

4. On Nuclear (Dis-)Order

Ever since the 1945 bombing of Hiroshima ushered in what is often dubbed the “atomic age” or the “nuclear era,” people have obsessed about the potential for massive, even civilization-ending, destruction seemingly inherent in the weapon exploded there. Over the decades this obsession has variously focused on an endless array of creative, if consistently unfulfilled, worst-case scenarios deriving from fears about the cold war arms race, nuclear apocalypse, and the proliferation of the weapons to unreliable states (or even to reliable ones). (Mueller 2010, p.ix)

The quote from the preface to John Mueller’s controversial book is mocking the decades-long obsession of scholars, journalists, and politicians with the exaggerated dangers of nuclear weapons. Despite Mueller’s arguments that such “nuclear alarmism” is unfounded and largely irrational, the fact is that since 1945, international community has gone to great lengths to prevent nuclear Armageddon from taking place. In today’s world politics, most states are subject to the rules of global nuclear institutions such as the Nuclear Non-Proliferation Treaty (NPT) regime or the International Atomic Energy Agency (IAEA), while the violations of these rules are largely considered some of the most serious threats to international peace and security.

The aim of this chapter is to bridge the theoretical and empirical parts of the book and provide the reader with a broader context of norms, rules, and order in global nuclear politics. The “nonproliferation game”, a subject of my inquiry in this book, was defined in the introductory chapter as a continuously negotiated techno-political order that aims to create and sustain a patterned behavior of states with respect to the global diffusion of nuclear technology. The game takes place primarily within the international regime that revolves around the NPT, but also across the more encompassing *global nuclear order*, a bulk of norms, rules, practices, and institutions that underpin the international dimension of nuclear affairs. In the logic of my research design, understanding the contingent and dynamic character of nuclear order and the normative structure of nonproliferation game allows me to apply my general theoretical perspective in individual empirical cases.

The existence of order also logically implies a possibility of *disorder*. If nuclear norms and rules are the building blocks of nuclear order, the violation of these norms and rules can be interpreted as disorderly, *deviant* behavior. As such, besides examining the normative structure of nuclear politics, I also aim to identify major patterns of deviance in nuclear affairs and highlight the prominent cases of norm violations in nuclear order since its institutionalization in the late 1960s. Once again, this should provide the broader context to the specific cases of “nuclear deviance” in chapters 5, 6, and 7.

In this chapter, I proceed as follows. First, I briefly discuss the historical constitution of nuclear order as it gradually emerged after the Second World War. Second, I review the dominant perspectives on nuclear order in contemporary nuclear scholarship. Third, I use the conceptual framework from the previous chapter to reconstruct a normative structure that underpins the nonproliferation game. Fourth, I elaborate on the contestedness of nuclear order with respect to ambiguous concepts, clashing norms, and technological change. Fifth, I highlight notable patterns of deviant behavior in nuclear politics of the last few decades, with respect to nuclear “outsiders”, “rogues”, and “keepers”. Finally, in a brief conclusion, I discuss the findings of this chapter and how they relate to the goals of my book.

Emergence of Nuclear Order

In this section, I aim to briefly elaborate on the historical constitution of global nuclear order. In the macro perspective, I treat *nuclear order* as nested within the broader *international order* (cf. Walker 2004, p.9; Müller et al. 1994, p.8). Nonetheless, the unique character of nuclear technology and its undisputed political relevance provide nuclear order with a privileged position in international affairs.⁶⁹

The unprecedented destructive character of nuclear weapons demonstrated in August 1945 during the bombing of Hiroshima and Nagasaki arguably brought about a strong ordering imperative towards nuclear technology in international politics. As early as 1946, the United Nations General Assembly (UNGA) passed its very first resolution to establish the Atomic Energy Commission (UNAEC), with the objective “to deal with the problems raised by the discovery of atomic energy” (UNGA 1946). In the same year, the United States put forward a proposal for

⁶⁹ On the notion of “nuclear exceptionalism”, see Hecht (2012).

the establishment of international control over nuclear arms, widely known as the Baruch plan (see Gerber 1982). However, both the U.S. proposal and the Soviet counter-offer eventually fell prey to the Cold War competition and mistrust between the two ideological blocks; and so did the 1957 Rapacki plan that would establish a regional nuclear-free zone in Central Europe (see Stefancic 1988; Ozinga 1989).

Despite these failed formal attempts, the 1940s and 1950s still saw a birth of some early norms, practices, and institutions that were highly relevant to the later establishment of global nuclear order. Perhaps most importantly, the Korean war and its aftermath led to the gradual emergence of informal norm of nuclear non-use in military conflicts (cf. Tannenwald 2007, chaps. 4–5; Paul 2009, chap. 3). Furthermore, the 1957 Atoms for Peace speech and the creation of the International Atomic Energy Agency (IAEA) and EURATOM established possible pathways for the future international control of fissile materials and the global diffusion of nuclear technology (Smith 1987, p.259).

The 1960s was arguably the period when nuclear order took shape through the incremental sedimentation of arms control practices and the establishment of several formal initiatives. In the wake of the Cuban missile crisis that could have resulted in all-out nuclear war, the United States and the Soviet Union laid the foundations to the practice of bilateral strategic arms control. The (originally reluctant) Soviets eventually accepted the idea, successfully promoted by the U.S. strategic expert community (see Adler 1992), that the relationship of the two nuclear superpowers should be built upon the logic of strategic stability achieved through mutual nuclear deterrence and a “realistic” approach to nuclear reductions. The 1963 “Hot Line Agreement” and the subsequent Strategic Arms Limitation Talks (SALT) that culminated in the signature of the 1972 SALT I Interim agreement and Anti-Ballistic Missile (ABM) Treaty represented the first attempts to formally institutionalize the emerging practice of bilateral nuclear arms control.⁷⁰

In the same period, we could also observe a gradual institutionalization of arms control practices in multilateral setting. The 1959 Antarctic Treaty, the 1963 Limited Nuclear Test Ban Treaty (LTBT), and the 1967 Outer Space Treaty reflect three important trends in the dynamics

⁷⁰ For the theoretical and conceptual underpinning of strategic arms control idea, see Schelling and Halperin (1961), Bull (1961), Brennan (1961), and Jervis (1993). For the emergence and spread of the arms control idea and its institutionalization in U.S.-Soviet bilateral relations, see Adler (1992), Krause and Latham (1998), and Tannenwald (1999a).

of nuclear order: a regional approach (that continued in the 1967 Treaty of Tlatelolco and the following agreements establishing regional nuclear weapon-free zones); a limitation of nuclear testing (that continued in the 1974 Threshold Test Ban Treaty and the subsequent efforts to negotiate the Comprehensive Test Ban Treaty – CTBT); and a domain-control (that continued in the 1972 Seabed Treaty).

However, the key multilateral achievement in the context of emerging global nuclear order was arguably the successful negotiation of the NPT. In early 1960s, the U.S. Department of Defense prepared a secret memorandum for President on the increasing pace and danger of uncontrolled nuclear proliferation in the next years and decades; in this very context, President Kennedy made his famous speech about the United States having to face a world with “15 or 20 or 25” nuclear-armed nations in the next decade (Kennedy 1963). The need for a multilateral solution to the “non-proliferation problem” emerged hand in hand with the growing pressure to open doors to a truly global diffusion of civilian nuclear power (Walker 2012, p.73). The Soviets eventually joined the United States in this endeavor in the fear of possible nuclear weapons acquisition by West Germany and Japan, and the establishment of NATO multilateral nuclear force (cf. Krause 2007b, p.488; Walker 2012, p.74; Simpson 1994, p.22). Eventually, the process which started in the 1959 United Nations General Assembly (UNGA) “Irish” resolution culminated in the 1968 signature of the NPT by 62 states. By 2016, the number of states that both signed and ratified the treaty has reached 190, with only India, Pakistan, Israel, North Korea, and South Sudan currently being non-signatories.⁷¹

The details of the NPT negotiation are discussed in more detail elsewhere.⁷² In brief, there were arguably three key innovations in the NPT that laid the foundation for the emerging nuclear order. First, the NPT established two categories of states with different rights and obligations according to the treaty: *nuclear-weapon states* (NWS), defined as the ones that tested nuclear weapons before 1967 (UN Department for Disarmament Affairs 1968), i.e. the United States, Soviet Union, United Kingdom, France, and China; and *non-nuclear-weapon states* (NNWS), i.e. all the other signatories. Second, the NPT set a number of (more or less specific) prescriptions and proscriptions for the aforementioned categories of states;

⁷¹ North Korea is the only state that had acceded to the NPT and later withdrew.

⁷² See for example Burns (1969), Epstein (1976), Unger (1976), Shaker (1980), Nye (1981), Müller et al. (1994, chap.2), Bourantonis (1997), Paul (2003), Krause (2007b), Bunn and Rhineland (2008), Walker (2012, chap.3), and Popp, Horowitz, and Wenger (2016).

conventionally, they have been treated as the three normative pillars of the treaty, with respect to the horizontal spread of nuclear weapons, the peaceful nuclear use, and finally the cessation of the nuclear arms race and disarmament.⁷³ Third, the NPT established a system of quinquennial conferences that would “review the operation of this Treaty with a view to assuring that the purposes of the Preamble and the provisions of the Treaty are being realized” (UN Department for Disarmament Affairs 1968).⁷⁴

Together with the regional nuclear weapon-free zone agreements (see Goldblat 1997; Thakur 1998), the NPT and its review process have laid foundations to the global nuclear non-proliferation regime (Nye 1981, p.16; cf. Keeley 1990).⁷⁵ In the heart of this regime also lies the International Atomic Energy Agency (IAEA) safeguards system, joined by a sheer number of supportive institutions, initiatives, international treaties, practices, declarations, resolutions, trade agreements, and pieces of domestic legislation in individual states, that have emerged over the course of the last few decades (cf. Fischer 1987; Smith 1987; Biswas 2014, chap.1; Müller, Becker-Jakob, et al. 2013). Among them are also the “non-proliferation clubs” such as the Nuclear Suppliers Group (NSG), the Proliferation Security Initiative (PSI), the Missile Technology Control Regime (MTCR), the G8 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction, or Nuclear Security Summits (NSS) (see Müller et al. 2014).

