

What did they say? The Prohibition of Nuclear Weapons in Diplomatic Statements

Moritz Kütt

Interdisciplinary Research Group Science, Technology and Security (IANUS),
Technische Universität Darmstadt,
kuett@ianus.tu-darmstadt.de

Jens Steffek

Institut für Politikwissenschaft,
Technische Universität Darmstadt
steffek@pg.tu-darmstadt.de

*Paper prepared for the ISAC-ISSS Annual Conference on Security, November 14th - 16th 2014,
The University of Texas, Austin, Texas, USA
(Hosted by the International Security Studies Section of ISA
and the International Security and Arms Control Section of APSA)*

Abstract:

Nuclear weapons are the only weapons of mass destruction which are not comprehensively prohibited, including prohibitions on possession, development and use. Only for the prohibition of use exists a universal de-facto norm. Analyzing diplomatic statements made during the Review Process of the Nuclear Non-proliferation Treaty and the First Committee of the UN General Assembly in the years 2000 to 2013 shows that a more comprehensive norm can be considered an emerging norm. The analysis carried out makes use of quantitative content analysis methods to process a large text corpus and the “norm life cycle” by Finnemore and Sikkink to assess the development of the comprehensive prohibition. Support for the norm is operationalized by calculating frequencies of ten terms which act as proxies for the comprehensive prohibition of nuclear weapons. It is found that several states accept and also require such behavior. Thus it can be considered a norm, which currently is in the phase of norm emergence, because it has gained enough support by several states to be considered a shared understanding. A hypothesis of growing support for the norm can also be confirmed by the dataset, surprisingly among states without nuclear weapons as well as nuclear weapon states.

Introduction

On April 5, 2009, US president Barack Obama gave one of his first major foreign policy speeches during a visit to the Czech Republic. In that speech Obama affirmed ‘America's commitment to seek the peace and security of a world without nuclear weapons’ (Obama 2009). This clear commitment to total nuclear disarmament surprised many observers. It also raised high hopes among peace activists, even if Obama cautioned immediately that this was a long-term project and required the collaboration of many other countries. Obama’s Prague speech was not a single incident of commitment to comprehensive nuclear disarmament. In the 2010 General Assembly of the United Nations, Norway’s ambassador Espen Barth Eide remarked that ‘[...] there have been more frequent references to the long-term goal of a world without nuclear weapons among key leaders and experienced statesmen than in many years’ (UNGA, 2010: 23). In this paper we investigate if commitments to a comprehensive prohibition of nuclear weapons are really on the rise in international politics. Can we observe the consolidation of a more comprehensive norm against nuclear weapons that not only covers their use in war but also their development, production and storage? What exactly is the current status of that norm?

Today, about 17,000 nuclear weapons¹ exist around the world. They are in possession of nine countries (USA, Russia, United Kingdom, France, China, Israel, Pakistan, India and North Korea) and comprise a destructive force powerful enough to destroy all life on earth. Ever since the first nuclear bombs were built in the 1940s there has been controversy over the moral permissibility of their use, and international negotiations to restrict their development, acquisition, possession, testing, and proliferation among states followed. Negotiations resulted in a number of international treaties. The 1968 Treaty on the Non-Proliferation of Nuclear Weapons (NPT) has been the last multilateral agreement that institutionalized a set of norms concerning nuclear weapons on a global scale. It includes the prohibition to develop or acquire nuclear weapons for so-called non-nuclear-weapon states (NNWS), and the obligation for nuclear-weapon states (NWS) to disarm their arsenals (Shaker, 1980). However, while the first prescription was relatively successful, the second did not yield any significant result. Currently, several NWS are even modernizing their forces and recent negotiations on improvements and changes within the treaty framework were obstructed by many actors. The future development of the NPT regime is unclear, and some

¹ In the literature, a distinction between nuclear weapons and nuclear explosive devices can be found, the latter possibly intended for peaceful explosions. In this text, the term nuclear weapons includes all types of nuclear explosives.

observers feel that ‘the state of the NPT is alarming’ (Müller, 2010: 191).

Regarding the use of nuclear weapons in war, it is often claimed that an international norm *de facto* prohibits the first use of nuclear weapons. The fact that no nuclear weapon has been exploded in war since the bombings of Hiroshima and Nagasaki seems to corroborate that such a norm exists. Some authors rather cautiously describe this as a ‘tradition of non-use’ (Paul, 2010). Others underscore the absoluteness of the prescription and call the use of nuclear weapons in war a ‘taboo’, a very strong and absolute rule that does not allow for exceptions (Tannenwald, 1999, 2005, 2007). With regard to the use of nuclear weapons, the question is not any more whether a norm against first strikes exists but how stringent it is under extreme circumstances (Press et al., 2013). The aversion against the use of nuclear weapons has not yet resulted in a comprehensive prohibition of that category of weapons, including possession, production and use, as well as obligations for disarmament². Such a comprehensive ban is an almost natural goal for all international regimes tackling weapons of mass destruction (Nadelmann, 1990: 523).

In this respect the regulation of nuclear weapons lags far behind the regimes targeting other weapons of mass destruction. With regard to biological and chemical weapons, states already agreed on comprehensive conventions banning both classes of weapons (UNODA, 2012; OPCW, 2012). The possibility of an analogous, comprehensive ban of nuclear weapons has taken more concrete shape as civil society actors are pushing for the issue. A prominent example is the ‘Model Nuclear Weapons Convention’, a sketch of a treaty text similar to the Chemical Weapons Convention, written and developed by non-governmental organizations. Some countries, such as Malaysia and Costa Rica, introduced this text as working papers in international negotiations, including a prohibition of the possession of nuclear weapons. Similarly, a number of resolutions related to the prohibition of nuclear weapons are tabled regularly in the United Nations General Assembly First Committee (UNGAFC)³. One resolution, following up on an advisory opinion of the International Court of Justice from 1996 has found growing support in recent years. The court was asked to assess the legality of the threat of use or use of nuclear weapons. In its section on actions, the resolution

‘[c]alls once again upon all States immediately to fulfil that obligation by commencing multilateral negotiations leading to an early conclusion of a nuclear weapons convention

² Both terms, „total prohibition of nuclear weapons“ and „prohibition of nuclear weapons“, will be used interchangeably in this paper and stand for the comprehensive norm, including use, possession, development, testing and obligations for disarmament.

³ The First Committee is officially responsible for disarmament and international security and prepares draft resolutions for the assembly.

prohibiting the development, production, testing, deployment, stockpiling, transfer, threat or use of nuclear weapons and providing for their elimination; “
(UNGA, 2011, paragraph 2, section on actions)

Although resolutions of the General Assembly are not legally binding they can document growing support for an emergent international norm. The comprehensive prohibition of nuclear weapons thus seems to be getting increasing support by states. If this is true, this might be an indication that a comprehensive prohibition of nuclear weapons is emerging as a shared norm on the international level. It is our purpose in this paper to gauge the current support of this norm. We use a theoretical approach to the study of emergent international norms developed by Martha Finnemore and Katherine Sikkink, the model of a norm life cycle (Finnemore and Sikkink, 1998). Using this framework, we analyze if the prohibition of nuclear weapons is currently approaching or maybe has already reached, the so-called ‘tipping point’, when a critical mass of states subscribe to a new norm. Our empirical study relies on quantitative content analysis. We assume that states that support a comprehensive prohibition of nuclear weapons will mention this position in official diplomatic statements in different international arenas where disarmament is discussed. We analyze a total of 6,545 diplomatic statements, adding up to a text corpus of approximately three million words. This original dataset comprises statements made during the Review Process of the NPT and the First Committee of the United Nations General Assembly in the years 2000 to 2013. We measure the frequency of ten selected terms that function as proxies for a comprehensive prohibition of nuclear weapons.

Our analysis shows that references to an international prohibition to possess and develop nuclear weapons were on the rise during that period, including a requirement to abolish existing weapons. An interesting finding is that not only NNWS support the idea. Also among states that currently possess nuclear weapons the idea of total prohibition is gaining ground. These states, the ‘nuclear haves’, may be crucial actors in supporting such a norm change. It can thus be considered an emergent norm which has mustered enough support by several states to be considered a shared understanding. Our results also show that support for a comprehensive prohibition of nuclear weapons increased significantly over time. However, the ‘tipping point’ of the norm life cycle has not been reached yet. According to Finnemore and Sikkink, about one third of all states in a specific system should show support of an emergent norm to reach the tipping point. Our analysis does not document such widespread support.

This paper is organized as follows: in the next section we introduce the theoretical

framework of our research, in particular the concept of the norm life cycle. Section three briefly sketches the history of regulation of nuclear weapons and locates the emergent norm of a comprehensive ban in it. In section four we detail our method of quantitative content analysis and our research design. In the fifth section we present and discuss the results of our empirical analysis. The last section briefly concludes and outlines avenues for further research.

Theoretical Framework

In this paper we are concerned with the emergence and diffusion of norms in international society. We study this phenomenon from a social constructivist perspective on international relations (IR). Like rational choice, social constructivism is an approach rather than a theory (Adler, 1997). It builds on the assumption that human beings make sense of the social world in which they live with the help of collectively held beliefs. Many of these beliefs are prescriptive and come in the form of rules, norms and principles. These collective beliefs inform the interests and desires of social actors (Finnemore, 1996: 393). At least in the more mainstream variants of constructivism, collective beliefs and ideas are regarded as causes for action, implying that changes in collective beliefs can effect changes in individual behavior. Constructivism has become a popular perspective on the role of norms in international politics, and much of the literature was designed to show that beliefs and norms ‘matter’ in IR (Finnemore and Sikkink, 2001: 396). A wealth of empirical studies has used a constructivist approach to analyze the emergence of new ideas, norms and political regimes as well as modifications of existing ones. Issues of international security, such as security communities (Acharya, 2014; Adler and Barnett, 1998), and arms control (Price, 2003) have been prominent objects of study.

