

Delaying Disaster: The Problem of Nuclear Safety in Eastern Europe

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Abstract

The purpose of this dissertation is to explain variations in compliance with international nuclear safety agreements. In the wake of the Chernobyl disaster, Western states committed considerable resources to improve the safety of Soviet-designed nuclear power plants in Eastern Europe and Russia. They conditioned further assistance on strict commitments to close some of the world's most unsafe reactors. All first-generation reactors lacking a solid structure containment unit were to be closed as soon as possible, oftentimes years before the scheduled end-of-lifetime deadlines. Each country in this study entered into such an agreement. However, despite fairly uniform requirements, the five countries under review have exhibited significant variations in compliance with those commitments.

The model presented here engages the current compliance literature by introducing a previously unexamined variable, the stability of the domestic political rules of the game. The rules define both the structures of government and the processes by which normal governance of the political system occurs. They also shape how government elites evaluate the costs and benefits of compliance, which in the case of nuclear safety, are temporally fixed. Compliance costs must be paid in the short term, while the benefits only pay off in the future. Those evaluations determine whether or not elites will comply.

A common argument within Western policy circles presents a counter to the approach offered in this study. Domestic safety culture has been a primary focus of Western programs designed to increase operational safety and improve compliance overall. This dissertation establishes the criteria for testing "rules effects" and safety

culture as potential explanatory variables, and offers evidence to support the conclusion that the rules of the game more accurately explain compliance than does safety culture.

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“Habeo igitur gloriationem in Christo Iesu ad Deum”

Chapter 1 - Introduction

Several years ago I spoke with a U.S. Department of Energy official about the slow progress of nuclear safety work in Eastern Europe and the former Soviet Union. With a great deal of frustration, he asked, “Don’t they realize what they are dealing with? What the hell are they thinking?” That conversation, and the impressions gained from working with the U.S. Senior Coordinator for Nuclear Safety beg the same question, why have countries of the former Eastern Bloc exhibited wildly different compliance levels with nuclear safety agreements over the past ten years? When I asked the Armenian Ambassador to the International Atomic Energy Agency (I.A.E.A.), he replied that compliance was all about degrees of risk. He added that his understanding of risk depended on what he considered more important, present problems or distant rewards.

The Ambassador’s statement points to what I consider to be an effective explanation for variations in compliance. Specifically, the stability of the *rules of the game* that define the domestic political system. In broad terms, rules of the game refer to the structures and processes within the political system that define who is in charge, which actions are appropriate, and the mechanisms for governing the country. The *stability* of those rules affects *elite discount rates*, essentially, how willing political actors will be to pay present costs to gain future rewards. Regarding international agreements, rules frame how governmental actors evaluate the costs and benefits of compliance.¹ In

¹ I look at domestic elites because they oversee the state’s energy resources. None of the nuclear power plants in this study are privately owned, so my investigation can focus on political rather than commercial actors. Additionally, while social pressure plays a role in elite decision-making, the final decisions are not made by the general public.

the case of nuclear safety these are temporally fixed – costs are primarily short-term while benefits are deferred until the future.

I consider two types of rules that shape decisions about compliance requirements: **formal** rules that establish governmental structures, and **informal** rules defining the normal processes of day-to-day governance. I use three criteria to measure the stability of both types of rules. All are general enough to apply to a variety of political systems, including democratic and authoritarian systems.² The *first* criterion is the presence of a predictable mechanism of power transfer. The *second* is a clear differentiation of delegated authority between groups in the political system. The *third* is the absence of direct challenges to said delegation by competing elites.³

Indicators for the formal rules of the game are commonly found (although not exclusively) within a constitutional framework, as with all of the countries in this dissertation. This makes it relatively straightforward to apply these three criteria to the structures of government regarding election cycles, separation of powers principles, and whether or not that separation is challenged. In terms of the informal processes of governance, power transfer mechanisms refer to appointment and dismissal procedures for government decision-makers. This group includes heads of ministries, plant

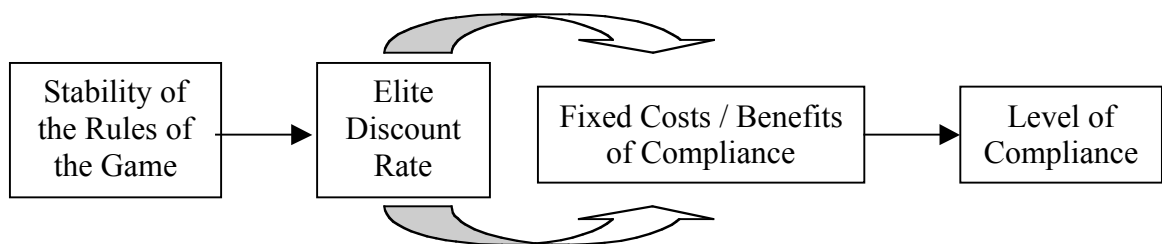
² All of the countries in my dissertation have a constitutional framework establishing the formal rules of the game. However, formal rules also exist in non-constitutional political systems including monarchies, theocratic regimes, and various forms of dictatorship.

³ Przeworski (1995) uses the concept of institutional uncertainty to capture the perspectives of both ruling elites and those out of power. He argues that the opposition's willingness to take a long-view is as important as that of the current elites given their ability to challenge the system from the outside. The chapters that follow bear this out.

managers, state utility chairman, parliamentary committee members, as well as other key actors deciding on compliance. The delegation of power points to bureaucratic responsibilities. Challenges to those responsibilities applies in the same way as it does within the broader structural delegation in the formal rules of the game.

An intervening step in my explanation posits that the degree of stability in the rules of the game affects how political actors view the costs and benefits of compliance. Elite discount rates, as the willingness to fulfill long-term commitments vis-à-vis immediate goals and interests, are influenced by the stability of the rules of the game. “Rules effects” frame elite considerations concerning compliance commitments. Accordingly, unstable rules create widespread uncertainty about the viability of the current political system. Under such conditions, political actors are less willing to fulfill international commitments that have no immediate pay-off. Short-term thinking prevails. Stable rules produce the opposite effect by enabling elites to place greater emphasis on long-term goals even when there are immediate costs to doing so. To illustrate my argument, the following diagram details the basic process by which rules effects determine compliance.