The NPT-based non-proliferation regime represents the key component of the global nuclear order, and arguably remains the main source of normative dynamics within this order (cf. Walker 2007b, p.432). As I highlight below, the regime itself has evolved quite dynamically since the early 1970s, implementing new rules, initiatives, and procedures to adapt to new requirements of states as well as to changes in the external environment. A key point in the regime’s evolution was the 1995 agreement of the state parties to extend the (originally twenty-five years) duration of the NPT indefinitely, as a part of the “package deal” that included the strengthening of the review process and introduction of new “principles and objectives” to

⁷³ The obligations of NWS in peaceful nuclear use and disarmament pillars are frequently interpreted as a grand “bargain”, that had justified the fact that NNWS pledged to permanently forgo an option to develop their own nuclear weapons. For a critique of the notion of an NPT bargain as merely a “prominent ideological myth of the liberal arms control school”, see Krause (2007b; cf. Gilinsky & Sokolski 2017).

⁷⁴ William Walker argues that “most state parties had by now come to regard the NPT [Review] Conference as a quasi-legislative assembly with authority to set the broad agenda” (Walker 2007b, chap.439; cf. Walker 2007a, chap.750). On the legal and policy dimensions of NPT Review Conferences, see Stoiber (2003).

⁷⁵ Shampa Biswas suggests that beyond the declared goal of solving the “problem of nuclear weapons”, global nuclear non-proliferation regime also “helps to constitute a certain rendition of the problem of nuclear weapons that serves a global ordering function” (Biswas 2014, p.74). See also Ruzicka (2017).

assess the implementation of the NPT provisions (NPT/CONF.1995/32 1995; cf. Jayantha Dhanapala & Rydell 2005; Welsh 1995; Rauf & Johnson 1995).

The issues related to nuclear non-proliferation and disarmament have been also dealt with within the Conference on Disarmament.⁷⁶ Furthermore, the adoption of the CTBT or the 2016 resolution on the nuclear ban treaty negotiation were subject to a general vote in the UNGA.⁷⁷ Finally, in 1996, the International Court of Justice (ICJ) provided the advisory opinion on the legality of the threat or use of nuclear weapons, suggesting, *inter alia*, that “there exists an obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control” (ICJ 1996; cf. Matheson 1997; Heffernan 1998).

Scholarly Perspectives

Nuclear scholarship has generally accepted the idea that a certain kind of order had gradually evolved in global nuclear affairs. Furthermore, nuclear scholars broadly acknowledge the importance of the NPT as the normative cornerstone of this order, even if they usually understand global nuclear order as including also the NPT non-members. Nevertheless, the contemporary nuclear scholarship still approaches this subject from different, and sometimes principally competing, perspectives.

Perhaps the most famous depiction of nuclear order comes from the British scholar William Walker (2000; 2004; 2007a; 2012). Walker portrayed global nuclear order as comprising of the two interlinked systems: a managed system of deterrence and a managed system of abstinence. In the system of deterrence, a “recognized set of states would continue using nuclear weapons to prevent war and maintain stability, but in a manner that was increasingly controlled and rule-bound”; in the system of abstinence, “other states would give up their sovereign rights to develop, hold and use such weapons in return for economic, security and other benefits” (Walker 2000, p.706; cf. Harrington & Englert 2014). The two systems would be connected through “normative and instrumental tissue”, including reciprocal

⁷⁶ The work of the Conference on Disarmament in Geneva had stalled for more than a decade since the late 1990s due to the inability of member states to agree on the program of work. The key item on the agenda of this forum has been (for several decades) the negotiation of Fissile Material Cut-Off Treaty (FMCT). The treaty is, however, still in the stage of preliminary debates rather than actual negotiation, mostly due to the opposition of Pakistan. See for example Meyer (2011).

⁷⁷ On the role of UN in nuclear order, see Boulden et al. (2009).

obligation, NPT norms, rules, bargains, security guarantees, cooperative institutions, and shared narratives (Walker 2012, p.84). Walker also suggested, not unproblematically, that the international construction of these two systems can be understood as a progressive, cooperative project based on the ideal of “enlightenment”, in which “the commitment to disarmament represents a direction of travel—towards an increased political and instrumental restraint, now serving the avoidance of both nuclear war and catastrophic terrorism” (Walker 2007b, p.451).

Scholars who draw on the English School conception of world order sometimes have a similar tendency to depict the existing global nuclear order as progressively expanding in the context of the more general normative expansion of international society. For example, Ogilvie-White (2010) argued that there has been a long-term trend within the nuclear non-proliferation regime towards a consensus on how to respond to regime threats, and a greater willingness among states to sacrifice a certain amount of their sovereignty in favor of more intrusive regime rules. This development can then be seen as a parcel of the more general “shift from ‘pluralist’ to ‘solidarist’ international society” (Ogilvie-White 2010, p.118; cf. Wheeler 1992; Makinda 2010). Elsewhere, Ogilvie-White also stressed Walker’s earlier point about the importance of great powers (the United States in particular) in maintaining order that unquestionably contributes to the common good (Ogilvie-White 2013).⁷⁸

The aforementioned depiction of nuclear order as a common “enlightenment project” of global community has not been accepted without opposition. In the special issue of *International Affairs* on this subject,⁷⁹ Joachim Krause critiqued Walker’s argument as “an example of how ideological tenets have taken over today’s liberal arms control school” (Krause 2007b, p.485). Krause portrays a more pragmatic, actor-specific interest-driven picture of global nuclear order that is in contrast with “myth-based” liberal arms control perspective. In particular, he contests the notion of a disarmament “bargain” between the NWS and NNWS as something that does not reflect the historical positions of individual countries in the NPT negotiations. Krause contends that

⁷⁸ Hedley Bull – likely the most prominent English School scholar – was himself sometimes vary about hegemonic tendencies of Western states in the nuclear non-proliferation regime, and explicitly recommended to pursue a “Low Posture” doctrine, “in which nuclear countries can best contribute to the management of proliferation by attempting to minimize the gap that separates them from the non-nuclear” (Bull 1987, p.207). At the same time, he viewed the existing conception of nuclear order as largely beneficial and criticized the unsatisfied Third World countries for the inability to formulate a coherent alternative conception (Bull 1987, pp.195–196).

⁷⁹ See also Roberts (2007) and Hassner (2007).

the NPT is a treaty that was agreed upon as a measure to stop horizontal nuclear weapons proliferation, but it has never been a disarmament treaty. It is a treaty with unequal obligations and it might even be called an unfair treaty. But it has found broad support because the huge majority of states know that without this treaty their security would be diminished. (Krause 2007b, p.492)

A similar reasoning was applied in Horowitz's (2015) critique of the widespread pessimistic assessments of the future of nuclear order. It is also prominent in the recent writings of Elbridge Colby, who views the contemporary status quo nuclear order as "malleable, responsive, and realistic", and certainly less hazardous than alternative nuclear abolition scenarios (Colby 2015).

On the other hand, much of the existing nuclear scholarship problematizes *particularly* the existing status quo in the global nuclear order. Authors such as Albin (2001, chap.6), Müller (2010a; 2017; cf. Müller, Becker-Jakob, et al. 2013), and Tannenwald (2013) highlight the justice/fairness-driven normative conflicts in the contemporary nuclear order, and the resulting erosion of legitimacy of this order (cf. Rathbun 2006; Doyle II 2010; Perkovich 2008; Dalton et al. 2016; Acheson 2016).⁸⁰ Similarly, Ken Booth critiques the idea of "indefinite nuclearism" with reference to its incompatibility with the culture of human rights (Booth 1999a; 1999b; on the perils of nuclear status quo, see also Hanson 2002; Thakur 2000).

The introduction of various critical perspectives from sociology and continental philosophy to IR also led some nuclear scholars to apply these perspectives as analytical lens to study the dynamics of nuclear order (for an overview, see Burke 2016a). For example, Jasper (2016) employed a conceptual toolbox developed by French social theorist Pierre Bourdieu to interpret global nuclear order as a "quasi-religious field" with its own stabilizing ceremonies, myths, and practices (cf. Marin 1987). In a much earlier account, Keeley (1988; 1990) provided a reading of the non-proliferation order from the "power/knowledge" perspective of Michel Foucault. Peoples (2016) discussed the scope of nuclear critique in IR and the role of "utopianism" in nuclear order. Burke (2016b) studied the temporal dimension of nuclear order through the hybrid of post-structural and new materialist perspective. Harrington (2009) focused on the phenomenon of "nuclear fetishism" in world order, in which nuclear weapons

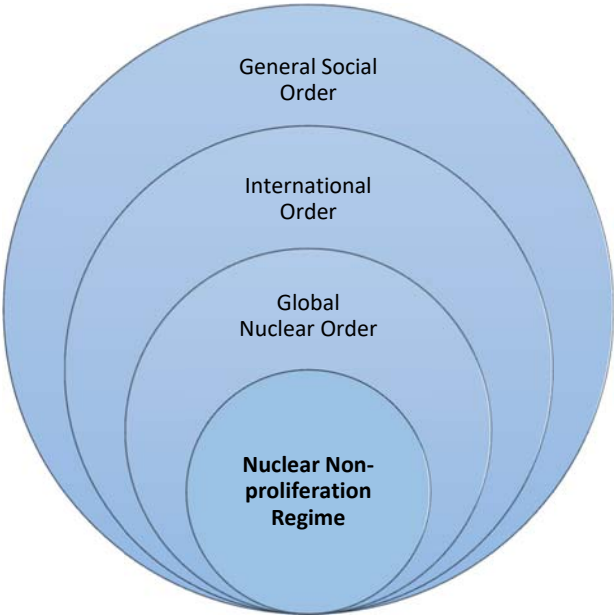
⁸⁰ In this regard, Ruzicka and Wheeler (2010) point to the importance of "trusting relationships" among states in the NPT regime, that need to be sustained (and preferably bolstered) in order to prevent the erosion of international nuclear order. For a critique, see Bluth (2012).

function as the “currency of power” (see also Harrington 2016). Finally, several authors employ a post-colonial perspective to denounce the global nuclear order as a predominantly Western conception that has aimed to establish a form of a “nuclear apartheid” vis-à-vis the Third World states (cf. Singh 1998a; Krause & Latham 1998; Biswas 2001; Biswas 2014; Maddock 2010; Das 2012a; Mathur 2014; Mathur 2015).

