon

[3] International Day for the Total Elimination of Nuclear Weapons

[4] North-Korea

Code tree 1: Event (reasoning device) (source: author)

Code tree 2: Cause (reasoning device)

Code tree 2 is shown below. It concerns all codes and code groups for the 'causes' (reasoning device). The numbers after the codes indicate how often a code or code group occurred in the analyzed documents.

Cause

Anti nuclear weapons (15)
- 50 ratifications TPNW (2)
- Changes in society (4)
- De-nuclearisation (6)
- Destructive force (3)

Church (3)
- Church (2)
- Speech UN conference (1)

Develop-ment (25)
- Modernization (6)
- New nuclear weapons (2)
- NW development (11)
- NW testing (6)

Second World War (21)
- 70/75 years (2)
- Bombing Hir. & Naga.[1] (6)
- Dead of a survivor / veteran (6)
- Japan surrendered (1)
- No education cruel history Japan (1)
- Visit Hiroshima (2)
- Second World War (3)

Nuclear sharing (18)
- Citizen initiative (8)
- Dutch government (8)
- JSF fighterjets (1)
- Nuclear function? (1)

Treaties (10)
- INF treaty (5)
- New START (1)
- TPNW (4)

Sust. Investment (7)
- Companies / banks (ABP) (6)
- Investment (1)

NW states and leaders (14)
- NATO (4)
- Russia (5)
- Trump / USA (5)

Pro nuclear weapons (5)
- Looser approach to NW (1)
- Nuclear deterrence (4)
- Regain power
- Threat

Geopolitics (22)
- Disagreement (8)
- Geopolitical tension (7)
- Not renouncing NW (2)
- Precondition: include China (1)
- Solve disagreement (3)
- USA doesn't lift sanctions (1)

Code tree 2: Cause (reasoning device) (source: author)

Code tree 3: Context (reasoning device)

Code tree 3 is shown below. It concerns all codes and code groups for the 'contexts' (reasoning device). The numbers after the codes indicate how often a code or code group occurred in the analyzed documents.

Context

Anti nuclear weapons (28)
- Ending NW testing (3)
- Freeze NAR[1] (2)
- ICAN (1)
- No fear (1)
- Activism (4)
- Nuclear disarmament (16)
- NW not (anymore) in movies (1)

Second World War (6)
- Japanese supremacy (3)
- Military veteran (2)
- Right to medical allowance (1)

Consequences NW (21)
- Environmental damage (1)
- Human suffering (16)
- Moral issues (1)
- Radioactive radiation (2)
- Risk of nuclear disaster (1)

Nuclear sharing (15)
- Citizen initiative (1)
- Dutch NW debate (2)
- No national NW ban (1)
- Nuclear sharing task (4)
- Public documents with evidence (1)
- Disclose EU nuclear weapons (3)
- Voting (TPNW) (3)

Sust. investment (5)
- ABP still invests (1)
- Sust. investment (4)

NW states and leaders (20)
- Israel (3)
- N-Korea (3)
- Trump's orders (1)
- Nuclear strategy (6)
- Russia (6)
- Trump's NW strategy (1)

Pro nuclear weapons (17)
- Controversial tweet (1)
- Hydrogen / nuclear bomb (1)
- National unrest (1)
- Not renouncing it's NWs (7)
- NWs for safety (1)
- Power (3)
- Uranium (3)

Geopolitics (45)
- (economical) Sanctions (7)
- Annexation Krim (3)
- Disagreement (3)
- Geopolitical conflict / tension (7)
- Hostilities USA (1)
- Last Russia / USA treaty (1)
- Nuclear arms race (18)
- Pressure (3)
- Supplier China (1)
- USA protects EU (1)

[1] Nuclear arms race

Code tree 3: Context (reasoning device) (source: author)

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Code tree 4: Judgement (reasoning device)

Code tree 1 is shown below. It concerns all codes and code groups for the 'judgements' (reasoning device). The numbers after the codes indicate how often a code or code group occurred in the analyzed documents.

```
                                    ┌──────────────┐
                                    │  Judgement   │
                                    └──────────────┘
```

Negative (33)
- Ambitious (2)
- Awkward (1)
- Criticism (4)
- Dangerous (3)
- Downward spiral (2)
- Excuses / sorry (3)
- Hard / difficult (5)
- Idiots (1)
- Mistake (5)
- No courage (2)
- Trouble (2)
- Unpredictable (3)

Take action (21)
- Holding to ambition (2)
- NW should be prohibited (1)
- Take action (9)
- Take the lead (7)
- Wake up country / politicians (2)

NW consequences (20)
- Humanitarian consequences (6)
- Human rights (1)
- Moral benchmark (1)
- NW not ethical (6)
- Risk of mistakes / disasters (6)

Dutch policy (17)
- Slow disarm.[1] process (4)
- Dilemma (2)
- Double standards (4)
- Hypocrite (1)
- More transparency (6)

NW states and leaders (8)
- Russia is weak (1)
- Accept NWs N-korea (1)
- Disarm. is responsiblity NW states (2)
- NW states don't ensure safety (3)
- Trump's NW obsession (1)

