# The Nuclear Weapons Anachronism: A Historical Perspective

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The prospect of the prohibition of nuclear weapons has risen to new prominence in 2017. On 9th October, the International Campaign to Abolish Nuclear Weapons (ICAN) was awarded the Nobel Peace Prize for 'its work to draw attention to the catastrophic humanitarian consequences of any use of nuclear weapons and for its ground-breaking efforts to achieve a treaty-based prohibition of such weapons' (Nobel Prize, 2017). ICAN is a major advocate of the Treaty on the Prohibition of Nuclear Weapons, adopted by the United Nations on 7th June 2017 in an attempt to pave the way for worldwide nuclear disarmament. As of 11th October 2017, the treaty has been signed by fifty-three states (ICAN, 2017). However, none of the current nuclear-armed states (China, France, India, Israel, North Korea, Pakistan, Russia, United Kingdom, United States) have signed it. Therefore, it remains to be seen whether the revived publicity for nuclear prohibition efforts will set the world on a path towards disarmament.

The non-existence of a norm on the prohibition of nuclear weapons to this day is in many ways anachronistic. Nuclear weapons are Weapons of Mass Destruction (WMD), defined as:

…atomic explosive weapons, radioactive material weapons, lethal chemical and biological weapons, and any weapons developed in the future which have characteristics comparable in destructive effect to those of the atomic bomb or other weapons mentioned above. (CCA, 1948: 2).

As opposed to nuclear weapons, other types of WMD have been contractually banned already. With few exceptions, nearly all countries around the globe are signatories to the Biological Weapons Convention of 1975 and the Chemical Weapons Convention of 1997 which ban both the possession and use of such weapons (UNODA, 2017a; UNODA, 2017b). This begs the question as to why an international norm on the prohibition of these types of WMD has evolved while it has so far not emerged for nuclear weapons. What makes nuclear weapons so 'different'? To answer this question, this paper will compare nuclear weapons to chemical weapons regarding their utility, ethics and respective histories. It will argue that the given anachronism is the result of a path-dependent historical development. Whereas the norm of non-use of chemical weapons, established with the Hague Conventions and reaffirmed by the Geneva Protocol, paved the way for the later consensus on total prohibition, an early attempt to establish the complete prohibition of nuclear weapons failed in 1946 and has consequently precluded even a mere consensus on non-use up to this day. The first section of this essay will consider the utilitarian case for nuclear weapons as well as the ethical case against them to show that considerations around utility and ethics alone cannot explain the given anachronism. The remainder of this essay will employ a historical study of chemical weapons and nuclear weapons respectively and explain why the prohibition of the former has evolved into a norm while this has not been the case for the latter. By addressing the question of prohibition in a comparative manner, this essay seeks to provide new insights as to why nuclear disarmament continues to be a difficult task.

## Utilitarian and Ethical Perspectives on Nuclear and Chemical Weapons

Two major schools of thought occupy the centre stage in the academic debate about nuclear weapons. The optimists

(see Mearsheimer, 1993; Waltz, 2012) argue that nuclear weapons are advantageous, whereas the pessimists (see Sagan, 2012; Miller, 1993) argue that nuclear weapons pose too much risk. The debate has been flowing along utilitarian and ethical considerations. Utilitarian considerations provide some answers to the question as to why the prohibition of nuclear weapons has proved so difficult. However, they fail to explain why this has proved difficult as *opposed* to the prohibition of another form of WMD, namely chemical weapons.

T.V. Paul argues that complete disarmament will not be reached while states see nuclear weapons as useful (2012: 165). Hence, he points towards the presumed utility of nuclear weapons as a deterrent. The utility argument has been mostly put forward by realist scholars (see Mearsheimer, 1993; Waltz, 2012). Kenneth Waltz was perhaps the best-known advocate of nuclear weapons. Not only did he advocate the possession of nuclear weapons, but he even believed that their gradual spread across the world would be advantageous (2012: 37). His whole argument is based on the idea that war against a state with nuclear weapons becomes too costly to fight (2012: 6, 20). Hence, as states will refrain from running such costs, the world will be more peaceful (Mearsheimer, 1993: 57).