Structure of the Game

In this section, I draw on the theoretical perspective elaborated in the previous chapter to analytically reconstruct the normative structure of the “nonproliferation game”. The nonproliferation game can be defined as a continuously negotiated techno-political order that aims to create and sustain a patterned behavior of states with respect to the global diffusion of nuclear technology.⁸¹ The game takes place primarily *within* the nuclear non-proliferation regime, but also *across* the more encompassing global nuclear order. The nuclear order itself is then nested within the international order, and the general social order as such (cf. Walker 2004, p.9; Müller et al. 1994, p.8) – see Figure II.

Figure II. Playfield of the Nonproliferation Game



⁸¹ Ursula Jasper uses the similar notion of a “technopolitical negotiated order”, which is “based on ongoing processes of re-negotiation, re-affirmation or re-configuration” (Jasper 2016, p.3).

The NPT represents the main, albeit not the only, source of the rules of the nonproliferation game. Drawing on Antje Wiener’s (2008; 2014; 2017) vertical typology of norms in international order, I provide an interpretation of the normative structure of nonproliferation game consisting of macro-level *fundamental norms*, implemented in meso-level *organizing principles*, and eventually micro-level *standardized procedures*. In Table III., I provide a simplified depiction of this normative structure, followed by more detailed discussion of individual norms and rules.

Table III. Normative Structure of the Nonproliferation Game

<i>Fundamental Norms</i>	Non-proliferation	Peaceful nuclear use	Disarmament	Deterrence	Military Non-use	Universality
<i>Organizing Principles</i>	IAEA safeguards, NWFZ, NSA, extended deterrence, export control rules, counterproliferation, enforcement					
	IAEA technical assistance, bilateral trade agreements, transparency (CSA, AP), non-enrichment/non-reprocessing/multilateral fuel bank, PNE					
	comprehensive test-ban/nuclear non-testing, strategic arms control, irreversible stockpile reductions, role reduction, halt of warhead/fissile material production, multilateral arms control, NWS transparency, NWFZ, legal ban, general and complete disarmament					
	NWS declaratory policies, civilian oversight, strategic force postures, strategic arms control					
	principles for institutional membership and withdrawal (NPT, IAEA Board of Governors, export control clubs etc.), universalization, treaty extension/transformation					
<i>Standardized Procedures</i>	standardized procedures of the IAEA, NSG, Zangger Committee, Wassenaar Arrangement, MTCR, CTBT, UNSC Resolution 1540, etc., specific rules of U.S.-Russian strategic arms control treaties, NPT Articles VIII.-X., standardized nominating and voting procedures of the IAEA, individual export control clubs etc.					

Fundamental Norms

I propose that the global non-proliferation order is built on six fundamental norms: (1) non-proliferation; (2) peaceful use; (3) disarmament; (4) deterrence; (5) military non-use; and (6) universality. The three fundamental norms are enshrined (with different level of specificity) in the individual articles of the NPT and they are also frequently referred to as the three “pillars” of the treaty. In contrast, the fundamental norms of deterrence and military non-use have gradually evolved through states’ practice since 1945 (although they are also regularly referred to in key policy documents). The fundamental norm of universality was ascribed in the NPT preamble and it has been an inseparable part of NPT dynamics ever since.

As a truly international norm, *non-proliferation* emerged during the 1960s and has become formally validated in the NPT.⁸² The treaty preamble states a cause-effect conviction that “proliferation of nuclear weapons would seriously enhance the danger of nuclear war”, and therefore the NPT aims to prevent the “wider dissemination of nuclear weapons” (UN Department for Disarmament Affairs 1968). In the first two articles, the NPT has established the key rules for non-proliferation norm: the rules of non-assistance for NWS (proscribing transfer of nuclear weapons to other recipients and any kind of assistance to NNWS with nuclear weapons acquisition; NPT Article I), the rules of abstinence for NNWS (proscribing acquisition of nuclear weapons; NPT Article II), and the rules of institutional control for both NWS and NNWS (prescribing the acceptance of IAEA safeguards for NNWS nuclear activities, and proscribing all states to export fissionable material or relevant equipment unless these are subject to IAEA safeguards; NPT Article III).

The fundamental norm of *peaceful use* has emerged in the international context of the establishment of the UN Atomic Energy Commission, the “Atoms for Peace” speech, and the foundation of the IAEA. The norm reflects a key distinction in global nuclear order between the use of nuclear energy for “bad” (i.e., military) and “good” (i.e., civilian) purposes. Unlike the dissemination of nuclear weapons that has been widely recognized as a major global threat, the spread of nuclear technology for electricity production and scientific purposes has been predominantly hailed as largely beneficial.⁸³ During the NPT negotiations, the support for the expansion of civilian nuclear trade and assistance was frequently constructed as a post-colonial issue that would enhance the economic development of Third World countries (cf. Hecht 2007, pp.102–103). The norm itself was formally validated in the NPT preamble and then Article IV., which asserts an “inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination” (UN Department for Disarmament Affairs 1968, Article IV, Para 1). However, the same paragraph

⁸² For an excellent discussion of the metaphor of proliferation with respect to the spread of weapons, see Mutimer (2000) and Pelopidas (2011; 2015). In spite of occasional theories of beneficial systemic and sub-systemic effects of horizontal spread of nuclear weapons (the so-called “proliferation optimism” – e.g., Waltz (1981; 2012) and Mearsheimer (1990; 1993)), the vast majority of scholars, experts, international organizations, and governments subscribe to “proliferation pessimism”: an idea that the spread of nuclear weapons is a dangerous phenomenon with strictly negative consequences for international security and order. See also Feaver (1993; 1995; 1997), Lavoy (1995), Knopf (2002), Karl (2011), Sagan & Waltz (2012), Cohen (2016), and Smetana, Ludvik, Sokolski, & Krepon (2017) .

⁸³ This is not to suggest that there is no political resistance to civilian use of nuclear energy. However, the notion of the beneficial, peaceful use of nuclear energy has been central to the normative logic of the NPT and the global nuclear order as such.

also states “conformity with Articles I and II” as the condition for peaceful use. Furthermore, Article IV. prescribes that “all the Parties to the Treaty undertake to facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy” (UN Department for Disarmament Affairs 1968, Article IV, Para 2). Guided by the logic of post-colonial economic development, these efforts should be especially directed towards the NNWS “with due consideration for the needs of the developing areas of the world” (UN Department for Disarmament Affairs 1968, Article IV, Para 2).⁸⁴

Disarmament is arguably the most contested fundamental norm of contemporary nuclear order. The very first resolution of UNGA in 1946 called for the “the elimination from national armaments of atomic weapons”, and the notion of disarmament has been a common rhetorical device in Cold War political proclamations. However, among the fundamental norms enshrined in the NPT, disarmament has received the shortest and the most ambiguous formal validation of the three. The heavily contested NPT Article VI. prescribes all parties to the treaty “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” (UN Department for Disarmament Affairs 1968, Article VI).⁸⁵ The meaning of this article has been subject to numerous interpretations over the course of the last few decades. There were also many attempts to make the normative prescriptions and proscriptions more specific, most prominently in the “Principles and Objectives for Nuclear Non-Proliferation and Disarmament” adopted at the 1995 NPT Review and Extension Conference (NPT/CONF.1995/32 1995), the “Thirteen Steps” in the Final Document of the 2000 NPT Review Conference (UNODA 2000, pp.14–15), and the 2010 NPT Review Conference “Action Plan” (NPT/CONF.2010/50 2010a, pp.19–24; cf. Mukhatzhanova 2013; Müller, Becker-Jakob, et al. 2013, p.55). Nuclear disarmament, as the fundamental norm of the nuclear order, has also been formally validated

⁸⁴ Hecht (2012, p.102) suggests that “the NPT’s text offered a worldview that conjoined Cold War moral injunctions (to avoid planetary destruction) with postcolonial ones (to transcend the sociotechnical injustices of the colonial order).” See also Hecht (2006, p.327).

⁸⁵ Although nuclear disarmament itself naturally presupposes a qualitatively different effort by the NWS than NNWS, the fact that the article VI. has been explicitly formulated as an effort of both NWS and NNWS has been often omitted in nuclear debates. See Sagan (2009a), cf. Sagan et al. (2010).

in the aforementioned ruling of the International Court of Justice (ICJ 1996), and in numerous resolutions of the UNGA and other international bodies.⁸⁶

Nuclear *deterrence* is usually understood as the employment of coercive threats to use nuclear weapons in order to dissuade military attacks against oneself or one's allies. In nuclear scholarship, nuclear deterrence is most often treated as a strategy, doctrine, or policy.⁸⁷ However, it has arguably also established itself as a norm in global nuclear order (cf. Freedman 2013). With the exception of Israel (which does not publicly acknowledge its nuclear status),⁸⁸ all the current nuclear-armed states (as well as NATO as an explicitly nuclear alliance) have explicitly incorporated nuclear deterrence in their broader security and defense strategies. Furthermore, the articulation and development of deterrence postures has become standard conduct among them. Whereas the NPT itself is completely silent on the issue of deterrence, it has been sometimes considered as an "unofficial pillar" of the nuclear non-proliferation regime (Tannenwald 2013, p.302). As an international norm, however, it has been continuously contested as illegitimate by many NNWS and NGOs alike – and arguably ever more so in the recent years (see for example Wilson (2008) and Ifft (2017)).

Military non-use of nuclear weapons since 1945 remains one of the puzzles in nuclear scholarship. Whereas the realist perspective usually refers to the operations of deterrence, self-interest, and prudence when explaining non-use (cf. Gray 1999, pp.103–108; Sagan 2004), several scholars have tracked the gradual emergence of non-use norm proscribing direct military employment of nuclear weapons in conflict (see Tannenwald 1999b; 2005; 2007; Potter 2010; cf. Paul 2009; 2010; Sauer 2015; Press et al. 2013).⁸⁹ Although the NPT preamble warned about "the devastation that would be visited upon all mankind by a nuclear war" (UN Department for Disarmament Affairs 1968), the treaty itself has not established any rules with respect to the military use of nuclear weapons. However, the legitimacy of military nuclear use has been repeatedly contested in both inter- and intra-state debates, and non-use has

⁸⁶ On July 7th, 2017, the UNGA adopted a Treaty on the Prohibition of Nuclear Weapons, as the first international agreement banning nuclear weapons and providing framework for their elimination (see UNGA 2017). However, the Treaty was adopted without the participation of nuclear-armed states and most NATO allies, who rejected to recognize its validity and to abide by its terms.