Pro nuclear weapons (10)
- Horrible but necessary (3)
- NW is guarantor for peace (1)
- NW discussion is outdated (1)
- NWs ensure safety (5)

Positive (7)
- Good result (2)
- Great job (1)
- Important (4)

Geopolitical development (19)
- Anti nuclear arms race (1)
- New Cold War (2)
- No or less of a threat (2)
- Nuclear threat (14)

Int. policy (22)
- Disarm. must be verifiable / shown first (2)
- Duty (2)
- Failed summit (1)
- No genuine agreement (3)
- Non compliance with agreement (8)
- No NW deplotment (2)
- Stricter sanctions (3)
- Wrong approach (1)

[1] Disarmament

Code tree 4: Judgement (reasoning device) (source: author)

Code tree 5: Solution (reasoning device)

Code tree 1 is shown below. It concerns all codes and code groups for the 'solutions' (reasoning device). The numbers after the codes indicate how often a code or code group occurred in the analyzed documents.
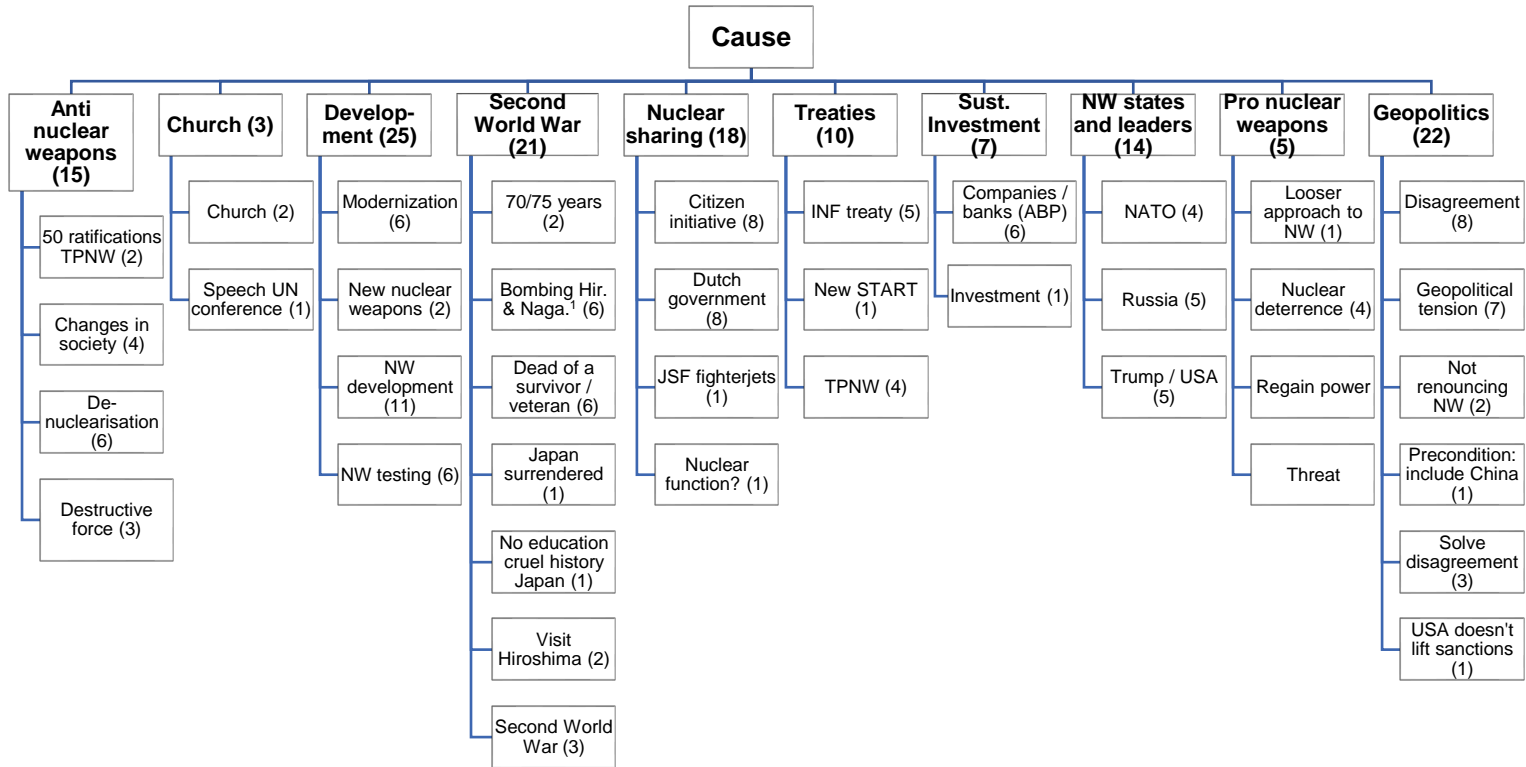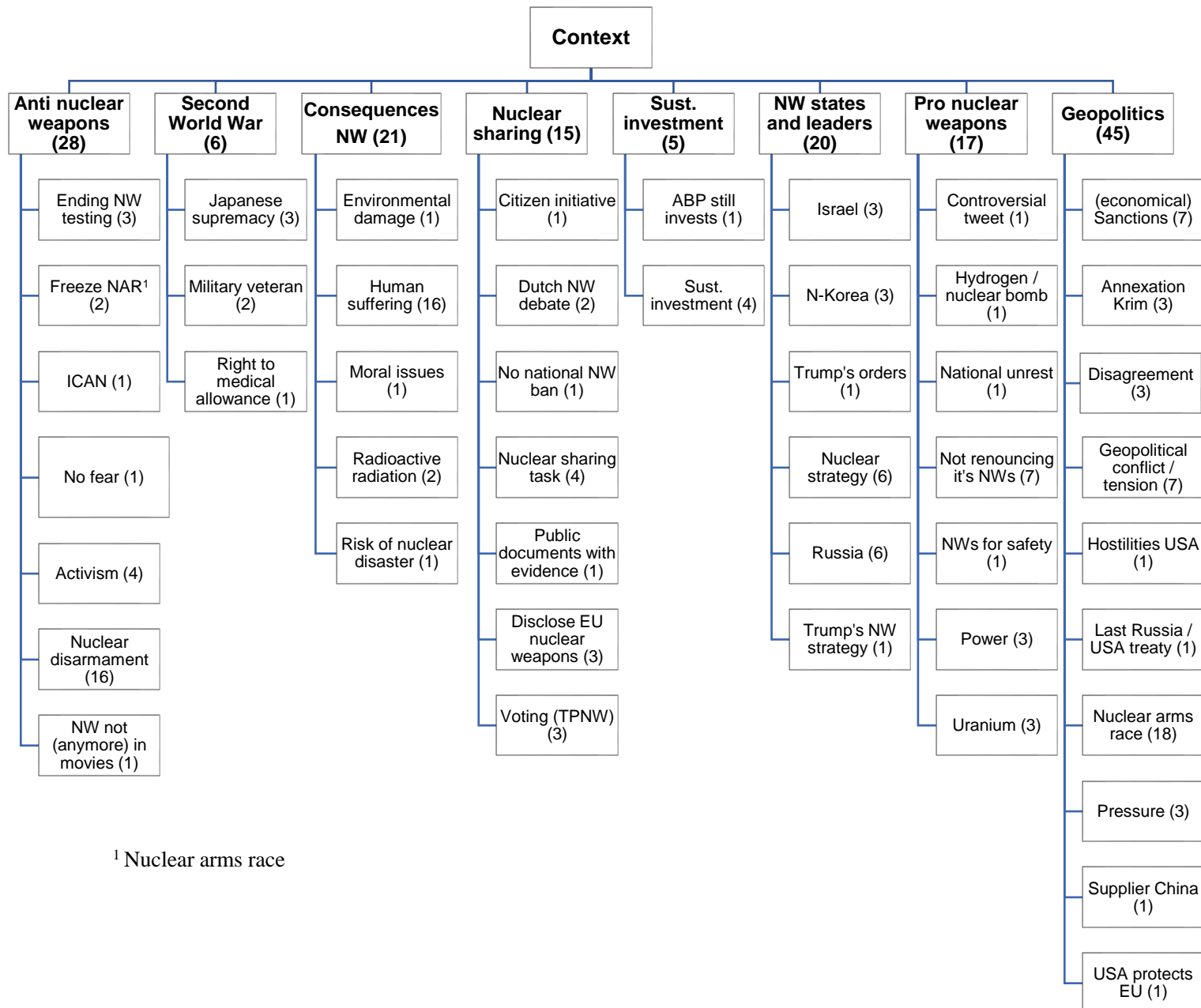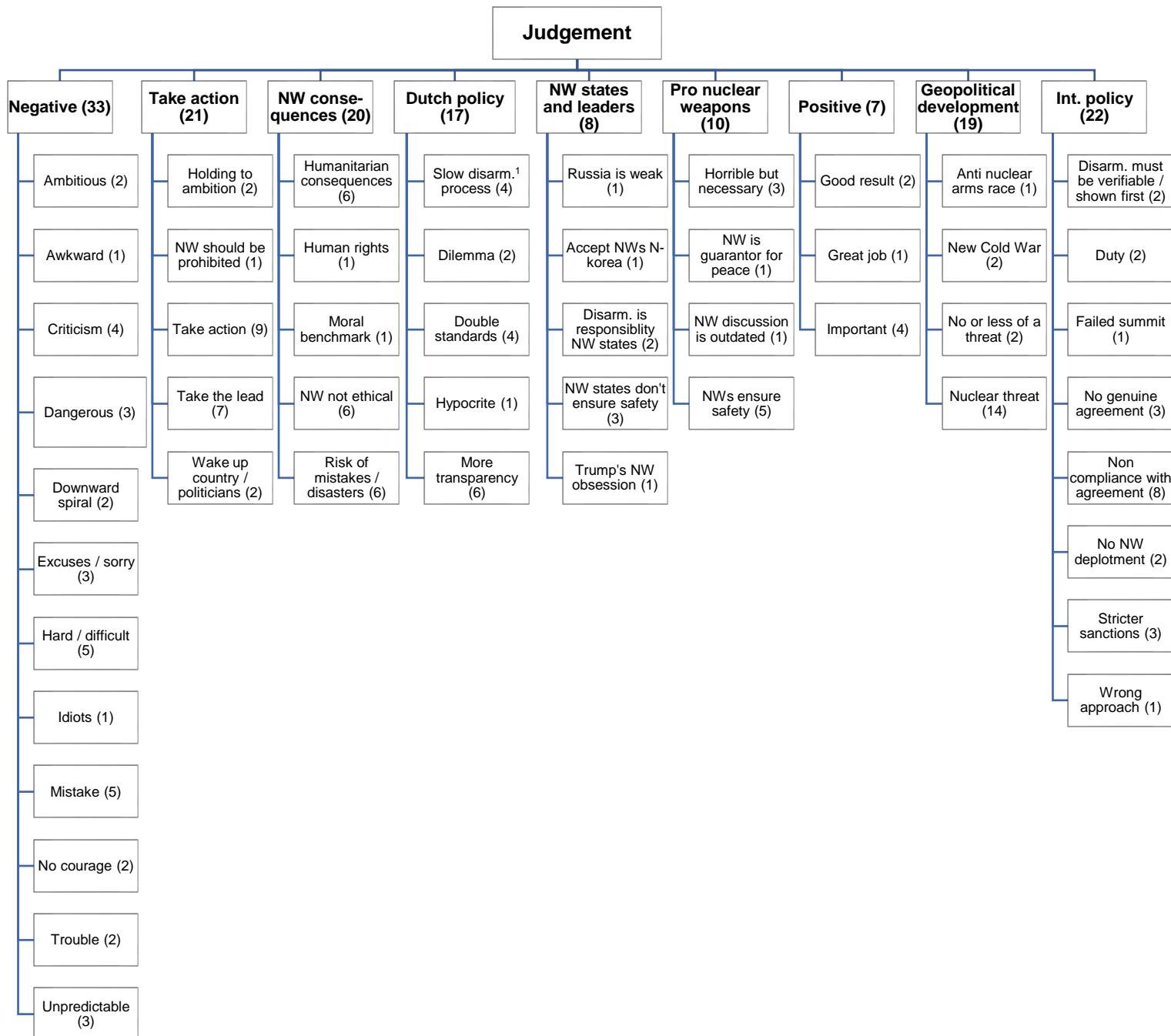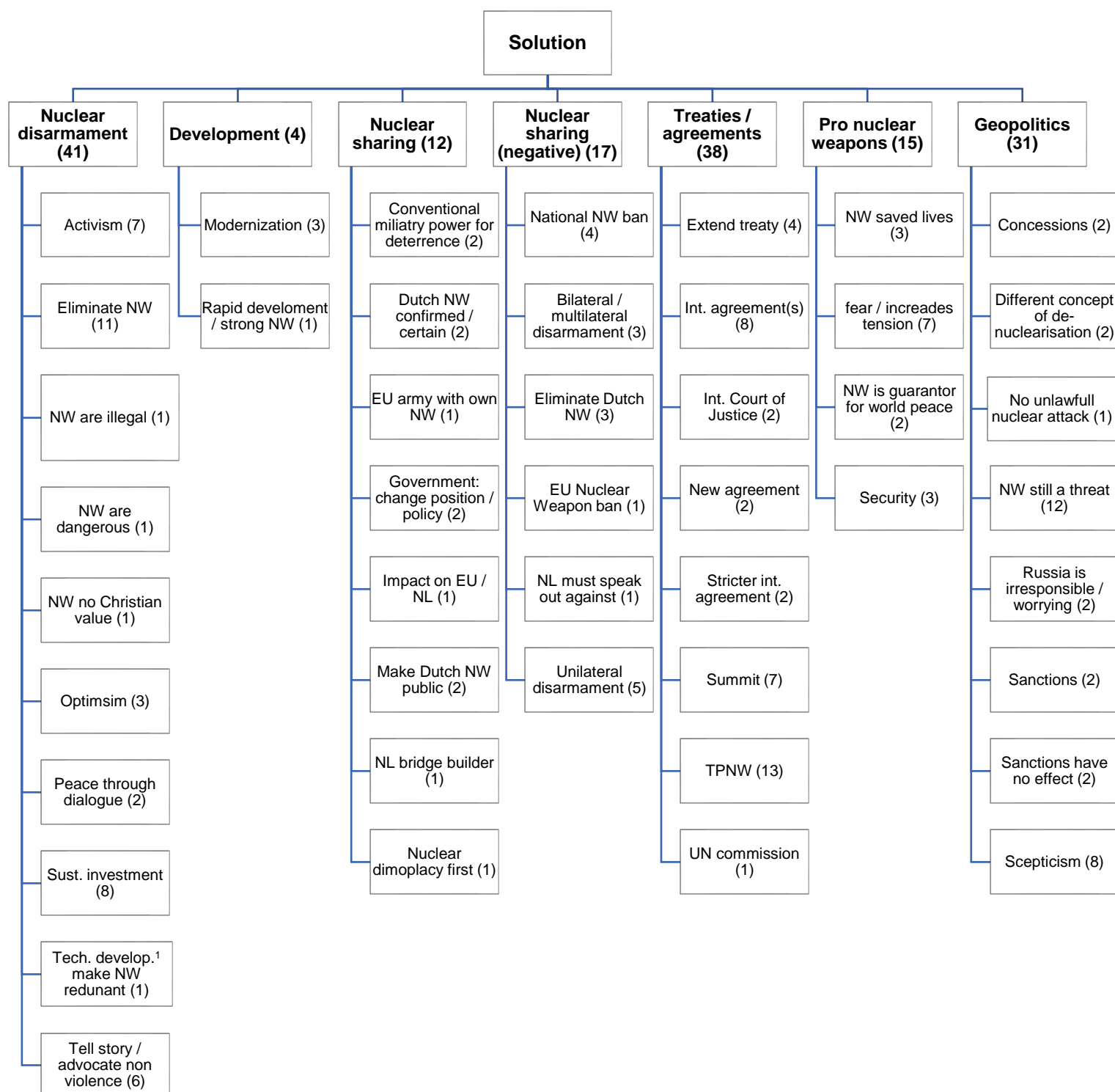