Figure 1: Rules Effects Model of Compliance



In contrast to my approach, much of the current literature on compliance focuses on international factors, primarily international regime characteristics and the nature of external incentives. Additionally, policy makers in Western governments and the I.A.E.A. often rely on normative concepts of safety culture to explain compliance.⁴ This dissertation presents an effective alternative to those approaches by showing the importance of rules effects as an effective independent variable.⁵ In this regard, my work joins the discussion between rational choice and normative theorists who have brought ideas, beliefs and values into the mainstream studies of international relations.⁶ Recent

⁴ The I.A.E.A. is replete with analysts and experts working on increasing safety culture as a means of increasing compliance. Miroslav Lipar, a former Slovakian nuclear regulator now working as head of the I.A.E.A. Operational Safety Section, showed me scores of documents relating to training conferences, internal I.A.E.A. workshops, and collaborative efforts with Western nuclear industry groups that all stressed safety culture as the most important aspect of compliance. This approach is not limited to the I.A.E.A. While working at the State Department, I met several E.P.A. and D.O.E. officials who also stressed the need to “get inside their heads and make them think the right way - ” conformation that the safety culture precedent remains the priority.

⁵ I directly test the safety culture argument throughout the dissertation, but eliminate international factors due to the homogeneity in both regime characteristics and external incentives. While not all countries are offered the same type of incentives, European Union membership vs. grants and foreign aid, the net effect is comparable. I demonstrate this in the course of the dissertation.

⁶ Mary Douglas and Aaron Wildavsky, *Risk and Culture: An Essay on the Selection of Technical and Environmental Dangers* (Berkeley: University of California Press, 1982) offer an interesting analysis of the mechanism by which norms frame rational evaluations of costs and benefits. In this dissertation, I test normative and rational models as competing claims, remembering that their work presents an important aspect of the debate that should be considered in later research. For broader discussions, see Martha Finnemore, *National Interests in International Society* (New York: Cornell Press, 1996); Martha Finnemore and Kathryn Sikkink, “International Norm Dynamics and Political Change,” *International Organization* 52,4 (Autumn 1998): 891-93; Margaret Keck and Kathryn Sikkink, *Activists Beyond Borders: Advocacy Networks in International Politics* (New York: Cornell Press, 1997); Thomas Risse-Kappen, ed., *Brining Transnationalism Back In: Non-State Actors, Domestic Structures, and International Institutions*

discussions of various domestic constraints to compliance, often referred to as background conditions rather than independent variables, further justify my approach. Unfortunately, these discussions have not explicitly defined how those constraints determine compliance.⁷ Aside from contributing to existing debates, the study of nuclear safety also has value in itself given the transboundary and domestic risks associated with operating unsafe reactors. No one wants another Chernobyl-like accident to occur.⁸ I examine why some actors choose not to take the necessary steps to reduce the risk of that possibility.

(Cambridge: Cambridge Press, 1995); Thomas Risse, Stephen Ropp and Kathryn Sikkink, eds., *The Power of Human Rights* (Cambridge: Cambridge Press, 1999); Thomas Risse, "Let's Argue! Communicative Action in World Politics," *International Organization* 54,1 (Winter 2000): 1-39; Jeffrey Checkel, "Norms, Institutions, and National Identity in Contemporary Europe," *International Studies Quarterly* 43 (1999): 83-144; Jeffrey Checkel, "Bridging the Rational Choice-Constructivist Gap? Theorizing Social Interaction in European Institutions." ARENA Working Paper #11 (2000); Jeffrey Checkel, "International Institutions and Socialization in the New Europe." ARENA Working Paper #11 (2001); Jeffrey Checkel, "Taking Deliberation Seriously." ARENA Working Paper #14 (2001); Jeffrey Checkel, "Why Comply: Social Learning and European Identity Change," *International Organization* 55,3 (Summer 2001): 553-588; John Ruggie, John, "What Makes the World Hang Together? Neo-Utilitarianism and the Social Constructivist Challenge," *International Organization* 52,4 (Autumn 1998): 855-885; Peter Katzenstein, ed., *The Culture of National Security* (New York: Columbia Press, 1996); Judith Goldstein and Robert Keohane, eds., *Ideas and FP* (New York: Cornell Press, 1993); Jeffrey Legro, "Which Norms Matter? Revisiting the Failure of Internationalism," *International Organization* 51 (Winter 1997): 31-63; and Ward Thomas, "Norms and Security," *International Security* 25,1 (Summer 2000): 105-139.

⁷ See Jeffrey Checkel, "Norms, Institutions, and National Identity in Contemporary Europe," *International Studies Quarterly* 43 (1999): 83-144; Jeffrey Checkel and Andrew Moravcsik, "A Constructivist Research Program in E.U. Studies?" *European Union Politics* 2,2 (June 2001): 213-31; and Frank Schimmelfennig, "The Community Trap: Liberal Norms, Rhetorical Action and Eastern Enlargement of European Union," *International Organization* 55 (Winter 2001): 47-84.

⁸ Even though the Ukrainian spelling (Chornobyl) is replacing the Russian version in diplomatic circles (Chernobyl), the later is more commonly used in popular and academic

Additionally, rules effects have not been previously examined in the context of compliance, nor has the issue of compliance with nuclear safety agreements been addressed since the breakup of the Soviet Union. While it has been suggested that domestic regime stability is a possible factor affecting compliance behavior,⁹ my dissertation focuses on the underlying rules of the game and offers an original test of rules effects. This dissertation first introduces a domestic level variable in contrast to the more common international level explanations for compliance; second, it counters the predominant normative approach by showing that safety culture cannot adequately explain variations in compliance; and third, it illustrates the positive nexus between rules of the game and compliance with international nuclear safety agreements. My goal is to show that the above model sufficiently explains variations in compliance. I recognize that other factors can affect elite discount rates, and that rules effects may lead to compliance behavior due to some other factor besides elite discount rates. I simply intend to show that the approach explains relevant outcomes, even if it is not the only necessary method of doing so.