We aim to trace and analyze change in the way states deal with the existence of nuclear weapons in this paper. Our focus is on the development of behavioral norms that regulate the development, production and use of such weapons. Let us begin with a definition of the term ‘norm’. Despite the centrality of the term in constructivist analysis, there is a wealth of different definitions of the term ‘norm’ in the literature. Most authors would agree, however, that norms are ‘not just behavioral regularities’ (Florini, 1996: 364). A social norm can be at work even if individual behavior seems to contradict it. In fact, most of the formal laws and informal conventions that govern our societies are regularly breached. On the other hand, conformity of behavior may be triggered by other factors than belief in a norm, such as fear of sanctions or positive material incentives. A norm hence is best defined as ‘a standard of appropriate behavior for actors with a given identity’ (Finnemore and Sikkink, 1998: 891).

Such a standard exists independently of the behavior that it guides or regulates. Only if divergence between prescription and behavior is possible can a norm become a variable in a research design. In addition, actors follow the standard given by norms not only because of coercion but because they believe in a 'sense of ought', an idea how one should behave (Florini, 1996: 364). Another very important definitional aspect is the intersubjectivity of a norm. Norms are based on a 'shared understanding' (see for example Payne, 2001: 38), and they give rise to 'collective expectations' (Jepperson, 1996) among the actors involved. Besides regulating behavior, norms may also have a constitutive effect, shaping the identity of actors (Adler, 2002: 103; Björkdahl, 2002: 15). Norms assign roles to actors, which in turn suggest taking certain courses of action, or refraining from them. An example to illustrate this dual process is the notion of a 'civilized state'. A civilized state is defined by its adherence to certain internationally agreed rules of conduct. Once a state identifies with this role, and is accepted as such by others, it faces external expectations to comply with those behavioral standards. We assume that both regulative and constitutive effects of norms play a significant role in the policy field of disarmament and proliferation control.

Having defined what norms are and what they do, the question remains where international norms come from, and how they acquire their prescriptive status. A useful heuristic tool to tackle this question is the concept of a norm life cycle. It was introduced by Martha Finnemore and Kathryn Sikkink to capture the empirical dynamics of norm emergence (Finnemore and Sikkink, 1998). It divides the process into three distinct stages: 'norm emergence', a 'norm cascade' and eventually 'internalization' of the norm of concern. During the first stage, a norm appears on the international agenda and a debate over its validity starts. The main actors at this stage are norm entrepreneurs that claim the importance of a new norm, draw attention to the issue and stress the necessity of the norm. These norm entrepreneurs, often non-governmental organizations (NGOs) or individuals, are critical for the emergence of the norm as they try to persuade states to support it. This driving force to accept a new norm can come from domestic sources as well as from the international level. Only if some states already accept it, share the idea and try to persuade others, one can speak of an 'emerging norm' in this formative phase. Generally, new norms are not introduced in a void, but into a normative space that is already crowded (Finnemore and Sikkink, 1998: 897). The new norm has to compete with other emerging candidates and with existing norms.

Two social mechanisms are particularly relevant in the first stage of the norm life cycle. First, efforts at (re-)framing help to name, interpret or dramatize an issue and to put it into a certain context (Payne, 2001). Second, robust organizational platforms can be a starting

point for norm entrepreneurs to successfully communicate and promote new norms. Between the first and the second stage, Finnemore and Sikkink describe a tipping point which has to be reached. At the tipping point, a 'norm cascade' sets in that spreads the new norm rapidly, and without the entrepreneurship needed in the first phase. The process is called a 'norm cascade', because the adoption of the norm typically accelerates during this stage. More states already supporting a norm lead to higher pressure for conformity towards others. It is not easy to predict when such a tipping point will be reached, given the variety of actor constellations and campaign issues in IR (Berman, 2001: 240). Finnemore and Sikkink argue that 'although it is not possible to predict exactly how many states must accept a norm to 'tip' the process, because states are not equal when it comes to normative weight, empirical studies suggest that norm tipping rarely occurs before one-third of the total states in the system adopt the norm' (Finnemore and Sikkink, 1998: 901). Given the huge asymmetries in power, wealth and influence in the international system, some states are more critical in their support for a new norm than others. Apart from hegemonic countries such as the US whose support or resistance will always matter in particular ways, it will probably depend on the concrete norm at hand which states will belong to the group of key actors. We assume that in our case, the nine states possessing nuclear weapons may form such a group.

Norm emergence is not a unidirectional process, and Finnemore and Sikkink warn that many new norms fail to ever reach the tipping point and cascade. The process may become delayed and interrupted for many years. Typically, an emergent norm will at some point become institutionalized through legal codification and endorsement by international organizations. This is not a necessary condition, however, to proceed to the last stage of the process, which is internalization. If this point is reached the validity of a new norm becomes taken for granted. Most of the actors involved almost automatically adhere to the norm, and the constant repetition of their behavior helps to universalize it further. In the following section we consider the comprehensive prohibition of nuclear weapons as a potentially emergent norm in international society.

Norms prohibiting the use and possession of nuclear weapons

Nuclear weapons have sparked controversy from the day they were invented (Wittner, 2009). The first resolution ever passed in the United Nations General Assembly called for efforts to eliminate nuclear weapons (UNGA 1946). Although the most destructive weapon ever developed, they have not been exploded in war since the bombing of Hiroshima and Nagasaki in 1945. And numerous states that have the technological capacity of building them refrain from doing so. Political scientists have discussed a number of explanations for this puzzling

phenomenon. Among IR realists, the most prominent explanation is the theory of deterrence. States do not use nuclear weapons because they fear retaliation by others (Martin, 2013; Waltz, 1990). Other materialist explanations include a lack of military utility of nuclear weapons and a lack of suitable delivery vehicles (Mueller, 2010). Constructivists criticize the realist explanations as insufficient, pointing out cases in which nuclear weapons were not used even when the nuclear power faced defeat and the adversary was not able to retaliate. The US did not use them in Vietnam and lost the conventional war, similarly the Soviet Union in Afghanistan. Moreover, in some cases states not possessing nuclear weapons attacked nuclear weapon states, and no nuclear response was launched.

Constructivists therefore suggest that there must be a common understanding that the use of nuclear weapons in war is prohibited. Nina Tannenwald worked extensively on this idea, framing the norm as a 'nuclear taboo' (Tannenwald, 1999, 2005, 2008). She studies the case of the United States and its non-use of nuclear weapons over a period of 60 years. According to Tannenwald, a veritable taboo has emerged that proscribes the use of nuclear weapons with 'absoluteness, unthinkingness, and taken-for-grantedness' (Tannenwald, 2008: 11). The taboo still has the regulative effect of banning the use of nuclear weapons but in addition has also some constitutive effects. It defines nuclear weapons as extraordinary weapons that belong to an especially problematic category, the category of 'weapons of mass destruction'. The use of such weapons is generally perceived as inhuman and morally not acceptable. The norm also plays a role in establishing the identities of 'civilized' and 'uncivilized' states. All states, we can assume, would be willing to belong to the first category, avoiding actions that are seen as war crimes and hence not use nuclear weapons (Tannenwald, 2008: 45).

Other scholars call the non-use of nuclear weapons a 'tradition' and oppose the term taboo, while acknowledging the fact that the de-facto norm on non-use exists (Sagan, 2004; Paul, 1995, 2010). While Paul still used the term taboo in 1995 he revised his position in more recent years and suggests that '[a] tradition is a less stringent form of social phenomenon than a taboo is' (Paul, 2010: 854). In the case of a veritable taboo, state leaders would not even consider the use of nuclear weapons as an option. Paul does not believe that this is the case. He points out that current defense doctrines still envisage the first use of nuclear weapons in case of conventional attacks. And in his view even the single use of a nuclear weapon in war would stop the prohibitive norm from working, making immediate nuclear retaliation likely. A tradition of non-use hence is more fragile than a taboo, and also more open for change (Paul, 2010: 857ff.).

It has been pointed out that the prohibition of using nuclear weapons, no matter if it is a taboo or tradition, does not imply a prohibition to acquire or develop nuclear weapons. '[W]hile there is a strong taboo on use, the prohibition on possession continues to apply only selectively' (Tannenwald, 2008: 387). No general legal norm banning their possession exists, only a partial prohibition, referring to the different categories of states in the NPT. While the use of nuclear weapons is quite robustly banned, a norm against the possession of nuclear weapons is emergent at best. What exactly would such a norm prescribe? A focal point of the discussion is the *Model Nuclear Weapons Convention*, a treaty draft proposed by several NGOs and actively supported on the international level by some states. It contains the following core obligations:

- 'Each State Party to this Convention undertakes never under any circumstances:
- a. To use or threaten to use nuclear weapons;
 - b. To engage in any military or other preparations to use nuclear weapons;
 - c. To develop, test, produce, otherwise acquire, deploy, stockpile, maintain, retain, or transfer nuclear weapons except as specified under paragraph 4 of this Article;'
- (IPPNW, IALANA, and INESAP, 2007, Section I, Article A, Paragraph 1.)