Some scholars have made further suggestions as to why nuclear abolition has not been achieved so far. Butfoy (2012) blamed the lack of progress made towards abolition under the Obama administration on the President's sense of 'American exceptionalism'. In this view, Obama's commitment to abolition was irreconcilable with the simultaneous insistence on American military primacy (Butfoy, 2012: 281). However, thereby Butfoy virtually reiterates the utility argument. If the United States seeks military primacy, nuclear weapons are useful. Huntley argues that the problem of nuclear proliferation needs to be solved before states can make further steps towards abolition (2010: 155). However, in this line of thought, responsibility for disarmament is simply passed on to newly nuclear-armed states outside the Non-Proliferation Treaty (NPT), like North Korea. It ignores the fact that the possession of nuclear weapons by some NPT members, like the United States, threatens North Korea which in turn seeks to build a nuclear deterrent to enhance its own security. Again, in this classical security dilemma, nuclear weapons are useful for states like North Korea.

Can the given anachronism be explained in simple terms of utility then? As mentioned earlier, the idea that nuclear weapons are useful is grounded in the belief that they offer advantageous deterrent capabilities. As Thomas Schelling states, the difference between nuclear weapons and other types of weapons does not lie in the cost that they inflict. It is possible to kill a lot of people with any type of weapon. What sets nuclear weapons apart is the speed with which this can be achieved (1966: 20). Such speed of delivery led to the expected Mutually Assured Destruction during the Cold War. Between the US and the USSR, then, nuclear weapons were arguably able to provide a deterrent in the Waltzian sense.

However, nuclear weapons have not been able to shield the US from other threats, such as international terrorism. Whether a weapon is useful depends chiefly on the situation and the kind of threat one seeks to avert. Nuclear weapons do not prove useful in any given scenario. Neither do chemical weapons always prove inexpedient. Indeed, they have proved useful in the past. Spiers cites the siege of Platea and Velium (431-401 BC) as an early example in which the Spartans directed toxic sulphur fumes against these cities (1986: 13). Such a strategy could prove effective even in modern times if enemy forces and civilians are not properly equipped to defend themselves against chemical weapons. Even 'lighter' chemical weapons can prove effective if cross-employed with conventional weapons to gain a strategic advantage. During the Vietnam War, the US army found that CS gas was a useful tool for purposes of area denial and could be employed effectively in both defensive and offensive scenarios (Spiers, 2010: 82). The employment of herbicides proved equally effective to enhance the defence of US military camps, it facilitated aerial observations and denied the Vietcong cover (Spiers, 2010: 84). The point here is that chemical weapons are not *per se* useless. Rather than that, their usefulness depends on the specific circumstances of any given conflict. Therefore, one cannot easily say that a norm on the prohibition of chemical weapons has merely emerged because there is no use for such weapons anymore. Even in the modern age, chemical weapons can be employed effectively in certain conflict situations, whereas nuclear weapons may prove ineffective in others.

Critical assessments of nuclear weapons have traditionally been tied to ethical considerations. Many scholars point to the inherent dangers of nuclear weapons. Sagan states that militaries are likely imprudent and accidental wars could erupt under a variety of different scenarios (2012: 49-50, 74). Miller points out that states may lose their control

of nuclear arsenals in times of political instability (1993: 74). For the same reasons, Avery sees nuclear abolition as no less than a question of life or death (2016: 305). Such considerations, however, were exactly what informed the chemical weapons non-use norm. The International Committee of the Red Cross (ICRC) which was also directly involved in the drafting of the Geneva Protocol issued an appeal in 1918. It stated that chemical weapons inflicted terrible and intolerable suffering on the victims, that the use of such weapons could easily spiral out of control and that their impact was indiscriminate (ICRC, 1918). There are clearly strong ethical reservations about both types of weapon. Fears about imprudence, the scale of suffering and indiscrimination apply to nuclear weapons and chemical weapons alike.

