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Crafting the Nuclear World Order (1950-1975): The Dynamics of Legal Change in the Field of Nuclear Nonproliferation

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Abstract

This paper opens the analysis of treaties in the security field to sociological and hermeneutic analyses of international lawmaking practices. In a legal world where tensions exist between legal regimes, it claims that the interpretive quality of past treaties determines which legal rules survive and which ones disappear when new treaties with overlapping jurisdiction are introduced. The article demonstrates this thesis by using the dynamics of legal change in the field of nuclear proliferation from 1950 to 1975. It first shows that instrumentalist theories of international law, which see in some aspects of the nonproliferation regime a) attempts by strong states to freeze the status quo, and b) attempts by all state parties to solve coordination and cooperation problems, fail to explain how the global nonproliferation regime was articulated with prior regional regimes, in particular, the transatlantic regime. To explain why discrepancies existed between the two regimes, and why certain rules evaporated, while others survived the paradigm shift, this paper then moves to field and hermeneutic theories of international law. It shows that only by paying attention to the interpretive quality of the constitutive treaties of each regime (whether they are clear, ambiguous, or opaque), can one explain the evolution of the nonproliferation regimes.

Crafting the Nuclear World Order (1950-1975):

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Sociologists of law and international law scholars have traditionally expressed little interest in the making of treaties in the field of security.[1] As a result, international relations scholars have more often studied international treaties in this field. This specialization has limited the kind of theories used to explain the life cycle of these treaties. Most often, theorists of international relations discuss treaties either as dependent variables explained by the geopolitical balance of power,[2] or as tools of policy coordination.[3] They do not take into account the possibility that legal change can be driven by dynamics internal to the field of international law and/or by the content of past international treaties themselves. In this article, I propose to open the analysis of treaties in the security field to sociological and hermeneutic analyses of international lawmaking practices.

The expertise claimed by international relations specialists on security treaties, and the correlate lack of interest showed by most other scholars in the social sciences (from sociology to anthropology and law), is all the more problematic in that the reality of international law in the field of security has drastically shifted away from the externalist and instrumentalist conceptions of international law adopted by most international relations scholars. The proliferation of treaties in the field of security in the

[1] Nuclear issues became of interest to law professors when the International Court of Justice (ICJ) responded to the request of the United Nations Assembly on the legality of the threat of using nuclear force, Laurence Boisson de Chazournes and Philippe Sands 1999.
[2] Kenneth Waltz [1986] 2008.
[3] Robert Keohane 1983.

postwar era has led to tensions and frictions between complex legal regimes,[4] to the point that signing new treaties can create messiness in the global legal order rather than solve collective action problems.[5] To curb these negative effects, scholars, diplomats, and statesmen pay increasing efforts to ease tensions between the legal content of treaties signed at different times and for different purposes. When they do, their efforts, shaped by dynamics internal to the field of law, can drive legal change.

The field of nuclear nonproliferation is a case in point. International relations scholars have proposed various theories explaining the rise of this regime centered around the Nuclear Non-Proliferation Treaty (NPT, 1968). But, as I show in the first section, they have failed to theorize the complexity of the nuclear world order. In the second section, I show that a sociological approach using the concept of "field"[6] is better equipped to explain the dynamics that lead to the multiplication of these legal rules. However, this approach also has its limits. In particular, field theory falters when it comes to explaining how commensurability between different norms and regimes are proposed, adopted, and stabilized over time. Therefore, in the third section, I introduce a theory of legal change focused on the interpretative nature of treaties. I illustrate how this theory explains the dynamic aspects of interaction between the NPT regime and prior regimes in the field of nonproliferation, in particular, the previous transatlantic regime instituted by the European Community of Atomic Energy Treaty (Euratom Treaty, 1957) and the U.S.-Euratom Treaty (1958).

1. International Relations Theory Applied to the Making of the NPT Regime

[4] Or "regime complex"; see Karen Alter and Sophie Meunier 2009:13.
[5] Martti Koskenniemi 2002; Miguel Poiares Maduro 2003; Daniel Halberstam 2010.
[6] Vincent Pouliot 2008; Frédéric Mérand and Vincent Pouliot 2008.

Realism and the NPT

Many specialists of international security adopt, implicitly or explicitly, a set of hypotheses on the role of international law in international relations which can be called "realist"[7] to the extent that they see treaties as the reflection of an external military or geopolitical reality. Overall, and as represented in table 1, this model assumes that the changing distribution of military and economic technology drives geopolitical change (the alliances formed by rising and declining Great Powers and their satellite states),[8] which itself drives legal change (the treaties which seal these new alliances). Here, the driving force of legal change is the emergence of Great Powers.[9] For Cold War specialists like Kenneth Waltz[10] or John Lewis Gaddis[11] for instance, external change in the allocation of military and economic factors is the primary factor which explains why states sign new treaties of alliance, why they ask to reform the statutes of international organizations and why they violate the provisions of international treaties when it is in their interest and they have the military power to do so. This model of change in international law is therefore both externalist and instrumentalist: external factors (outside the realm of law) determine the evolution of international treaties; and treaties are just instruments used by Great Powers to accrue their economic and military power.[12] Or as Jack Goldsmith and Eric Posner write, in general, "international law is not a check on state self-interest" but merely "a product of state self-interest." [13]

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[7] International relations theory found its origins in German realist legal thinking; Martti Koskenniemi 2001.
[8] Hans J. Morgenthau 1960:40.
[9] Some authors, however, introduced the idea that states balance against several types of threats, which is why they do not automatically "bandwagon" with the most militarily dominant ally; see Stephen Walt 1987, 1988; John Mearsheimer 1990.
[10] Kenneth Waltz [1986] 2008:50.
[11] John Lewis Gaddis 2005. For similar views, see Alain Joxe 1990.
[12] Barry Posen 1984.
[13] Jack Goldsmith and Eric Posner 2005:13.

Insert Table 1

This model explains why the NPT was signed, by whom, when, and whether states would comply with it based on external geopolitical events. When the U.S. and Soviet Union came to an agreement over the merits of nuclear nonproliferation, they were able to broker a treaty to that effect: the NPT, signed in 1968.[14] Indeed, the main thrust of the NPT is to ensure that the Nuclear Weapon States (NWS) do not help other states acquire the nuclear technology that could help them become Great Powers themselves; and that Non-Nuclear Weapon States (NNWS) will not seek that help from the nuclear Great Powers (art. 1 and 2).[15] In so doing, the NPT worked in the interest of the Great Powers. It was signed after the U.S. realized that the lack of such treaty had allowed France to build nuclear weapons (in 1960), and after the Soviets realized it had allowed China to develop their own nuclear weapons (in 1964). The Great Powers acted to propose the NPT to freeze the number of NWS to only five – the British having exploded their bomb in 1952. To ensure the *status quo*, the U.S. and the U.S.S.R. needed the NPT.

The NPT also reflected (rather than changed) the asymmetry in the external structure of world society. It granted to the five *de facto* nuclear Great Powers, which still held a permanent veto in the United Nations Security Council, the recognition of their lawful status as Nuclear Weapon States (NWS). The nuclear Great Powers also endowed the International Atomic Energy Agency (IAEA) with the responsibility of ensuring that, with the notable exception of the West European states party to the Euratom Treaty, all

[14] For a review of the claims made by decolonizing nation-states with Great Power aspirations such as India and Pakistan against the nuclear apartheid instituted by the NPT, see Lawrence Scheinman 1966.
[15] Nuclear Non-Proliferation Treaty 1968.

the other NNWS respect their promise not to acquire nuclear weapon technologies (art. 3). As realism predicts, the smaller states failed to convince the Great Powers to institute in exchange an international agency in charge of monitoring their promised steps toward world nuclear disarmament (art. 6).

While many authors agree that changes in the allocation of military and economic factors are determinants of geopolitical change, this realist model also tells us that past treaties do not survive the signature of new treaties whose provisions contradict those of these past treaties.[16] This is what historians of the Cold War sometimes argue with respect to the principles, norms and doctrines adopted by the U.S. in the 1950s to discourage its allies who had signed the North Atlantic Treaty and entered its Organization (NATO) from producing nuclear weapons. During the early days of the Cold War, the U.S. did not want to let smaller Great Powers (like France) get nuclear weapons on a unilateral basis, for fear that unpredictable and dangerous order would emerge from such multipolarity.[17] With this purpose in mind, the U.S. signed many treaties by which it committed specific nuclear weapons to NATO, which it held in joint-custody with the host NATO country in Europe (these treaties were called "nuclear-sharing agreements"). By committing to share the decision to fire the NATO missiles containing the shared nuclear warheads with European allies, the U.S. hoped to dissuade Europeans from producing nuclear warheads in a unilateral fashion.

[16] Kenneth Waltz [1986] 2008:44.
[17] Kenneth Waltz [2000]2008:211. As Waltz writes, "[t]he stark dangers of a nuclear world and the simplicity of relations between two powerful adversaries produced clarity in the definition of their national interest." Kenneth Waltz [1967]2008:300.

Historians argue that these legal norms and rules embedded in the NATO nuclear-sharing agreements were long gone by the time the NPT was negotiated.[18] Already in 1962, before the Cuban Missile Crisis, the U.S. started reneging on its prior (non)proliferation[19] commitment with its NATO allies. The U.S. President John F. Kennedy put an official end to this doctrine in the summer prior to the Cuban Missile Crisis, when under Soviet pressure he cancelled nuclear-sharing agreements with Italy and Turkey, which had committed shared nuclear warheads to land-based missiles, and instead proposed that they be placed in sea-based submarines controlled by the U.S. President.[20] What was vital, said his Secretary of Defense Robert McNamara, was "unity of planning, executive authority and central decision;" in other words, "it [was] essential that we centralize the decision to use our nuclear weapons to the greatest extent possible."[21]

Here, legal change occurred without the Europeans agreeing to these changes, or without even the support of the U.S. military officials on the ground in Europe. Indeed, after NATO's Supreme Commander objected to the American doctrinal changes under the pressure of Europeans in NATO's Atlantic Council, the U.S. President simply fired NATO's Supreme Commander, showing Europeans that the U.S. was not prepared to negotiate its new nonproliferation doctrine.[22] Furthermore, despite German opposition, in December 1966 the U.S. Secretary of State Dean Rusk told the German representative to the NATO Council that the NPT nonproliferation commitment made obsolete any kind of

[18] Stanley Hoffmann 1964; Marc Trachtenberg 1999.
[19] I place (non) in parenthesis to underline the ambiguity of the commitment which consisted of trying to avoid nuclear proliferation by sending nuclear warheads to foreign soil.
[20] Walt Rostow 1962; McGeorge Bundy 1987:5; Marc Trachtenberg 1999:354.
[21] Gregg Herken 1985:163-4; Marc Trachtenberg 1999:316
[22] Marc Trachtenberg 1999:302.

nuclear-sharing arrangement by which the U.S. would have helped West Germany or France build nuclear weapons, "unless (according to the American interpretation) a federated European state would become the successor of the present European nuclear powers, i.e. France and Great Britain," the latter being NWS with whom the U.S. already cooperated in the development of military applications of nuclear energy.[23] In this case Washington was able to impose their perception of the external structure of military and economic factors on Europeans.

Realism and the Plurality of Legal Norms in the Nonproliferation Field

This externalist model of legal change has been criticized on various counts. Some critics contend that its causal predictions are so broad that they can be hard to prove wrong. For instance, Kenneth Waltz argues that nuclear weapons cannot by themselves change the structure of international politics, "[they] must first be seen as a product of great national capabilities rather than as their cause."[24] This assertion challenges the linear causation drawn in model 1. It also complicates attempts to explain specific state conduct with respect to particular treaties.[25] In the case of the NPT, realists could support contradictory narratives to explain the same state conduct: for instance, the West German signature of the NPT could prove that West Germany no longer had pretensions to sit among the other Great Powers, or else that West Germany did not need nuclear weapons to become a Great Power itself.

[23] Kurt Birrenbach 1973, In December 1966, the American commitment to the "successor state theory" was implicitly accepted by the Soviets, see Max Kohnstamm 1966.
[24] Kenneth Waltz [1964] 2008:102-3.
[25] Thomas J. Christensen and Jack Snyder 1990:143.