The model treaty thus succinctly summarizes the main elements of behavior expected from a state that would accept the prohibition of nuclear weapons. The prohibition itself has to be clearly distinguished from other norms in the field of nuclear weapons. It is a far-reaching rule that clearly goes beyond existing norms prohibiting the use and proliferation of nuclear weapons. It is also clearly different from the idea of nuclear disarmament. Disarmament treaties create an obligation to reduce the number of nuclear weapons but do not outlaw their possession. To reach the aim of a world free of nuclear weapons, something more comprehensive is necessary. A comprehensive prohibition of nuclear weapons clearly would have regulative effects. It would constrain state action, in particular the behavior of those states that currently possess nuclear weapons – requiring their dismantlement and abolition. Moreover, constitutive effects can be envisaged. If nuclear weapons currently function as a 'currency of power' (Harrington de Santana, 2009), the prohibition of nuclear weapons would constitute a world where such a currency can not be used anymore.

In the present phase of norm creation different norm entrepreneurs can be identified that help promoting such a norm. The following list of supporters is not exhaustive, but can illustrate the type of actors that can be found among the norm entrepreneurs. First of all, the most active norm entrepreneurs are NGOs. Numerous organizations lobby states for the case of nuclear disarmament, non-proliferation and the prohibition of nuclear weapons on international basis. Among the most important are the *International Campaign to Abolish Nuclear Weapons*, *Abolition 2000* and the *Parliamentarian Network for Nuclear*

Disarmament. Second, several smaller states also endorse the call for a total prohibition of nuclear weapons (e.g. Costa Rica, Malaysia, Norway). In 2007, Costa Rica submitted the *Model Nuclear Weapons Convention* as a working paper to the NPT Preparatory Committee. During the NPT negotiations, a group of states called the New Agenda Coalition (NAC), founded in 1998, is also very active in lobbying for a comprehensive ban. The group consists of Brazil, Egypt, Ireland, Mexico, New Zealand and South Africa. Third, some prominent individuals might have helped the emergence of the described norm. As Secretary General of the United Nations, Ban Ki Moon listed a Nuclear Weapons Convention as a viable option in a five point plan presented in 2008 (Ki-Moon, 2008). US President Barack Obama presented a vision of a world free of nuclear weapons in his Prague speech cited above (Obama, 2009).

In recent years also the *International Committee of the Red Cross* (ICRC) has been acting as a moral entrepreneur in this context. In calling for the prohibition of nuclear weapons the ICRC introduced a new argumentative frame, highlighting the “catastrophic humanitarian consequences” of any nuclear weapons use (International Committee of the Red Cross, 2010). Following this call, a series of international conferences of states have been held to discuss the humanitarian impact of nuclear weapons. The first took place in March 2013 in Oslo, a second in February 2014 in Mexico, and a third one will be held in Vienna in December 2014. These conferences are seen by the campaigning NGOs as steps towards a “ban treaty” (ICAN 2014). Such a treaty would also be a legal instrument for the prohibition of nuclear weapons but probably less complex than an encompassing Nuclear Weapons Convention. These recent activities suggest that the prohibition of nuclear weapons is getting increasing support by states and might be approaching the tipping point in the norm life cycle. To assess the progress of the prohibition norm, we set out to locate it within the stages of the norm life cycle proposed by Finnemore and Sikkink. Is the prohibition norm approaching the crucial tipping point? In the next section we expound our research project designed to answer this question.

Research Design, Method and Operationalization

A problem often raised in empirical research on norms is how we actually know a norm when we see it (Finnemore and Sikkink, 1998: 888). One possibility would be to observe the behavior of actors and to infer the existence of a norm from it. However, and as explained above, it is problematic to infer from (non-)compliant behavior to the (non-)existence of a norm. In addition, in the case of norms related to nuclear weapons, observing states’ behavior might not be sufficient to find out about the status of the norm. First of all, the number of actors that possess nuclear weapons is relatively small and nuclear weapons have been used

only in two occasions. Some nuclear disarmament has taken place, but as long as there is no commitment to complete disarmament this can only show adherence to a norm suggesting a reduction of arsenals. Looking at state actions regarding their nuclear arsenals might not provide good answers to the question. If there were a treaty or legal framework to completely ban nuclear weapons, one could use the knowledge about signature, ratification and compliance to see if states would accept the prohibition of nuclear weapons as a norm. In the absence of such a treaty this approach is not viable either.

To assess the status of the comprehensive prohibition norm we therefore decided to analyze public statements of state representatives that are related to it. We assume that states will express possible support for the norm in official statements. '[B]ecause norms by definition are shared and intersubjective and relate to shared moral assessments [...], evidence for the existence of norms can be found in the discourse addressing a particular behavior, i.e. rhetoric' (Björkdahl, 2002: 13). In their statements they may either invoke the norm directly or use formulations that unambiguously support such a norm. In terms of method we therefore opted for a quantitative content analysis of diplomatic statements presented in international negotiation forums dedicated to the regulation of nuclear weapons. To evaluate the status of the prohibition norm, quantitative content analysis of statements that are part of such a discourse will be applied. Going further than Björkdahl we claim that such an analysis not only reveals evidence for the existence of a norm but can also indicate developments of norm consolidation and acceptance when the observation period is long enough. In the following paragraphs, the method of quantitative content analysis will be described, as well as the dataset and the operationalization of our research.

'Content analysis is a research technique for making replicable and valid inferences from texts [...] to the context of their use' (Krippendorff, 2004: 18). A distinction can be made between qualitative and quantitative content analysis. Qualitative versions of content analysis typically target the meaning of texts, requiring personal reading and interpretation by the researcher. Examples of such an approach are discourse analysis and narrative analysis (Pierce, 2008: 264ff.). The body of texts that can be scrutinized in such a qualitative way is naturally limited. Quantitative content analysis is designed to count incidences and frequencies of pre-defined units of a text, such as words or entire phrases; or to classify text fragments according to coding schemes. Quantitative content analysis has several advantages. It is possible to process a huge amount of text at relatively low costs. The selection of data can cover a longer period of observation than would be possible otherwise. The method is non-intrusive and keeps a high distance to research subjects, facilitating

objectivity and reliability of findings. Nevertheless, the selection of the texts for analysis by the researcher may introduce bias. The probably most critical point are the inferences that can be made from text elements to the convictions or intentions of the authors of that text. We will turn to both issues in some detail below. In IR and foreign policy research, content analytical methods have been used since the 1960s (Holsti, 1969). More specifically in the field of nuclear disarmament, quantitative content analysis has been used in a study by Harald Müller who analyzed government statements at the NPT Review Conference in 2010 to assess the impact of the new Obama Administration (Müller, 2011).

An important decision in undertaking content analysis is the selection of an appropriate text corpus. The texts chosen for our study are oral statements made by state representatives at regular events and negotiations related to nuclear weapons at the international level. Typically, speeches given at these events have been carefully prepared and attuned with a country's foreign policy. While authors clearly have different cultural backgrounds, texts are still rather similar in their language use because of diplomatic rules and conventions. The two series of events taken into account are the NPT review process and the meetings of the United Nations General Assembly's First Committee (UNGAFC). Other disarmament fora, such as the UN Conference on Disarmament, were not included because of the relatively limited number of states participating in them.

The NPT review process consists of Review Conferences (RefCon) that take place every five years, preceded by Preparatory Committee meetings (PrepCom) in the three years before. The speeches delivered there are crucial for the research question at hand. The continuous NPT review process allows for the negotiation of additional agreements, such as a comprehensive ban on nuclear weapons. A large number of states typically participate during these events and make statements, especially during Review Conferences (90 countries in 2010). Statements are made by single states and groups of countries (e.g. Non-Aligned Movement, European Union). Besides states, some international organizations and NGOs are allowed to floor. However, we included only statements by states and group of states in the text corpus.

The UNGAFC discusses disarmament and arms control matters related to all types of weapons, preparing resolutions for the General Assembly. Besides the NPT Review process, this is the main arena where states would discuss the prohibition of nuclear weapons. The work of the UNGAFC is structured in sessions covering organizational matters, general debate and thematic discussions on specific draft resolutions. All parts are included in the text corpus. By careful selection of search terms we made sure that, for example, a state's support

for the prohibition of chemical weapons was not mistakenly interpreted as support for the nuclear norm of concern in this work.

Regarding access to statements, different approaches were necessary for the two arenas. Nearly all statements from the NPT review process could be found in the archive of the independent NGO *Reaching Critical Will* (RCW). RCW has created an online database that lists all statements that were delivered⁴ but in some cases the full text is not provided. Usually, between 10 and 20 % of the delivered speeches are missing, but these omissions do not follow any distinct pattern, so that no systematic bias is to be feared. Since the NPT regime does not have a permanent secretariat, there are no official verbatim records of all meetings. Only summary records are provided through the United Nations Office for Disarmament Affairs (UNODA). These summary records are not useful for analysis because they contain the wording and a possible bias of those writing the summary records. The original statements do not get included in the United Nations document system⁵. While most of the statements were in English (1476 of 1765 accessible), some were only available in the language the speaker used for presenting (one of the six official UN languages). Due to practical constraints, only texts in French and Spanish could be also included in our research (adding 210 statements). As the RCW archive mainly includes scanned documents, the textual content had to be extracted using Optical Character Recognition technologies (OCR) before the inclusion in the text corpus.

The UNGAFC debates are available as official verbatim records of the meetings. These records are official UN documents so that access is unproblematic. For statements made in other languages than English, an official English translation is provided. The translation is typically done by expert translators employed by the UN and familiar with the issues discussed. We therefore assumed that accurate and coherent sets of terms for specific topics were used and we therefore included the translated documents in our database. What complicates the work with UN verbatim records is that they cover several statements of states per document record. Before they were included in the text corpus, these were split by hand into individual statements. For 2013, statements of the UNGAFC debate have not yet been published as official documents. Again, RCW provided the state statements, with similar minor issues regarding language as described above. For the text corpus, no sampling of texts has been made. A total of 6,545 statements by states or groups of states were included in the

⁴ It was checked in detail for those years UNODA also listed statements. For other years, completeness was simply assumed.