[1] Technological developments

Code tree 5: Solutions (reasoning device) (source: author)

Code tree 6: Visuals (framing device)

Code tree 6 is shown below. It concerns all codes and code groups for all the visuals: images, maps and graphs (framing devices). The numbers after the codes indicate how often a code or code group occurred in the analyzed documents.

Image / map / graph

- **Image**
  - **Worldleaders (18)**
    - India and Pakistan (1)
    - Kim Jong-Un / N-Korea (6)
    - Netanyahu / Israel (1)
    - Obama (1)
    - Putin (1)
    - Reagan and Gorbatsjov (5)
    - Trump (2)
    - World leaders (1)
  - **Nuclear sharing (8)**
    - Dutch minister of foreign affairs (1)
    - F35 / F16 fighterjet (2)
    - Dutch government (1)
    - Volkel airbase (4)
  - **NW profes-sionals (2)**
    - NW expert (1)
    - Highest ranking US military officer (1)
  - **Victim / survivor (16)**
    - (people of) Hiroshima / Nagasaki (11)
    - Veteran / activist (4)
    - War soldiers (1)
  - **Anti nuclear weapons (7)**
    - ICAN (2)
    - NW demonstration (5)
  - **Nuclear weapons (3)**
    - Nuclear weapon(s) (2)
    - NW test (1)
- **Map**
  - Arguments for / against F-35's (1)
  - NWs by country (1)
- **Graph**
  - NWs by country (1)

Code tree 6: Visuals (framing device) (source: author)

Code tree 7: Text elements – word choice / example / metaphor (framing device)

Code tree 7 is shown below. It concerns all codes and code groups for the word choices, examples and metaphors (framing devices). The numbers after the codes indicate how often a code or code group occurred in the analyzed documents.

[1] Consequences

Code tree 7: Text elements – word choice / example / metaphor (framing device) (source: author)