Furthermore, this first model of legal change fails to account for the coexistence of legal norms inherited from a succession of treaties with overlapping jurisdiction. Cold War historians should pay closer attention to tensions between the NPT and treaties signed by the U.S. prior to the entry into force of the NPT. In this case, the U.S. had not only signed nuclear-sharing agreements with specific NATO allies, but also with a European organization comprised of six NATO members: the U.S.-Euratom Treaty, signed in 1958. The articulation between prior European treaties and the NPT was much more problematic than the articulation of the NATO nuclear sharing arrangements with the NPT. With this treaty, the U.S. recognized the authority of the Euratom Commission to control nuclear activities in the territory of the six nations that had signed the Euratom Treaty in 1957. This is why the U.S. was not free to negotiate on article 3 of the NPT, which concerned the role of the IAEA and Euratom in future nuclear safeguards of exchanged fuels, and why the drafting of this article became one of the main sources of contention between the U.S., the Soviets, and Europe.[26]

Regarding the issue of controls, the first model of causation makes it hard to predict the outcome of these negotiations. The Soviets recognized the legitimacy of the IAEA safeguards only in 1963, but after they did so, their criticisms turned exclusively against Euratom, which was routinely accused of being "a military operation," which could not be trusted for the control of European nuclear activities.[27] The U.S. also wanted to abrogate the right of Euratom to control its nuclear activities, and charge in its place the IAEA, as the U.S. Ambassador to NATO told Europeans in February 1967.[28] But the Euratom Commission succeeded in imposing its viewpoint on article 3 of the NPT on

[26] Mohammed Ibrahim Shaker 1976:656.
[27] Euratom Commission 1963c.
[28] Max Kohnstamm 1967.

both the U.S. and the Soviets. That Europeans were successful in changing Americans' position is a mystery to realists, who have trouble explaining how a weak international organization like the Euratom Commission could keep its system of control against the will of American and Soviet governments, and of all non-European states.

Regime Theory: Strategic Reasons for Interstate Cooperation

Some international relations scholars ("regime theorists") claim that the externalist approach to legal change previously outlined needs to be amended rather than repudiated in order to explain why, in certain cases, small states or weak international organizations can influence the making of international treaties in the field of security.[29] For Robert Keohane, states agree to follow a predictable and orderly course of action when they have a higher interest in cooperation than in maintaining the anarchic structure of world society that realists believe to exist, as such anarchy often leads to unacceptable costs.[30] From this perspective, collective rules enshrined in treaties are less an instrument of power, and more an instrument of coordination and cooperation freely accepted by all kinds of states.

Regimes exist in particular because international organizations and transnational networks enhance the epistemic quality of expert debates on complex issues, such as questions of nuclear proliferation, which involve many legal, technological, economic and political dimensions, and which states might not solve unilaterally.[31] As Robert

[29] John Duffield 1994.
[30] Regimes are not always used to deal with collective action problems, as is often the case in the field of security. Rather, regimes in the field of human rights aim to solve domestic problems, in particular, safeguarding the constitutional protections of human rights; see Jack Donnelly 1986; or Andrew Moravscik 2000.
[31] Anne Marie Slaughter 2004.

Keohane, Stephen Macedo and Andrew Moravcsik write, "most international organizations work less as binding decisionmakers rather than as sites for transnational and transgovernmental networks […] linking national officials with their foreign counterparts for the purpose of joint-decision making, coordination and information-sharing."[32] These networks, or these "epistemic communities,"[33] in the nuclear arms control regime, help states develop shared diagnostic over the undesirability of non-optimal equilibria (like a nuclear arms race), and over the means to avoid free riding strategies – what I call "problem-solving strategies"[34] in table 2. This was the case of the Intergovernmental Nuclear Fuel Cycle Evaluation (INFCE), a conference which further advanced the idea that plutonium reprocessing facilities represented a threat to international security.[35]

Insert Table 2

In the "nonproliferation regime," states signed the NPT because all states (not just NWS but also NNWS) were convinced that the spread of nuclear weapons to more states would pose a serious danger to their collective security, and that it was not in their interest to encourage proliferation, or just to let it happen. The pre-existence of prior treaties actually reinforced this collective diagnosis. These prior treaties sustained the efforts of the global "epistemic community" of nonproliferation specialists, but they

[32] Robert Keohane, Stephen Macedo and Andrew Moravcsik 2009:19.
[33] Emmanuel Adler 1992a, 1992b; Emanuel Adler and Peter Haas 1992.
[34] These strategies, according to Stephen Krasner's canonical definition, hold together "the principles, norms, rules, and decision-making processes around which actor expectations converge in a given issue area." Stephen Krasner 1983:1.
[35] Trevor McMorris Tate 1990: 402, 3.

addressed the problem of nuclear proliferation in a piecemeal fashion, either by prohibiting the circulation of specific technologies, or within a particular region: for instance, the Limited Test Ban Treaty (LTBT, 1963) which restricts the spread of nuclear testing technologies (art 1.2.),[1] or regional treaties like the Euratom Treaty (1957); the Antarctic Treaty (1961), which prohibits the stockpiling of nuclear weapons on the continent; the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Tlatelolco Treaty, 1967); the South Pacific Nuclear Free Zone Treaty (Rarogtonga Treaty, 1986); and the Outer Space Treaty (1966).[36] These previous treaties diffused the right legal nonproliferation norms, but failed to accomplish what only the NPT could do. Indeed, all these treaties, which were part of the "nonproliferation regime" (signed before or after the NPT), worked to advance the same goal: to avoid the perils of nuclear proliferation.

Although they pay attention to this legal continuity between treaties, regime theorists pay little attention to the internal dynamics of this legal history. Whether one section of a treaty comes from a prior treaty is of little interest to regime theorists,[37] for whom "regimes are not important from the standpoint of their formal legal status but from the stable, predictable pattern of relations that develop and that enable states to work together."[38] Those regime theorists who look into draft treaties, treaties, pamphlets, articles and books look to find the strategic intentions that states express regarding their international environment, not inter-textual legal borrowings.

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[36] Trevor McMorris Tate 1990:400.
[37] Shirley V. Scott 2004:163.
[38] Donald J. Puchala and Raymond Hopkins 1983:63; Stephen Krasner 1983:9. The assumption defies common sense as we know the extent to which drafts of treaties are scrutinized by diplomats and statesmen during international conferences devoted to the penning of treaties. Anneline Riles 1999.

One Nonproliferation Regime; or Many?

One can list at least two problems with this approach of the nonproliferation regime(s), one empirical (or historical), and one theoretical. Historically, regime theorists are wrong when they assume that all the treaties in the nonproliferation regime, despite legal idiosyncrasies, aimed at solving the same problem: that of avoiding nuclear proliferation.

Regime theorists assume that the Euratom Treaty was meant to prevent France and West Germany from developing nuclear weapons.[39] This mistake comes from three aspects of the Euratom Treaty, which give the superficial impression that its goal was to prevent the development of military applications of nuclear energy in France and West Germany. First: the content of its technological program. In February 1957, a month before Euratom was signed, the main promoter of the Euratom Treaty, the Frenchman Jean Monnet, sent his emissaries to the U.S. to present Euratom's program. Under this program, Euratom was to buy six American power plants and the enriched uranium necessary to fuel them (see table 3). This is why the future Euratom Commission needed to sign a bilateral U.S.-Euratom Treaty. Monnet's presentation made the U.S.-Euratom Treaty look very proliferation-resistant, as Europeans appeared not to ask for help from the U.S. to enrich uranium by themselves.[40]

Second, the Euratom property of fissile materials. Euratom Treaty writers gave the impression that Euratom sought to avoid nuclear proliferation, by claiming property on all dangerous materials. Indeed, the Euratom Treaty stated that "special fissionable materials shall be the property of the Community, and that this right of ownership shall

[39] Trevor McMorris Tate 1990:410.
[40] Louis Armand 1957.

extend to all special fissionable material produced by a member state" (art. 86).[41] If Euratom had the legal property of fissile materials, then, one could deduct that all materials should be used for peaceful purposes since Euratom had no jurisdiction in the military field.[42]

Third, the Euratom control procedure. As the main nuclear exporter of fissile materials in Western Europe, the U.S. government controlled their uses by importing states, including the Six Euratom signatory-states. In the 1950s, the U.S. expected a large demand for nuclear power plants from Europe. Therefore, the U.S. expected that it could not ensure inspections all alone for much longer. A multilateral solution was better. Two options existed: the U.S. could delegate that right of control to the newly-created IAEA, as proposed by the U.S. Chairman of the Atomic Energy Commission (AEC); or it could delegate it to the Euratom Commission, at least for the controls of fissile materials circulating in Western Europe. Indeed, the Euratom Treaty planned that the Commission would ensure that fissile materials were under proper controls (art. 77). This solution was advocated by Jean Monnet and the U.S. Secretary of State at the time, John Foster Dulles. It was eventually accepted by the U.S. Congress when the latter ratified the U.S.-Euratom Treaty in 1958.[43]

Insert Table 3

But on all three counts, this superficial reading of the Euratom Treaty hides that the drafters pursued another goal with this treaty: to enable the U.S. to help a united

[41] Euratom Treaty 1957.
[42] Jules Guéron 1984.
[43] Max Kohnstamm 1957.

Europe acquire nuclear weapons capability at a time when none of its signatory-states had yet exploded a nuclear device (a goal in clear contradiction with the future NPT). Although commentators had hinted at this hidden goal before, we had to wait until certain archives opened in the 1990s to learn about these facts.

First, on the technological program (see table 3). Thanks to the Euratom Treaty, the Europeans intended to receive U.S. help in the development of some parts of nuclear weapons, like highly enriched uranium. Initially, French specialists defended Euratom in parliament on the basis that France would receive financial help for its enrichment program from future Euratom partners, and technical help from the U.S. through the future US-Euratom treaty.[44] That the French government wanted to acquire uranium-enrichment technology meant only one thing: that France intended to use the Euratom Treaty to produce nuclear weapons. As European experts have written, "France's European partners entertained no illusion about the military ambitions of such a project," due to the "simultaneous pressures by the French to build nuclear power plants using natural uranium as well as an uranium enrichment plant."[45] Since these military ambitions were so obvious, some American officials, like the AEC Chairman, opposed the future U.S.-Euratom Treaty.[46] In response to this opposition Monnet and his emissaries prepared a new last-minute program to convince the U.S. that Euratom only sought to buy from the U.S. proliferation-resistant power plants and the enriched uranium necessary to fuel them. This was largely deception on their part.

[44] Francis Perrin 1956; Louis Armand 1956.
[45] Jules Guéron 1983.
[46] The opposition was lead by the Chairman of the Atomic Energy Commission (AEC), Lewis Strauss, who warned Senators against the plans of the Secretary of State, John Foster Dulles, who was in favor of helping Europeans acquire dual-use technologies, see XXXX.

That six years after its signature, only one power plant had been bought from the U.S. (instead of the six promised) was therefore not a big surprise to those who knew better. Indeed, rather than abandoning the projected European enrichment plant, the participation of West Germans and Italians in the construction of the French enrichment plant just turned secret. A month before the end of Euratom Treaty negotiations, in February 1957, France and West Germany signed a secret treaty of military cooperation, which was then extended to Italy (November 1957), one month before the ratification of the Euratom (see table 3).[47] In May 1958, as negotiation of the U.S.-Euratom Treaty came to an end, this Franco-Italo-German treaty entered into force when France secretly opened participation in the production of enriched uranium to the West Germans and Italians. According to the French historian George-Henri Soutou, the French, West Germans and Italians sought to produce nuclear warheads which would be owned by the three countries along supranational lines.[48]

Second, European Foreign Ministers who negotiated the Euratom Treaty used legal expertise to obscure the meaning of key words, in particular "property" and "control" related to fissile missiles. Indeed, the notion of property was conceived as *property sui generis*, which meant that Euratom had the formal property without having the property rights (art. 87): only if the states or companies using dangerous materials were proven guilty of illicit activities by the Euratom control agency could the Euratom Commission reclaim its latent property rights on these fuels (rights to sell them, store them, use them for whatever purpose, etc.). Therefore, whether Euratom achieved non-proliferation objectives depended on the definition of "control" in the Euratom Treaty.