Compliance and the Rules of the Game

At the 1992 G-7 meeting, Western governments pledged to assist those countries in Eastern Europe and the former Soviet Union that operated Soviet-designed nuclear reactors. As part of larger economic aid packages, each country was offered technical assistance to improve operational safety and correct serious design flaws. However, for

writing. My writings follow existing convention, I mean no offense.

all first-generation reactors, the G-7 conditioned the assistance on early closure of those reactors, in some cases years before the specified technical deadline. These power plants all lack solid concrete and steel containment structures to prevent the release of radioactive material in the event of a reactor overload, exemplified at Chernobyl in 1986. The goal since the 1992 G-7 meeting has been to prevent such a catastrophe from happening again. To that end, several Eastern European and former Soviet countries signed agreements committing to improve operational safety, develop a regulatory infrastructure capable of ensuring the success of those efforts, and ultimately, decommission all first-generation Soviet-designed reactors before the end of their design lives. The five countries I examine in this dissertation have all exhibited different levels of compliance with comparable agreements.

Based on those agreements, I considers three requirements for compliance ranked according to the relative cost of implementation: 1) safety modifications and upgrades (low), 2) regulatory sufficiency to ensure the plant runs safely for the duration of its operational lifetime – however long that may be (medium), and 3) early closure of “unsafe” Soviet-designed nuclear reactors (high). As a rule, compliance is always costly but some aspects are more costly than others. Taken as a whole though, the long-term benefits of compliance offer a net gain when compared to all of the short-term costs. Benefits include technical assistance, improved operational safety that makes nuclear power plants more profitable over time, economic assistance, energy efficiency, and development of alternative energy sources to offset the loss of nuclear generating

⁹ See Checkel (2001c).

capacity. These advantages compensate for the direct costs, and increase in value over time.

Compliance as a Dependent Variable

Around the same time the G-7 made its commitment to improve nuclear safety in Eastern Europe and the former Soviet Union, international relations scholars began paying more attention to the subject of compliance overall. The literature over the past decade has centered primarily on compliance with environmental, monetary, and human rights agreements. Studies on the environment and international monetary systems emphasize international institutional arrangements and how they define enforcement mechanisms. Specifically, the motivation (i.e., the carrots and sticks) presented to target state elites – those political actors whose behavior the agreements are trying to change.¹⁰ These studies focus on the clarity of incentives, their salience to domestic actors, and specific monitoring mechanisms as determining factors for compliance behavior.¹¹

¹⁰ For environmental issues see David Victor, Kal Raustalia, and Eugene Skolnikoff, eds., *Implementation and Effectiveness of International Environmental Commitments* (Cambridge: MIT Press, 1998); and John Knox, “New Approach to Compliance with International Environmental Law.” *Ecology Law Quarterly* 28,1 (May 2001): 1-123. For monetary issues see Simmons (2000) and Harold Koh, “The New Sovereignty: Compliance with International Regulatory Agreements,” *Yale Law Journal* 106,8 (July 1997): 2599-2659.

¹¹ For a sample of the discussions concerning explicit agreement stipulations, perceptions of those commitments, and monitoring and enforcement mechanisms see Arild Underal, “Explaining Compliance and Defection: Three Models.” *European Journal of politics* 4 (March 1998): 5-30; Beth Simmons, “Compliance with International Agreements” *Annual Review of Political Science* 1 (1998): 75-93; Beth Simmons, “Capacity, Commitment, and Compliance: International Institutions and Territorial Disputes,” International Relations Colloquium (University of Virginia, 2001); Smith McGillivray, “Trust and Cooperation through Agent-Specific Punishments” *International Organization* 54,4 (Autumn 2000): 809-24; Peter Cowhey, Peter, “Domestic Institutions

Chayes (1995) accurately critiques this approach for overemphasizing an enforcement model of compliance, and instead favors one in which dialogue and information exchange create understanding between agreement partners. This approach most clearly mirrors the norms-based arguments used to explain compliance with human rights agreements¹² and safety culture relationships to nuclear safety.

Despite the different approaches, the obvious commonality within the compliance literature is the necessity of a signed agreement. Agreements designate the framework that defines appropriate and inappropriate behavior. They offer elites specific guidelines for compliance, and indicate the costs and benefits of their compliance. One issue often raised in compliance studies refers to the potential instrumentality in signing an international agreement. Actors may sign agreements with little or no intention of carrying them out.¹³ Signature may be considered as a way to defray current domestic or international criticism, or a means of delaying real changes during the interim years between signature and ratification. Buying time and buying off opponents are two

and the Credibility of International Commitments *International Organization* 47 (Spring 1993): 299-326; and Jorgen Wettstad, *Designing Effective Environmental Regimes: The Key Conditions* (Northampton: Edward Elgar Press, 2001).

¹² Risse, Ropp, and Sikkink (1999) and Sonia Cardenas, "Beyond Compliance: Comparative Responses to International Human Rights Pressures," Ph.D. dissertation, (Department of Government and Foreign Affairs, University of Virginia, 1998) explore different stages of compliance, and the effect international actors have on target state elites to promote norm-following compliance.