⁸⁷ The review of deterrence-related literature in nuclear scholarship is beyond the scope of this book. Perhaps the most prominent attempts to conceptually tackle this issue were written by Brodie (1946), Schelling (1966), Morgan (1977), Jervis (1989), Freedman (1989), and Powell (1990).

⁸⁸ On Israeli nuclear opacity – or the *amimut* – see Cohen & Frankel (1987) and Cohen (1998; 2010).

⁸⁹ Nuclear scholars frequently use the notion of "nuclear taboo" for the military non-use norm. However, the use of the term is not wholly unproblematic as a number of works have been contesting the "taboo-like" nature of the norm (e.g., Press et al. 2013; Paul 2010).

remained a consistent behavioral pattern among nuclear-armed states since the end of the Second World War.⁹⁰

The fundamental norm of *universality* is based on the notion that the threat of nuclear war concerns “all mankind”, and the solution to this problem therefore requires the “co-operation of all States” (UN Department for Disarmament Affairs 1968; the treaty preamble). As such, the nonproliferation game is underpinned by the idea that its rules ought to guide the behavior of and (eventually) apply to *all* states in international order. In the spirit of this norm, the NPT Review Conferences have repeatedly reaffirmed the aim of the NPT community to actively extend the treaty membership towards universal participation. For example, at the 1995 NPT Review and Extension Conference, the very first item on the list of “Principles and Objectives for Nuclear Non-Proliferation and Disarmament” noted that the “universal adherence to the [NPT] is an urgent priority. All States not yet party to the Treaty are called upon to accede to the Treaty at the earliest date, particularly those States that operate unsafeguarded nuclear facilities. Every effort should be made by all States parties to achieve this objective” (NPT/CONF.1995/32 1995, p.365). Since the 2000s, this effort equates to convincing the remaining few outliers – India, Pakistan, Israel, North Korea, and South Sudan – to accede to the treaty as NNWS (cf. Müller, Becker-Jakob, et al. 2013, pp.53–54).⁹¹

Organizing Principles and Standardized Procedures

With respect to these six fundamental norms, a number of *organizing principles* have gradually emerged in states’ practice and more or less formal initiatives. Perhaps most prominently, they include the IAEA safeguards system as a monitoring, verification, and confidence building tool of social control in the nonproliferation regime (see Brown 2015). Another such principle, enshrined in the NPT Article VII., has been the creation of regionally-defined nuclear weapon-free zones (NWFZ) (cf. Goldblat 1997; Thakur 1998; Müller et al. 2015). Since the NPT

⁹⁰ The 1996 ICJ ruling on this matter stated rather indecisively that “the threat or use of nuclear weapons would generally be contrary to the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law; however, [...], the Court cannot conclude definitively whether the threat or use of nuclear weapons would be lawful or unlawful in an extreme circumstance of self-defence, in which the very survival of a State would be at stake” (ICJ 1996). The Treaty on the Prohibition of Nuclear Weapons adopted by the UNGA on July 7th, 2017 states that “any use of nuclear weapons would be contrary to the rules of international law applicable in armed conflict” and explicitly prohibits the use of nuclear weapons in Article I. of the Treaty (UNGA 2017).

⁹¹ In the case of all the states except South Sudan, this would involve their de-nuclearization prior to their accession.

negotiations, the NNWS have also sought to gain security assurances from the NWS in exchange for their nuclear abstinence (cf. Walker 2012, p.78; Bunn & Timerbaev 1993; Bunn 1997; Simpson 1994, pp.24–25); whereas the NWS had refused to include any such assurances to the NPT text itself, they were later pledged in the form of “negative security assurances” in the unilateral statements of the NWS (albeit with qualifications), and again confirmed in the 1995 UNSC resolution 984.⁹²

Another organizing principle of nuclear non-proliferation order, arguably even since before the NPT adoption, has been the formulation of extended deterrence guarantees provided by the NWS (in practice, primarily by the United States) to their allies.⁹³ The states have been gradually introducing new counter-proliferation initiatives to interdict transfers of sensitive materials, such as the Proliferation Security Initiative (cf. Winner 2005; Joyner 2005). Furthermore, the states have devised an organizing principle of multilateral norm enforcement (through the UNSC) and unilateral or “minilateral” enforcement (sanctions applied by individual states or coalitions of like-minded states outside the UNSC framework).

With respect to the global diffusion of civilian nuclear technology, the key organizing principles have been the IAEA’s technical assistance and the bilateral inter-state agreements on nuclear trade. Nevertheless, these two instruments have been conditioned by the compliance of the NNWS with the norms of transparency, with the adoption of the IAEA Comprehensive Safeguards Agreement as the compulsory requirement.⁹⁴ Another principle has been the creation of extra-NPT non-proliferation clubs to harmonize export control policies with respect to proliferation-sensitive materials and equipment, and international initiatives to secure vulnerable facilities and materials (see Müller et al. 2014). Many of the aforementioned organizing principles are then reflected in the micro-level standardized procedures of the IAEA, Nuclear Suppliers Group (NSG), Zangger Committee, Wassenaar Arrangement, Missile Technology Control Regime (MTCR), or the UNSC Resolution 1540.

⁹² The negative security assurance is a pledge of a NWS not to use or threaten to use nuclear weapons against a NNWS, whereas the positive security assurance would have a NWS come to the aid of a NNWS in response to the aggression by another state armed with nuclear weapons. See Bunn & Timerbaev (1993).

⁹³ On the link between U.S. extended deterrence/assurance and non-proliferation, see Bleek and Lorber (2014) Knopf (2012), Müller & Schmidt (2010), Kroenig (2016), and Reiter (2014).

⁹⁴ The IAEA safeguards have been originally applied only to the NNWS, which eventually had to put *all* of their nuclear facilities under the IAEA monitoring. However, the five NWS eventually accepted application of safeguards on *some* of their civilian facilities through the Voluntary Offer Agreements, to somehow balance the unequal treatment in the NPT (cf. Baeckmann 1988; Müller, Becker-Jakob, et al. 2013, p.53; Tannenwald 2013, pp.304–305). On the Additional Protocol, see Hirsch (2004).

Since the 1970s, some states have also aimed to introduce measures that would limit the capability of the NNWS to develop a full indigenous nuclear fuel cycle (uranium enrichment and plutonium reprocessing) (see Zhang 2006), and propose initiatives such as multilateral fuel banks (cf. Goldschmidt 2010; Meier 2006; Müller 2005; Tannenwald 2013, pp.306–307; Ford 2010a). Furthermore, Article V. of the NPT also originally granted the NNWS the, now obsolete, right for “potential benefits from any peaceful applications of nuclear explosions”, prescribing conditions for both the NNWS as a beneficiary (“international observation and [...] appropriate international procedures”) and NWS as a supplier (“the charge to such Parties for the explosive devices used will be as low as possible and exclude any charge for research and development”) (UN Department for Disarmament Affairs 1968, Article V).⁹⁵

The general norm against nuclear testing has been continuously referred to as both disarmament *and* non-proliferation measure (cf. Jones & Marsh 2014; Bunn 1999; Johnson 2009; Keeley 1989) – despite the fact that the CTBT, in which the norm was formally validated, has not yet entered in force (cf. Bunn 1999; Holum 1997; Kamra 2009).⁹⁶ With respect to the practical implementation of disarmament norm, the practice of bilateral strategic arms control (as a “management of arms race”) and irreversible stockpile reductions of NWS have been in the forefront of global attention (cf. Müller et al. 1994, chap.1; Mutimer 2011). The following principles have been also gradually re-constructed as organizing principles for nuclear disarmament since the NPT signature: reduction of the role of nuclear weapons in military doctrines of NWS, halt of warhead and fissile material production, multilateral arms control, NWS transparency, and establishment of nuclear weapon-free zones (cf. Mukhatzhanova 2013). In recent years, pressure has been increasing from a large number of NNWS to negotiate a legal ban on nuclear weapons as a new disarmament measure.⁹⁷ On the other hand, NWS and their allies frequently point to steps towards “general and complete disarmament” and the improvement of global security situation as critically important organizing principles for the

⁹⁵ Peaceful nuclear explosions (PNE) offer an excellent example of the dynamic normative development of nuclear order. Whereas PNE’s received its own article in the NPT, the concept nevertheless underwent a normative contestation through states’ practice and discursive interventions. Soon the very idea has become completely obsolete and in the 1990s prohibited under the CTBT. Cf. Long (1976) and Harrington & Englert (2014).

⁹⁶ See also Rockwood (2016) and the related articles in the special section of The Nonproliferation Review.

⁹⁷ By the successful adoption of UNGA resolution 71/258, the majority of UN member states agreed to convene a UN conference to negotiate a legally binding instrument to prohibit nuclear weapons in 2017; however, all the NWS and most of U.S. allies voted against the resolution and declined to participate at the conference (see UNGA 2016; Reif 2016; Fihn 2017; Sauer 2017). As noted above, The Treaty on the Prohibition of Nuclear Weapons was eventually adopted by the UNGA on July 7th, 2017 (UNGA 2017).

disarmament norm.⁹⁸ Despite numerous attempts of the NNWS to establish standardized procedures for the NWS in disarmament area, the NWS and their allies mostly resist these attempts (cf. Ritchie 2014; Sauer & Pretorius 2014; Smetana 2016; Müller 2017). As such, widely accepted standardized disarmament procedures are currently limited to bilateral U.S.-Russian strategic arms control (currently based on the 2010 New START Treaty) and the halt of nuclear testing (as specified by the CTBT).