[47] MAEF 1957.
[48] MAEF 1956.

A careful examination of secret treaty negotiations shows the European Foreign Ministers defined control as a "control of conformity,"[49] in order for the French government to have the right to develop military uses of nuclear energy along with West Germany and Italy. Euratom inspectors would verify the conformity between the "real" and "declared" uses of nuclear fuels (be they civil or military uses) of the firms and research institutions in the Community. If French (or France-German) installations declared that they used nuclear fuels for military ends, inspectors could only verify (up to a certain point) that these military uses were indeed the real uses. In contrast, the American inspectors (soon to be replaced by IAEA inspectors), had to verify that real end uses were not military of any kind ("control of finality"). Monnet and his emissaries neglected to clarify this distinction between control of conformity and finality when they presented the Euratom Treaty to U.S. Senators in February 1957.[50] Furthermore, by ratifying the U.S.-Euratom Treaty in 1958, the U.S. Senators might not have understood that they lost their "right of pursuit," as the French called it: materials sold to one country (for instance Germany) for peaceful purposes and then sold again to France could then be re-processed (in the case of plutonium for instance) to be used eventually in French (or European) nuclear warheads (art. 84).

Historically, we therefore see that the "geopolitical problem" that the Euratom Treaty sought to solve was of a different nature than that which the NPT addressed. The Euratom Treaty responded to geopolitical concerns,[51] but not those described by specialists of the nonproliferation regime. Euratom Treaty drafters wanted to encourage

[49] Euratom Commission 1960.
[50] Max Kohnstamm 1957.
[51] In contrast to Andrew Moravcsik 1998:183-185; for an explanation of the European integration which focuses on states' economic concerns, see also Alan Milward 1992, 2002.

supranational proliferation (and prevent national proliferation) in order to help Europeans check the Soviet forces in Europe. Nowhere in the Euratom Treaty does one find a limitation placed on the military applications that its signatory-states could draw from nuclear energy.

To a large extent, regime theory, if it was grounded in more detailed historical research, would need to take into account the shifting nature of the geopolitical problems and problem-solving strategies that were identified by various treaty writers over time. The discontinuity of purpose among the treaties included in the "nonproliferation regime" raises a problem of a more theoretical nature. Indeed, the notion of "regime" assumes that there exists an overarching homogeneity of purpose across a wide range of contexts in which diverse treaties and other legal instruments were crafted. But if each treaty addressed a geopolitical problem of a specific type, then we need to raise the question of whether treaties last longer than the geopolitical problems they are designed to solve, and whether a plurality of contradictory treaties and regimes coexists at the same time.

Realists and regime theorists do not raise the possibility that the nonproliferation regime might include a plurality of regimes with conflicting norms. One reason might be that regime theorists always emphasize consensus among, rather than conflict between, the epistemic communities in charge of interpreting treaties. Another reason might be that they assume that legal contradictions resulting from the coexistence of a plurality of legal rules will be solved naturally, either by informal abandonment of obsolete norms, or by formal abrogation of past treaties. In this case, if some provisions of the Euratom Treaty contradicted those of the NPT (for instance, the provisions regarding the control of European nuclear activities by Euratom), they would be abrogated or abandoned in

practice by those governments when they signed the NPT. This was not the case, however.[52] To explain the occurrence of this abnormality, I turn to field theories of legal change.

2. Field Theory Applied to the Field of Nonproliferation

To analyze the work of interpreting and solving legal contradictions between treaties in practice, we need to enter into the legal fields from which treaties emerge. Here, I present how field theory can explain the outcome of turf battles between law practitioners.

Field Theory: From Institutions to Practice

Field theorists explain the plurality of legal norms through theories of how practitioners and bureaucracies bring new problem-solving strategies and impose their ways of understanding geopolitical problems by mobilizing new forms of knowledge[53]. Field theorists first see state organizations and practitioners as engaged in a struggle to maximize their appropriation of formal rights and jurisdiction (see table 4). Bureaucracies defend their jurisdiction by imposing their "doctrine for solving puzzles"[54] to other administrations. The rule applies not only to domestic organizations but to international organizations as well.[55] Once a regime sets up a series of institutions in charge of

[52] In that sense, Susan Strange is wrong when she writes that "all those international arrangements dignified by the label regime are only too easily upset when either the balance of bargaining power or the perception of national interest change among those states who negotiate them." Susan Strange 1983:345 ; see also Arthur A. Stein 1983; Robert Jervis 1983; Michael Brzoska 1992: 216.
[53] Vincent Pouliot 2008; Frédéric Mérand and Vincent Pouliot 2008.
[54] Peter Hall 1989:13.
[55] Institutionalist studies show that national atomic agencies in every country demonstrate a will to keep their formal rights as large as possible. See Lawrence Scheinman 1966, 1967, 1986; Scott Sagan 1996; George Perkovich 1999.

monitoring and enforcing treaty compliance, these institutions develop a vested interest in the preservation of *their* regime: they are likely to block the transfer of their jurisdiction to another international organization, for instance, an organization in charge of monitoring states' compliance with commitments contracted in a posterior treaty.[56]

Applied to the study of nonproliferation, this institutionalist model partially explains the mechanisms at work in the legal field. It predicts that the organization first charged with the control of nuclear activities, the U.S. AEC, was likely to oppose the delegation of its control rights to another organization such as Euratom. Even though there is some grain of truth in this prediction, it fails to explain why the AEC actually supported granting this right of control to the IAEA.[57]

Similarly, such a strict institutionalist explanation applied to the study of the European Communities offers a partial explanation of the mechanisms at work in the European integration process. It can explain why the Common Market Community expanded its jurisdiction over time[58] and why the European Economic Community (EEC), the successor organization to Euratom, in 1967 fought to keep its jurisdiction over the control of European activities against the IAEA during the NPT negotiations. But it fails to explain why the Euratom Commission and then the EEC did not encourage states to use the Euratom Treaty framework to develop jointly their dual-use activities (activities with both peaceful and military goals) as was originally planned by the treaty

[56] Craig Parsons 2002; Liesbet Hooge and Gary Marks 2001.
[57] Henry Sokolski 2001
[58] Institutionalists agree with regime theorists that at the moment of the treaty negotiations, European treaties were signed because states thought that it was in their interest to sign them; but they add that once signed, the treaties added new important institutions which regime theorists ignore. Liesbet Hooge and Gary Marks 2001:3; Ernest Haas 1968; Fritz Scharpf 1999; Neil Fleigstein and Alec Stone Sweet 2002:1216.

drafters.[59] In that sense, a focus on jurisdictional conflicts between organizations only sees part of the story.

To better understand how regimes succeed to one another, field theorists not only look at organizations as institutions defending their prerogatives, but also as organizations marked by the strategic and normative ideals of the men and women who staffed them at a particular time. Indeed, sociologists of fields, particularly those who study international (or European) law with lenses inspired by Pierre Bourdieu,[60] emphasize that bureaucratic politics are shaped by men and women whose experience and strategic visions are larger than what they have acquired from working in one bureaucracy. Most often, the men and women who arrive at the top of bureaucracies have already formed their own problem-solving strategies from prior experiences in their earlier career.[61] Yves Dezalay and Bryan Garth even claim that it is the early socialization of actors in the juridical field which shapes the "principles of visions and divisions" [62] that structure cognitively how international law and foreign policy practitioners construct problems and problem-solving strategies in their field (see table 4).

Insert Table 4

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[59] Bertrand Goldschmidt 1984.
[60] Yves Dezalay 2004, 2007; Yves Dezalay and Bryant Garth 2002; Frédéric Mérand and Vincent Pouliot 2008; Antonin Cohen and Antoine Vauchez 2005, 2010; Sabine Saurugger and Frédéric Mérand 2010.
[61] Pierre Bourdieu 1987:16.
[62] Yves Dezalay and Bryant Garth 2002. What Bourdieu calls the practitioner's *habitus,* e.g. the corporeal reflexes and routines by which people apprehend to the world; Pierre Bourdieu 1987:13.

Legal change, then, is produced by social mechanisms that go much deeper in the social fabric of domestic societies than the simple sharing of a cognitive diagnostic by an "epistemic community" or a transnational inter-governmental network. Typically, field theorists show that the attitude of jurists and lawmakers toward international organizations and treaties depends upon the distribution of legal capital in their national field of law. A key distinction opposes those practitioners who have acquired their legal and social capital on domestic markets of legal expertise (diplomas from national universities, legal experience gained from working in local enterprises, etc.), and those who have acquired it on the international market (diplomas from prestigious foreign universities, participation in international joint ventures, etc.).[63] In fact, social mechanisms (like the prevalence of homophily in recruitment, the differential distribution of social capital among social classes) and institutional processes (like the stability of solutions which are taken for granted in administrations, which turn ideas into behavioral routines) facilitate the reproduction of such a polarization of normative positions from one generation to the next.[64]

By emphasizing mechanisms of reproduction in domestic fields of law, field theory therefore assumes that legal change derives from external shocks or governmental changes whose effect on legal change is mediated through the socialization of practitioners in domestic fields (table 4).[65] For instance, the decline of European Great Powers after the Second World War translated into a decline of European Law Schools, and a rise of American Law Schools, which affected how elites in the field of law in the

[63] Yves Dezalay and Bryant Garth 2008:165.
[64] Generations are independent of age: what matters is the date of entry into the field; Pierre Bourdieu 1987.
[65] Yves Dezalay and Bryant Garth 2008.

periphery (Latin America or Asia) acquired their training.[66] The shift from Europe to the U.S. changed the balance of institutional forces among legal professionals in peripheral domestic fields: younger law professionals used the understanding of law they acquired in the U.S. to challenge in their home nation the old elites formed in Europe.[67] To amend the word of the Italian political economist Vilfredo Pareto, history of legal change is a "cemetery of aristocracies"[68] fought with global weapons in domestic national fields.

The U.S. Field of Foreign Policy and International Law in the Late 1950s

Field theory predicts that similar mechanisms of inter-generational change coupled with the decline of European centers of learning explains why new problem-solving strategies were brought to power in the field of nonproliferation in the U.S. in the late 1950s and early 1960s; and why the new generation of U.S. nonproliferation specialists tried to unravel the treaties crafted by older generations formed in Europe.

The trajectory of Jean Monnet from one World War to the next, from Paris (and Bordeaux) to Washington, illustrates such a global shift in power. Monnet met success early in life when, during the First World War, at only twenty-eight, he convinced the French President to create a Franco-British Commission to jointly plan the industrial war effort of the Allies, which he then successfully chaired from 1917 to the end of the war. After becoming the first Secretary General of the League of Nations, Monnet then became the vice-president of Transamerica (a Wall Street investment bank), and conducted financial operations in Europe from Wall Street, with the help of U.S. lawyers

[66] Yves Dezalay and Bryant Garth 2002.
[67] For similar "boomerang effects" see Martha Finnemore and Kathryn Sikkink 1998; Thomas Risse and Kathryn Sikkink 1999.
[68] Vilfredo Pareto. 1968 [1916]:2053.

like John McCloy and John Foster Dulles, whom he paired with French lawyers, like René Pleven.[69] In 1940, Monnet repeated his experiment of the First World War when he again set up in an Allied Production Board which he chaired from London and then from Washington. From Washington, Monnet led the same group of lawyers to plan the war effort: Pleven and McCloy, the latter who worked as Under-Secretary in the War Department. With this background, and in the words of Justice Felix Frankfurter, for the Americans, Monnet was a "teacher to our defense administration."[70] After the Second World War, Monnet, McCloy and other federalists believed that Europe should repeat Monnet's experiment of the two World Wars: Western Europe had to federate its defense industries and military forces before it could take joint decisions with the U.S. regarding West European defense.