Hence, utilitarian and ethical considerations cannot explain the fact that an international norm on the prohibition of nuclear weapons has not evolved whereas the prohibition of chemical weapons has become a norm. In certain situations, there may be as much use for chemical weapons as there is in other situations for nuclear weapons. In the same way, ethical problems pertain to both nuclear and chemical weapons. In view of these considerations, it appears that neither nuclear pessimists nor optimists can provide an answer to the question as to why the prohibition of nuclear weapons has not become a norm while this has happened for chemical weapons.

## How the Prohibition of Chemical Weapons Became a Global Norm

What makes a global norm? In constructivist literature, norms are commonly defined as 'collective expectations for the proper behaviour of actors with a given identity' (Katzenstein, 1996: 5). Krasner conceptualises them in a slightly different way as 'standards of behaviour in terms of rights and obligations' (1983: 3). As such, norms are collectively agreed ideas about the right and wrong behaviour of any given state. An international prohibition norm, then, entails that non-possession and non-use are seen as self-evidently and unquestionably 'right' by the large majority of states, so that they can be considered a behavioural standard.

The idea that the prohibition of chemical weapons has become an international norm is by itself contested. Peter Hough, for example, questions the ability of the Chemical Weapons Convention to effectively abolish chemical stockpiles and therefore sees an enduring danger that such weapons may be used (2004: 47). Richard Price, on the other hand, argues that the use of chemical weapons has become a taboo (1997: 43). In his view, this taboo was already firmly established at the first Hague Conference in 1899 (1997: 19). Ever since, it has informed discourse about chemical weapons (Price, 1997: 174).

It was not until the late 19th century that chemical weapons could be produced on an industrial scale. In an effort to safeguard humanitarian interests in war, the signatories of the Hague Conventions of 1899 and 1907 had declared their intentions to renounce on the use of 'poison or poisoned weapons' (Hague Convention, 1899: Art. 23). Despite their agreements, chemical weapons were commonly employed by both sides during the First World War. While chemical weapons did not prove decisive in the overall war effort, they still inflicted considerable damage. Gas attacks killed an estimated 100.000 soldiers during the First World War (Gradmann, 2003: 136). 56.000 of these were inadequately protected Russian soldiers on the Eastern Front (Spiers, 1986: 32). Nevertheless, one should not be too quick to conclude, as Price reminds us, that 'the norm [of non-use] died in the trenches' (1997: 59). British efforts, for example, were 'significantly restrained by the nascent chemical weapons norm' and all sides appear to have understood their use of gas first and foremost as a means of retaliation. This implied 'an attempt to enforce the norm and end the practice of gas warfare' (1997: 59-60). The First World War spawned a considerable host of art and literature conveying the horrors of gas warfare that inform common ideas of it to this day, such as John Singer Sargent's painting *Gassed* (1919) or Erich Maria Remarque's *All Quiet on the Western Front* (1929). Because of the evident horrors of gas warfare, the International Committee of the Red Cross (ICRC) urged the warring parties in February 1918 to refrain from using poisonous gases. The ICRC contributed directly to the drafting of the Geneva Protocol signed in 1925 which reiterated the ban on the use of gases and extended it to biological weapons (US State Department, 2002).

The fact that chemical weapons were used on further occasions after 1925 should not divert our attention from the

growing consensus on the non-use of chemical weapons. While Spain used chemical weapons during the colonial war in Morocco against Rif tribesmen between 1921 and 1927, the Spanish government did not ratify the Geneva Protocol until 1929 and was hence not legally bound not to employ them. Afterwards, Spanish authorities tried to conceal the evidence of their use (Spiers, 2010: 72-73), showing that they were aware of the emerging norm. Fascist Italy used mustard gas in the Abyssinian War and Japan, not having signed the Geneva Protocol, made use of chemical weapons in China (Spiers, 2010: 74). Italy's use of gas in Abyssinia did not go unnoticed. Emperor Selassie appealed to the League of Nations in June 1936 and publicly condemned the use of mustard gas. The Italians, after long efforts to deny their use, publicly admitted that they had broken the Convention (Price, 1997: 103). While European governments were reluctant to do anything about it in an era of appeasement, numerous civil society groups condemned the attacks (Grayzel, 2012: 180-181).