The organizing principles of deterrence norm have primarily been declaratory policies of nuclear-armed states; strategic force postures, including employment and deployment patterns of individual delivery systems and defenses; and strategic arms control, that has institutionalized the deterrence relationship between Washington and Moscow. The implementation of military non-use norm has primarily relied on the declaratory policies of nuclear-armed states, which limit contingencies under which nuclear weapons could be used militarily, and the norm of civilian oversight over nuclear employment. There have been minimal standardized procedures implemented in these areas except for those that have been agreed between U.S. and Russian counterparts in strategic arms control agreements.

The NPT also includes the organizing principle of withdrawal from the treaty, based on “extraordinary events, related to the subject matter of this Treaty, [that] have jeopardized the supreme interests [of the members state]” (UN Department for Disarmament Affairs 1968). The standardized “three-months-in-advance” procedure for such withdrawal is then specified in the first paragraph of the NPT’s Article X.

Furthermore, the NPT includes organizing principles for the extension of the treaty and standardized procedures for its amenability. The original rule enshrined in the NPT was the limited (twenty-five-year) duration of the treaty, after which the state parties would decide over its extension (UN Department for Disarmament Affairs 1968, NPT Article IX., Para 2). After the 1995 decision to extend the NPT indefinitely, the remaining organizing principle that would arguably grant the legitimacy to the NPT membership norm would be the gradual *transformation* of the NPT towards equality through nuclear disarmament, a principle that so far lacks any standardized procedures despite numerous proposals in this direction by some of

⁹⁸ Although some scholars suggest that the commitment to general and complete disarmament had already been “disjoined from nuclear disarmament obligations” (Granoff 2006, p.1001), the issue of mutual linkage between these concepts is still subject to contestation in the NPT context (cf. Burroughs 2016; Meyer 2016; Rydell 2016).

the NNWS.⁹⁹ Finally, Article VIII. of the NPT (Paras 1–2) stipulated the standardized procedure for the amenability of the treaty, requiring the amendments to be approved by the majority of member states, including all of the NWS and all the members of the IAEA Board of Governors.

The NPT and other institutions of the nonproliferation game have developed a number of organizing principles that follow the fundamental norm of *universality*, yet not necessarily the norm of *equality*. With respect to the rules of NPT membership, the treaty introduces Article IX., which opens the possibility to accede to all states, but at the same time distinguishes between the two types of membership. The NWS are defined as states “which ha[ve] manufactured and exploded a nuclear weapon or other nuclear explosive device prior to 1 January, 1967” (UN Department for Disarmament Affairs 1968); the rest of the signatories would then assume the roles of the NNWS.¹⁰⁰ From the NPT perspective, the states outside of the treaty remain in a certain vacuum with respect to their identity in nuclear order.¹⁰¹

Other institutions of the nonproliferation game also operate under the fundamental normative conception of universal applicability of nuclear norms. However, the organizing principles for their actual membership varies. For example, the IAEA Board of Governors is partly elected and partly nominated on the basis of the states’ level of development in the area of nuclear energy (see Fischer 1997). The NSG and several other export control clubs usually have limited (if growing) membership, composed of important suppliers and a few other states that comply with the standardized trade procedures of these clubs (cf. Gahlaut & Zaborsky 2004; Strulak 1993; Cupitt & Khripunov 1997). Arguably, the only global forum dealing with nuclear issues in which all the states of international order are represented on equal footing would be the UNGA. The founding documents of these institutions also usually include specific standardized procedures with regard to membership, extension, and decision-making rules.

⁹⁹ For the discussion of different approaches, see Ware (2015).

¹⁰⁰ As some scholars observed, this rule has some rather unconventional implications. For example, if any of the current NWS decides to unilaterally dismantle all of its nuclear weapons, it would continue to be treated as a NWS under the treaty terms; at the same time, the states acquired nuclear weapons after 1967 cannot be granted the NWS status and can only join the treaty if they disarm and join as NNWS (see Müller, Becker-Jakob, et al. 2013, p.54).

¹⁰¹ As I discuss in the last section of this chapter, the legitimacy of this norm that has divided the formally equal states (in international order) to unequal categories (in nuclear order) has been heavily contested by the NPT “outsiders” since the NPT adoption (cf. Singh 1998a; Tannenwald 2013).

The Inherent Contestedness of Nuclear Order

At the 2005 NPT Review Conference, the IAEA Director General Mohamed ElBaradei proposed in his statement that “the Treaty has served us well for 35 years. But unless we regard it as part of a living, dynamic regime - capable of evolving to match changing realities, it will fade into irrelevance and leave us vulnerable and unprotected. While our twin goals - security and development - remain the same, our mechanisms for achieving those goals must evolve” (ElBaradei 2005).

Normative structure of nuclear order has indeed been perpetually contested, and many original norms and rules have significantly evolved since the inception of NPT in the late 1960s. After decades of deliberations and attempts to formally codify the “normal” behavior in international nuclear affairs, the NPT regime, as the key normative source for the global nuclear order, still remains “an incomplete and contested construct, facing both internal strains and competing understanding and practices in its environment” (Keeley 1988, p.7) This section elaborates on the three sources of tension in the nonproliferation game that provide the ground for the contestedness of nuclear norms, rules, and principles: the ambiguity of nuclear concepts, the clashes between individual norms, and the problem of technological change.¹⁰²

Some scholars have correctly observed that most of the notions that the nonproliferation game is built on, such as “proliferation”, “disarmament”, “peaceful use”, but even “nuclear” and “weapons”, are to a large extent ambiguous and frequently contested themselves. For example, Zhang (2006) highlights the ongoing contestation of one of the key concepts in NPT rules: the prescription “not to *manufacture*” nuclear weapons (UN Department for Disarmament Affairs 1968, Article II.). Whereas some states have interpreted this clause as allowing anything short of assembling the actual weapon, other have promoted an interpretation that the NPT also precludes “sensitive activities” that may lead to the weaponization of fissile materials (Zhang 2006).

The ambiguity in nuclear order nevertheless does not reside merely in the general vagueness of international norms, but also in the inherent, structural ambivalence of nuclear technology (Abraham 2006). To define a certain state or activity as “nuclear” remains to be a political act rather than an objective decision based on preexisting scientific or technological

¹⁰² Due to space concerns, this section is far from being exhaustive, and rather points to some of the trends that are in the forefront of contemporary nuclear discourse.

criteria (cf. Abraham 2006; 2010; 2016; Hecht 2006; 2007; 2012; Jasper 2016). Hecht famously suggested that

“[...] nuclearity is a regularly contested technopolitical category. It shifts in time and space. Its parameters depend on history and geography, science and technology, bodies and politics, radiation and race, states and capitalism. Nuclearity is not so much an essential property *of* things as it is distributed *in* things. Settlements about *degrees* of nuclearity have significant consequences. They structure global control over the flow of radioactive materials.” (Hecht 2007, p.101, *emphasis in the original*).

This realization has profound consequences for our understanding of the tensions between vaguely defined norms in international treaties such as the NPT, and the actual practice of states. In fact, even the boundary that would determine whether the state actually crossed the nuclear threshold, which is the key distinction between actors in nuclear order, remains blurred, making the insights into the dynamics of horizontal proliferation rather complex (cf. Hymans 2010; Hymans & Matthew S. Gratias 2013; Harrington & Englert 2014; Bourne 2016; Robinson 2015). As I will demonstrate in the following section, some “deviant events”, such as India’s “peaceful nuclear explosion” in 1974, led to the implementation of standardized procedures that would specify the individual categories in more detail. Nevertheless, even previously-agreed detailed lists of problematic items that are subject to specific treatment in nuclear order are made through the techno-political consensus of the time, and remain open for continuous re-negotiation.

Individual norms within the normative structure of nuclear order are also mutually interconnected, both vertically and horizontally, through discursive linkages. They often take the form of (quasi-)causal statements, hinting to cause-effect connections between behaviors in individual normative categories. Some organizing principles are in fact shared by different fundamental norms, whereas others are potentially clashing, opening the stage for normative conflicts in nuclear order.

Perhaps the most prominent tension has traditionally been between the norms of *non-proliferation* and *peaceful nuclear use*. The key issue is the inherently ambivalent, dual-use nature of nuclear fuel cycle: as noted by Nye, “distinction between peaceful- and weapons- use of the atom [is] primarily a question of politics rather than physics” (Nye 1981, p.17). What

would clearly separate the two – the *intent* of the state – is very difficult to assess even with the most stringent controls. As such, to draw a line where peaceful use stops and military use starts is often a political act rather than purely technical assessment (cf. Acton 2009; Fields & Enia 2009, pp.174–175). As the peaceful, civilian nuclear capabilities spread, so do the potential capabilities for military nuclear programs (cf. Fuhrmann 2009; Kroenig 2009; Brown & Kaplow 2014). On the other hand, ever more intrusive non-proliferation measures are sometimes opposed as hindering the “inalienable right” for peaceful use of nuclear energy (cf. Tannenwald 2013, pp.302–304; Müller, Becker-Jakob, et al. 2013, pp.55–57; Quester 1979, pp.556–564; Sotomayor 2013, p.96).

Non-proliferation and (nuclear) *disarmament* norms, on the other hand, were practically inseparable at the dawn of the nuclear age; for example, the aforementioned Baruch plan and the Soviet counter-proposal directly merged these concepts. By the 1960s, the two emerging norms had become separated normative bodies. However, the link between them appeared (implicitly) in the NPT and it has been frequently, and often explicitly, reconstructed in nuclear discourse ever since, mostly in the sense that “nuclear disarmament and nonproliferation require each other” (Ruble 2014b, p.107; cf. Thakur 2007). More specifically, both actors of nuclear diplomacy and nuclear experts often put forward the claim that the unwillingness of the NWS to cease the arms races and proceed to nuclear disarmament weakens the non-proliferation norm by creating incentives for other states to proliferate (cf. Freedman 2013, p.96; Quester 1979, pp.548–549; Walker 2007b; Booth 1999a).¹⁰³ And *vice versa*, steps towards strengthening the disarmament norm are frequently seen as benefiting non-proliferation norm; in some interpretations, “good-faith disarmament” encourages deeper cooperation between NWS and NNWS on non-proliferation initiatives, and decreases the demand for nuclear weapons in international politics (cf. Harrington de Santana 2011; Tannenwald 2013, p.314; Rathbun 2006).¹⁰⁴ Some NWS and their allies sometimes suggest another policy-relevant link between the two norms: more substantial steps towards disarmament can only come when the nuclear proliferation issue is solved, and we are able to

¹⁰³ Some scholars and experts question the existence of this connection. For example, Oliver Thränert even suggests that nuclear arms races of the 1970s and 1980s in fact prevented further horizontal proliferation at the time (Thränert 2008, p.334).