⁵ Only for recent conferences, UNODA has published statements made during the General Debate on its web site. If available, these were used instead of RCW documents.

text corpus.

After compiling the text corpus we defined the units of text to be counted during the analysis, that is, specific words or short combinations of words that indicate reference to comprehensive prohibition of nuclear weapons. A first problem in this regard was that there is no international treaty or agreement in force that contains such a norm. Therefore we could not measure references to such a distinctly named document. References to the norm under scrutiny here had to be gathered via proxies, that is, terms or combinations of terms that unambiguously point to the norm we are targeting.

For the selection of terms, we assumed that every term that can possibly function as proxy for the prohibition of nuclear weapons will contain the word nuclear. It is a very distinct feature of this adjective that it is nearly exclusively used for expressions related to nuclear weapons. The only synonym that can be found with some frequency in the text corpus is the word ‘atomic’. It normally occurs, however, in the combination International Atomic Energy Agency and can thus be discarded. We hence assumed that all combinations of words that are used to show support for the prohibition of nuclear weapons include the word ‘nuclear’. Taking into account combinations of a maximum length of six words and a minimal occurrence frequency in all texts of more than 0.001 per mil, the terms shown in Table 1 were chosen. The table shows each term without stopwords⁶. To simplify the presentation of results, short identifiers were introduced (left column in Table 1 on next page). To generate Spanish and French translation of the terms, official UN translations of occurrences of English terms were used, in addition to checking for combinations containing the Spanish ‘nuclear’ and the French ‘nucléaire’.

Two terms are explicit formulations of the norm of prohibition of nuclear weapons. Most obviously, states using ‘prohibition of nuclear weapons’ (PNW) can directly be seen as supporters. Similarly, states that mention a *Nuclear Weapons Convention* (term NWC) are classified as supporters, as it can be assumed that they refer to the model of the conventions on chemical and biological weapons that ban these weapon types completely. Three terms describe a vision of a ‘world free of nuclear weapons’ (WFNW, NFWW, WWNW). As there are currently large numbers of nuclear weapons in the world, a world free from these weapons would very likely imply a form of legal or at least moral prohibition of the possession of nuclear weapons. Therefore they are seen as supportive statements for the discussed norm. There are four terms that refer to the physical disposition of nuclear weapons (EionNW, EateNW, EingNW, TDNW). They are taken into account because it seems

⁶ Stopwords are words like “of”, “the”, “and” etc. that mainly function for the construction of sentences, not for the specific meaning.

plausible that states requiring the elimination and physical destruction of nuclear weapons are in favor of their prohibition. The last term, ICJ (International Court of Justice), needs explanation. In 1996, the ICJ was tasked by the UNGA to give an advisory opinion on the legality of the use or threat of use of nuclear weapons. The judges stated unanimously in their advisory opinion that there exists an obligation to start negotiations which would lead to comprehensive nuclear disarmament in all aspects. That can be seen as the obligation to negotiate a codified prohibition of nuclear weapons. Many states in fact make that connection when referring to the court opinion. We thus assumed that these states are also in favor of the prohibition of nuclear weapons.

Table 1: English, Spanish and French terms selected for analysis, all shown without stopwords. For EingNW and NFWF, translations are covered by other terms listed.

Identifier	English	Spanish	French
NWC	nuclear weapon convention	Convencion marco/sobre/tipo arma nuclear	convention (generale) arme nucleaire
PNW	prohibition nuclear weapon	proscripcion arma nuclear	Interdiction/prohibition arme nucleaire
EionNW	elimination nuclear weapon	Eliminacion total/definitive arma/arsenale nuclear	élimination rapide effective / total / definitive / complete arme nucleaire
EateNW	eliminate nuclear weapon	eliminar (totalmente) arma/arsenale nuclear	eliminer totalement /progressivement arsenaux/arme nucleaire
EingNW	eliminating nuclear weapon	-	-
TDNW	thorough destruction nuclear weapon	destruccion total arma nuclear	destruction totale arme nucleaire
WFNW	world free nuclear weapon	Mundo/planeta libre arma nuclear	monde exempt arme nucleaire
NFWF	nuclear weapon free world	-	-
WWNW	world without nuclear weapon	Mundo/planeta sin arma nuclear	monde san arme nucleaire
ICJ	negotiation leading nuclear disarmament aspect	negociacione buena fe lleven logro desarme nuclear aspecto	negociations conduisant desarmement nucleaire

Our assumption in designing the research was that state representatives who mention the prohibition of nuclear weapons, or a proxy term, are supporting such a norm, and not arguing against it. States avoid explicit references to norms that they do not support, rather than risk getting ‘trapped’ in a language game forcing them to justify their position. States ‘can become entrapped by their arguments and obliged to behave as if they had taken them

seriously' (Schimmelfennig, 2001: 65). Accordingly, a state that does not support a nuclear weapons convention would rather not mention that term at all, instead of explicitly stating its disapproval. Moreover, official country statements during NPT review meetings and in the UNGAFC are structured in a programmatic, declaratory fashion so that usually only issues, treaties and ideas are mentioned of which states are supportive. To test the validity of this theory-driven assumption we checked a random sample from the text corpus for the context of the reference. The random sample covered about one fifth of the total corpus and not a single explicitly negative reference to one of the terms was found.

At the beginning of the analysis, texts in the corpus were converted to lists of words according to specific rules. Numbers and single-letter words were excluded, because they cannot contain information pertinent to our research question. Regarding to grammatical markers, only trailing 's' letters were removed. No stemming process (e.g. reducing 'talking' to 'talk') was applied (Krippendorf, 2004: 265). This seemed reasonable, because the terms selected here contain very few verbs, and the most important verb 'eliminate' / 'eliminating' has two separate identifiers (EateNW and EingNW). Additionally, we removed stopwords from the corpus before searching for terms⁷. After these simplifications, the corpus contains approximately three million words (before removal there were around six million).

To measure the status and strength of the emergent norm we use two indicators, frequency of references and number of supporting states. The frequency of references we take to be an indicator for overall support of a norm in international society. Frequency in our research is measured as the number of occurrences of a term in a specific statement or set of statements, divided by the total number of words in these statements (total number after removal of insignificant words as described above)⁸. This relates the number of occurrences to the statement length. Thus, a statement which includes many references to the norm, but is also very long, shows less support for the norm than a shorter statement with the same number of references. In addition, a simple count of the occurrence of a term has little analytical purchase in a longitudinal study when the size of the text corpus analyzed is shifting every year. A second indicator is the number of state representatives who used the selected terms in their speeches. These countries are seen as supportive of the norm in general. Here it is important to note that not all states make statements at every meeting, sometimes they leave it to other states to deliver their position (there is for example often a position of the EU in

⁷ Lists of stopwords in English, Spanish and French were used as provided by Jacques Savoy from the Université de Neuchâtel (<http://members.unine.ch/jacques.savoy/clef>). Exempted from removal were without/thorough, sin and sans because they are used in selected search terms.

⁸ If a term consists of more than one word, the frequency listed in this paper is the number of term occurrences divided by the total number of single words

general).

The empirical analysis of the text corpus was carried out using a modified version of Drupal. Drupal is a web content management system, typically used to create websites. However, it also provides us with the ability to organize and sort large numbers of data and is easily extendible. While there are other content analysis tools readily available, the choice for a new and independent tool was made for two reasons. First, a large number of texts were available in scanned digital form, but not searchable. The tool based on Drupal made it possible to process these texts automatically doing optical character recognition, making the texts readable for computers. Second, by using a content management system for web applications, it is now possible to easily share the database of documents with other researchers.

Results

It is crucial for quantitative content analysis that the text corpus selected is highly pertinent to the research question. While already the selection of texts for the corpus aims to include only relevant texts, it is useful to check for textual references related to the issue under study. Table 2 below lists a selection of English words and terms and their ranking, not including stopwords. Three separate rankings have been made, for single words and for combinations of two or three words respectively.

Table 2: Rank and number of occurrences of words and word combinations in analyzed texts. The rank shows the position in a list of all possible words or combinations, excluding stopwords.

Rank	Word	Occurrences	Frequency (in %)
1	nuclear	80,922	2.77
2	weapon	62,230	2.13
5	disarmament	34,924	1.19
9	proliferation	23,025	0.79
25	convention	11,041	0.38
1	nuclear weapon	36,072	1.23
3	nuclear disarmament	10,153	0.35
1	nuclear weapon state	8,180	0.28
5	nuclear weapon free	5,475	0.19

Excluding stopwords, the word ‘nuclear’ is the most frequently used word in the corpus. It occurs more than 80,000 times, making up for around 2.8 % of all non-stopwords in the corpus. Similarly, the word ‘weapon’ is mentioned more than 62,000 times, roughly a

frequency of 2.1 %. The combination of both words, ‘nuclear weapon’, still is referred to in about 36,000 cases, making it the most frequent combination of any two words. This clearly indicates that the text corpus is related to aspects of nuclear weapons. Moreover, ‘nuclear disarmament’ is the third most frequent combination, underlining the specific relevance of the corpus for the field of nuclear disarmament. Similar figures occur for the two other languages. These findings show that the selected text corpus is highly relevant for the research question.

The first part of the main analysis dealt with the dynamics and timeline of norm emergence. How did the frequency of the selected search terms change over the last 10 years? For this part, all documents from the corpus were included. The results of this analysis are displayed in Figure I below. Note that in 2001, 2006 and 2011 no NPT events took place so that these years show only results for the UNGAFC. While UNGAFC debates have a broader agenda than the NPT review meetings, frequencies could be found to be in similar range as in NPT meetings.