During the Second World War, Germany and Japan used chemical weapons. Zyklon B, a form of hydrogen cyanide, was used in the Nazi gas chambers for the mass murder of European Jews. Japan used chemical weapons on multiple occasions against the Chinese (Ping, 2007: 165-167). When this became public, it caused major international dismay. As President Roosevelt warned Japan that the use of chemical weapons would be met with 'massive retaliation', Japanese chemical warfare decreased significantly in 1944 (Ping, 2007: 167). The Nazi gas chambers epitomise the cruelty and inhumanity of the Holocaust to this day. Testimonies on the use of gas in Nazi extermination camps helped to convict war criminals at the Nuremberg Trials shortly after the war (Yad Vashem, 2016). Rather than undermining the notion of an emerging consensus, these incidents support the idea that the international norm of non-use was well-established and that the Geneva Protocol played an important part in reinforcing it after the experience of the First World War. Spain's and Italy's attempts to conceal the use of gas shows that the respective governments were aware they had broken the norm. The international response to the use of chemical weapons in combat by Japanese forces as well as the use of gas in Nazi extermination camps equally supports the idea that a norm of non-use was in place. Using chemical weapons came to be seen as a crime.

During the Vietnam War, the use of chemical defoliants therefore caused much controversy. Alongside the general protest against a war that was seen as unjust by many Americans, scientists denounced the use of herbicides and made the Department of Defence commission several wartime studies (Spiers, 2010: 85). Protest led to a 'swirl of adverse publicity' and later Vietnam veteran lawsuits about the effects of chemicals on their health caused further problems to the US government (Spiers, 2010: 85-86). Again, the use of chemical agents did not go uncontested. In, 1988, Iraqi forces employed chemical weapons in an attack on the Kurdish town of Halabja, killing thousands of civilians. This most deadly employment of chemical weapons since the Second World War led 149 states to sign a declaration in 1989 condemning the use of chemical weapons and advocating a new treaty to ban them (Smithson, 1992: 38). The Paris Declaration asked specifically for the 'prohibition of the development, production, stockpiling and use of all chemical weapons, and [for] their destruction' (New York Times, 1989). In 1993, the Chemical Weapons Convention was opened for signature. By 2009, 186 states had signed the Convention so that it became 'a virtually universal ban on the development, production, stockpiling, retention or use of chemical weapons' (Wirtz, 2010: 141). Right now, the only states that have not formally acceded are Israel which has signed but not ratified the Convention, Egypt, North Korea and South Sudan (Arms Control Association, 2017). The signatory states that retain chemical stockpiles are Iraq, Libya and the US. Iraq has not destroyed all stockpiles due to the disruption caused by recent conflicts, whereas the remainder of Libya's stockpiles are currently being destroyed in Germany (Arms Control Association, 2017). The US had destroyed 90% of its stockpiles in 2016 and is projected to complete destruction by 2023 (Arms Control Association, 2017).

Syrian forces have used chemical weapons against civilians on multiple occasions during the conflict in Syria. A UN Mission found 'clear and convincing evidence' that Sarin gas had been used in one of the suburbs of Damascus in 2013 and stated that the use of such could not be proven but was highly probable in multiple other incidents (United Nations, 2013). In light of these incidents, experts warned that the chemical weapons taboo might erode (Graham-Harrison, 2016). United States President Obama stated in 2012 that the use of chemical weapons in Syria would cross a 'red line', however no consequences ensued when they were employed. Nevertheless, the use of chemical weapons caused international outrage. UN Security Council Resolution 2118 was unanimously adopted and required Syria to destroy its chemical weapons stockpiles. Syria acceded to the Chemical Weapons Convention (CWC) in 2013 and stockpiles were taken out of Syria for destruction on a special US vessel (BBC, 2014). Further gas attacks