¹³ Victor, Raustilia, and Skolnikoff (1998) tested this nonobservance behavior referencing Soviet and Japanese adoption of, and then later withdrawal from, the International Convention to Regulate Whaling and Soviet/Russian signature of the London Convention on Nuclear Dumping.

possible motivations for initially signing an international agreement.¹⁴ Regardless of the initial intentions, the larger structural effects of rules stability incorporate these intentions in compliance decision-making.¹⁵

Aside from the intentions behind initial signature or the nature of the agreements themselves, Underal (1998) accurately identifies three general factors affecting compliance outcomes: 1) rational interest calculations, 2) domestic politics, and 3) ideational structures. He admittedly refrains from testing the causal mechanisms he presents with either empirical evidence or broader theoretical adjudication. In contrast, Weiss and Jacobson (1998) and Mitchell (1988, 1994) test models of international regime construction designed to induce elites towards acceptable behavior, but their work lacks sufficient theoretical grounding. This shortcoming limits the generalizability of their

¹⁴ Oran Young, *Compliance and Public Authority* (Baltimore: Johns Hopkins Press, 1979) and Abram Chayes, "On Compliance," *International Organization* (Spring 1993): 175-205 argue that signature reveals an implicit expectation to comply. Given the costs incurred during negotiations preceding the signing of an international agreement, and the assumption that rational actors satisfice their priorities, they maintain that decision-makers will initially try to comply. States will not sign without some measure of initial willingness to abide by the treaty. Later divergence is a separate issue. However, empirical evidence does not seem to promote this decision-making process. Cardenas (1998) and Risse, Ropp, and Sikkink (1999) provide solid evidence to that effect. Finnemore and Sikkink (1998) take a contrary view that stresses the instrumentality of signing agreements. Decision-makers may simply wish to alleviate immediate external or internal pressure with no real intention of behavioral realignment. Other approaches remain neutral to the nature of intentions, focusing on bargaining strategies (Fearon 1998, Schultz 1998), the role of two-level game negotiations (Putnam, 1988), and the process of agreement formation (Keohane 2000). None of which specify, *a priori*, what intentions must be, and instead emphasize the constraints under which intentions are processed and articulated.

¹⁵ Whatever actors' intentions may be regarding compliance, whether motivated by self-interest, altruism or something in between, expectations about the viability of the rules of the game determine how actors go about achieving their goals when it is time to comply.

extensive empirical research.

Despite the common reliance on international regime effectiveness, very little attention has been paid to domestic constraints affecting target state elites. As stated earlier, monetary policy, human rights concerns, and environmental protection have examined international constraints on elite misbehavior.¹⁶ Amid focus on each of these areas, discussions abound comparing the relative merits and efficacy of different types of international regimes. In contrast, I examine variations in compliance within the context of a single international regime that espouses a single principle of safety – unsafe reactors must be upgraded to a comparable Western safety level. If that is not possible, they must be shut down or redesigned.¹⁷ Furthermore, Western assistance has been comparably generous to each country, and enforcement has been uniformly tied to future benefits.¹⁸ Thus, in contrast to the main emphasis in the compliance literature, my approach focuses on a neglected domestic level variable, and its effects on compliance. While stable rules

Thus, initial motivations bear less relevance on compliance than do rules effects.

¹⁶ Cowhey (1993), and Wettestad (2001) are two good examples. Expanding the field of inquiry, Chayes (1995), Downs (1996), and Simmons (1998, 2000, 2001) have nonetheless addressed efforts to increase compliance through various methods of international pressure. Managerial style regimes differ from coercive, which in turn counter more normative approaches. In my work, I deal with the *fact* of compliance variations rather than specific ways to increase compliance. The aforementioned works certainly bear relevance to the issue of nuclear safety. My hope is that coupled with them, my own efforts will aid policy makers in increasing the overall safety of nuclear facilities in East-Central Europe and the former Soviet Union.

¹⁷ Safety standards are important to consider since there is currently no uniform set of criteria for universal application. The I.A.E.A. has produced “guidelines” but the E.U. does not have a “checklist” for candidate states. Despite this limitation, there are safety principles that all signatories must adhere to, the central tenants of which are listed above.

¹⁸ While not every country has received the same amount of aid in monetary figures, each

are generally recognized as an important key to compliance, my work offers an original treatment of those rules as a test variable in the context of nuclear safety. By treating rules effects as an assumption, earlier approaches miss the important role that variations play in determining compliance behavior.

Testing Compliance

I use an ordinal level of operationalization for compliance rather than the more common nominal usage. All of the cases in this dissertation have at least some measure of compliance, where partial compliance is a valid option.¹⁹ Within this model, three areas define compliance behavior:

- 1) the status of safety upgrades to existing nuclear power plants,
- 2) whether or not the nuclear regulator authority has sufficient resources, authority and autonomy to do its job of ensuring safe operation and final decommissioning of unsafe reactors, and
- 3) early closure of hazardous Soviet-designed nuclear reactors – in accordance with comparable Western safety levels.

This final level also includes the precursory decisions that must be taken as part of the

has been given comparable assistance based on prevailing needs.

¹⁹ Cardenas (1998) establishes that symbolic gestures of compliance, like replacing bureaucratic elites who have become undesirable to the West, are more than simple non-compliant behavior. For example, instead of viewing “lip-service” as an absolute failure to change state behavior, she incorporates it into a continuum of compliance. While symbolic changes are not as compliant as total behavioral realignment, Cardenas shows they have a measure of compliance and are therefore significant. Hence, an ordinal approach to compliance captures a more complete range of outcomes.

decommissioning process. These include establishing alternative replacement power sources and providing the required moneys to pay for shutdown.²⁰

The three compliance levels are ranked in order of their respective costs. Costs reflect the different aspects of the safety principle embedded in all nuclear safety agreements, and are associated with the prevention of a catastrophic release of radioactive material. Accordingly, safety upgrades cost less than maintaining a competent regulatory agency. Both upgrades and agency management cost less than shutting down or redesigning existing reactors and building replacement energy generation facilities.²¹ Defining compliance categories in this fashion allows me to consider the *quality* and *quantity* of compliance decisions. The chart below illustrates the criteria for each level of compliance. Levels are progressive and cumulative; the highest level of compliance can only occur after the preceding two conditions have been met.

²⁰ I do not include a zero category for compliance because in the universe of possible cases none exhibits that behavior. However, the possibility certainly exists for elites to sign an agreement then fail all together to comply with any of its stipulations.