The results for the years 2000 through 2013 displayed in Figure 1 show a roughly u-shaped curve that seems to plateau at high levels after 2010. The curve starts at a relatively high level of 1.8 per mill in 2000, decreasing to a level of 0.9 to 1 per mill. In 2007 the curve begins to rise again, with a steep increase in 2009/10. The highest total frequency with nearly 2.3 per mill can be found for 2010. Values in 2012 and 2013 are slightly lower, but still higher than all years before 2009. Two factors should be taken into account when interpreting this diagram. In 2000, a very substantial agreement on 13 steps towards nuclear disarmament was reached at the NPT Review Conference, which may explain the high frequency levels at the beginning of the curve. However, this agreement was not followed up five years later - the 2005 Review Conference is often called a total failure as states were not even able to agree on a conference agenda.

Some additional insights can be gained by differentiating the results by search term. The group of terms related to the elimination of nuclear weapons (EionNW, EateNW, EingNW, TDNW) accounts for a high fraction of all references to a possible prohibition of nuclear weapons. The use of these terms remains relatively constant at levels of 0.6 to 0.8 per mill. In contrast, the terms related to a ‘world free of nuclear weapons’ (WFNW, NFWF, WWNW) increased drastically during the last five years of the observation period. Especially the term ‘world without nuclear weapons’ (WWNW) was hardly mentioned at all before, but is mentioned on average every 53,000 words stated during the last five years. We suggest that this can be read as an effect of the new US administration and its policy change, especially the famous Prague speech mentioned in the introduction, where president Obama explicitly

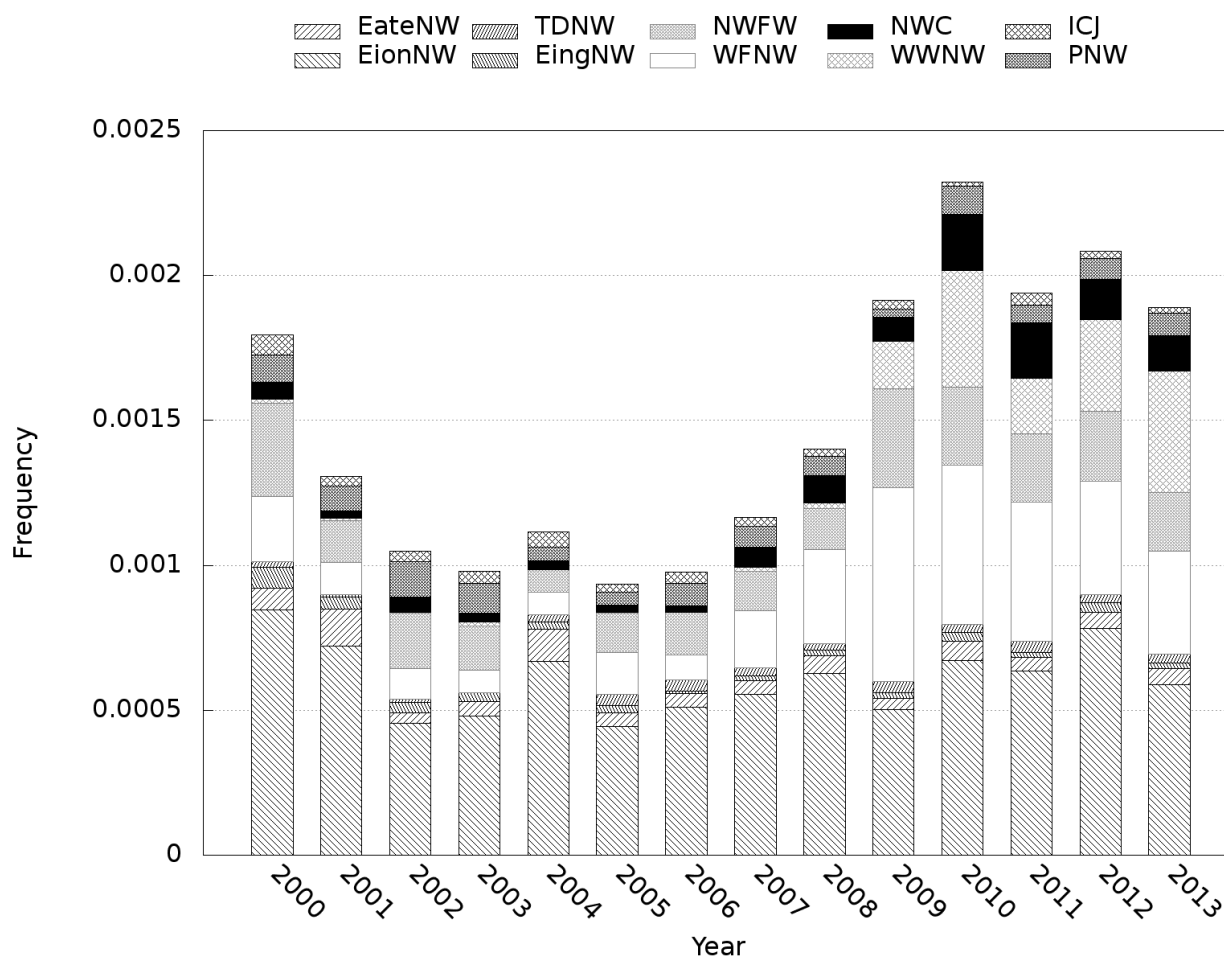


Figure 1: Frequency of the use of the selected terms by all actors.

committed to a ‘world without nuclear weapons’. Our analysis thus confirms Müller’s finding that states at the 2010 NPT Review Conference adapted their rhetoric in that sense (Müller 2011: 230/1). The results show a lasting ‘Obama effect’ in the nuclear disarmament and non-proliferation discourse. When a hegemonic country publicly endorses an emergent norm, like-minded countries are encouraged to follow suit.

By contrast, the three terms related to legal aspects of prohibition contribute only to a small extent. Two of them show a slight decline since 2000 (ICJ and PNW). The third, NWC, however, has drastically increased since 2000. Although the number is low compared to other terms in our list, the increasingly frequent references to a nuclear weapons convention is still meaningful. While in the first years of the observation period such a convention was referred to not much more than once in 300,000 words, the frequency increased to a maximum of one in 5,000 in 2010 and 2011. Afterwards, again a slight decrease is visible; however, the development over the last six years can illustrate growing support for a concrete project of a legally binding prohibition of nuclear weapons.

From these general results on frequency of references we can infer that the prohibition

of nuclear weapons can be considered an emergent norm, which is at least in the first stage of the norm life cycle. It is frequently mentioned in pertinent international negotiations and we can assume that a ‘shared understanding’ about its prescriptive content has emerged. The steep increase in references to the prohibition norm since 2007 can be seen as a sign for the success of norm entrepreneurs to convince a first group of states - how many will be discussed in the following paragraphs. The increase in references to the prohibition norm in general, but also to a concrete legal framework for institutionalizing it, point towards a progressive dynamic in the life cycle. The more often a new norm is mentioned, the closer it gets to the final stage of the cycle.

We now turn to the authors of diplomatic statements invoking a prohibition norm and thus can distinguish different groups of countries. The goal is to assess if the new norm has penetrated international society evenly or if it sponsored only by certain groups of countries. Figure 2 below displays the results for different groups of states. The specification of different search terms is omitted here, only the general frequency of all norm-supporting terms together is shown. Besides those statements made by single state members of the listed groups, statements made by a specific country in the name of the group are included. This occurs frequently in international conferences. Statements made on behalf of a group are counted only once. Because the groups partly overlap in membership, some states are included in more than one group. The groups shown are the five official NWS, the countries of the North Atlantic Treaty Organization (NATO), the European Union (EU), the New Agenda Coalition (NAC)⁹ mentioned above, and the Non-aligned Movement (NAM)¹⁰.

Rather unexpected, all considered groups show an increase in the frequency of the usage of terms related to a possible prohibition of nuclear weapons in recent years, except for 2013. Even the three groups NWS, EU and NATO show such an increase, although they all have members that possess nuclear weapons. These three groups show similar frequencies for most times, which can be partly explained by the large overlap in membership, and similarities in policies. The increase for these groups mainly happens during the 2010 review cycle (2007-2010). Not surprisingly, the NAC as norm entrepreneur always mentions specific terms two or three times more often than the three other groups, showing vigor to bring the prohibition of nuclear weapons on the negotiation agenda. It used terms most frequently in 2012, with more than three in 1000 words being direct references to the prohibition of nuclear weapons. Also in the year of its first appearance in the review process in 2000 frequencies were high. In the next review cycle, the numbers dropped, showing that NAC was not as