in Syria have since been confirmed. Most of these have been attributed to the government forces of Bashar Al-Assad and one to the Islamic State (Guardian, 2016). However, it is important to note that the use of chemical weapons in Syria is an exception to the norm. The recent gas attacks were conducted in a civil war environment and it is unclear whether Bashar Al-Assad ordered his forces to make use of chemicals, or if they were used at the initiative of lower-level officers. The fact that ISIS forces used mustard gas also substantiates the notion that chemical weapon stockpiles have at least partly escaped the control of the Syrian regime. The use of chemical weapons in Syria is therefore an outlier and does not dispute the norm on the complete prohibition of chemical weapons. The large majority of states have acceded the CWC and most have destroyed their stockpiles or are in the process of doing so. The emergence of this norm has been intrinsically tied to international agreements. The Geneva Protocol provided for a norm of non-use, the CWC later established the prohibition norm.

**Why Has the Prohibition of Nuclear Weapons Not Become a Global Norm?**

Nina Tannenwald argues that since the 1940s a 'nuclear taboo' has emerged in the United States. She traces the origins of the taboo back to the 1948 United Nations classification of nuclear weapons as WMD in a time when reports about their use in Japan led to increasing public awareness of the consequences of exposure to radiation (2007: 363). After the scare of the Cuban Missile Crisis, she argues, this taboo became implicit in relations between the US and the Soviet Union (Tannenwald, 2007: 363). According to Tannenwald, no serious thought was given to using nuclear weapons in the First Gulf War and furthermore the anti-nuclear movement that had grown during the Reagan period re-emerged in the 1990s and delegitimised the use of nuclear weapons even further (2007: 364). However, Tannenwald's argument is confined to the non-use of nuclear weapons by the US and, as will be shown in the following, neither a norm on the non-use nor on the non-possession of nuclear weapons has emerged to this day, neither in the US nor internationally.

During the Second World War, US scientists developed the first nuclear weapons. In fact, scientists such as Einstein had been advocating this move in as early as 1939 out of fear that Nazi Germany might have a nuclear weapons programme. However, it was clear in early 1945 that the Germans had not been able to develop the adequate technology (Cortright, 2008: 128). Nevertheless, the US then dropped two nuclear bombs on the Japanese cities of Hiroshima and Nagasaki on 6th and 9th August 1945 respectively. The decision to do so was by no means uncontroversial. What overrode the Truman administration's prick of conscience was the feeling that a nuclear attack was a just revenge for the attack on Pearl Harbor, the belief that further American casualties could be avoided, as well as the belief that it could serve as a show of strength to the Soviet Union (Heuser, 2000: 23). After the attacks, it was indeed the comparison to chemical weapons that cast doubts on the use of nuclear weapons. US officials started to worry about Japanese reports on the consequences of radiation exposure that reminded many government officials uneasily of the effects of chemicals in World War One (Tannenwald, 2007: 97). Nevertheless, the prohibition of such weapons never became an international norm.

Prohibition implies non-use as well as the destruction of stockpiles. As the recent UN Treaty on the Prohibition of Nuclear Weapons has only been signed by a rough fourth of all states, the most comprehensive treaty in place remains the Nuclear Non-Proliferation Treaty that came into effect in 1970. At the moment, the treaty has 190 signatories. It was not signed by North Korea, India and Pakistan, all of which are nuclear states. Israel, being another non-signatory, maintains a policy of 'nuclear ambiguity', having neither admitted nor denied the possession of nuclear weapons, but is widely believed to have somewhere between 80 and 400 warheads (Cohen, 2010: 82). Hence, out of the nine nuclear powers in the world today, only five have acceded to the treaty. The treaty only forbids proliferation of nuclear weapons. As to the abolition of such it states in Article VI:

Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control. (US State Department, 2010).