²¹ Costs include, but are not limited to monetary resources. Regulatory sufficiency costs more than upgrades because it entails changing existing laws, reallocating budgets and the coinciding need to reach political consensus, paying salaries, establishing new infrastructure, personnel training. More importantly, compliance in this area opens up the possibility of allowing the regulator to shut the plant down for either short time periods for safety reasons, or long-term closure due to fundamental design deficiencies. Decommissioning is the most expensive area of compliance because it entails all of these costs and the development of alternative energy sources, their integration into the electricity grid, and the considerable costs of storing and sealing all radioactive material. As a costly signal, the precursory actions leading up to decommissioning would not be undertaken unless elites intended to proceed with final shutdown.

Figure 2: Definitions of Compliance

Low Compliance	Safety Upgrades		
Medium Compliance	Safety Upgrades	Regulatory Sufficiency	
High Compliance	Safety Upgrades	Regulatory Sufficiency	Reactor Shutdown and or necessary precursory steps

Of the five countries in this study only one reactor has actually been closed as a result of an international commitment to do so. The Ukrainian government shut the last reactor at Chernobyl in December 2000. In this sense, to talk about high compliance in other countries cannot mean identical action since none has been taken to date.

Nevertheless, in the other cases, governmental actors have all agreed to specific timelines before which they must close their reactors. Based on those timelines I can still indicate high compliance when actors take the necessary and costly preceding steps to reach that goal. Setting up national decommissioning funds to augment international assistance, and the development and implementation of alternative energy programs are commensurate to high compliance because actors only undertake them as part of the decommissioning process. The absence of repeated and widespread challenges by political elites countermanding the shutdown commitment serves as corroborating evidence in light of the other two costly steps. Therefore, high compliance is evident in both the final shutdown of an unsafe nuclear reactor in accordance with an international agreement, as well as in the specific precursory steps leading up to that final outcome. I use this definition of high compliance to enable comparable studies between the cases in this dissertation.

Requirements for each level of compliance are found in the Convention on Nuclear Safety (C.N.S.), Grant Agreements funded by the European Bank for Reconstruction and Development (E.B.R.D.),²² and specific Memoranda of Understanding (M.o.U.) with the European Union and the United States. In addition to the agreements defining the conditions for compliance, I use four sets of sources to determine the actual level of compliance for each country. Specifically, I examine

- 1) ten years of industry journal articles,
- 2) independent assessments by non-governmental organizations, e.g., Bellona and Friends of the Earth,
- 3) evaluations by the I.A.E.A., the E.B.R.D., the Nuclear Energy Agency of the Organization for Economic Cooperation and Development (N.E.A.-O.E.C.D.), the European Council (E.C.), the International Nuclear Safety Program (I.N.S.P.) of the U.S. Department of Energy, and
- 4) interviews with Western experts in the N.E.A.-O.E.C.D., the U.S. government, the I.A.E.A., and Foratom – the Western European lobby consortium to the European Union.²³

²² I extend my gratitude to Vince Novak, Director for Nuclear Safety at the E.B.R.D. for his generous assistance.

²³ Carol Kessler, Deputy Director-General N.E.A.-O.E.C.D.; Dick Stratford, Deputy Assistant Secretary of State, U.S. State Department; Karen Henderson, Assistant for International Programs – Office of the Chairman, U.S. Nuclear Regulatory Commission; Tobjorn Norendal, Norwegian Ministry of Foreign Affairs and Chairman, I.A.E.A. Contact Expert Group; Jan Stuller, Regional Coordinator – Department of Technical Cooperation, I.A.E.A.; David Sycamore, Director International Affairs, Foratom.

To offset potential bias from these sources, I conducted interviews at the I.A.E.A.'s 46th General Conference (September 16-20, 2002), where I spoke with nuclear regulators, plant managers, and representatives from nuclear energy ministries and design institutes for each of the countries in my dissertation. To augment my interviews, I gathered a wealth of evidence from a decade of industry journals. While I use different sources to determine the stability of the rules of the game, I employ the same breadth of empirical evidence to give the best possible picture of rules effects.

Previous Uses of Rules Effects and Discount Rates

Domestic rules of the game are part of a larger body of literature that deals with aspects of regime stability, specifically, debates concerning regime type and consolidation. In particular, much of the current democratization literature implicitly touches on aspects of rules stability,²⁴ but only peripherally, as part of a broader concern with regime transitions and democratic consolidation.²⁵ When rules effects enter into the

²⁴ Richard Anderson, Steven Fish, Stephen Hanson and Philip Roeder, *Postcommunism and the Theory of Democracy* (Princeton: Princeton University Press, 2001) effectively review the literature regarding alternative indicators of regime stability.

²⁵ Larry Diamond, *Developing Democracy: Toward Consolidation* (Baltimore: Johns Hopkins Press, 1999); Juan Linz and Alfred Stepan, *Problems of Democratic Transition and Consolidation* (Baltimore: Johns Hopkins Press, 1996); Gerard Alexander, *The Sources of Democratic Consolidation* (Ithaca: Cornell Press, 2001); Adam Przeworski, *Sustainable Democracy* (Cambridge: Cambridge Press, 1995); Karen Dawisha and Bruce Parrott, eds., *The Consolidation of Democracy in East-Central Europe* (New York: Cambridge University Press, 1997); Karen Dawisha and Bruce Parrott, eds., *Politics, Power, and the Struggle for Democracy in South-East Europe* (New York: Cambridge University Press, 1997); Karen Dawisha and Bruce Parrott, eds., *Democratic Changes and Authoritarian Reactions in Russia, Ukraine, Belarus, and Moldova* (New York: Cambridge University Press, 1997); Karen Dawisha and Bruce Parrott, eds., *Conflict, Cleavage, and Change in Central Asia and the Caucasus* (New York: Cambridge University Press, 1997); Graeme Gill, *Democracy and Post-Communism: Political*

literature, there is a recurrent shortcoming due to the assumption that the rules must be formalized in a constitutional agreement to be classified as stable.²⁶ England represents the most obvious rebuttal to that assumption given the successful operation of its political system for centuries without a formal constitution.