¹⁰⁴ For a study that suggests that such link is not supported by empirical evidence, see Kroenig (2014b).

prevent “break out” scenarios by rogue actors that would take advantage of their sudden nuclear primacy (cf. Quester 1979, pp.549–550; Tannenwald 2013, p.308; Smetana 2015).

The relationship between the *non-proliferation* and *deterrence* norms is relevant especially in the context of extended deterrence and assurance of NNWS allies. The conventional logic of the nonproliferation game suggests that many allied states that would otherwise acquire a nuclear deterrent of their own instead rely on a “nuclear umbrella” provided by the United States (and, during the Cold War, the Soviet Union); should the U.S. extended deterrence be weakened or disappear altogether, some of the U.S. allies may reconsider their nuclear restraint and eventually proliferate (Smith 1987, p.258; Freedman 2013, p.97; Krause 2007a, p.494; cf. Müller & Schmidt 2010). On the other hand, the continued discursive reconstruction of extended nuclear deterrence as something critically important for the security of a large number of states implicitly boosts the value and importance of nuclear weapons in international politics. As suggested by Scott Sagan, “a security-oriented strategy of maintaining a major role for U.S. nuclear guarantees to restrain proliferation among allies will eventually create strong tensions with a norm-oriented strategy seeking to delegitimize nuclear weapons use and acquisition” (Sagan 1996a, p.86). In a similar fashion, many NNWS, NGOs, and scholars today argue that the doctrine of nuclear deterrence embraced by the NWS *itself* necessarily encourages proliferation and therefore weakens the non-proliferation norm (cf. Doyle 2013, p.22). Similarly, abolition proponents have been also stressing the principal philosophical incompatibilities between the logics of *deterrence* and *disarmament* norms; whereas the logic of deterrence implicitly recognizes the value of nuclear weapons for (inter-)national security, entrepreneurship of disarmament norms largely relies on devaluing nuclear weapons as illegitimate tools of security management (cf. Ritchie 2013; 2014; Berry et al. 2010).¹⁰⁵

A necessarily paradoxical relationship exists between *deterrence* and the *military non-use* of nuclear weapons. Whereas nuclear use in deterrence is only latent, the credibility of nuclear deterrence still relies on the belief that it actually could take place under some circumstances (cf. Schelling 1966, chap.1; Freedman 2013, p.97). Arguably, the practice of *non-proliferation* and *disarmament* generally strengthens the “taboo” by limiting circumstances

¹⁰⁵ Note that unlike nuclear disarmament, nuclear arms control practices are philosophically fully compatible with the norm of nuclear deterrence. For the elaboration of this argument, see for example Mutimer (2011). For the evolution of arms control idea in the context of nuclear deterrence, see Adler (1991; 1992).

under which the use of nuclear weapons would be available or even plausible. The hypothetical violation of the “taboo” might have a significant transformative impact on all norms of nuclear order and perhaps even the international order as such. The nature and level of this impact would largely depend on the circumstances of taboo violation and the reconstruction of such an event in international discourse (cf. Tannenwald 2007, pp.14–15; Quester 2005; Zuberi 2003, p.45).

The fundamental norms of nuclear order are also linked to the institutions and (meta-)norms of broader international order. The ever more intrusive verification, control, and monitoring mechanisms of nuclear non-proliferation, to some extent, clash with the institution of state *sovereignty* in the international realm (cf. Rislove 2006, p.1075; Sotomayor 2013, p.97; Homan 2013, pp.73–74; Tannenwald 2013, p.304; Ogilvie-White 2010, pp.118–119). The unequal arrangement of the NPT, in which a small number of states receive special treatment and very different rights and obligations, is in the conflict with *sovereign equality*, one of the fundamental meta-norms of international order (see Tannenwald 2013, p.304; Müller, Becker-Jakob, et al. 2013). Issues connected with nuclear deterrence and the implicit possibility of nuclear use are often discussed in the context of the *international humanitarian law* norms, and the idea that any military use of nuclear weapons would necessarily constitute a breach of these norms (cf. Sauer & Pretorius 2014; Borrie 2014; Smetana 2016). Furthermore, the acquisition of nuclear arms has been frequently linked to the status of *great power* in international order (Tannenwald 2013, p.305; Ogilvie-White 2013); arguably, these concerns have been highly relevant to the decision-making of several nuclear-armed states that understand their nuclear capabilities as directly linked to their exceptional status in world politics (see Sagan 1996a; Lodgaard 2011, p.26,91,213).

The contested nature of the nonproliferation game also stems from the embeddedness of meta-norms of *general* social order in international nuclear affairs (Walker 2004, p.9). Perhaps most prominently, several scholars have studied key normative conflicts in global nuclear order from the general perspective of justice and fairness.¹⁰⁶ The meta-norm of *distributive justice* is tied the distribution of rights and obligations in the NPT and the global nuclear order in general. According to one perspective, the NPT regime has been constructed

¹⁰⁶ See for example Albin (2001, chap.6), Albin and Druckman (2014), Müller (2010a; 2011b; 2017), Müller, Becker-Jakob, and Seidler-Diekmann (2013), Tannenwald (2013), Fahmy (2006), Schaper (2014), Rathbun (2006), or Fey and Melamud (2014).

as a transformative regime, the justice foundations of which were based on “microjustice” principles (Brickman et al. 1981), with different obligations and rights related to the different, but temporary, status of the two groups (cf. Walker 2007b; Tannenwald 2013; Smetana 2015, pp.50–53). As such, the justice within the regime was supposed to be maintained by temporarily forgoing the distributive justice principle of *equality* and upholding the principle of *equity*, with the NNWS accepting obligations in the non-proliferation area, in exchange for the assistance with civilian nuclear programs and steps made by the NWS towards nuclear disarmament.¹⁰⁷ In this perspective, nuclear abolition and the resulting nuclear equality in nuclear order would be the final, “macrojustice” goal of the NPT regime.

Besides the equity concerns that have been arguably in the forefront of nuclear discourse since the NPT inception, the norms of nuclear order also, to some extent, clash with the meta-norm of *procedural justice*. There is a long-standing issue linked to the norm enforcement practice that uses the UNSC as the exclusive enforcement body, in which the five NWS possess prominent voting rights in contrast to the NNWS (cf. Müller 2010a; Simpson 2005, p.3). In a similar fashion, many NNWS frequently put forward complaints related to their underrepresentation in the IAEA Board of Governors and export control groups (cf. Müller, Becker-Jakob, et al. 2013, pp.58–59).

Finally, since the non-proliferation regime is essentially a “*techno-political*” order, the global scientific and technological development also represents a potential driver for normative contestation and change of the nonproliferation game. As Harald Müller suggests, “*new technologies* create a new reality; insofar as existing norm systems were designed to regulate the policy field on the basis of the old ‘technological reality,’ they have to be adapted in order to do their job. Technological innovation thus opens windows of opportunity for norm entrepreneurs by posing challenges as well as offering tools for solutions” (Müller 2013, p.12, *emphasis in the original*). In the nuclear order, this issue has been especially relevant to the technological developments in uranium enrichment and plutonium reprocessing technologies (and their global spread), delivery systems for nuclear weapons, and the general “revolution in military affairs” (Fortmann & Hlatky 2009; Lieber & Press 2017). The technological progress was also critical to the formal validation of the non-testing norm in the CTBT, with respect to the

¹⁰⁷ For a critique of this perspective, see Krause (2007a), Thränert (2008, pp.333–336), and Colby (2015).

emergence of advanced verification technologies and the possibility to conduct sub-critical testing and computer modelling of nuclear tests (Rosert et al. 2013, pp.122–127).

The unequal power positions of individual actors notwithstanding, contestation of nuclear norms has been a widespread practice in the global nuclear politics. In consequence, the rules of nonproliferation game have been undergoing dynamic normative development over the course of the last few decades. It is beyond the scope of this chapter, and indeed this book, to capture all the relevant trends in nuclear norm contestation and dynamics. It is, nevertheless, worth pointing to the general pattern in which the NWS and their allies tend to be more focused on the normative contestation of the micro-level standardized procedures of technical character, particularly in the connection with the rules of non-dissemination and peaceful use. The non-allied NNWS, on the other hand, rather tend to tackle larger political issues, and focus primarily on organizing principles of the rules of disarmament and the peaceful use with respect to technological assistance and development. The key “sites of contestation” in the nonproliferation game have traditionally been the regular NPT Review Conferences and their Preparatory Committees (PrepComs), the Conference on Disarmament, and the UNGA First Committee, all of which provide the majority of states with the possibility to dynamically contest and affirm the norms of global nuclear order.

Nuclear Rules and the Patterns of Deviant Behavior

Émile Durkheim was one of the first sociologists to promote the idea that deviance is not just a natural part of society but also that however much we may try to achieve it, a deviance-free society cannot possibly exist. In *Rules of Sociological Method*, he mentioned the following example:

Imagine a society of saints, a perfect cloister of exemplary individuals. Crimes will there be unknown; but faults which appear tolerable to the layman will create there the same scandal that the ordinary offense does in ordinary consciousness. If, then, the society of saints has the power to judge and punish, it will define these lesser acts as criminal and will treat them as such.

(Durkheim 1895, p.68)

International politics is, in many aspects, far from the proverbial society of saints. Global nuclear politics is no exception. While serious violations of nuclear norms have not been widespread,

they have been taking place occasionally since the NPT inception in the late 1960s. Often, these violations were considered serious issues for international security at the time, and had a profound impact on the development of norms and rules of nuclear order. In this section, I will highlight some notable patterns of deviant behavior in nuclear politics of the last few decades, which will allow to place the empirical cases in my book in a broader historical context. I divide this section in three parts: the “outsiders”, the “rogues”, and the “keepers”.