As field theory predicts, the popularity of the "European federalist" [71] ideals and problem-solving strategies developed by Monnet and his associates among Western policymakers reflected the role of European law (and the importance of a European experience) in the formation of jurists and policymakers at the time. Their common experience in Europe, valued by policymakers, helped Monnet's associates gain positions of power. For instance, René Pleven was the French President of the Council when Monnet (and then Pleven) introduced the European Defense Community (EDC) Treaty in 1950. This European experience helped John McCloy gain the job of Supreme Allied Commissioner in 1947: he became the highest civilian authority in West Germany, who

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[69] Jean Monnet 1976:250.

[70] Felix Frankfurter 1941. Monnet was also the author of the sentence, "the U.S., arsenal of democracy," which Frankfurter told Monnet never to use in public so that President Roosevelt could later use it.

[71] I use the term that Monnet and his collaborators used to describe their ideals, and the design of international organizations that they advocated, which included some supranationality to the extent that the Commission had a veto on the introduction of legislation in the Council, and that qualified majority voting could be used to take some decisions (for instance, the Euratom R&D program, art. 215).

was responsible for nuclear and defense policy in West Germany, as the 1949 Basic Law did not give any powers to the West German Chancellor in these fields. When Monnet introduced the Euratom Treaty, it was John Foster Dulles who was the U.S. Secretary of State chosen by President Eisenhower.

Not only did this first circle of policymakers share a common training in, and first-hand experience in the making of, European law, but the jurists whom they hired were trained in the same schools. In the U.S. field of law, American legal scholars trained in the most cosmopolitan institutions, such as Harvard Law School, were also called to participate in the drafting of European treaties (see table 5).[72] For example, in 1950 when Monnet and McCloy were drafting the anti-trust provisions of the European Coal and Steel Treaty (ECSC Treaty) they recruited Robert Bowie to help - the youngest law professor ever recruited by Harvard Law School.[73] Next they paired Robert Bowie with Carl Friedrich, one of his Harvard colleagues and a German émigré, to help them draft a treaty establishing a European Political Community (as in the EDC Treaty, art. 38).[74]

The knowledge gained by European federalists actually helped U.S. policymakers win political battles and establish the credibility of their strategies for the defense of Europe in the eyes of the American public. American high officials stationed in Europe during the Truman years introduced federalist normative ideals and problem-solving strategies to the power struggles in Washington. As early as June 1951, through McCloy's mediation, Monnet convinced Eisenhower to support the ideas behind the EDC Treaty.[75] Eisenhower's criticism of the Democratic international liberals behind President

[72] Antonin Cohen 2005:130. See also Antonin Cohen and Antoine Vauchez 2005; Yves Dezalay 2007.
[73] Cited in Peter M.R. Stirk and David Weigall 1999:68.
[74] Lucien Radoux 1952; Robert Bowie and Carl Friedrich 1954.
[75] Jean Monnet 1976:420.

Truman and his Secretary of State Dean Acheson turned Eisenhower into a man capable of uniting the Republican Party behind a new flag: European federalism. This ideal replaced the old isolationist position of Republicans. It helped Republicans and fiscal conservatives unite behind a doctrine that established their credibility: if West Europe could be integrated into a European Federation and if the U.S. could progressively help that new federation obtain nuclear weaponry to defend itself, the U.S. had an exit strategy from Europe.[76]

As Bourdieu's theory predicts, the strategy for Western European defense developed by the Eisenhower administration was shaped by the overall trajectory of these men rather than by the jurisdictional boundaries of their present job. When Eisenhower was elected President, he remained faithful to the federalist interpretation of NATO, which Monnet and others conceived as an association between the U.S. and a federation of European states, with NATO's Supreme Commander acting as a representative of both federations. Even if this interpretation meant that NATO's Supreme Commander would act in relative independence from the U.S. President, President Eisenhower agreed to it. Furthermore, Eisenhower, Secretary of State John Foster Dulles, and his director of the Policy Planning Staff Robert Bowie agreed to the European interpretation of the U.S.-Euratom Treaty which Monnet kept secret from the U.S. Congress. They were the only Americans with knowledge of the secret military treaties signed between France, West Germany and Italy in the background of the Euratom Treaty negotiations, which planned the creation of European nuclear force, and which Eisenhower and Dulles advised

[76] Aaron L. Friedberg 2000.

European federalists to keep secret until the U.S.-Euratom Treaty was ratified in Congress.[77]

Insert Table 5

As field theory predicts, the election of Kennedy to the U.S. Presidency in 1960 influenced the normative inspiration of treaties in the field of nuclear nonproliferation, not only because it brought a new party coalition to power, but also because it reflected deep inter-generational changes in the domestic fields of international law and nuclear strategy in the U.S. For the new generation, the "objectivity" that was granted to Law by the older generation of European federalists no longer operated as a matter of principle. New institutions of research and higher learning in nuclear strategy gained prominence in the field of nonproliferation (the Rand Corporation, the Harvard Department of Government Studies), while the institutions that had been central in the production of the first generation of European federalists lost their relevance (like the Harvard Law School, or European law schools).[78] This intergenerational shift affected mostly the Democrats, in large part because they suffered from McCarthy's witch-hunt against Democratic international liberals in foreign policymaking institutions (from the State Department to the CIA) and from elitist schools (Harvard Law School).[79]

Kennedy's "whiz kids" distinguished themselves from their elders by not having a background in international law, not to mention European law, and instead developing statistical and "scientific" methods of geopolitical analysis. For instance, Robert

[77] George-Henri Soutou 1996:113, 1994:157.
[78] Pierre Bourdieu 1988.
[79] Kai Bird 1992.

McNamara (1916-2009), an economist by training and the youngest assistant professor at Harvard Business School in 1940, was new to the field of nuclear strategy and had no background in law when Kennedy chose him as Secretary of Defense (see table 5). Kennedy left to the incoming National Security Advisor McGeorge Bundy (1919-1996),[80] the youngest Dean at Harvard, the responsibility of recruiting the new generation of nuclear strategists, and Bundy hired the men whose career he had sheltered at Harvard in governmental studies and economics (rather than in the Harvard Law School),[81] or those Rand analysts who were the protégés of Paul Nitze, the former Director of the Policy Planning Staff of his father-in-law, Dean Acheson.[82] For instance Carl Kaysen, who played a key role in the negotiation of the LTBT and worked at the DoD under Nitze and then under Bundy at the NSC, was a Harvard-trained economist, professor at MIT, and longtime Rand consultant.[83]

The use of numbers and abstract rules derived from operation research developed by the Rand Corporation gave these new nonproliferation and nuclear strategy experts some rhetorical weapons with which to fight the strategic doctrine of older European federalists. It explains why, in May 1962, McNamara replaced Eisenhower's nuclear doctrine of shared authority within NATO by Rand's doctrine of centralized deterrence into the U.S. hands. Field theory does not need to refer to any external military reason to explain this doctrinal change. Rather, it assumes that experts' quest for legitimacy in their national fields of power explains it. In so doing, field theory differs from realism, which

[80] McGeorge was the son-in-law of Dean Acheson and the son of Harvey Bundy, Under-Secretary of State during the war (who oversaw the Manhattan Project); see Kai Bird 1998:102, 104.
[81] Kai Bird 1998:136.
[82] On the role of Thomas Schelling and John McNaughton, two Harvard political scientists with Rand connections, and their lack of training in international law see Fred Kaplan 1983:330-5.
[83] Andrew May 1998:150.

can only explain that change in reference to the so-called "missile gap" opened between the U.S. and Soviets by the launching of the Sputnik, even if this explanation no longer seems credible. Indeed, historians have showed that McNamara soon realized that the "missile gap" did not exist, or rather, that it was in favor of the U.S., and that American intelligence was sufficient for NATO's Supreme Commander to see the signs of an imminent threat of Soviet invasion in Europe, so that there was no external reason to change NATO's doctrine of massive preemption and shared authority between the U.S. and Europe.[84]

Field theory also puts the fact that none of the newcomers in the field nonproliferation had any knowledge of European international law into theoretical perspective. For instance, McGeorge Bundy later acknowledged that "[t]he European Community is an institution which I chose to admire, partly with a willing suspension of disbelief but also with a necessary confession of ignorance."[85] In this context, then, it was not surprising that the new generation of U.S. experts proposed a NPT, whose provisions contradicted the U.S.-Euratom Treaty of 1958. European jurists blamed the lack of European legal culture for this. For instance, a German deputy in the European Parliament declared to his peers in March 1967 "that the experts in disarmament responsible of the NPT ignored everything of the Euratom Treaty, which is characteristic of the new disorder which threatens us."[86] For European jurists, "[t]he NPT raises an exemplar case of a new kind of problem, which is to harmonize the numerous engagements that States take, for themselves and their citizens, toward other States or international organizations," as "the obligations subscribed can become contradictory

[84] James R. Killian 1997, Joxe 1990.
[85] McGeorge Bundy November 29, 1972.
[86] Cited in Jan Giljssels 1968:3.

simply because of the inadvertence of the negotiators who do not know of engagements taken elsewhere and in another conjecture."[87]

Field theory helps explain why we find a plurality of legal norms in the nuclear world order; why contradictions between treaties emerge; how new forms of knowledge are mobilized to change the perception of geopolitical problems and appropriate problem-solving strategies. But it does not explain the legal work of "commensuration"[88] between these legal norms and rules which turns plurality into pluralism,[89] in the very precise sense that pluralism seeks to create commensuration between different international legal orders which are in need of rationalization through legal reasoning. One reason for this limit is that field theory is based upon a comparative static analysis rather than a dynamic analysis of legal change, as it does not tell us whether, and to what extent, the law signed in one period constrains the opportunities to change it in successive periods. To account for the possibility of pluralism, I now present a hermeneutic theory of legal interpretation which builds upon field theory.

3. The Hermeneutic Theory Applied to the Interpretation of Nuclear Treaties

In this section, I show that the interpretive quality of treaties (their being clear, ambiguous or opaque) affects how their meaning is likely to be changed when contradictions between legal orders emerge. In particular, the clarity or opacity of treaties determines how treaty interpreters can deal with the plurality of rules in a complex legal environment.

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[87] Jan Giljssels 1968:1.
[88] Wendy N. Espeland and Mitchell L. Stevens 1998.
[89] Daniel Halberstam 2010.

A Hermeneutic Theory of Recursivity in International Law

The hermeneutic theory that I present here focuses on the legal work of establishing continuity and commensuration between conflicting treaties by playing on ambiguities, loopholes and opaque clauses. In fact, this hermeneutic theory seeks to explain "recursive" [90] changes in the interpretation of international treaties: how new interpretation of treaties emerge after external shocks have changed the broader geopolitical environment; or after institutional changes have affected the legal field in key national contexts, etc.

The interpretive quality of a treaty is inter-subjective, in the sense that its meaning is inferred from the sum of writings produced about it: not only from the text of the treaty itself, but also from the protocols of application, the memorandums of understanding in which treaty drafters record how they understand the meaning of a treaty (see table 6). The adjectives "clear" or "ambiguous" and "opaque" thus refer to an "interpretive tactic," which I define as an inter-subjective process of constructing meaning at the micro-level.[91]

Insert Table 6

Most authors who take into consideration interpretive tactics distinguish only two tactics: one which privileges clarity, the other which privileges ambiguity or what authors like Bruce Carruthers and Terrence Halliday call "polysemy."[92] In fact, I claim that there are three various interpretive tactics that diplomats can use to pen a treaty and which we

[90] Terence Halliday and Bruce Carruthers 2007.
[91] I sometimes say that "a treaty" is clear or opaque for the purpose of simplicity.
[92] Terence Halliday and Bruce Carruthers 2007:1059.

need to distinguish, because each can have a different impact on legal change. These tactics are: clarity, ambiguity, and opacity.[93]

Clarity is often presented as the best tactic for diplomats to follow when there is a high consensus on the geopolitical problem at stake and on the range of solutions that states can adopt to face it. Clarity in public negotiations is not only a higher and more legitimate value of "communicational action"[94] than ambiguity and secrecy in deliberation. Clarity is also deemed more efficient than ambiguity and secrecy in securing a commitment to respect a legal document. What Jon Elster calls the "civilizing force of publicity"[95] and clarity convince states that free-riding states will be less likely to violate the treaty in question later. Indeed, if a treaty clearly defines which category of state conduct falls under the category of treaty compliance, and which under the category of treaty non-compliance, a treaty will allow statesmen to better identify and sanction violations[96].