Hence, the treaty does not commit signatory parties to abolition, but only to start negotiations to achieve such goal 'at

an early date'. Although nuclear stockpiles in the US and Russia have been downscaled (especially after the START I Treaty was signed), complete abolition of nuclear weapons still seems to be a dream of the future. The latest New START treaty signed in 2010 only aims to reduce the number of strategic offensive capabilities, whereas it leaves a lot to be desired in terms of overall nuclear stockpiles (US State Department, 2016). Although President Obama declared in 2009 that he would 'seek the peace and security of a world without nuclear weapons' (White House, 2009), he left office without having made much progress to achieve such an objective. Russian President Putin furthermore suspended a deal with the US over the disposal of weapons-grade plutonium because of tensions over Ukraine and Syria (Isachenkov, 2016). Most recently, US President Donald Trump's erratic and contradictory comments on nuclear weapons have caused considerable concern as well (Blake, 2017).

His comments also speak to the fact that even the non-use of nuclear weapons has not become as entrenched an international norm as Tannenwald would have us believe. While it can be reasonably assumed that leaders are hesitant to use them, the possibility of such use still looms in the background. NATO still reserves itself the right to first use of nuclear weapons in a conflict, a stance that has been criticised by some scholars (see Sagan, 2009). Out of all the states that currently possess nuclear weapons, only China has adopted an official no-first-use policy (Thakur, 2016). Hence, it is the only country that would use its arsenal purely as a second-strike weapon, at least according to its own government. No state has formally obliged to destroy their arsenals. While one may agree with Tannenwald that a certain hesitance on the use of nuclear weapons might exist, a nuclear prohibition norm has not emerged to this day.

## Prohibition, Non-prohibition and Path Dependency

Why, then, has a consensus on the prohibition of chemical weapons emerged while this is not the case for nuclear weapons? The previous discussion on the chemical prohibition norm has shown that a consensus on the non-use of chemical weapons emerged formally with the Hague Conventions and was legally reaffirmed in the Geneva Protocol. A consensus on non-possession found its first official expression in 1989 after Iraqi forces attacked Halabja with chemical weapons and was afterwards formally recognised with the Chemical Weapons Convention. Hence, today, it is reasonable to speak of a norm on the prohibition of chemical weapons.

The history of nuclear weapons has been following a very different trajectory. Limited yet powerful anti-nuclear protest emerged right after the bombs had been dropped on Hiroshima and Nagasaki. Many nuclear scientists who had been directly involved in the Manhattan Project or had otherwise helped America on the way to nuclear power status felt deceived by the US government as they had envisaged the bomb as a deterrent against Nazi Germany and not as a weapon of attack to be used against Japan (Cortright, 2008: 127-128). Prominent scientists such as Leo Szilard who founded the Foundation of American Scientists in 1945, and Eugene Rabinowitch who founded the Bulletin of Atomic Scientists pushed the US government to actively consider the abolition of nuclear weapons for a brief period in early 1946 (Cortright, 2008: 130). According to Cortright, abolition seemed feasible until Bernard Baruch was appointed as US representative to the newly founded UN Atomic Energy Commission (2008: 131). As opposed to the earlier proposed Acheson-Lilienthal Plan which encompassed the destruction of the US nuclear arsenal, the new Baruch Plan called for initial observer missions abroad to make sure that no country was able to develop nuclear weapons and the subsequent dismantling of the US nuclear arsenal (Cortright, 2008: 131-132). This proposition was dismissed by the USSR. Payne argues that the failure of the Baruch Plan should be ascribed to the Soviets. Stalin, according to Payne, was anxious to develop his own nuclear capabilities and had no intention to open his borders for foreign observers (1998: 4). However, the US could equally be blamed for asking all other nations to take serious steps before them. In fact, Cortright follows this line of argument, saying that the US position obstructs non-proliferation efforts to this day (2008: 133). Had the US adopted the Acheson-Lilienthal Plan instead of the Baruch Plan, perhaps the ensuing nuclear arms race could have been avoided. Whichever side is to blame, the underlying problem preventing the US and the Soviet Union's immediate agreement seems to have been a deep lack of trust: Neither side could be sure that giving up on their own nuclear weapons programme would have been met likewise by the other side.