The Outsiders

As I noted above, one of the fundamental norms of the nonproliferation game has been the norm of universality, based on the normative conviction that norms, rules, and principles enshrined in the NPT are not applicable merely to the NPT signatories, but are normatively valid, or *ought to be valid*, in the international order more broadly. As such, the long-time aim of the NPT member states has been to achieve the universality of NPT membership through the accession of the remaining “outsiders” as NNWS.

As the number of NPT signatories has gradually increased since the late 1960s, the remaining outsiders started to be seen as “non-signatory deviants” rather than states exercising their sovereign right not to join the specific international agreement (Keeley 1988, p.28). As noted by William Walker,

non-membership of the NPT was widely regarded as infringing the norm of non-proliferation and thus as being *politically* unacceptable. It was therefore considered legitimate to make [the NPT outsiders] suffer for their opposition to membership. They were thus regarded as prospective insiders rather than legitimate outsiders [...] (Walker 2012, pp.148–149, *emphasis in the original*)

In many aspects, the “deviant behavior” of the outsiders had a profound influence on the normative structure of the nonproliferation game. This was particularly the case of countries that have crossed the threshold of being merely suspected of potential proliferation intentions and took more radical steps towards acquiring nuclear weapons capability outside the NPT rules.

In the early days of the NPT, the most prominent example of such behavior with far reaching normative consequences was undoubtedly the case of the Indian underground nuclear explosion in 1974. Although the government in New Delhi labeled the test a “peaceful

nuclear explosion” (PNE) (cf. Jaipal 1977; Abraham 1999, chap.4), Indian behavior was widely interpreted as a breach of the non-proliferation norm among the NPT members – particularly on the side of the United States and Canada that supplied India with heavy water and a research reactor, respectively, and saw the test as “cheating on the basic bargain of the nuclear regime” (Nye 1981, p.18; cf. Epstein 1976, p.285; Epstein 1975, p.262).

The experience with the Indian PNE pointed to the inadequacy of the NPT in stopping the global dissemination of nuclear weapons among NPT non-members. As such, this “deviant event” also opened a window of opportunity to introduce new rules with respect to exports of nuclear technologies. Soon after the explosion, the major nuclear suppliers – United States, Soviet Union, West Germany, France, the United Kingdom, Japan, and Canada – started the process of nuclear export policy coordination that led to the establishment of the Nuclear Suppliers Group (NSG), also known as the “London Club”, imposing restraint of the transfer of sensitive technologies. The group adopted the original “trigger list” of the Zangger Committee (cf. Schmidt 1994) and expanded it by including other items that can be subject to export only to countries with implemented IAEA safeguards (see Anthony et al. 2007, chap.2; Müller et al. 1994, pp.22–23). As noted by Wan, “the specification of items and facilities to be safeguarded would deter any copycatting that might be sparked by India” (Wan 2014, p.221).

Furthermore, in the wake of the Indian PNE, the Ford administration decided that the United States “should no longer regard reprocessing of used nuclear fuel to produce plutonium as a necessary and inevitable step in the nuclear fuel cycle” and called upon “all concerned governments to affirm publicly that they will regard nuclear wrongdoing as an intolerable violation of acceptable norms of international behavior, which would set in motion strong and immediate countermeasures” (Ford 1976; cf. Andrews 2006). The subsequent administration of President Carter launched the International Fuel Cycle Evaluation in 1977 to discuss the options the establishment of joint regional fuel-cycle facilities and practical aspects of multilateral cooperation on storage of plutonium (cf. Skjoldebrand 1980). Furthermore, in 1978, the U.S. Congress passed the Nuclear Non-Proliferation Act to put further restrictions on U.S. nuclear exports. The India’s PNE also led to the termination of the U.S. nuclear assistance to Egypt and Israel and French assistance to Pakistan and South Korea, that the two main nuclear exporters previously pledged to their customers (Rabinowitz & Sarkar 2017).

In addition to that, Zuberi notes that “by the late 1970s the definition of proliferation changed from acquiring nuclear weapons or other explosive devices to developing a “nuclear explosive capability”, and “consequently, the objective of safeguards changed from early detection of diversion of significant quantities of nuclear materials from peaceful to military pursuits to ‘prevention of development of nuclear explosive capability’” (Zuberi 2003, p.44). All these attempts represented a contestation and reinterpretation of the original “benevolent” understanding of the peaceful use norm in the NPT, which was widely understood as allowing the NNWS practically any use of nuclear technology short of nuclear explosion (cf. Zhang 2006; Lellouche 1981).

By the 2000s, the number NPT outsiders that might have followed the Indian example gradually shortened. The problem of non-signatory deviants eventually shrank to three “nuclear holdouts” (Hagerty 2012): India, Israel, and Pakistan.¹⁰⁸ Unlike some of the previous outsiders that were only suspected of keeping an option to develop nuclear weapons, these three states are widely treated as nuclear-armed, although Israel does not publicly confirm (nor deny) its nuclear weapons capability (cf. Cohen & Frankel 1987; Cohen 1998; Cohen 2010). Although they are still regularly called to accede to the NPT as NNWS, there have been attempts in the nuclear order to start considering these remaining states as “exceptions” that should be perhaps treated differently than just “prospective insiders” or “perpetual outsiders” (Walker 2012, pp.148–155). For example, former IAEA Director General ElBaradei famously noted in 2006 that “however fervently we might wish it, none of these three is likely to give up its nuclear weapons or the nuclear weapons option outside of a global or regional arms control framework /...) Our traditional strategy – of treating such states as outsiders – is no longer a realistic method of bringing these last few countries into the fold” (Mohammed ElBaradei 2006). However, as I demonstrate in chapter 7 on the case of India, occasional attempts to “normalize” the outsiders have also met with strong resistance from many states of global nuclear order.

¹⁰⁸ In 2011, a newly independent South Sudan joined this group. Although South Sudan has not acceded the NPT yet, it is likely due to the internal problems that the newborn state is dealing with, and the country is not considered a proliferation threat. Furthermore, although North Korea could be also considered an ‘outsider’ since its withdrawal from the NPT in 2003, the legality of North Korean withdrawal has been heavily contested and in the NPT setting North Korea is therefore treated differently than India, Pakistan, and Israel (see e.g., Bunn & Rhinelander 2005b).

The Rogues

Nothing is closer to the typical image of nuclear deviants than the rules-defying, international “rogues”, cheating on their nonproliferation obligations to develop a clandestine nuclear arsenal. The issue of non-compliance with non-proliferation norm has been discussed since the early years of NPT negotiations. As in many other arms control agreements, the potential for cheating led to the development of mechanisms to monitor and verify states’ compliance with the treaty. However, it was only in the 1990s and the following decades when this issue moved to the forefront of international security debates, as a part of the discourse on “rogue states” and “evil” actors in world politics. Despite differences in their behavior and rhetoric, Iraq, North Korea, and Iran (and to a lesser extent Libya and Syria) have been constructed as prototypical nuclear outlaws, repeatedly violating the norms of nuclear order, and therefore representing a great threat to the international society of the “normal” states.

As I noted above, the logic of nuclear order largely relies on the structural ambivalence of nuclear technology (cf. Abraham 2006; 2010), in the sense that uranium enrichment and plutonium reprocessing are dual-use processes, relevant in both civilian and military applications of nuclear energy. Since the Eisenhower’s “Atoms for Peace” program and later the NPT explicitly encouraged global diffusion of peaceful nuclear capabilities, many states have feared that some actors would accept scientific and technological assistance under the pretext of civilian nuclear development, and, at some point, clandestinely turn their peaceful nuclear capabilities into military ones. Instead of directly prohibiting the enrichment and reprocessing technologies, the NPT sought to construct a “firewall” (Wan 2014) in the form of IAEA safeguards that would ensure that nuclear facilities conduct strictly peaceful operations. The Comprehensive Safeguards Agreement provided standardized procedures for the monitoring and verification tasks outline in the Article III of the NPT. Among other things, the IAEA adopted the earlier U.S. threshold of 20 percent uranium enrichment as an international norm that distinguishes “low” from “high” enriched uranium (cf. Brown & Glaser 2016; Schaper 2013; Harrington & Englert 2014).

Arguably, the truly defining case of non-compliant behavior that shaped the rules of the nonproliferation game was the discovery of the clandestine dimension of the Iraqi nuclear program in the early 1990s. Iraq was the first state party of the NPT that deliberately and explicitly cheated. The extent of Iraq’s breach of its NPT obligations came as a shock to many

at the time (cf. Albright & Hibbs 1991; 1992; Wan 2014). Even many countries that previously opposed more intrusive verification measures in the NPT now called for the change of the IAEA safeguards norms towards more stringent monitoring and control (Zuberi 2003, p.44; Sloss 1995). In the wake of this prominent deviant event, the IAEA safeguards underwent a major review in order to be able to detect undeclared nuclear activities and material (Hooper 1995). Most importantly, the IAEA introduced new monitoring practices such as environmental sampling and analysis (Donohue 1998).

Moreover, in 1997 the IAEA introduced the Additional Protocol (AP), a result of four years-long negotiations among NPT member states, led by the United States and Germany. The AP significantly increased the IAEA verification and monitoring capability, providing the Agency with much more in-depth information about member states' nuclear activities (including exports and imports) and with authority to access on short notice any facility for inspection (previously, the IAEA was only allowed to inspect so-called "declared" nuclear facilities). As of October 2016, 127 states had both signed and ratified the AP (IAEA 2016).

The members of the Nuclear Suppliers Group (NSG) also reacted to the discovery of Iraq's clandestine activities by amending the export control rules for nuclear trade. In 1992, the NSG agreed that any future supplies to the NNWS will be conditioned by the acceptance of the IAEA full-scope safeguards (NSG 1993).