If we consider the process of interpreting treaties dynamically, for instance, over two time periods, we can make predictions on how the interpretive quality of treaties signed at time 1 can survive changes that are external and internal to the field of law (see causal arrow "A" on table 7). Clarity not only has specific effects on treaty compliance; it also has specific effects on legal change. Clearly understood treaties are less likely than ambiguous or opaque treaties to be changed by external shocks or governmental changes. Realists would not disagree with this prediction. Even Hans Morgenthau writes that

[93] Avner Cohen also uses the term "opaque" when referring to the nuclear policy, which consists in never acknowledging publicly the military character of a nuclear program although insiders know it, see Avner Cohen 1998:5.
[94] Jürgen Habermas 1990.
[95] Jon Elster 1998:111.
[96] Jonas Tallberg 2002.

"during the four hundred years of its existence, the international law" of a technical nature and expressed in clear terms (for instance, the international regulations on mailing practices), "has in most instances been scrupulously observed"[97] despite many external shocks in the global balance of power. Clearly understood treaties are likely to survive the emergence of legal contradictions with treaties that are ambiguous or opaque.

Insert Table 7

Ambiguity is the contrary of clarity: ambiguity consists in postponing the clarification of a provision to a later date, when the state of the future is clearer, or when a consensus is found among negotiating parties. It is a very common tactic in the field of security. For instance, multilateral treaties like "the Briand-Kellogg Pact, the Covenant of the League of Nations and the Charter of the United Nations"[98] (three multilateral treaties which condemn "aggressive war") were typically couched in ambiguous and vague terms. In a dynamic perspective, the meaning of ambiguous treaties is likely to be clarified during a new cycle of lawmaking at time 2, either when mechanisms external to the field of law break the initial deadlock that prevented a clear consensus from emerging at time 1, or because of an "endogenous" process within the legal field, wherein "the original crafters of law seek to remedy its deficiencies in order to achieve their original purposes."[99]

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[97] Hans J. Morgenthau 1960:277.
[98] Hans J. Morgenthau 1960:281.
[99] Terrence Haliday and Bruce Carruthers 2007:1149. International courts typically accelerate such an endogenous process of clarification.

Then, when legal contradictions exist between treaties, the ambiguous provisions of a treaty signed at time 1 are likely to fall into oblivion if an overlapping treaty whose provisions are clearly understood is signed at time 2. This was the case of the U.N. Security Council resolutions, which were passed in the wake of the terrorist attacks of September 2001 and superseded ambiguous provisions of international treaties in the field of human rights, particularly in non-democratic states.[100]

Opacity designates another kind of polysemy in addition to ambiguity. Opacity consists in hiding from the public the clear meaning of the treaty, which treaty writers privately share among themselves. The U.S.-Euratom Treaty, as I showed above, provides an example of an opaque treaty which is interpreted differently by insiders, who shared a private understanding of the treaty in the backstage, and by outsiders, who also believed they understood clearly what the treaty meant. Both meanings seemed to be clear, but different (hence, a polysemy of a different kind than ambiguity).[101]

To render public treaties opaque, diplomats can either sign parallel secret treaties or protocols of application that specify the meaning of articles for a happy few (see table 6). They might do so to avoid the opposition of domestic bureaucracies whose formal rights are given away to new international organizations through the implementation of the treaty (as institutionalists predict they would); or, to circumvent the reaction of inimical Great Powers. In a sense, opacity buys treaty writers time before opponents to the treaty realize its real purpose, which will eventually be revealed by its implementation – but only after it's too late.

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[100] Kim Lane Scheppele 2006.
[101] In this case, the real interpretation is "blackboxed"; see Bruno Latour 1987.

Opaque treaties might survive longer to legal contradictions than ambiguous ones, depending on how efficient the parties to the opaque treaty are in hiding their real purpose to the outside world. If the governments of the signatory-states stay the same, it is likely that none of them will seek to clarify in public what the opaque treaty is supposed to mean for them, despite external shocks or changes in the field of law. But it is most likely that opaque treaties will be clarified if new governmental coalitions which oppose the secret goal of the treaty are elected to government (or after a coup). For these new coalitions, the costs of changing the secret interpretation is lower than if the treaty had been clearly understood, as they can just apply the treaty as it was publicly interpreted. In the following subsection, I test these hypotheses with two case studies.

The Opacity of the American Commitment in the U.S.-Euratom Treaty (1958)

Here, I consider whether opaque treaties survived the arrival of a new party coalition, which did not share the normative ideals and problem-solving strategies as those embedded in the treaties signed by their predecessors.

As I said, the treaties of federalist inspiration signed in the 1950s (both the Euratom Treaty and the nuclear sharing treaties signed between the U.S. and NATO allies) were opaque. According to the federalist interpretation of NATO, NATO's Supreme Commander needed to act as a representative of Europeans as well as Americans, which meant that he needed a pre-authorization to act speedily against any kind of threat of Soviet invasion. European federalists in Washington (Eisenhower, Dulles, Bowie, McCloy) lobbied for a "permanent delegation of the power of the

Alliance to launch a massive and immediate attack behind enemy lines."[102] This secret interpretation was secured into executive orders that Eisenhower secretly signed and which authorized NATO's Supreme Commander to fire the U.S. nuclear weapons stockpiled in Western Europe (if the U.S. President was unreachable at the time of the emergency). Furthermore, at the end of his presidency, Eisenhower promised that NATO's Supreme Commander would be a European General, conducting warfare on behalf of Europe.

European federalists also wanted to use the U.S.-Euratom Treaty of 1958 to provide Euratom with dual-use U.S. technologies, which Europeans could use to produce the future European nuclear weapons that NATO's Supreme Commander would be authorized to use. First, the Euratom Commission could buy sensitive materials (plutonium and highly enriched uranium) in the U.S. for European member-states, as the President of the Euratom Commission informed the French authorities in 1959.[103] Second, the U.S.–Euratom Treaty not only bore on the sale of six U.S. power plants to Euratom and the "transfer of fuel for the needs of the Euratom Community at a reasonable price"[104] but also a common R&D program.[105] European federalists wanted to use the latter to develop new technologies of uranium enrichment with the Americans (see table 3). In 1959, the Assistant Secretary of State for European Affairs, Robert

[102] A panel chaired by Robert Bowie and John McCloy issued a report that called for the creation of a NATO nuclear capable "Polaris" Medium-Range Ballistic Missiles (MRBMs) – with a range of 1,500 miles – jointly produced with Europeans directly under the sole control of NATO's Supreme Commander. Bowie's report was officially presented by the Secretary of State at the December 1960 ministerial meetings of NATO. Marc Trachtenberg 1999:212; see also Henry Owen 1966; George Henri Soutou 1994:87.
[103] Etienne Hirsh 1960.
[104] Euratom Commission 1960c.
[105] The U.S.–Euratom Treaty planed a jointly financed research and development program worth 100 million dollars; though the AEC had expressed much more interest in the 350-million dollar project on power development in Europe.

Schaetzel,[106] advised Euratom officials to meet U.S. nuclear scientists to discuss this prospect, which they did in June at Oppenheimer's offices in Princeton. There, "[the] Americans said they would like to participate in research cooperation concerning reprocessing and isotopic separation (testing other methods than gaseous diffusion)."[107] Euratom officials were enthusiastic.

However, the interpretive tactic followed by European federalists, which had consisted in passing treaties full of polysemic terms whose meaning they clarified secretly in parallel treaties or executive orders, did not build any defense against the reversal of policy brought by governmental change. The federalist interpretation of NATO and the pre-delegation orders signed by Eisenhower remained hidden from the U.S. Congress[108] which insisted on being consulted before the start of a nuclear war in Europe.[109] The European federalists paid the price of opacity when a new generation of experts entered the Kennedy administration. Kennedy immediately cancelled the executive orders signed in secret by Eisenhower, when alerted in January 1961 by Rand expert Daniel Ellsberg (at the DoD), and by McGeorge Bundy that these orders gave to NATO's Supreme Commander "faced with a substantial Russian military action [the right to] start the thermonuclear holocaust on his own initiative if he could not reach you."[110] In May 1961, as Kennedy visited Europe, Kennedy made NATO's Supreme Commander declare at the NATO meetings that if he used nuclear weapons in the

[106] Robert Schaetzel was the former negotiator of the U.S.-Euratom Treaty of 1958 together with Monnet's associate, Max Kohnstamm.
[107] Euratom Commission 1959a.
[108] Henry Owen 1966.
[109] Marc Trachtenberg 1999:195-199.
[110] Marc Trachtenberg 1999:298.

European battlefield, his command would depend upon the President's orders and not as the representative of the Atlantic Council.[111]

European federalists also paid the price of opacity when they wanted to apply the U.S.-Euratom Treaty as they interpreted it in secret. Indeed, when examining the proposed sale of highly sensitive fissile materials to France through the mediation of the Euratom Commission and the joint-program of research, the Chairman of the AEC and the Senators in the Joint-Committee on Atomic Energy also looked at Euratom's record of compliance with the public promises made when the Europeans negotiated the U.S.-Euratom Treaty of 1958. For the AEC, the Europeans had publicly committed to buy six peaceful power plants and only the amount of fissile materials necessary to fuel them. But in 1960, "the only power station to be built in the framework of the agreement was the plant ordered in southern Italy" [112] by the public utility Societa Elettronucleare Nazionale (SENN). An Euratom official noted that the new "American officials in charge at the AEC were ready to send large quantities of enriched uranium and plutonium to Euratom," but that the "Americans would send these quantities on the basis of the reports of advancement of our projects in power development."[113] Since Europeans did not buy any further plants, the AEC Chairman did not cooperate with the Commission.[114] Furthermore, the AEC insisted on limiting the U.S.–Euratom R&D collaboration to the optimization of the U.S. power plants sold to Euratom, and asked the Euratom Commission to "limit the role of research and development within the [Italian] SENN

[111] MAEF 1961.
[112] Bertrand Goldschmidt 1982:308, 9.
[113] Euratom Commission 1959b.
[114] Bertrand Goldschmidt 1982:310.

project."[115] It prohibited any joint-research on new methods of uranium enrichment, and insisted on "a) excluding all contributions from and contract to [universities and] national laboratories, and b) first screening all proposals from the U.S., thus reducing the scope and delaying the operations of the joint-R&D board."[116]

In this case, the arrival of a new generation of U.S. experts in the early 1960s eliminated the secret interpretations that European federalists made of NATO and the U.S.-Euratom Treaty. Newcomers reduced the polysemy of these treaties by simply denying their secret interpretation, without any formal treaty revision.

The Effects of the Transparency of the U.S.-Euratom Agreement

I now show that when treaty provisions are clearly understood, law has a force which can impose itself on the governments that seek to reform it.