As a precursor to much of the democratization literature, Almond and Coleman (1960) offer a powerful definition of framework rules by focusing on the exercise of power through “functional equivalents.” This approach enables them to evaluate comparable governance mechanisms instead of focusing exclusively on formal institutional structures. They maintain that informal mechanisms for governance exist not merely as aspects of government institutions. Informal rules may take place within the formal structure of government or outside it in some other venue; (e.g., clan patronage may be the real practice of politics, but so may official debates set within formal institutions). Accordingly, Almond and Coleman’s most important contribution has been to expand the types of rules that should be studied, specifically combining formal and informal rules in their treatment of political power, regardless of the nature of the political system itself. Their approach can apply to democracies and authoritarian

Change in the Post-Communist World (New York: Routledge, 2002); John Nagle and Alison Mahr, *Democracy and Democratization: Post-Communist Europe in Comparative Perspective* (London: SAGE Publications, 1999); and Geoffrey Pridham and Attila Agh, *Prospects for Democratic Consolidation in East-Central Europe* (New York: Manchester University Press, 2001).

²⁶ See Daron Acemoglu, *A Theory of Political Transitions* (London: Center of Economic Policy Research, 1999) and Harry Eckstein, *Regarding Politics: Essays on Political Theory, Stability and Change* (Berkeley: University of California Press, 1992).

systems, as well as various alternatives.

Based on that approach, I argue that formal rules are simply the structures of government in any form. All of the countries in my dissertation operate in the framework of national constitutions that define the structure of government. However, it is also possible for the concept of formal rules to apply to countries without codified constitutional frameworks. Alternative rules could include dynastic succession or religious appointment. Informal rules represent the normal procedures of governance. Moreover, these can be embedded within government structures as party systems, bureaucracies, or legislative committees. Traditional patronage relationships that predate or supplant formal institutions may also contain informal rules. Clan identities, corruption, and organized crime can be examples of these non-institutional processes if through them the real practice of politics takes place. Thus while formal rules are the structures of government, informal rules represent the methods of governance by which actors endeavor to achieve their political goals.

Both governmental structures and governance processes affect elite discount rates, the intervening variable in my model. Specifically, the stability of those two types of rules matters because it shapes elites' expectations for the future.²⁷ Levi (1988) and Geddes (1994) convincingly present the connection between rules stability and elite discount rates by pointing out the common goal of political survival among political

²⁷ I interchange the terms "time horizon," "discount rate," and "short/long-term perspective" as a literary device; their meanings are synonymous in this dissertation.

elites.²⁸ The likelihood of staying in power shapes elites' willingness to endure immediate costs in order to gain future rewards. The relative size of costs and benefits certainly matters, but expectations about longevity in office provide the overarching framework in which cost/benefit considerations occur. Stable rules will tend to enable elites to pursue long-term goals even when that means paying immediate costs. Unstable rules tend to produce the opposite dynamic as elites focus on immediate concerns in order to survive politically.²⁹

²⁸ Ken Oye previously articulated that connection from a game theoretic approach. Specifically, "the size of the discount rate applied to the future affects the iterativeness of games. If a government places little value on future payoffs, its situation has many of the characteristics of a single-play game. If it places a high value on future payoffs, its situation may have many of the characteristics of an iterated game. For example, political leaders in their final term are likely to discount the future more substantially than political leaders running for, or certain of, reelection." [Ken Oye, "Explaining Cooperation under Anarchy," in Ken Oye, ed., *Cooperation Under Anarchy* (Princeton: Princeton University Press, 1986), 13.]

²⁹ I do not test this part of the model empirically, but rather posit it as a logical condition. Levi and Geddes do an excellent job, so I simply point to their work as the basis of my proposition. I also assume rational action on the part of elites, and while competing normative claims are addressed throughout the dissertation I do not believe it is necessary to justify the prima face assumption of rationality. Robert Axelrod, *The Evolution of Cooperation* (New York: Basic Books, 1984) showed that time horizons affect actors' utility calculations for present decisions. If the future looks promising, in that short-term losses can be made up down the road, actors are more willing to pay costs now. The discount rate is central to cooperation – high discount rates (short time horizons based on little chance of future rewards for present sacrifices) make it unlikely, whereas low discount rates (long time horizons) enable actors to see beyond present needs and pay up front costs to gain the possibility of greater rewards down the road. Obviously the nature of costs and benefits, both temporally and in the relative value of each (whether costs outweigh benefits or vice versa) for actors' utility calculation matter as well. The cases in my study have fixed costs and benefits: costs are high in the short term, benefits are also high, but delayed until some time in the future (far enough off that actors will not receive the benefits at the same time as they pay short-term costs, but not so distant that they have no hope of enjoying them down the road). That key factor allows me to use discount rates as a part of the decision-making process elites use when evaluating their

I modify Levi and Geddes's model by emphasizing expectations about the viability of the rules as a precursory evaluative framework to individual political survival. Even before politicians can realistically consider issues of longevity in office they must first evaluate the longevity of the political system establishing those tenures. Expectations about how long the game will last shape expectations about personal play in the game itself. Subsequently, I am able to evaluate the structures and processes of government as well as how actors view their individual part in the scheme of things.

For the most part I infer discount rates rather than directly observe them through surveys or interviews. Whenever possible I use direct observation, but in general I assume their values based on an accumulation of corroborating circumstantial evidence. Accordingly, I assert that under periods of uncertainty resulting from unstable rules of the game, any reasonable person will pursue short-term goals at the expense of long-term rewards that incur high immediate costs.³⁰ A comparable assumption applies to stable rules and certainty regarding the longevity of the political system. Under stable conditions, reasonable actors are more likely to pursue long-term benefits and willingly endure short-term costs to get them.

Finally, throughout my dissertation, my concern is for the *presence* of variations in rules stability not the antecedent *causes* for those variations. I set this boundary condition for practical reasons due to limitations on time and resources. Latter study

international compliance commitments.