Another high-profile non-compliance crisis of the 1990s, the case of North Korea, was temporarily put on hold by the adoption of the 1994 Agreed Framework between Pyongyang and Washington (see introduction to chapter 6 for more details). The 2000s nevertheless brought about a new wave of compliance issues, with the prominent cases of Iraq, Iran, North Korea, and the Khan network. The story of Iraqi continued defiance of international norms (see Strategic Survey 1998) ended with use of force by the United States and its allies, and the resulting regime change that removed Iraq from the group of states of proliferation concern. Whereas the issue of Iran has been resolved – at least for the time being – through a comprehensive JCPOA agreement in 2015 (see the next chapter), North Korea withdrew from the NPT in 2003 and conducted its first nuclear weapon test in 2006 (see chapter 6). The discovery of black market nuclear trade network organized by Pakistani scientist A.Q. Khan – what the IAEA chief ElBaradei once called the "Wal-Mart of private-sector proliferation" (cited in Allison 2010, p.79) – highlighted the role of non-state actors in nuclear proliferation and

suggested the alternative way how “rogues” can defy the IAEA safeguards and clandestinely obtain sensitive material and technologies (cf. Corera 2006; Albright & Hinderstein 2005).

The Keepers

In contrast with the vast majority of international agreements, the NPT established two classes of states with substantially unequal rights and obligations. The five countries that tested nuclear weapons before 1967 – United States, Russia, the United Kingdom, France, and China – were designated as states that are legally entitled to possess nuclear weapons under the regime rules. However, they have been also frequently subject to accusations that their behavior breaches the fundamental norms of the NPT.

Actors which accused the NWS of violating the regime rules have mainly focused on two patterns of (allegedly) deviant behavior. First, the avoidance of obligations under NPT Article VI., i.e. behavior inconsistent with the disarmament norm. Second, the practice of “nuclear denial” with respect to the sharing of nuclear technologies under NPT Article IV., i.e. behavior inconsistent with the peaceful use norm. The behavior of (some of) the NWS in these three areas led to the construction of an image of nuclear “keeper”: a nuclear state that aims to keep its nuclear weapons indefinitely and take advantage of this privileged nuclear oligopoly for its parochial interests.¹⁰⁹

Since the first NPT Review Conference in 1975, many NNWS have been exerting pressure on the NWS to take concrete steps towards the fulfillment of Article VI. After the end of the Cold War and the cessation of nuclear arms race between the United States and the former Soviet Union, the pressure on the NWS to lower the salience of nuclear weapons in international politics and take specific actions towards nuclear disarmament gradually increased. Many NNWS also started to call for a process that would shift the policies of NWS from “surface” devaluing to more substantive, “deep” devaluing of nuclear weapons (Ritchie 2014). The “surface” devaluing would largely correspond to the practice of strategic arms control, involving primarily the quantitative limitations on “deployed” nuclear weapons and

¹⁰⁹ Whereas the NWS usually contest the fact that their behavior would be inconsistent with the fundamental norms of the NPT, there were also situations in which some of the NWS would engage in a forthright defiance of the existing standards – for example, under George W. Bush administration, the new U.S. Ambassador to the UN John Bolton publicly rejected the prior commitments to work towards nuclear disarmament (Allison 2010, p.80).

gradual reductions of total stockpiles of the United States and Russia.¹¹⁰ The “deep” devaluing, however, would require more significant qualitative changes in doctrines of the NWS with respect to the prevailing practice of nuclear deterrence (Ritchie 2014, pp.608–609).

As several scholars observed (Müller 2010a; Müller, Becker-Jakob, et al. 2013; Tannenwald 2013), the illegitimacy of the insufficient activity of the NWS towards nuclear disarmament has been primarily framed by the NNWS as an issue of justice, fairness, and equity with respect to the distribution of rights and obligations in the non-proliferation regime. In this interpretation, the NNWS have been holding their part of the bargain (i.e., “nuclear abstinence” through non-acquisition of nuclear weapons and compliance with the IAEA safeguard agreements), whereas the NWS had been avoiding their Article VI. obligations. In 1995, the NNWS used the extension of the NPT as a bargaining chip to agree with NWS on formal validation of specific organizing principles of disarmament, including the Comprehensive Test-Ban Treaty (adopted in 1996) and the Fissile Material Cut-Off Treaty (still under negotiation) (NPT/CONF.1995/32 1995; cf. Jayantha. Dhanapala & Rydell 2005). The meaning of the nuclear disarmament norm was further specified in the “Thirteen Steps” outlined in the 2000 NPT Review Conference Final Document and “Action Plan” of the 2010 NPT Review Conference, including the principle of “irreversibility”, transparency, and generally the norm of accountability of NWS vis-à-vis their disarmament obligations (cf. UNODA 2000; NPT/CONF.2010/50 2010a; Müller, Becker-Jakob, et al. 2013, p.55).

In the years following the 2010 NPT Review Conference, however, the frustration with the (still) slow pace of nuclear disarmament led to the emergence of Humanitarian Initiative (HI) among the NNWS and pro-disarmament NGOs, that would further intensify the pressure being put on the NWS. The HI would frame the urgent need for nuclear abolition primarily through the lens of human security, international humanitarian law, and new scientific findings related to the horrific consequences of the potential use of nuclear weapons (cf. Nielsen & Hanson 2014; Borrie 2014; Sauer & Pretorius 2014; Smetana 2016; Bolton & Minor 2016; Müller 2017, p.4). An integral part of the HI norm entrepreneurship, however, has been also the stigmatization of nuclear weapons and a complete delegitimization of nuclear deterrence

¹¹⁰ Although France and the United Kingdom also engaged in some quantitative reductions in their – significantly smaller – nuclear arsenals, they have been doing this unilaterally, put of any formal arms control framework. For a critical discussion of the conceptual link between arms control and disarmament, see Mutimer (2012) and Dalton et al. (2016, pp.7–8).

as a morally acceptable military posture in international politics.¹¹¹ In response to the continued “defiance” of the disarmament norm by the NWS and their NNWS allies, the HI initiated the process of negotiation of the ban treaty as a new organizing principle for nuclear disarmament (cf. Fihn 2017; Williams 2017).

Since the 1970s, many NNWS states also blamed the NWS for continued attempts to violate their obligations under Article IV. to facilitate the spread of civilian nuclear technology. As noted above, in the wake of Indian PNE, some of the nuclear suppliers, particularly the United States, decided to tighten the rules for nuclear exports and problematize the possibility of widespread development of indigenous full cycle capabilities. This “nuclear revisionism” (Zuberi 2003, p.43) was met with resistance in the newborn NPT-based nuclear order. At the time, the rift did not appear merely between the states of the developed North and the developing South, but also between the United States and its allies in Western Europe (particularly United Kingdom, France, Germany) and Japan. The government in Washington was accused of violating the norm of peaceful use enshrined in Article IV. of the NPT, by implementing the “policy of denial” and thereby illegitimately discriminating the NNWS in their access to nuclear technology (see Walker 2012, p.92). A similar critique was directed towards the export control clubs such as the NSG, which have been perceived by many states of the Global South as attempts to further stratify the global nuclear order and hinder the economic development of Third World states (Nye 1981, pp.21–22; Walker 2012, p.94).

Most Western states gradually joined the U.S. with respect to limiting the spread of nuclear materials and technologies. However, the sentiments among the developing states of the Global South that the practices of the developed states are in breach of the peaceful use norm have not faded away. The NAM states, in particular, have been regularly accusing the West (and especially the United States) of implementing denial policies that are infringing their “inalienable right” for civilian nuclear use and that are counter to the obligations of the NWS under the NPT (see Potter & Mukhatzhanova 2011a, chap.3; Ogilvie-White 2007, p.462). Together with the frustration about the lack of disarmament progress, these developments largely explain the resistance of many NNWS towards the implementation of any new obligatory non-proliferation measures that would further limit the civilian use of nuclear energy (cf. Müller 2010b, pp.195–196; Walker 2012, p.172; Tannenwald 2013).

¹¹¹ It should be noted that many themes of the Humanitarian Initiative have previously appeared in the earlier statements of like-minded NNWS, the NAM states in particular.

Conclusion

In this chapter, my aim was to build a bridge between the theoretical-conceptual chapters of my book and the empirical case-studies. I focused on the nonproliferation game as a specific techno-political space in international politics, guided by norms and rules that have been undergoing a dynamic development since the dawn of the nuclear age in 1945. After reviewing the historical constitution of nuclear order and the relevant scholarly perspectives, I introduced my own reconstruction of the normative structure of nonproliferation that draws on Wiener's typology of international norms introduced in the previous chapter. I elaborated on the contested nature of nuclear order and the patterns of deviant behavior in nuclear order since the NPT inception in the late 1960s.

Besides the main aim of providing the reader with a broader context of global nuclear politics, this chapter achieved three more goal with respect to the goals of my book. First, by critically surveying a large pile of relevant expert and academic literature, this chapter helped to clarify my analytical position vis-à-vis nuclear scholarship. My understanding of the "nonproliferation game" is not far from Ursula Jasper's conception of "technopolitical negotiated order", which is "based on ongoing processes of re-negotiation, re-affirmation or re-configuration" (Jasper 2016, p.3). Furthermore, my conceptual approach allows me to study inter-norm conflicts and dynamics as do the constructivist accounts of scholars such as Harald Müller (2010, 2013) or Nina Tannewald (2013). Finally, similarly to William Walker (2004), I also consider the NPT to be the key source of norms of global nuclear order, which is itself nested within the broader international order and general social order as such.

Moreover, I provided the reader with an original interpretation of the normative structure of nuclear order. I proposed that the structure consists of five macro-level fundamental norms, implemented in a number of meso-level organizing principles, and micro-level standardized procedures. This novel analytical dissection of nuclear rules in vertical (level of specificity) and horizontal (issue-area) axes arguably represents a convenient tool for studying the normative dynamics in global nuclear politics. In chapters 5, 6, and 7, I use this analytical framework to study the changes in the complex net of prescriptions and proscriptions that define the "appropriate" conduct of states in nuclear affairs.

Finally, the findings of this chapter support my broader interactionist argument about the contingent nature of social institutions, norms, and order – a claim that does not apply just

to the “ordinary” human society, but also to the high realm of international and nuclear politics. With respect to the subject matter of my book, this logic necessarily applies that as nuclear order itself is built upon ill-defined, contestable (and contested) normative structures, so are the categories of what constitutes a “normal” (“good”, “responsible”, “orderly”...) or “deviant” (“bad”, “irresponsible”, “disorderly”...) conduct in global nuclear affairs.