9 Brazil, Egypt, Ireland, Mexico, New Zealand, South Africa and Sweden.

10 NAM has officially 120 member countries, they are listed in (NAM 2012).

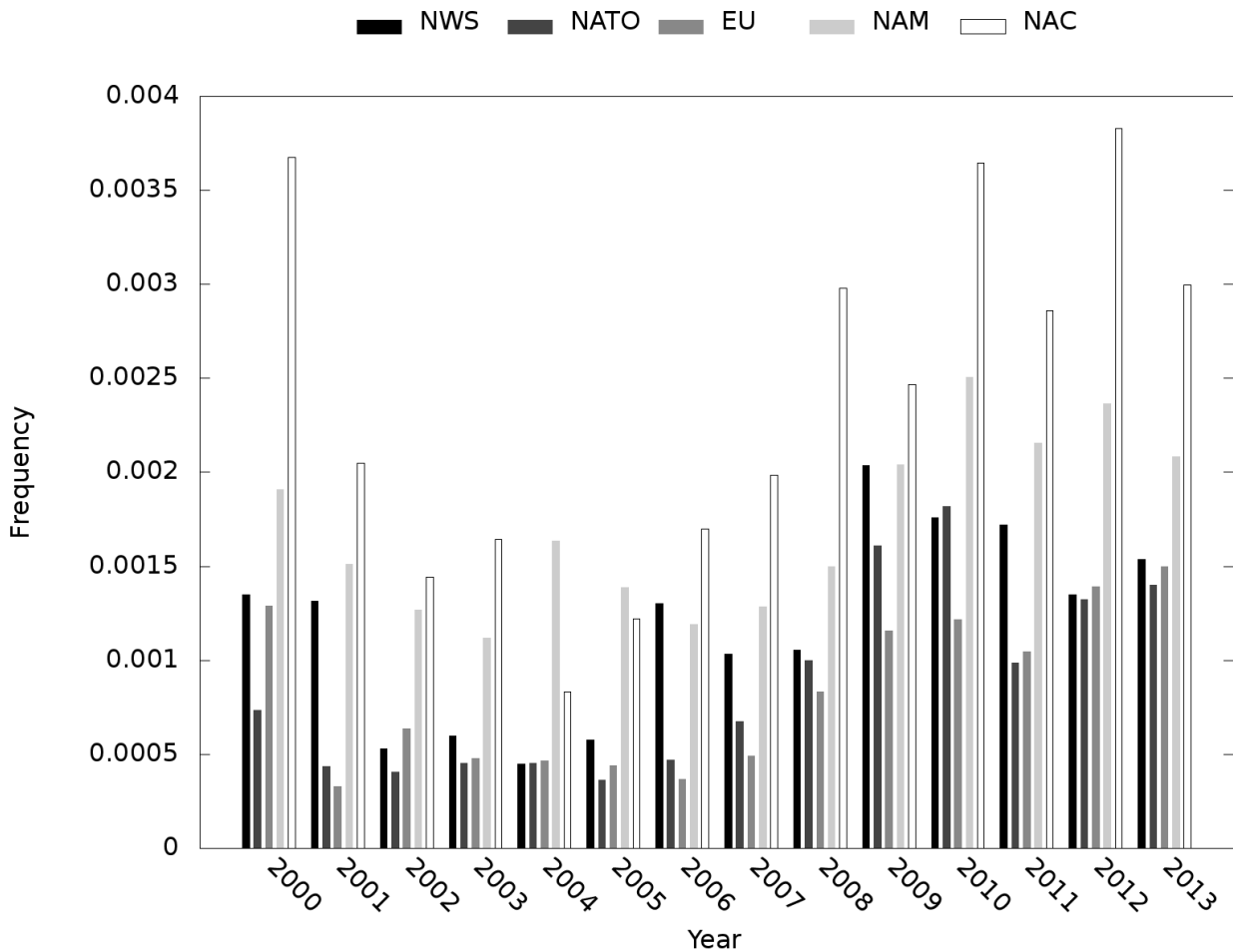


Figure 2: Frequency of use of all selected terms, separated by different groups of countries.

active and entrepreneurial as in 2000 anymore. In the 2010 review cycle, the frequency increased again. While it pronounces its support with high frequencies, one has to bear in mind that the overall statistical impact is rather small – compared to the total number of statements, NAC contributes only a small fraction. NAM already had a high frequency in the beginning and shows the lowest increase in references made to a prohibition of nuclear weapons over time, but the increase is still significant.

As discussed in the theory section, Finnemore and Sikkink estimate that a new norm requires support by about one third of all states in the relevant international arena to reach the tipping point of the life cycle. Figure 3 below shows the number of countries that mentioned at least one of the selected terms in their statement. These numbers are represented by the full bars. The dots indicate the total number of countries that gave speeches in the respective year, remaining approximately constant over the years. Similar to the frequency of reference to our search terms, the absolute number of states that used these terms shows increase during the last 13 years, but to a lesser extent. In the year 2010, an exceptional number of 108 states used terms that can be seen as synonyms for the prohibition of nuclear weapons in their statements.

In other years since 2009 about 70 states used such terms in their statements. The figure shows results for a linear regression model applied to all years except 2000. The regression gives an increase of about three countries per year with a p-value of 0.0210, indicating statistical significance. In our view, this is sufficient indication to show that the prohibition norm has reached the first stage of the life cycle with respect to the number of supporters.

Figure 3 also separately displays the number of countries that have referred to a stronger, legal terminology (NWC, ICJ, PNW). As explained above, we assume that the use of these terms indicates considerably stronger support for the prohibition of nuclear weapons than the other terms. However, our results show that they are used by between 10 and 25 states per year only. This shows that the number of avant-garde countries that already envisage a legal codification of the emergent norm is still low. While 70 states would be more than a third of all states present (threshold for the tipping point of the norm life cycle), 25 would be significantly less. With this result, we would not claim that the tipping point of the norm life cycle has been reached already.

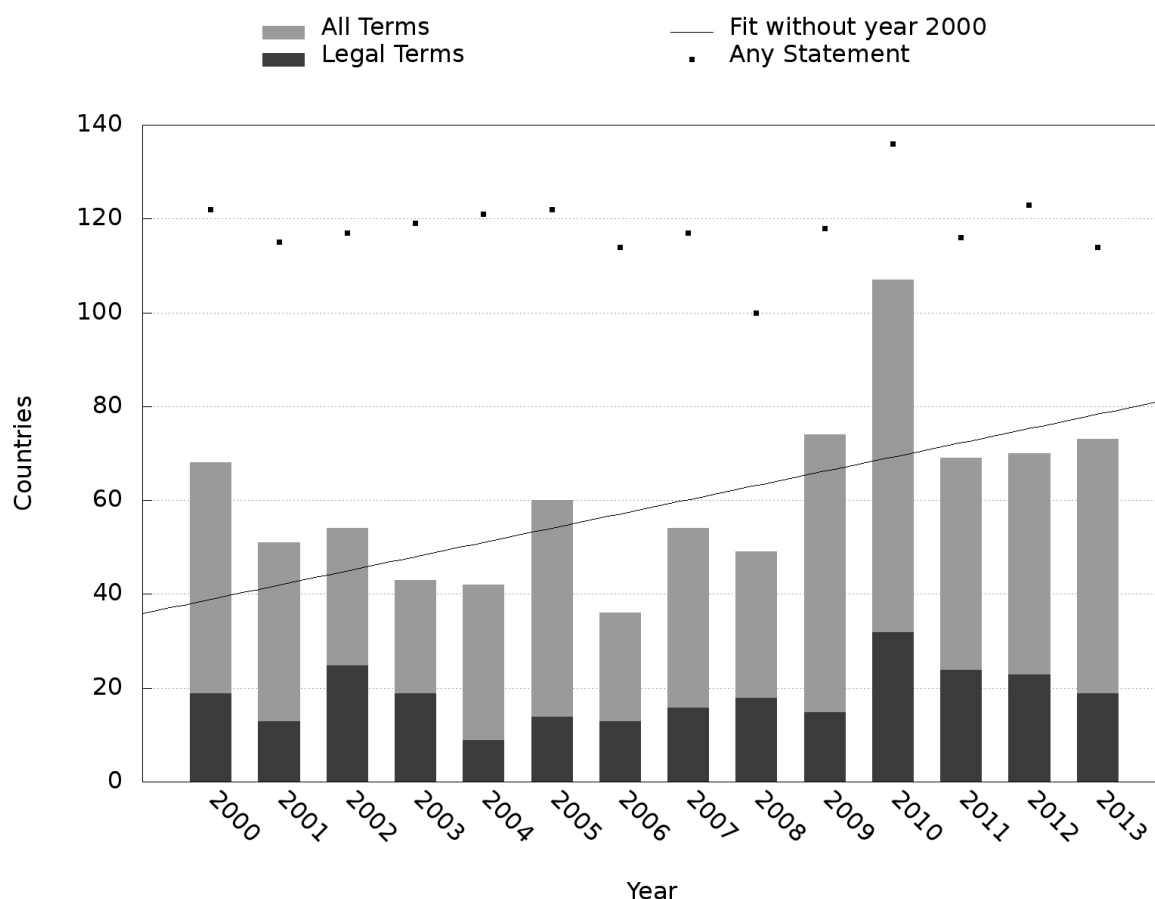


Figure 3: Number of countries that used terms related to the prohibition of nuclear weapons (bars), the dots show the total number of countries that made any statements. The line represents the result of a linear regression model, excluding the year 2000.

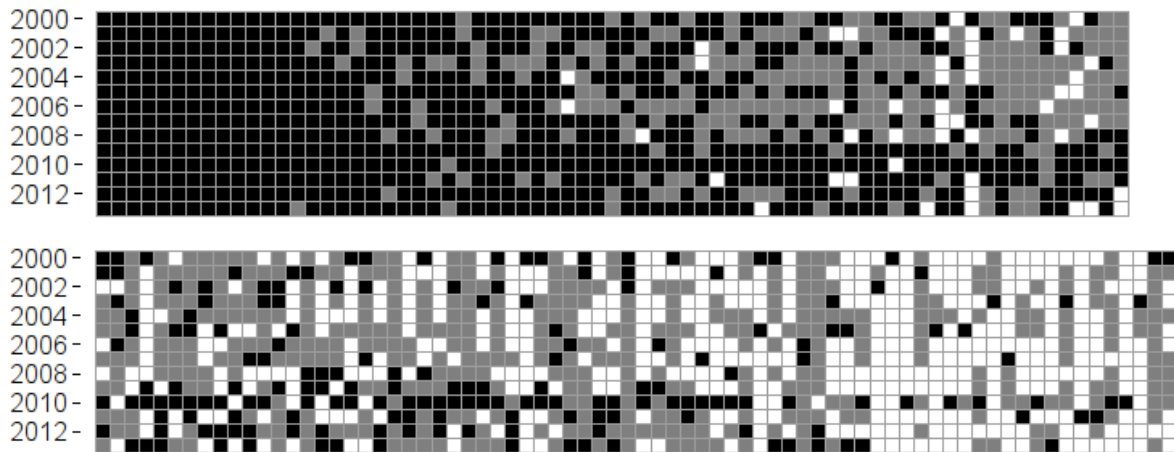


Figure 4: Fluctuation and stability of references to a prohibition of nuclear weapons. Shown are 143 countries (69 in upper row, 74 in lower) that used the proxy terms, at list one in a single year. A black filled square indicates term usage for a specific year, a gray a year with statement not including any term and white no statement given.