³⁰ Nuclear safety compliance entails high up-front costs. Where short-term costs are low, the connection between discount rates and compliance is less clear. All of my cases fall into the former situation, so I am able to set aside the latter hypothetical condition.

could incorporate a broader evaluation of the reasons themselves. To establish the presence of variations, I look at two principle sets of sources and corroborate my findings with a third indicator. The bulk of my evidence comes from the *East European Constitutional Review* and numerous cross-country studies, each examining post-communist transitions over the past decade.³¹ I include governance data from the Freedom House *Nations in Transit (N.I.T.)* series to confirm my findings.³² *N.I.T.* offers broad evaluations of democratization, economic liberalization, and the rule of law, and makes annual comparisons of each. Of these three, rule of law scores provide corroborating evidence for the more detailed empirical sources.³³

One potential limitation for using *N.I.T.* is that the range of variations between values does not correspond identically to my ordinal scale. Changes of more than .25 in

³¹ Examples include Attila Agh, *The Politics of Central Europe* (London: SAGE Publications, 1998); Dirk Berg-Schlosser and Raivo Vetik, eds., *Perspectives on Democratic Consolidation in Central and Eastern Europe* (New York: Columbia University Press, 2001); Mary Kaldor and Ivan Vejvoda, eds., *Democratization in Central and Eastern Europe* (New York: Pinter, 1999); and Paul Lewis, ed., *Party Development and Democratic Change in Post-Communist Europe: The First Decade* (Portland: Frank Cass, 2000).

³² Keith Jagers and Ted Robert Gurr, *Polity III: Regime Change and Political Authority; 1800-1994 – 2nd ICPSR version* (Ann Arbor, MI: Inter-University Consortium for Political and Social Research (distributor), 1996) is also helpful, but their study ends too soon in 1994 to be of much immediate value. Thankfully, *N.I.T.* addresses most of the indicators they examine providing continuity over the period of my study.

³³ Sometimes the authors of *Nations in Transit* realign or add categories to their analyses. While any alteration in coding can affect the reliability of the results, in the case of *N.I.T.*, it is done to increase the comparability of annual analyses. As a result, I do not think minor adjustments limit the value of the work as a whole. I crosschecked any potential discrepancies, but none arose as the other sources confirmed the general evaluations given by the Freedom House team. Therefore, using *N.I.T.* does not endanger the reliability of my evaluations.

value indicate a significant outcome, but according to the scale used in *N.I.T.*, most of my evidence tends to be highly constricted in the middle with huge ranges at the endpoints. I limit the problem by using *N.I.T.* as a tertiary source to confirm the general findings of the other two sources. As a result, I can accurately assess rules stability, showing variation both across cases as well as within them. This gives my dissertation considerable breadth and depth.

Costs and Benefits of Compliance

Figure 1 labels the *costs and benefits* of compliance as *fixed*.³⁴ This is a critical aspect of my explanation, as “fixed” means tied to a specific time period. In the case of nuclear safety compliance, the costs are proximate while rewards are distant; the costs of compliance must be paid up front, while rewards are delayed into the future. This facilitates the connection to elite discount rates, and in turn, rules effects shaping those perspectives. All of the agreements I consider in this dissertation frame compliance in these terms. Methodologically, to introduce variation at this point would unnecessarily complicate my model and diminish its parsimony. Variation would make elite decision-making dependent on the size of the change (great or small) and/or its direction (increased or decreased). Tracking the impact of those types of changes would demand

³⁴ One important short-term cost refers to dependence on nuclear energy, compared with alternative sources, and reflecting the costs of upgrading/shutting down unsafe reactors. Another deals with changing existing policies, which can arise from interest group competition, social mobilization against the prescribed behavior, and the personal costs individual elites may pay for being perceived as lackeys of foreign powers. While each of these can carry costs into the long-term, the bulk of the “expense” is in the first few years of transition. After that, the positive rewards of compliance outweigh the declining costs.

too much distinction in determining exactly which type of change mattered most. Even more importantly though, the same temporal condition can be seen in compliance agreements dealing with human rights, fiscal austerity measures, and nuclear disarmament.³⁵ All have costs and benefits that are respectively fixed on short and long-term bases. Since the condition of fixed costs and benefits extends beyond nuclear safety, I can generalize my approach to different areas of compliance and therefore, do not need to account for changes to that condition.

As an aspect of costs and benefits, each of the countries in my study depends on nuclear energy for domestic consumption; some export surplus electricity as well.³⁶ The cost of closing an operational nuclear reactor before the end of its design lifetime is quite

³⁵ Risse, Ropp, and Sikkink (1999), Beth Simmons, “International Law and State Behavior: Commitment and Compliance in International Monetary Matters,” *American Political Science Review* 94 (2000): 819-835; Joseph Nye, “Nuclear Learning and U.S.-Soviet Security Regimes,” *International Organization* 41,3 (Summer 1987): 371-402; and Abram Chayes, *The New Sovereignty: Compliance with International Regulatory Agreements* (Cambridge: Harvard Press, 1995).

³⁶ The capacity of the state to comply also factors into the costs of compliance. Specifically, the ability to collect electricity payments can affect compliance in three areas: paying nuclear power plant and regulatory agency wages, financing safety upgrades, and establishing decommissioning programs. While Skocpol and others have effectively brought the state back into discussions of domestic and international outcomes – for examples, see Theda Skocpol, ed., *Brining the State Back In* (Cambridge: Cambridge Press, 1985); James Scott, *Seeing Like a State* (New Haven: Yale University Press, 1998); Michael Mann, “The Autonomous Power of the State: Its Origins, Mechanisms, and Result,” *European Sociological Archive* 25 (1984): 185-213; Peter Evans, *Embedded Autonomy* (Princeton: Princeton Press, 1995); Arista Cirtautas, “The Post-Leninist State: A Conceptual and Empirical Evaluation,” *Communist and Post-Communist Studies* 28,4 (1995): 379-395; Barbara Geddes, *Politicians Dilemma: Building State Capacity in Latin American* (Berkeley: University of California Press, 1994); and John Hall and John Ikenberry, *The State* (Minneapolis: University of Minnesota Press, 1989) – I will not be able to test capacity in this current project due to real constraints on my time and funding. Further research should consider the role of

considerable for all countries involved. In examining this specific high cost of compliance (early closure), two aspects of dependence become important: 1) the viability of alternative energy supplies based on existing vs. planned facilities, including the cost of transitioning to them; and 2) energy efficiency to make generating facilities more competitive, improve commercial and residential insulation, decentralize heating control so users can determine their own temperature settings, increase payments for electricity bills, and strengthen the transmission infrastructure along the entire electricity grid.³⁷ These two dependence factors affect elite determinations of the real value of nuclear power, although they are principally relevant in the short-term. All the costs of transitioning to alternative sources and increasing energy efficiency must be paid up front, while benefits largely pay off in the future. Thus, while variations in dependence exist across countries, and relative costs vary as a result, the absolute costs of closing a nuclear power plant are high in every case.