International liberals in the Kennedy and then Johnson administrations not only challenged the secret interpretation that federalists gave to NATO and to the provisions of the U.S.-Euratom Treaty, concerning joint-development of dual-use activities. They also wanted to retract their recognition of the exclusiveness of Euratom controls in Western Europe. Initially, the U.S. government presented a first draft NPT in August 1965, which left to Euratom the possibility to keep its system of control if adapted to fit with the IAEA system. But after the Soviets recognized the IAEA safeguards on small reactors in June 1963, and as the IAEA complemented its safeguards system by extending it to the control of power plants in March 1964 and reprocessing plants in June 1966 (as

[115] Euratom Commission 1960c. As Bertrand Goldschmidt writes, the total bid was "far from the six or seven nuclear power stations […], seemed completely out of step with the developing situation." Bertrand Goldschmidt 1982:308.
[116] Jules Guéron 1973.

well as enrichment plants in 1968),[117] U.S. experts believed that the Soviets would agree to sign the NPT only if the IAEA rather than Euratom controlled European nuclear activities.[118]

In February 1967, the U.S. government presented a new draft of article 3 which suppressed the possibility that Euratom's safeguards would be maintained after the entry into force of the NPT. International liberals claimed that IAEA controls were more proliferation-resistant than Euratom's controls because the IAEA privileged the physical observation of facilities, whose construction had to be reviewed by the IAEA before being approved. In contrast, Euratom controls only concerned the fissile materials themselves and made it possible for Euratom member-states to use fissile materials for military purposes (they prohibited only undeclared military uses).[119]

But the new article 3 shocked the Europeans, who perceived it as a violation of prior treaty commitments. Konrad Adenauer qualified the article 3 of the NPT proposed by the U.S. in February 1967 as being a "Morgenthau plan squared."[120] The West German Euratom Commissioner was particularly adamant that "article 3 is incompatible with the Euratom Treaty, and proceeds from a will to discriminate between nations."[121] Not only Euratom non-nuclear-weapon states, but also France rejected the new article 3 of the NPT, which cancelled the specific "right of pursuit" which Euratom member-states, and France in particular, insisted on keeping: the IAEA maintained the right to control the peaceful use of nuclear materials (control of finality), once they were

[117] Glenn Seaborg, with Benjamin Loeb 1987:269.
[118] The proposal replaced the resolution introduced in January 1966, by Senator John Pastore, and cosponsored by a majority of fifty five Congressmen, which imposed the application of IAEA on the peaceful activities of the NNWS only, but which left open the possibility to recognize Euratom controls as "equivalent" as IAEA controls.
[119] Glenn Seaborg, with Benjamin Loeb 1971:288.
[120] In reference to the postwar plan of "pastoralization of Germany" see Thomas Alan Schwartz 2003:258.
[121] Euratom Commission 1967b, 1967d.

safeguarded by the IAEA, and wherever they might go after being first sold. In contrast, the Euratom Commission had no such "right of pursuit"[122]: nuclear materials bought by Euratom from the U.S., to be used in West Germany, and then sold to France, could be used by the French government for military goals. France threatened to blockade any type of controls if Euratom controls were re-defined along the lines followed by the IAEA controls.

To reverse the U.S. decision to extend IAEA controls to Euratom, Europeans insisted that there was no ambiguity in the American recognition that they would consult Europeans on any future provision concerning Euratom controls.[123] The U.S. had recognized explicitly this provision in the "paragraph 11E of the memorandum of understanding which had preceded the agreement itself between the two negotiators (letter Kohnstamm/Butterworth July 18, 1958), which said: 'I want to confirm the interpretation of the Commission … that in case an international system of safeguards and control would be instituted by the IAEA, the U.S. and Euratom will concert one another about the IAEA exercising controls and safeguards of the fissile materials used or produced within our programs'."[124] Jean Monnet immediately wrote to Eugene Rostow that the decision to accept the new draft article 3 was not solely in the U.S. hands, as "[e]ven if the non-nuclear-weapon members were to accept to submit to the IAEA, it is difficult to see how the existing situation could be changed without the consent of all members,"

[122] Euratom Commission 1967d.
[123] Euratom Commission 1967b.
[124] Euratom Commission 1967a, Max Kohnstamm 1958, Fernand Dehousse 1968: 2.

since "this situation results from the Euratom treaty and from the Euratom–U.S. agreement which both proceed of a common decision of the Six."[125]

This situation made clear the contradiction between past and future legal commitments of the U.S. Reflecting the European consensus, Monnet wrote to Eugene Rostow, the Under-Secretary of State for European Affairs, that the new draft article 3 ran in contradiction with American legal commitments, "as the IAEA intervention would recreate an administrative border line splitting the nuclear common market and shrinking industrial integration in a vital technological sector."[126] Indeed the new article 3 "would thus create and institutionalize discrimination [between France, which was a NWS, and the other Euratom member-states, which were not] where it does not exist up to now,"[127] since the Euratom Treaty clearly mentioned that in the "application of safeguards, no discrimination shall be made" (art. 84) between member-states depending on their final use of the materials.[128]

Europeans not only had legal arguments, which they could use to oppose publicly the new article 3, they could also give incentives to the U.S. to stick to its prior legal commitments. The Euratom member-states threatened to retaliate against the U.S. violation of its treaty commitment by rejecting the (second) British bid for accession to the EEC. Monnet's assistant warned Eugene Rostow, that the substitution of IAEA controls to Euratom controls would put the U.K in an awkward position, as the British might feel forced to agree with the U.S., but this "will be resented by the Germans, harm

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[125] Jean Monnet 1967. As the legal services of the Euratom Commission confirmed, "the U.S. had to consult with the Euratom Commission whether the article 3 of the draft NPT would violate the Euratom/U.S. agreement." Euratom Commission 1967a.
[126] Jean Monnet 1967.
[127] Jean Monnet 1967.
[128] Euratom Treaty 1957.

the British negotiations for membership in the Common Market, and give the French a major excuse for arguing that the U.K. does not share the same interests as Continent Western Europe."[129]

This pressure worked: recognizing that "[t]he intervention of the Commission on the discussions of the NPT results from conventional obligations,"[130] the American negotiator of the NPT, William Foster, came in Brussels in March 1967, to hear the opinion of the Euratom Commission on the new draft of article 3. Furthermore, the British Foreign Secretary, Lord Chalfont, also told the Euratom Commissioners in March 1967, that even though "the Soviet Union has already let us know that the only form of control that it accepted would be the one of IAEA" and that "a regional safeguards system like the one of Euratom would not be considered as equivalent," he should add that "[t]he British Government does not have rigid exigencies on control," and that it "has in mind to act as a European power" and that "it will do whatever is necessary to avoid dissociating itself from Euratom."[131]

Americans echoed Europeans' legal arguments when they dealt with the Soviets during the NPT negotiations. They emphasized the legal problems that would result from the legal differences in the two nonproliferation regimes. For instance, the U.S. negotiator, William Foster, told the Soviets that "based on the NPT draft of February 1967" the U.S. would not have any legal grounding to sue the Euratom Commission if it refused to submit its imports of nuclear fuels to the IAEA controls, especially if "the materials are sent to the Community, a lawful actor with a legal personality distinct from

[129] Max Kohnstamm 1967.
[130] Jan Giljssels 1968:6, 7.
[131] Euratom Commission 1967c.

the one of member states." [132] Indeed, the NPT only created obligations for States, which meant that "the Community could not be attacked on behalf of the NPT" if it refused to let the IAEA control nuclear installations in Euratom territory.[133] William Foster also argued that "all special fissionable material for peaceful purpose within Euratom territory was the property of Euratom," (art. 86)[134] which meant that "the Soviet draft contained a very large loophole, as under the Soviet article 3, all fissionable material owned by Euratom would be excluded from safeguards, not to mention the four facilities owned by Euratom over which even national governments have no independent inspection rights."[135]

To break the deadlock, in July 1967 the U.S. negotiator left the possibility that Euratom would be able to keep its controls in the new article 3, and while leaving the two concerned international organizations (the Euratom Commission and the IAEA) the responsibility to prove the equivalence of their safeguard system within 3 years of the enactment of the NPT (180 days in the final draft of the NPT) thanks to the ambiguity of the language agreed upon for article 3.[136] The Soviet negotiator accepted the idea, even though, in July 1967, he still stressed the non-equivalence of Euratom and IAEA safeguards, as the first was based on a non-intrusive materials-approach and the later on an "intrusive facility-based approach."[137] But in the fall of 1967, the legal point of view defended by the Euratom Commission had prevailed, as "[t]he new soviet delegation

[132] Jan Giljssels 1968:6, 7.
[133] Jan Giljssels 1968:6, 7.
[134] Euratom Commission 1967f.
[135] Euratom Commission 1967f.
[136] This clause, called the "guillotine clause," was initially rejected by Europeans but finally approved after Robert Schaetzel at the State Department told European Commissioners that "Euratom could enter into exploratory talks with the IAEA during the period before the treaty came into force." Robert Schaetzel 1967.
[137] Euratom Commission 1967f.

proposal on safeguards recognizes that… the 'exclusive purpose' of IAEA safeguards is 'verification' of the fulfillment of the obligations"[138] rather than the controls *per se*. The legal discussion was thus postponed until the discussion of a Euratom-IAEA treaty of cooperation, which as the Euratom Commission insisted, "in no case would organize the legal subordination of Euratom to the IAEA."[139]

This compromise represented a great victory for European legal experts, as this new article 3 was ambiguous enough that it "d[id] not create any real legal obligation," but "just mention[ed] the need to plan a negotiation."[140] It was also a victory for France, which had carefully waited until the NPT negotiations between the U.S., the Soviet Union and Euratom had come to an end that was satisfying for France before vetoing again the British entry into the Community in November 1967.[141] The new version of the NPT solved the incompatibility between two sets of treaties negotiated in two very different political, strategic and military contexts, by changing the institutional players in charge of making their control procedures commensurate, and by accepting to leave unknown the outcome of their future deliberations.

As I predicted, the clear provisions of the Euratom Treaty, which left the Commission in charge of the controls of nuclear activities in Europe, superseded the vague article 3 of the NPT. Euratom member-states interpreted article 3 of the NPT as saying that the U.S. delegate their "right of verification" of Euratom's controls to the IAEA, provided that they could maintain Euratom's monopoly over controls. The negotiation of European controls no longer confronted strong states (the U.S. and the

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[138] Euratom Commission 1967f.
[139] Euratom Commission 1967e.
[140] As Fernand Dehousse characterized the NPT, it was just "a *pactum de contrahendo*, a treaty planning another treaty;" see European Parliament 1972.
[141] Bertrand Goldschmidt 1983:370.

U.S.S.R) to a weaker international organization (the Euratom Commission), but an international organization (the Euratom Commission) to a weaker one (the IAEA). Furthermore, to escape the deadline of 180 days planned by the "guillotine clause" introduced in the article 3 of the NPT,[142] all Euratom NNWS signed the NPT in 1968 and 1969 but agreed to wait to ratify the NPT until the negotiations with the IAEA were finished. As the U.S. AEC Chairman noticed, "the fact that all Euratom members delayed their ratifications of the NPT until after the date [when they signed the IAEA-Euratom Agreement] gave Euratom increased bargaining power in its negotiation."[143]

As a result of this asymetry, the "NPT safeguards system has been greatly influenced by and adapted to the Euratom system in several respects,"[144] as Mohamed Shaker writes, which was a major victory for Euratom NNWS.[145] Indeed, the IAEA Safeguards Committee decided in March 1971 to accommodate the Euratom system of control; the IAEA adopted a material-based approach similar to that of Euratom for the NPT signatory-states and it reserved its old system of a facility-based safeguards to those countries which did not sign the NPT but which were nonetheless concerned in its application (for instance, if nuclear exporters asked them to place IAEA safeguards despite their having not signed the NPT). In contrast, Euratom made only slight changes to its control procedures: Euratom controls would no longer apply to the safeguarding of nuclear materials only (as planned by the Euratom Treaty of March 1957), but inspectors could also visit the facilities where these fuels were used, processed and produced. Furthermore, Euratom could invite IAEA inspectors to visit facilities if they decided to

[142] Mohammed Ibrahim Shaker 1976:701.
[143] Glenn Seaborg, with Benjamin Loeb 1987:304.
[144] Mohammed Ibrahim Shaker 1976:771.
[145] See Appendix 24, in Mohammed Ibrahim Shaker 1976:703.

do so,[146] in order to prove *on the ground* the compatibility of its controls with those of the IAEA.

The Agreement that they signed with the IAEA in September 1972 not only adopted many of the provisions of the IAEA's new control procedure (the "Blue Book") but included special provisions for Euratom NNWS. First, this was the first and only time that a regional organization, Euratom, was recognized as a party to the application of article 3 of the NPT. Second, the Safeguards Agreement proposed that the territories of NNWS which were part of Euratom represented a single unit. This meant that there would be no IAEA safeguards on nuclear materials traded among them, and no need to send advanced notification of bilateral trade in nuclear materials or equipment to the IAEA, as was required for all other states.[147] Third, in compliance with the U.S.-Euratom Treaty of November 1958, no nuclear material exported from the U.S. to Euratom was to be safeguarded by the IAEA. The diplomatic victory of Euratom NNWS cleared the road for ratification of the NPT by five founding Euratom NNWS: they all ratified the NPT the same day, on May 2, 1975.