In addition, there is some fluctuation among the states that support the norm which has to be taken into account. This is shown in Figure 4 above. Black filled squares show references to the norm in a certain year by a certain country, grey ones mean no references but statements were made. It emerges that there exists a group of 15 states supporting the norm continuously since 2000. Several more support the norm continuously over the last five years. Many more states have voiced support, but only in particular years. The combination of these three aspects highlights the fact that the norm is resonant only a smaller population of states. We hence conclude that it is in the first stage of the norm life cycle and clearly not reaching the tipping point.

Table 3 in the left column shows a list of the ten countries that referred most frequently to any of the terms. The right column displays the countries that most often invoke legal terms (NWC, ICJ, PNW). The most interesting finding is the appearance of two official NWS, China and the US, as well as the de-facto NWS India. The two Asian countries also show up in the right column, indicating support for a legal form of the prohibition of nuclear weapons. We caution, however, that this is not comparable evidence of support. In the case of the US, only the absolute number of references is high, the frequency of the terms in US statements is only 1.1 per mill. This is very low compared to other countries in the top ten, and on a list ordered by frequency the US would not figure among the strongest supporters. Looking into the time series for the US, more than two thirds of term usages took place after President Obama took office. If one assumes that in the field of nuclear non-proliferation and disarmament support by NWS is critical to reach the tipping point of the norm life cycle, our

results show that already two critical states firmly support the prohibition of nuclear weapons at the discursive level. However both did not yet take any unilateral steps to dismantle their arsenals.

Table 3: Countries which used terms most often (all terms or the group of legal terms).

All Terms			Legal Terms		
Country	Occurrences	Frequency	Country	Occurrences	Frequency
Japan	255	0.29	Malaysia	55	0.14
India	219	0.46	India	44	0.09
China	198	0.32	Indonesia	40	0.06
Indonesia	190	0.30	Iran	37	0.04
Iran	177	0.20	Cuba	31	0.05
Malaysia	165	0.42	Myanmar	26	0.08
Cuba	145	0.26	Mexico	25	0.06
USA	140	0.12	China	20	0.03
Brazil	138	0.30	Brazil	20	0.04
Australia	136	0.19	Egypt	16	0.03

Regarding other countries, our findings reflect generally expected positions. In both lists we find Malaysia and Indonesia, as well as Costa Rica in the second. All three are well-known supporters of the prohibition of nuclear weapons, including legal terminology. Similarly, Iran and Cuba show up in both lists. NAC as a group of countries that has a record of strongly supporting the prohibition of nuclear weapons is represented by Brazil (Column ‘All Terms’) and respectively Mexico, Brazil and Egypt, (Column ‘Legal Terms’). Other NAC members are following shortly after the first ten countries.

Besides looking at references ordered by country, region or term it is also possible to differentiate between arenas of negotiation in which the statements have been made. Figure 5 below shows that the place where the selected terms are mentioned most frequently is Main Committee I (Cluster I) of the NPT review process. It is officially tasked to discuss ‘implementation of the provisions of the treaty relating to non-proliferation of nuclear weapons, disarmament, and international peace and security’¹¹. In this committee, there is also a continued increase in the usage of terms. It might be the best starting point for qualitative research on argumentation strategies, which is beyond the scope of this paper. In the general debate of the NPT as well as in the UNGAFC terms are also used with frequencies of more than one per mill. Although the UNGAFC discusses many more issues (e.g. biological and chemical weapons) than the general debate of the NPT, similar frequencies

¹¹ Title during PrepCom according to Reaching Critical Will (2012).

occur. References in the second and third Main Committee of the NPT review process are rare, sometimes the terms are not mentioned at all. Therefore, for several years less than six bars are shown in Figure 5.

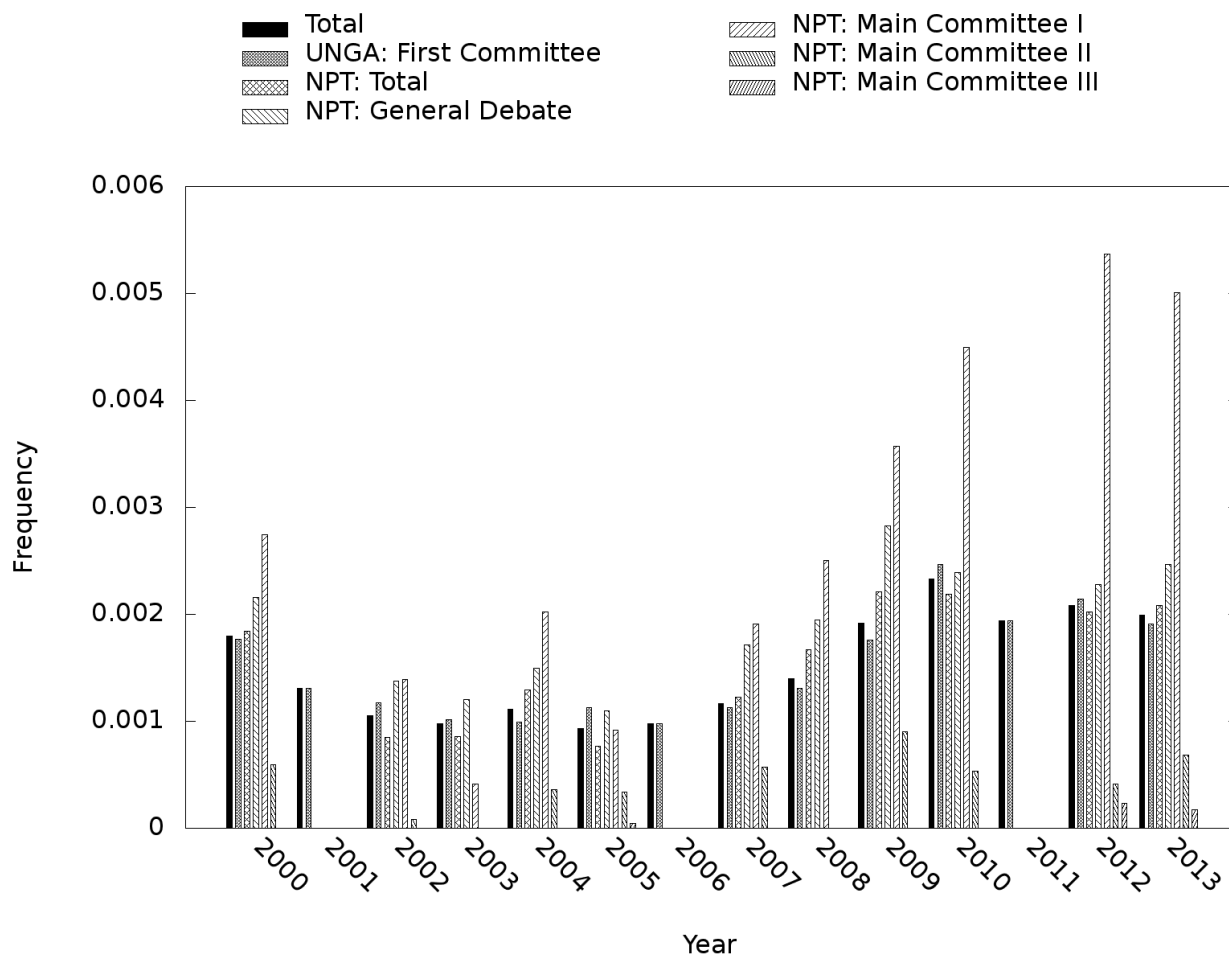


Figure 5: Frequencies of all terms combined in different arenas of negotiation.

Conclusion

Major normative shifts in the international system rarely happen *ad hoc*. Most take decades, if not centuries, to unfold. The abolition of slavery is a prime example for an important normative long-term shift (Crawford 2002; Ray 1989). As life-cycles of international norms are long and developments non-linear, it is a difficult task to assess the status of an emergent norm. In this paper we attempted to assess such a normative shift with regard to the prohibition of the possession of nuclear weapons. There is by now a robust norm against the use of nuclear weapons in war, but the development and stockpiling of these weapons is not covered by it. Optimists interpreted Barack Obama's 2009 speech in Prague as indication that an elimination of nuclear weapons, and a moral ban on their possession, was more than a mere utopia. We therefore systematically analyzed the current international status of a more comprehensive norm against nuclear weapons. Such a norm would be clearly distinct from both the prevalent norm prohibiting the use of nuclear weapons and the existing non-proliferation norms embedded in the NPT.

We were particularly interested in gauging potential increases in norm support by states. Is the comprehensive prohibition of nuclear weapons approaching the tipping point in the norm life cycle as described by Finnemore and Sikkink? Carrying out quantitative content analysis of 6,545 diplomatic statements we explored the occurrence of ten selected terms that can be regarded as textual indicator for support for the prohibition and acceptance of a possible norm. Our original dataset covers a period of 14 years (2000-2013). We measured the absolute number of references to our search terms as well as their frequency relative to the overall size of diplomatic statements. In addition, we identified the countries whose diplomatic representatives refer to the prohibition norm to assess the frequency of their references and the wording they prefer.