As the effort to ban nuclear weapons failed, the nuclear arms race took its course. The Soviet Union went nuclear in 1949. Britain and France tested their first bombs in 1957 and 1960 respectively. China conducted its first nuclear test in 1964. Official efforts after the failure of the Baruch Plan were no longer concentrated on abolition but rather on limitation and non-proliferation. Governments and academics came to see a world of nuclear weapons as a given. For example, both the US and Britain made explicit declarations when they signed the First Additional Protocol to the Geneva Conventions on the Laws of War in 1977 that any new rules introduced would not have any effect on the use and possession of nuclear weapons (Carty, 1986: 104). After 1946, nuclear weapons gained a momentum of their own. In just a few years, nuclear weapons became ever more sophisticated and developed ever more explosive power. The advent of the hydrogen bomb in 1952 also marked a watershed moment in strategic thinking and spawned new theories about nuclear strategy (Trachtenberg, 1989: 302-303). The failure of the Baruch Plan therefore set a dangerous precedent for the future history of nuclear weapons. They came to be seen as a necessary evil.

Hence, looking at the history of chemical and nuclear weapons, one can detect a certain path dependency. The way towards a norm of chemical prohibition was long and difficult with considerable setbacks, but this aim was lastly achieved because the norm of non-use had been in place since the turn of the century and subsequently reinforced after the experience of gas warfare in World War One. International agreements played an important role in this process. As a norm on nuclear prohibition was on the table in 1946 but failed to materialise, governments sought to arrange with a world of nuclear weapons. Further treaties were restricted to non-proliferation and limitation efforts because complete prohibition had been precluded by the failure of the Baruch Plan and the ensuing arms race.

## Conclusions

There can be no guarantee that chemical weapons will not be used in the future. The recent fate of Syrian civilians is a painful reminder of this fact. Neither is there an absolute guarantee that no state will in the future attempt to clandestinely procure such weapons for itself. However, such happenings do not automatically prove that there is no norm against such behaviour. As a comparison one may say that in most societies today, there is a clear norm that people should not be killed, at least not if they have not committed a grave crime. Nevertheless, murders happen all the time. Does that mean that there is no norm against murder? Not at all. In the same way, this essay has argued that although chemical weapons have been employed a lot more over time than nuclear weapons, a norm on the prohibition of chemical weapons has emerged to this day whereas this has not been the case for nuclear weapons. The essay has also shown that international treaties played a central role in cementing these norms. Chemical weapons have had a long and difficult historical trajectory. Although their non-use was established as a norm in 1899, they were extensively used in the First World War. The Geneva Protocol, inspired by the horrors of gas warfare, reiterated the demand for non-use. After the traumatic events in Iraq in 1989, the Chemical Weapons Convention finally prohibited chemical weapons altogether in 1997. The chance to establish such a regime for nuclear weapons at their inception was forfeited by the US and the Soviet Union. Under the conditions of an emerging Cold War, nuclear armament soon gained a momentum of its own and as the number of nuclear warheads grew, the chances for nuclear abolition became minimal. Up to the recent Treaty on the Prohibition of Nuclear Weapons, all efforts after the failure of the Baruch Plan had been geared at non-proliferation and the limitation or downsizing of stockpiles, but not at formalising norms of non-use and non-possession. It can hence be said that the failure of the Baruch Plan has – from a historical perspective – precluded the prohibition of nuclear weapons until today.

The historical analysis in this essay highlights the relevance and significance of international treaties in solidifying international norms. Perhaps the prospects of the Treaty on the Abolition of Nuclear Weapons are therefore brighter than one may think at the current moment, despite worries about North Korean nuclear tests and President Donald Trump's crude rhetoric. The analysis furthermore underlines the importance of trust between parties as the basis of any such agreement. In the case of chemical weapons, the norm of non-use was established before the norm of non-possession was implemented. Perhaps bilateral agreements on a reciprocate policy of no-first-use could pave the way for nuclear disarmament. However, such is easier said than done. Nevertheless, this essay shows that while

history takes a certain course, this course is not fixed. Under slightly different circumstances and with a bit of good will, the US and the Soviet Union might have been able to find an agreement in 1946 and perhaps it would not have taken seventy-one more years for a nuclear prohibition treaty to become a reality.

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