Conclusion

In this article, I have shown that in the field of security in general, and in the field of nonproliferation in particular, legal change is produced by 1) factors external to the field; 2) factors internal to the field of law; 3) the interpretive quality of the law itself. I have adopted a step-by-step and inductive approach to show the validity of the causal arrows which constitute the model of change in international law presented in this article.

[146] Mohammed Ibrahim Shaker 1976:706.
[147] Mohammed Ibrahim Shaker 1976:733.

I have shown that the interpretive quality of the transatlantic treaties determined which legal rules survived and which disappeared when new global treaties with overlapping jurisdiction were introduced in the 1960s. I first showed that some aspects of the nonproliferation regime originated from a) attempts by strong states to freeze the status quo, or b) attempts by all state parties to solve coordination and cooperation problems.

Second, I demonstrated that discrepancies between the transatlantic treaties created in the 1950s and the global treaties signed in the 1960s were due to inter-generational changes and distinction processes that affected the field of U.S. nuclear strategy and nuclear nonproliferation in the late 1950s. But field theory still fails to explain why certain rules of the prior transatlantic treaties evaporated, while others survived the paradigm shift of the 1960s. Thus, I introduced a new variable: the interpretive quality of treaties. In particular, I have shown that the clarity of past legal rules explained why they survived in the global regime instituted by the NPT and a range of Safeguards Agreements signed between the IAEA and European states, and why the opacity of other rules explained the ease with which they were repelled when new generations of nuclear nonproliferation experts came to power in the 1960s.

In so doing, this article has first of all provided a more carefully detailed history of the legal dynamics in the field of nuclear nonproliferation than one provided by international relations scholars. It has also shed light on the existence of causal arrows that are too often ignored by international relations scholars. More research is needed to test the strength of these arrows, their robustness, and the range of contexts in which they might play out. We cannot yet conclude that the predictions listed in the last section are

always true. From this paper, one can only call for more research that would pay attention to the interpretive quality of treaties and its causal role in legal change.

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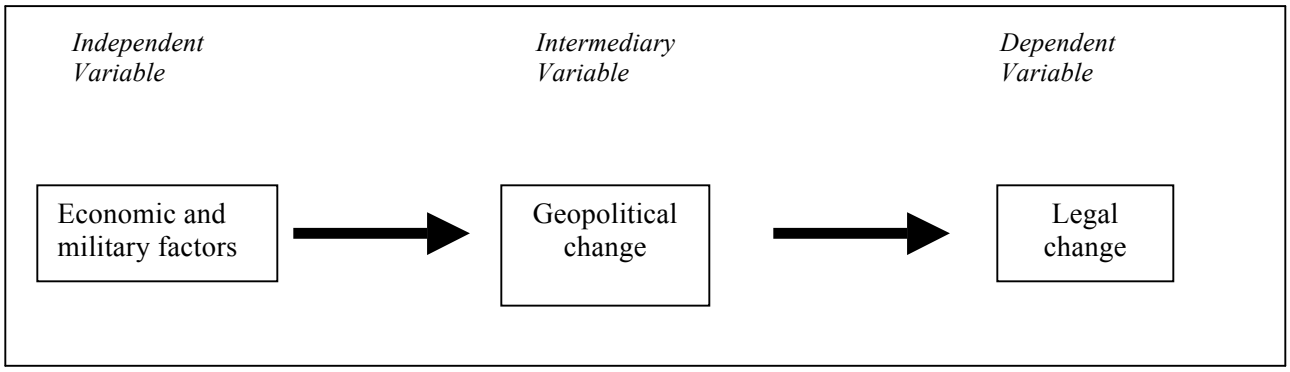
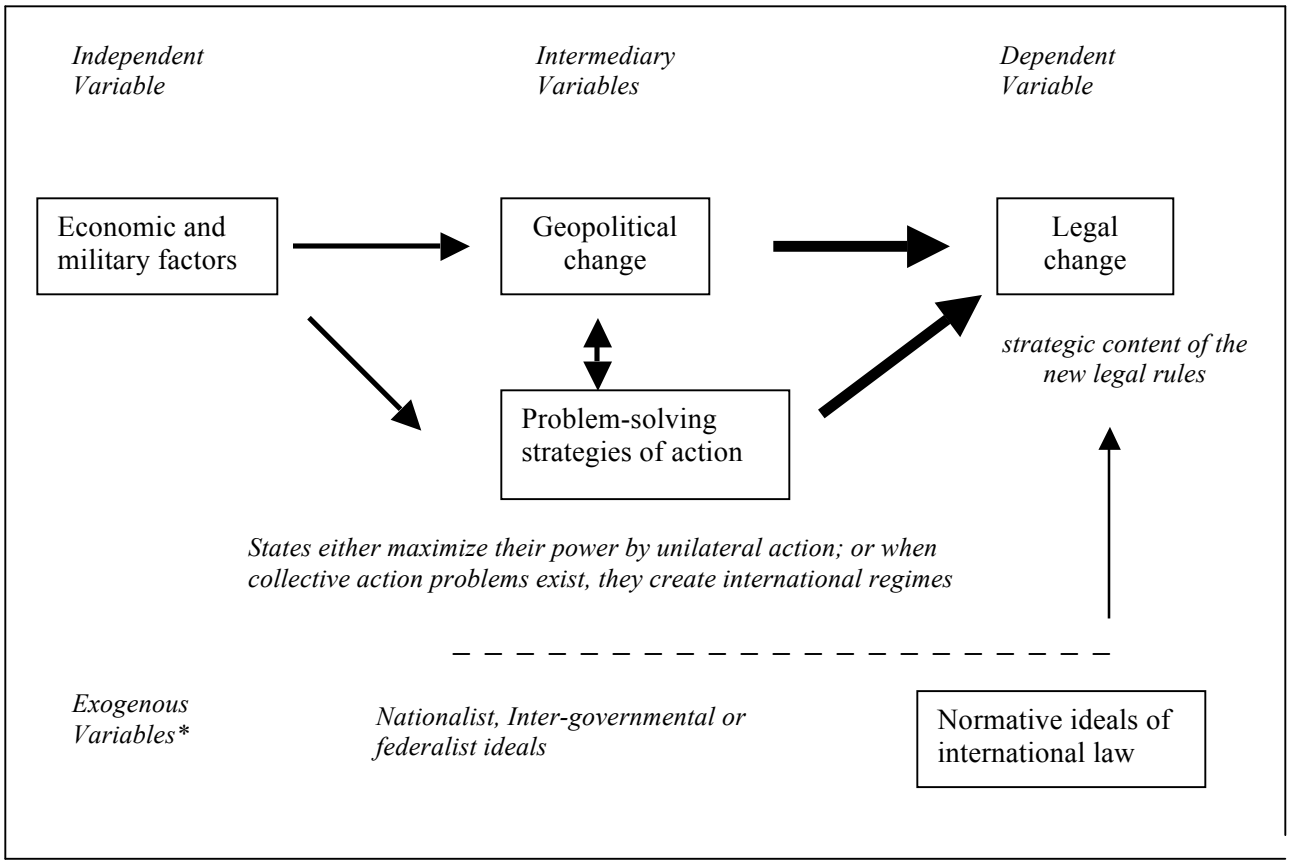


Table 1: Realist Explanations of Legal Change



* Even though students of regime theory acknowledge that the creation of a regime "may be influenced by domestic politics or ideology," they assume that these normative ideals (what they call "ideology") should be treated as exogenous variables.[148]

Table 2: Explanation of the Creation of Regimes

[148] Robert Keohane 1983:152; see also Robert Keohane 1984:63,4.

Interpretation of the Euratom treaty	*An Instrument of the Nonproliferation Regime*	*An Instrument which Contradicts other Instruments in the Nonproliferation Regime*
Technologies exchanged between the U.S. and Euratom	Monnet to U.S. Congress: Euratom buys and operates proliferation-resistant U.S. nuclear power plants and fuel	The Tripartite Agreements of November '57 and April '58: Joint research and development in nuclear dual-uses activities (uranium enrichment) Euratom Art.215 + Annex V: There's no limit to the programs that the Commission can present to the European Council for adoption by qualified majority voting
The scope of Euratom's property of nuclear fuels	Monnet to U.S. Congress: Euratom property extends to all the nuclear materials circulating within the territory of Euratom Euratom Art. 86: "Special fissile materials shall be the property of the Community" Euratom Art. 198: Euratom Treaty applies in "European" and "non-European" territory	European Foreign Ministers: Euratom property does not extend to military materials, co-owned by the French, West Germans and Italians Euratom Art. 87: "Member-states and persons shall have the unlimited right of use and consumption of special fissile materials which have properly come into their possession"
The function of the Euratom controls	Monnet to U.S. Congress: Commission checks that real uses are peaceful (similar to that of the AEC or IAEA) Euratom Art. 77: Commission "shall satisfy itself that provisions relating to safeguarding obligations assumed by the Community with a third state or an international organization are complied with"	European Foreign Ministers: Checks that real uses are the ones declared to the agency (be they military or peaceful) Euratom Art. 84: "in application of safeguards, no discrimination shall be made on grounds of the use for which ores and fissile materials are intended"

Table 3: Was the Euratom Treaty Part of the "Nonproliferation Regime"?