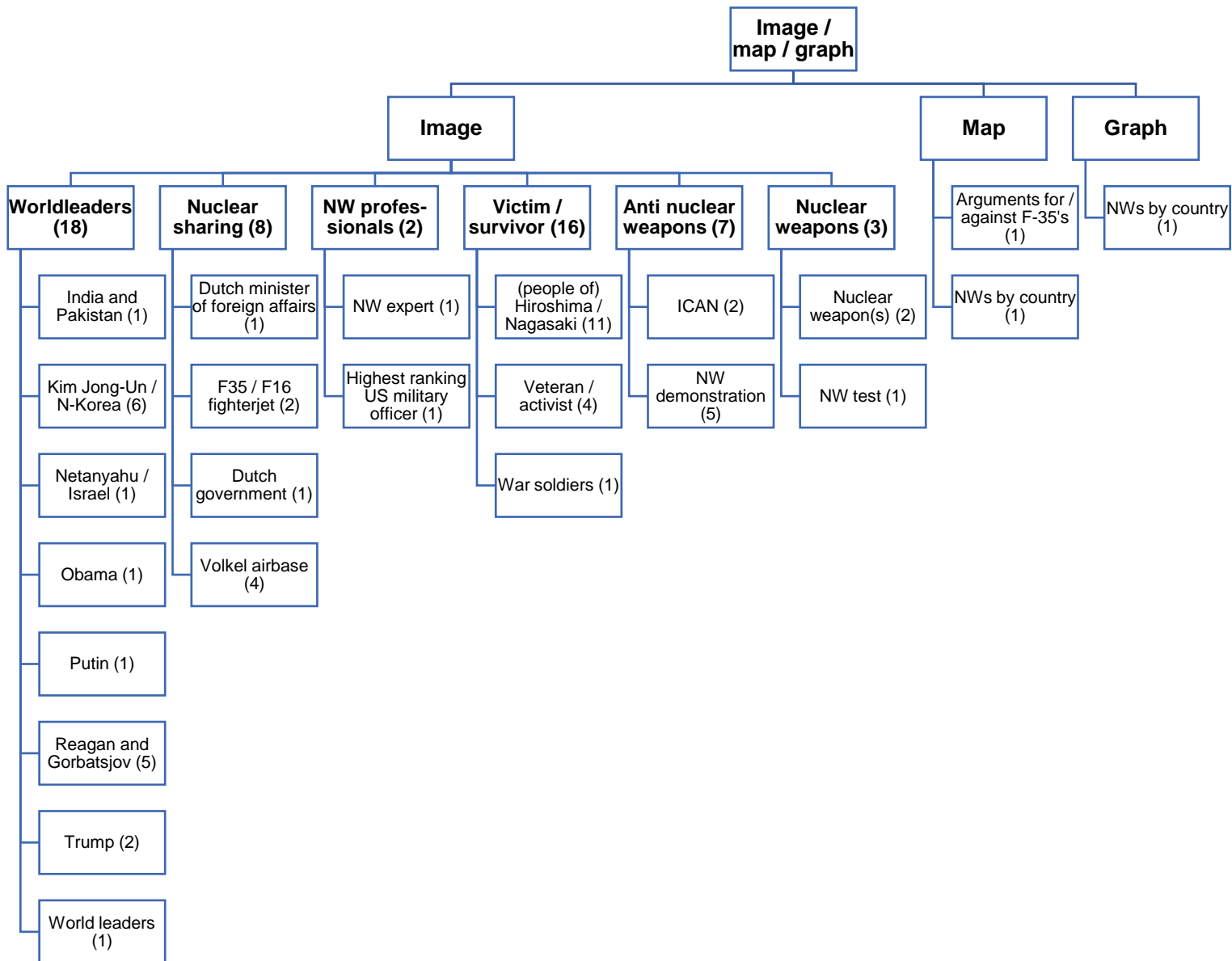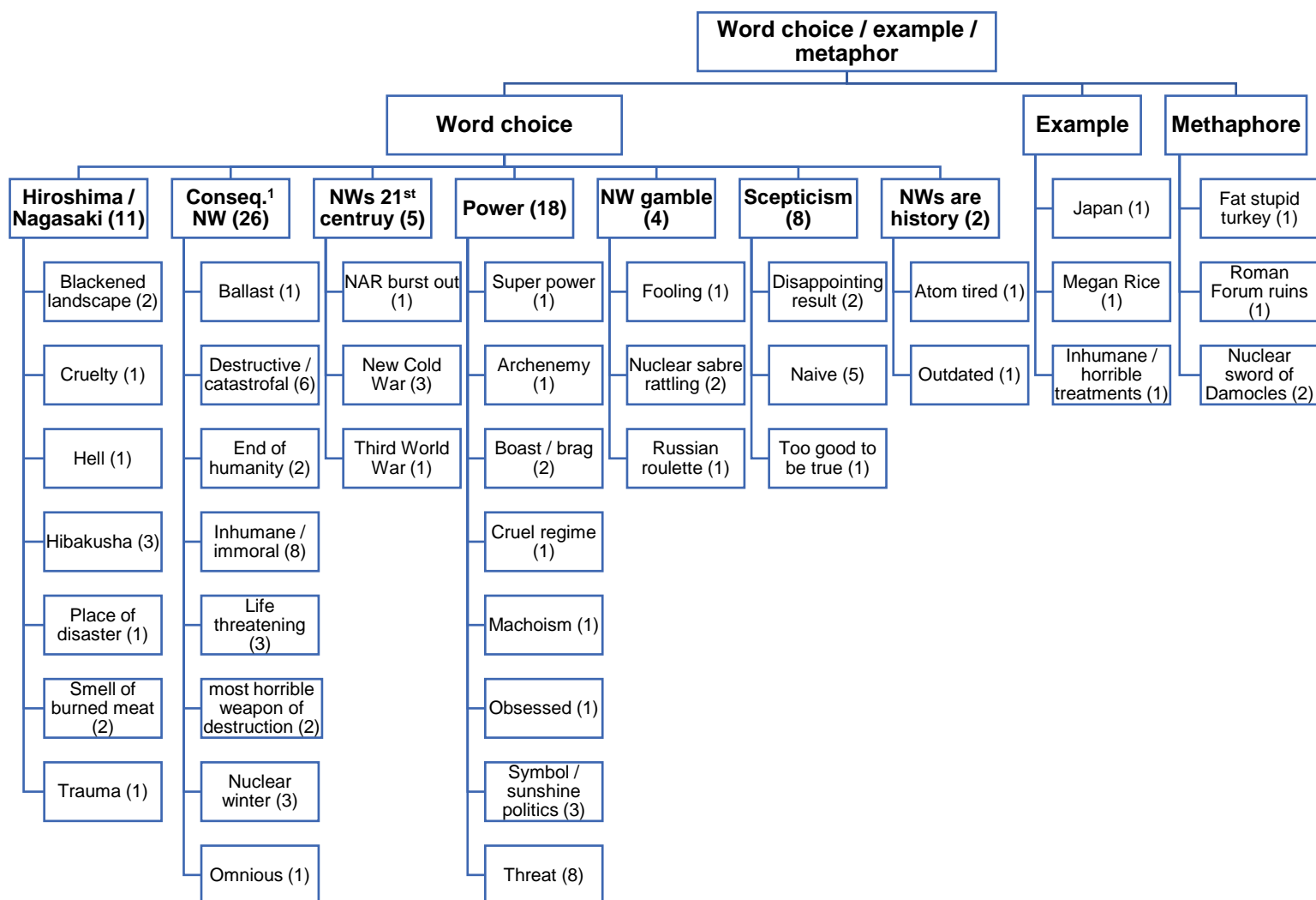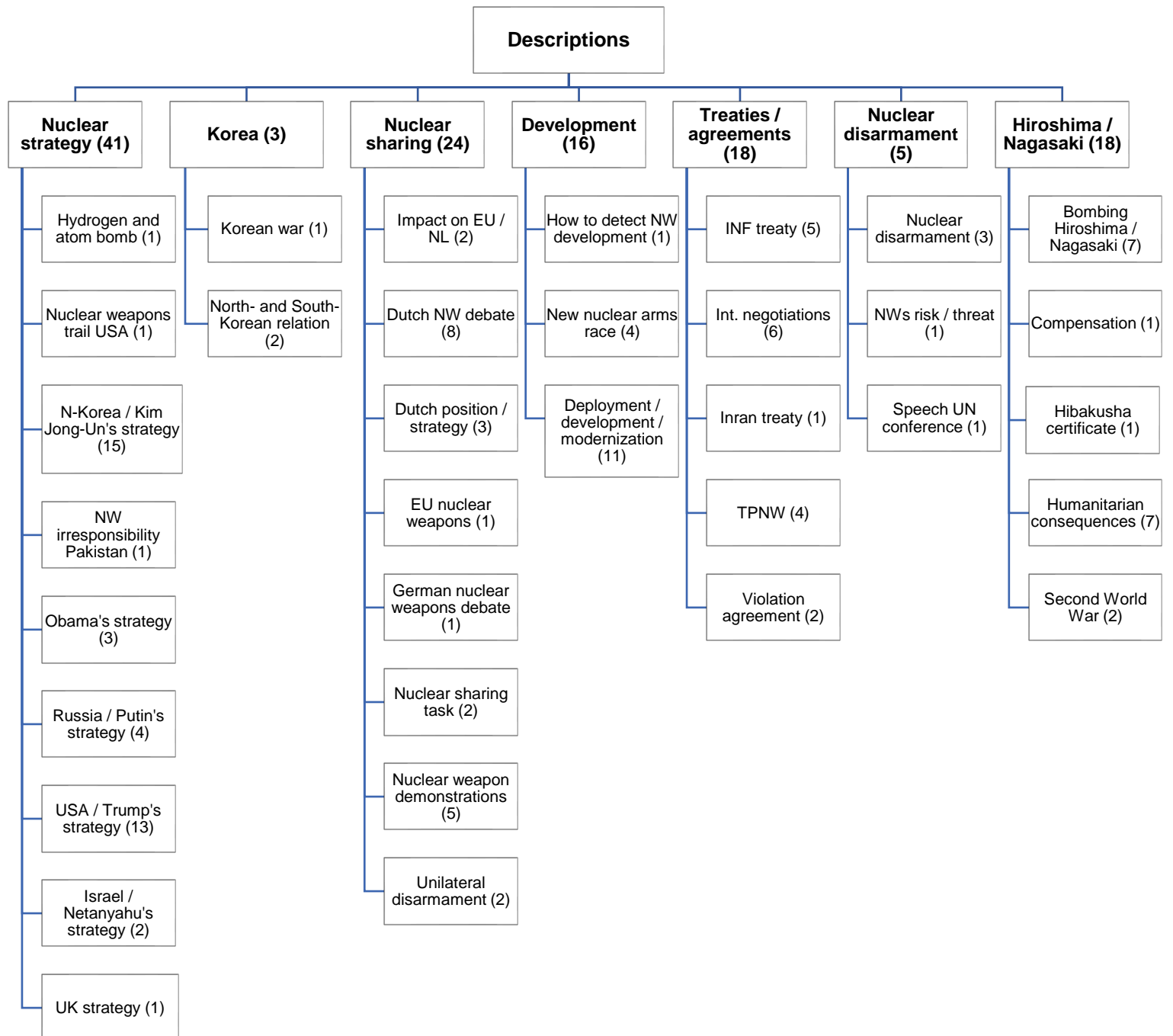