Our results show that the prohibition of nuclear weapons got increasing support over the period under study. In recent years, the frequency was as nearly high as 2 per mill – meaning that about two in 1,000 words is a direct reference to the prohibition of nuclear weapons. Especially the term 'Nuclear Weapon Convention' is referred to more often than ever before.

Our evidence shows that the increasing frequency of references indicates growing support for a norm that would prohibit nuclear weapons. 69 states and country groupings have referred to them in at least five different years during the observation period. However, only a small number of states can be considered active 'norm entrepreneurs' that commit to this prescription with high frequency and also support an international legal instrument to institutionalize this norm. Next to some well-known sponsors of nuclear disarmament such as

Costa Rica and Malaysia we found also India, China and Iran among the strongest supporters of such a norm.

We conclude that a comprehensive prohibition of nuclear weapons is currently in the phase of norm emergence. It has gained enough references in the discourse and the number of state sponsors is sufficient (and growing). The norm hence can be considered a ‘shared understanding’. However, according to our data, the tipping point that would lead to further stages of the norm life cycle has not been reached yet. Less than one third of state parties in the international system can be regarded as clear-cut sponsors of the norm, and from the crucial group of NWS only China and India qualify as such. Nevertheless, also other members of the group of NWS increasingly refer to it. We interpret this as a sign that also in countries that currently possess nuclear weapons the idea of total prohibition is gaining ground.

The fact that India, China and Iran result as leading sponsors of complete nuclear disarmament may raise some eyebrows. India and China do not seem to be dismantling their nuclear arsenal, and Iran is suspected to have a clandestine program underway for getting one. What we measured here were discursive shifts – words, not deeds. Quantitative content analysis cannot yield any information on causes or reasons why states publicly support such a norm, or whether their rhetorical commitment is sincere. To detect phony commitments, in the sense of a state supporting a norm that it does not have the slightest intention to abide by, qualitative case studies would be required. This is impossible for all 189 signatories of the NPT regime, or 193 UN members respectively. Investigating the nuclear rhetoric of crucial cases such as India, China, Iran and the US in depth, however, is feasible, and a task for future research to complement quantitative studies.

References

- Acharya, Amitav (2014) *Constructing a Security Community in Southeast Asia: Asean and the Problem of Regional Order*. 3rd ed. Abingdon: Routledge.
- Adler, Emanuel (2002) *Constructivism and International Relations*. In: Carlsnaes, Walter, Risse, Thomas & Simmons, Beth A. (eds) *Handbook of International Relations*. London: Sage, 95-118.
- Adler, Emanuel, and Michael Barnett, eds. (1998) *Security Communities*. Cambridge: Cambridge University Press.
- Adler, Emanuel (1997) Seizing the Middle Ground: Constructivism in World Politics. *European Journal of International Relations* 3(3): 319-363.
- Berman, Sheri (2001) Review: Ideas, Norms, and Culture in Political Analysis. *Comparative Politics* 33(2): 231-250.
- Björkdahl, Annika (2002) Norms in International Relations: Some Conceptual and Methodological Reflections. *Cambridge Review of International Affairs* 15(1): 9-23.
- Crawford, Neta (2002) *Argument and Change in World Politics: Ethics, Decolonialization, and Humanitarian Intervention*. Cambridge: Cambridge University Press.
- Finnemore, Martha (1996) *National Interests in International Society*. Ithaca: Cornell University Press.
- Finnemore, Martha & Sikkink, Kathryn (2001) Taking Stock: The Constructivist Research Program in International Relations and Comparative Politics. *Annual Review of Political Science* 4: 391-416.
- Finnemore, Martha & Sikkink, Kathryn (1998) International Norm Dynamics and Political Change. *International Organization* 52(4): 887-917.
- Florini, Ann (1996) The Evolution of International Norms. *International Studies Quarterly* 40(3): 363-389.
- Harrington de Santana, Anne (2009) Nuclear Weapons as the Currency of Power. *Nonproliferation Review* 16(3): 325-345.
- Holsti, Ole R. (1969) *Content Analysis for the Social Sciences and Humanities*. Reading, MA: Addison-Wesley.
- ICAN / International Campaign to Abolish Nuclear Weapons (2014): Nayarit – A Point of No Return – Mexico Conference 2014. Report, available at <http://www.icanw.org/wp-content/uploads/2014/04/NayaritReport-email.pdf>
- Jepperson, Ronald L., Wendt, Alexander & Katzenstein, Peter J. (1996) Norms, Identity, and Culture in National Security. In: Katzenstein, Peter J. (eds) *The Culture of National Security*. New York: Columbia University Press, 33-75.
- Krippendorff, Klaus (2004) *Content Analysis*. Thousand Oaks: Sage.
- Martin, Susan B. (2013) The Continuing Value of Nuclear Weapons: A Structural Realist Analysis. *Contemporary Security Policy* 34(1): 174-194.

- Mueller, John E. (2010) *Atomic Obsession: Nuclear Alarmism from Hiroshima to Al-Qaeda*. Oxford: Oxford University Press.
- Müller, Harald (2010) Between Power and Justice: Current Problems and Perspectives of the NPT Regime. *Strategic Analysis* 34(2): 189–201.
- Müller, Harald (2011) A Nuclear Nonproliferation Test. Obama's Nuclear Policy and the 2010 NPT Review Conference. *Nonproliferation Review* 18(1).
- Nadelmann, Ethan A. (1990) Global Prohibition Regimes: the Evolution of Norms in International Society. *International Organization* 44(4): 479-526.
- NAM – Ministry of Foreign Affairs of the Islamic Republic of Iran (2012). NAM Members & Observers., original website not available anymore, see <http://web.archive.org/web/20131205081221/http://www.nam.gov.ir/Portal/Home/Default.aspx?CategoryID=27f3fbb6-8a39-444e-b557-6c74aae7f75f> , (visited on 04/11/2014).
- Obama, Barack (Apr. 5, 2009). Remarks By President Obama in Prague. http://www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered (visited on 04/11/2014).
- OPCW / Organisation for the Prohibition of Chemical Weapons (2012) *Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (Chemical Weapons Convention)* (<http://www.opcw.org/chemical-weapons-convention/>).
- Paul, T. V. (1995) Nuclear Taboo and War Initiation in Regional Conflicts. *Journal of Conflict Resolution* 39(4): 696-717.
- Paul, T. V. (2010) Taboo or Tradition? The Non-use of Nuclear Weapons in World Politics. *Review of International Studies* 36(4): 853-863.
- Payne, Rodger A. (2001) Persuasion, Frames and Norm Construction. *European Journal of International Relations* 7(1): 37-61.
- Pierce, Roger (2008) *Research Methods in Politics - A Practical Guide*. London: Sage.
- Press, Daryl G., Sagan, Scott D. & Valentino, Benjamin A. (2013) Atomic Aversion: Experimental Evidence on Taboos, Traditions, and the Non-Use of Nuclear Weapons. *American Political Science Review* 107(1): 188-206.
- Price, Richard (1998) Reversing the Gun Sights: Transnational Civil Society Targets Land Mines. *International Organization* 52(4): 613-644.
- Rappert, Brian (2005) Prohibitions, Weapons and Controversy: Managing the Problems of Ordering. *Social Studies of Science* 35(2): 211-240.
- Ray, James Lee (1989) The Abolition of Slavery and the End of International War. *International Organization* 43(3): 405-439.
- Sagan, Scott D. (2004) Realist Perspective on Ethical Norms and Weapons of Mass Destruction. In: Hashmi, Sohail & Lee, Steven (eds) *Ethics and Weapons of Mass Destruction : Religious and Secular Perspectives*. Cambridge: Cambridge University Press, 73 - 95.
- Schimmelfennig, Frank (2001). The Community Trap: Liberal Norms, Rhetorical Action, and the Eastern Enlargement of the European Union. *International Organization* 55(1): 47-80.

- Shaker, Mohamed I. (1980) *The Nuclear Non-Proliferation Treaty: Origin and Implementation, 1959-1979*. London: Oceana.
- Tannenwald, Nina (1999) The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use. *International Organization* 53(3): 433-468.
- Tannenwald, Nina (2005) Stigmatizing the Bomb: Origins of the Nuclear Taboo. *International Security* 29(4): 5-49.
- Tannenwald, Nina (2008) *The Nuclear Taboo: The United States and the Non-Use of Nuclear Weapons Since 1945*. Cambridge: Cambridge University Press.
- UNGA / United Nations General Assembly (1946), Establishment of a Commission to deal with the problem raised by the discovery of atomic energy, Resolution A/RES/1(I).
- UNGA / United Nations General Assembly, First Committee (2010). Verbatim Record of the 2nd meeting. Official Record A/C.1/65/PV.2.
- UNGA / United Nations General Assembly, First Committee (2011) *General and complete disarmament: follow-up to the advisory opinion of the International Court of Justice on the Legality of the Threat or Use of Nuclear Weapons*. Resolution A/C.1/66/L.42.
- UNODA / United Nations Office for Disarmament Affairs (2012) *Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction* (<http://www.un.org/disarmament/WMD/Bio/>).
- Waltz, Kenneth (1990) Nuclear Myths and Political Realities. *American Political Science Review* 84(3): 731-745.
- Wittner, Lawrence (2009) *Confronting the Bomb: A Short History of the World Nuclear Disarmament Movement*. Stanford: Stanford University Press.