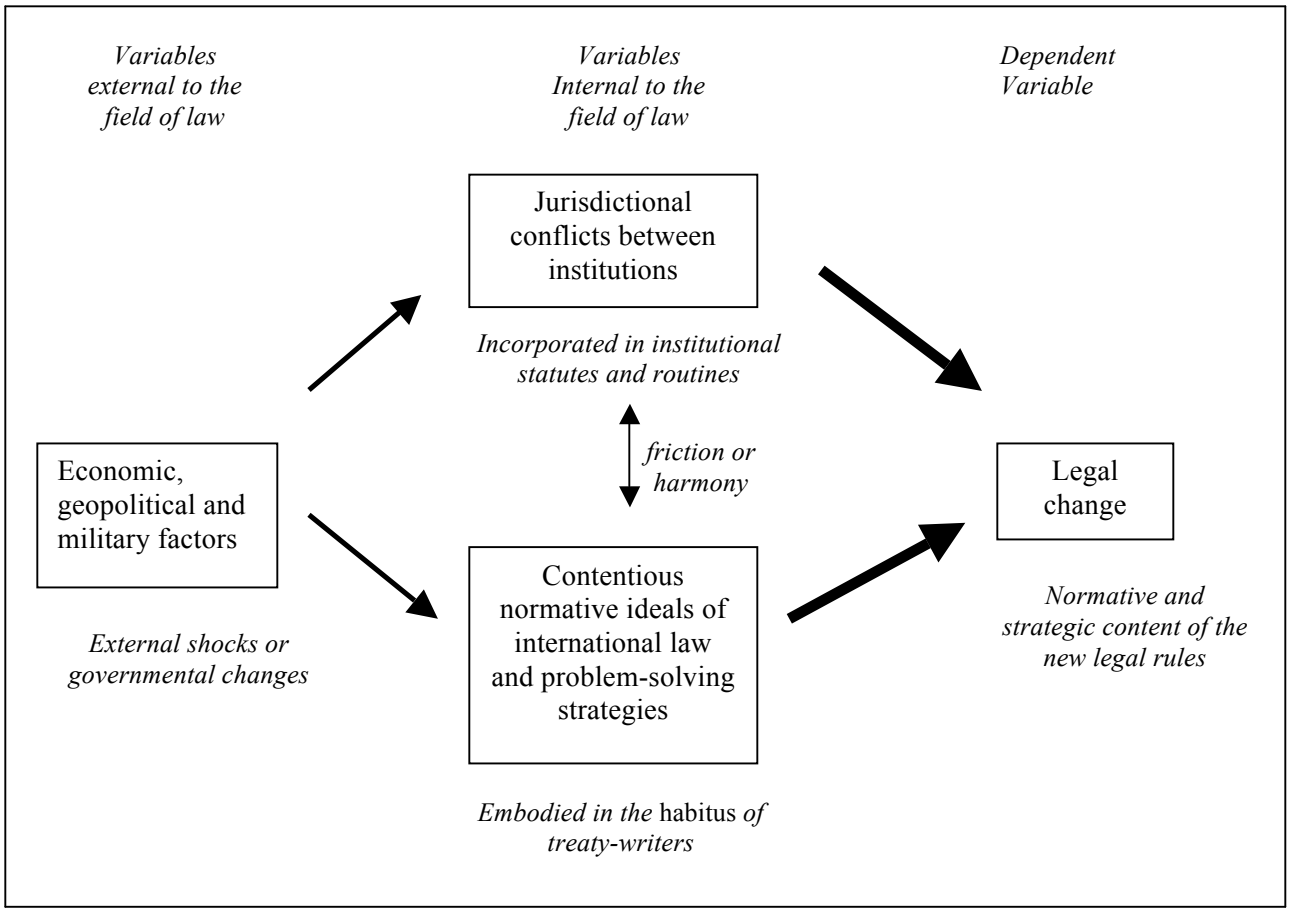
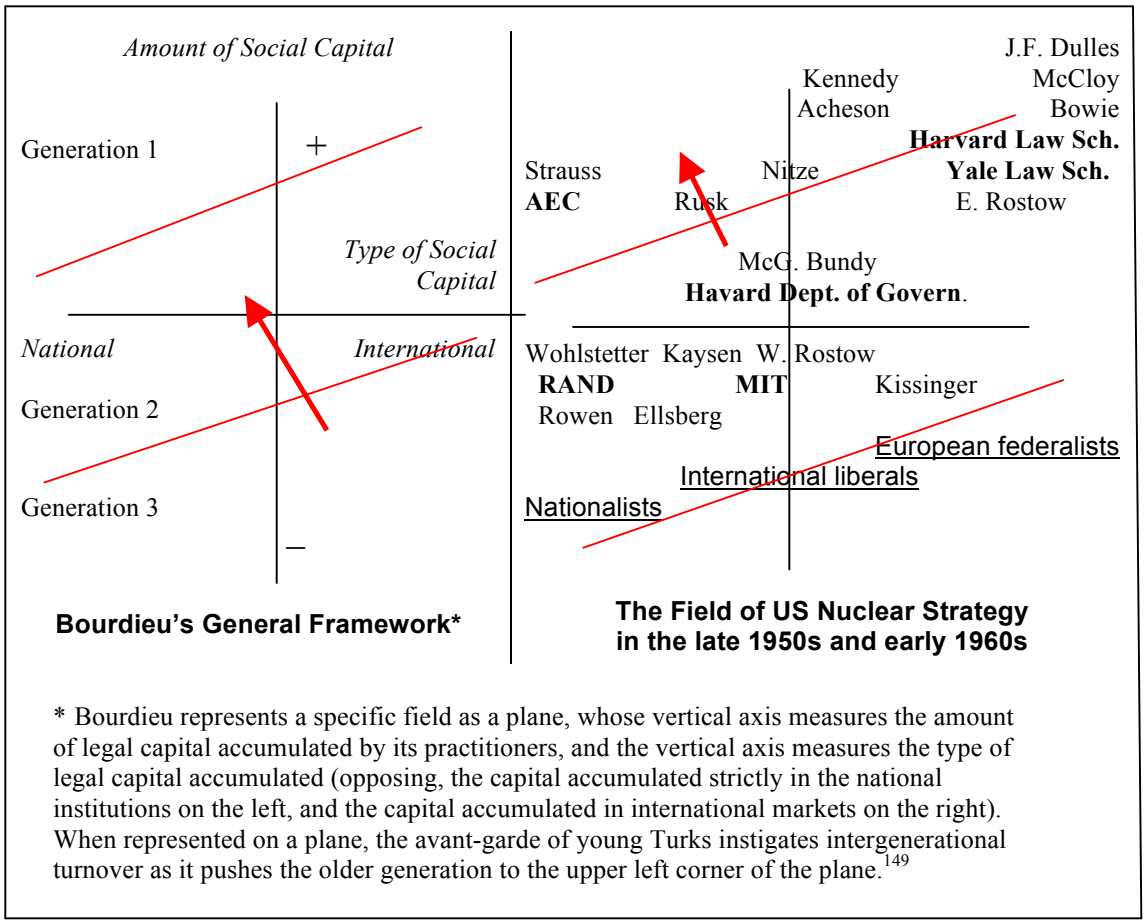


Table 4: Field Theory of Legal Change



* Bourdieu represents a specific field as a plane, whose vertical axis measures the amount of legal capital accumulated by its practitioners, and the vertical axis measures the type of legal capital accumulated (opposing, the capital accumulated strictly in the national institutions on the left, and the capital accumulated in international markets on the right). When represented on a plane, the avant-garde of young Turks instigates intergenerational turnover as it pushes the older generation to the upper left corner of the plane.[149]

Table 5: The Field Theoretical Approach to the U.S. Field of Nuclear Strategy

[149] Pierre Bourdieu 1988.

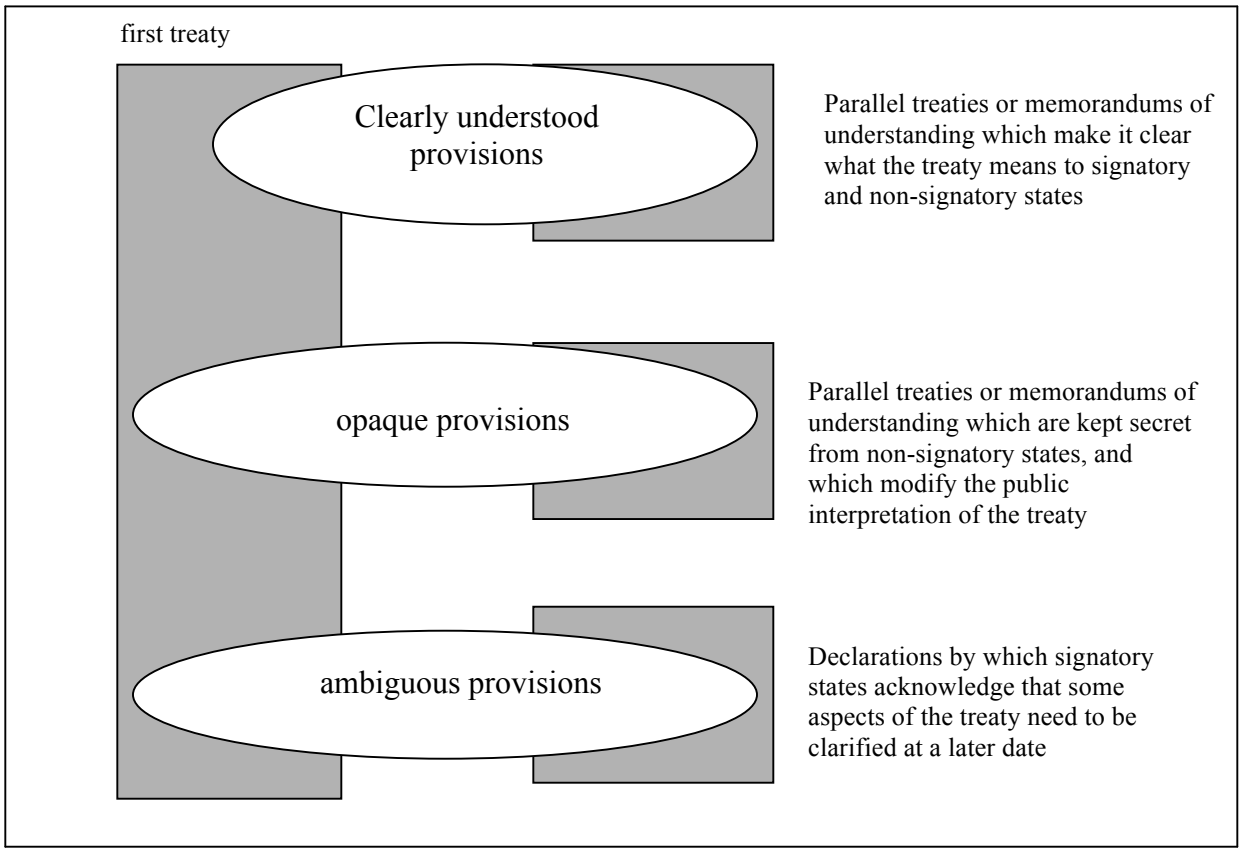


Table 6: The Interpretive Quality of Treaties

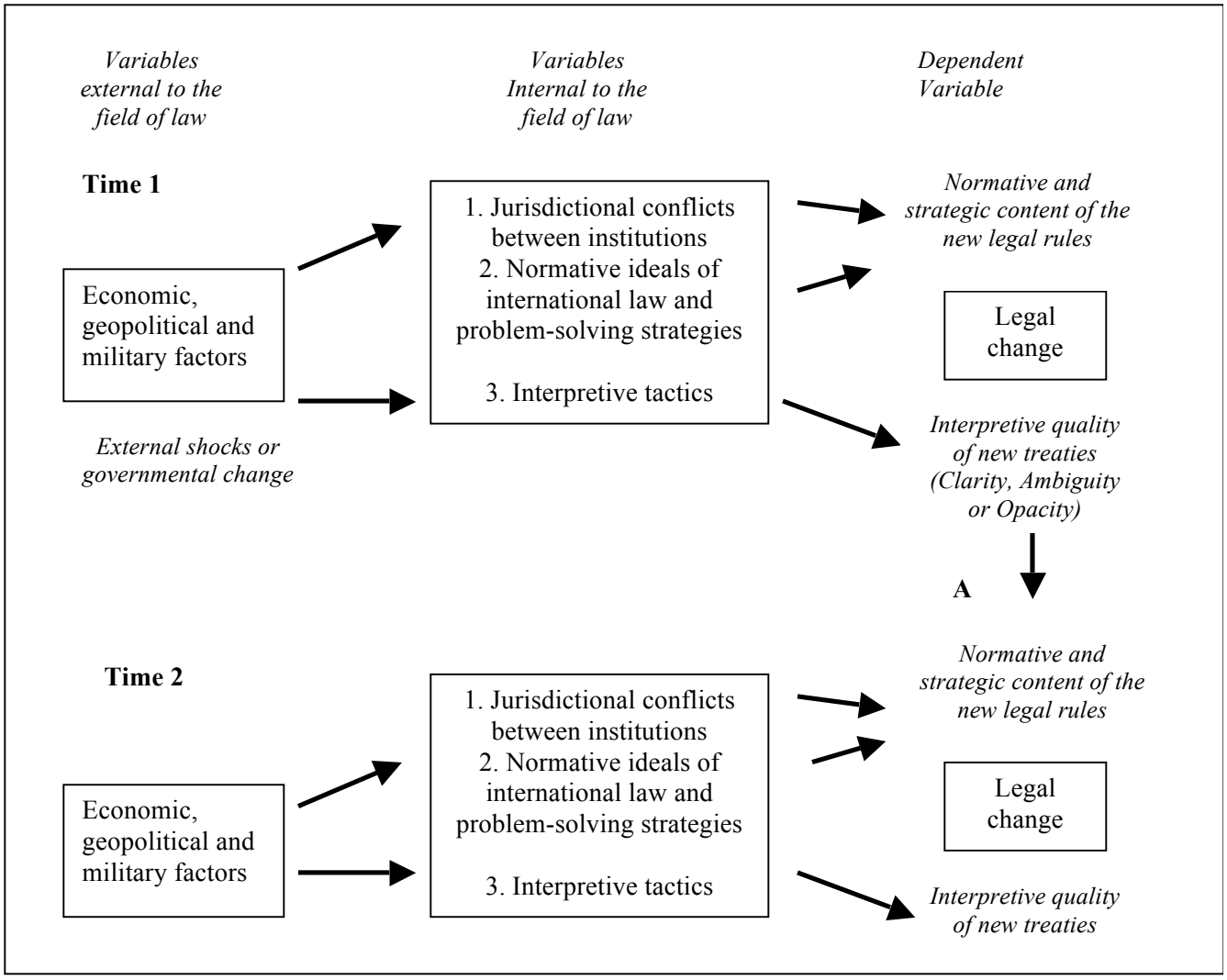


Table 7: A Dynamic Approach of the Hermeneutic Process of Treaty Interpretation