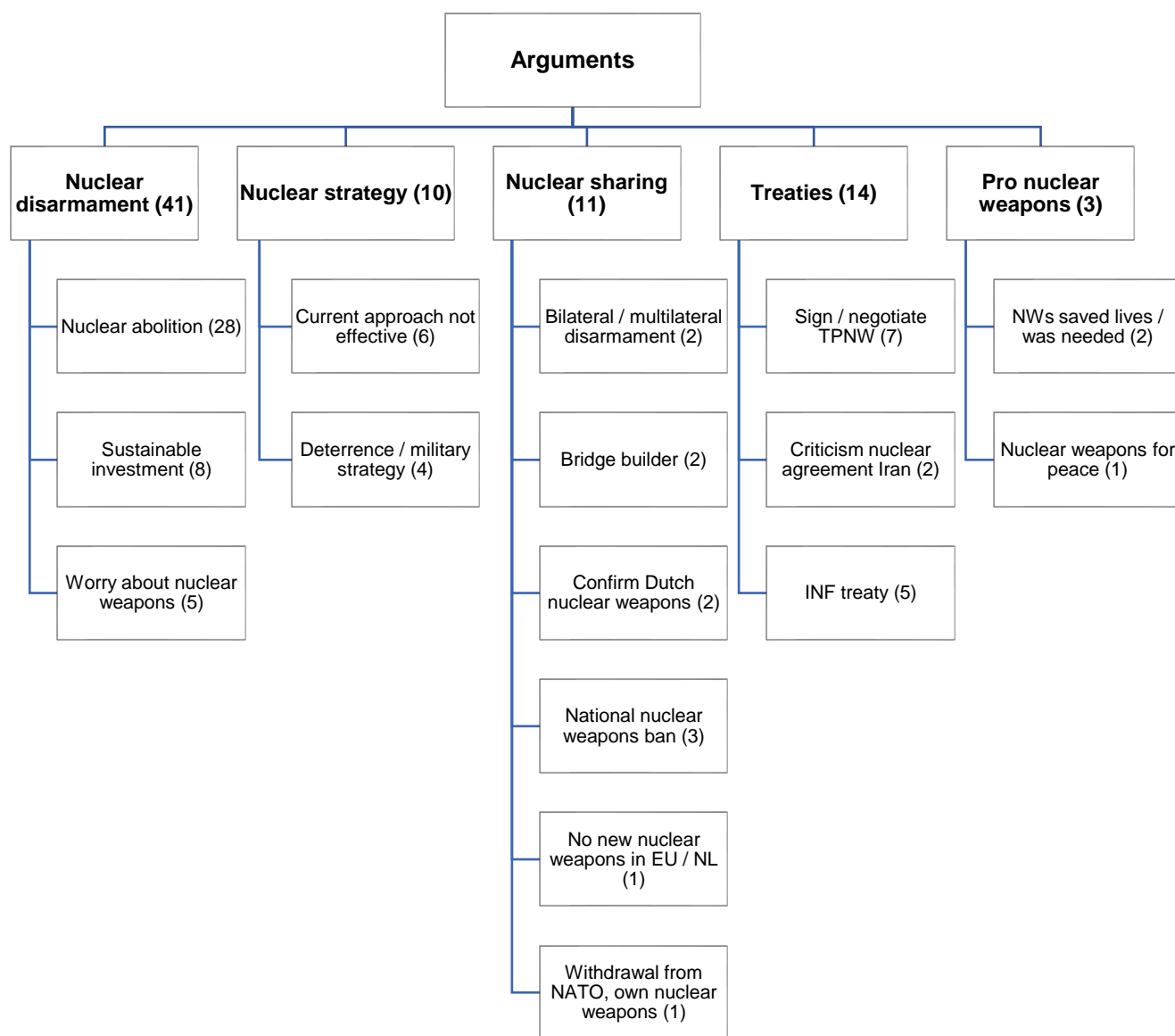## Code tree 8: Text elements – descriptions (framing devices)

Code tree 8 is shown below. It concerns all codes and code groups for the 'descriptions' (framing device). The numbers after the codes indicate how often a code or code group occurred in the analyzed documents.

```
                                    ┌──────────────────┐
                                    │   Descriptions   │
                                    └──────────────────┘
```

Descriptions

Nuclear strategy (41)
- Hydrogen and atom bomb (1)
- Nuclear weapons trail USA (1)
- N-Korea / Kim Jong-Un's strategy (15)
- NW irresponsibility Pakistan (1)
- Obama's strategy (3)
- Russia / Putin's strategy (4)
- USA / Trump's strategy (13)
- Israel / Netanyahu's strategy (2)
- UK strategy (1)

Korea (3)
- Korean war (1)
- North- and South-Korean relation (2)

Nuclear sharing (24)
- Impact on EU / NL (2)
- Dutch NW debate (8)
- Dutch position / strategy (3)
- EU nuclear weapons (1)
- German nuclear weapons debate (1)
- Nuclear sharing task (2)
- Nuclear weapon demonstrations (5)
- Unilateral disarmament (2)

Development (16)
- How to detect NW development (1)
- New nuclear arms race (4)
- Deployment / development / modernization (11)

Treaties / agreements (18)
- INF treaty (5)
- Int. negotiations (6)
- Inran treaty (1)
- TPNW (4)
- Violation agreement (2)

Nuclear disarmament (5)
- Nuclear disarmament (3)
- NWs risk / threat (1)
- Speech UN conference (1)

Hiroshima / Nagasaki (18)
- Bombing Hiroshima / Nagasaki (7)
- Compensation (1)
- Hibakusha certificate (1)
- Humanitarian consequences (7)
- Second World War (2)

Code tree 8: Text elements – descriptions (framing device) (source: author)

Code tree 9: Text elements – arguments (framing devices)

Code tree 1 is shown below. It concerns all codes and code groups for the 'arguments' (framing device). The numbers after the codes indicate how often a code or code group occurred in the analyzed documents.

Code tree 8: Text elements – arguments (framing device) (source: author)