More broadly, meaningful benefits to compensate for the costs of compliance do not exist in the short-term. Even the daily value of increased safety accrues over time making it primarily a long-term benefit.³⁸ In addition to the accumulated value of safety, reputational costs are weighted towards future interactions, and cooperation with the West – whether through official E.U. membership or beneficial financing and

capacity since it has been under-examined in the compliance literature.

³⁷ In addition to funding for alternative energy sources, the countries under review have all been offered assistance to increase efficiency in their energy usage. As with all the other costs/benefits, the value of these programs is framed by discount rates because the costs are all short-term, and the benefits delayed to sometime in the future.

³⁸ My thanks to Gerard Alexander for clarifying this with me.

infrastructural grants³⁹ – pays its greatest rewards over longer periods of time. Therefore, costs are effectively fixed in the short-term with little or no comparable short-term benefit, and tangible benefits are deferred. These static costs and benefits contrast with variations in rules stability.

Testing Variations in Rules Effects

I define stability in three categories – *Low*, *Medium*, and *High* – which coincide with the three levels of compliance. At either endpoint the stability of both formal and informal rules is the same; they are both stable at *High* levels and both unstable at *Low* levels. I introduce *Medium* stability to capture the middling ground of partial stability where one rule is stable, while the other is not. Using all three gives my approach the ability to capture a wide range of rules effects. The use of both formal and informal rules for each level yields greater explanatory accuracy than if I simply relied on individual aspects from either type, such as the number of alternations of power, how many times regular elections are held, or the turnover rates for ministerial or legislative appointments. Based on the three criteria listed in the introductory section – 1) the presence of a predictable method of power transfer; 2) a clear differentiation of delegated authority between groups in the political system; and 3) the absence of direct challenges to the delegation of power – I present the following definitions to establish the coding for rules effects used throughout the dissertation.

³⁹ I implicitly test the notion that prospects of E.U. membership determine compliance by picking cases that have no chance of getting in (Armenia and Ukraine), and showing that even these states comply to some degree.

- High Stability: These are rules that remain unchallenged by actors within the political game, enabling certainty about the longevity and resilience of those rules to weather diverse international and domestic policy crises. Stable rules are evidenced in the predictable transfer of power through regular elections, hereditary title, selection by clan leaders, or some other reliable method that continues over time. They are also seen in a clear differentiation of authority between groups in the political system and a lack of challenge to said delegation. To be labeled highly stable, both formal and informal rules must meet the conditions listed above.

- Medium Stability: This condition results from inconsistent levels of stability between formal and informal rules – one set is stable while the other is not.⁴⁰ The different types of rules are in opposition to each other, such that there may be stable governmental structures but unstable processes of day-to-day governance. In contrast, a condition of stable informal rules and unstable formal rules could be seen in transitional political systems that operate on patronage relationships while elites try to work out the institutional structures of government. In both cases, the result will be mixed levels of compliance since rules effects do not produce a uniform pattern of discount rates in the same way conditions of high and low stability are apt to do.⁴¹

⁴⁰ I do not preface one type of rule over the other; stable formal rules will not automatically compensate for the uncertainty resulting from unstable informal rules, or vice versa. What matters is that one is stable and the other is not.

⁴¹ It is also possible that movement toward increasing stability may be hindered by lingering threats to stabilizing efforts, whereby certainty in the rules increases over time but key obstacles may remain in the way. Degrading stability can also be held in check by certain accepted practices, therefore preventing the slide from going all the way to the bottom.

Medium stability is the most challenging condition to define but its position in the middle is important since can describe key periods of transition to either endpoint.

- Low Stability: Such a situation exhibits unpredictable methods of power transfer, unclear delegation of political authority, and persistent challenges to that delegation. This creates uncertainty about the viability of the political system. Both the structures of government and the processes of governance are unresolved and impermanent. Arbitrariness and unpredictable changes to ministerial responsibilities produce uncertainty about how actors should behave in the present, and limit their ability to make reliable predictions concerning the future. Uncertainty pervades both formal and informal rule.

In coding stability I do not weight the three criteria differently. I recognize this is not ideal and future operationalization of rules effects should take into account the possibility of variations between them. However, at this stage I assume they co-vary. To do otherwise would add unnecessary complications to the model without adding to its explanatory power for the cases in my dissertation.⁴² Further work on this topic will include a more nuanced approach as I examine different areas of compliance.

Rules Effects Hypotheses and Examples

Variations in the stability of the rules of the game correspond to variations in compliance with nuclear safety agreements. Rules effects shape compliance behavior through elite evaluations of the costs and benefits of compliance. Discount rates act as an

⁴² This is especially true for medium stability as a simple combination of one highly

intervening variable in that process. The following three hypotheses establish the basic premises for each level of stability.

- A. *Highly stable* rules enable long-term thinking due to the predictability, clarity, and unchanging nature of the political system. This applies both structurally and in the processes of governance. As a result, willingness to endure high short-term costs to gain the future benefits of compliance prevails. This leads to *high compliance*;
- B. *Medium stability* produces competing incentives so that elites will comply with some requirements, but not the most costly area of early closure. The result is *medium compliance*.
- C. *Low stability* produces uncertainty in the rules governing the political system, both formally and informally. Elites are unable to count on a foreseeable future for the political system, and that uncertainty creates powerful incentives to view short-term costs as more important than long-term benefits. The future will likely be sacrificed for the present. This leads to *low compliance*.

Both sets of hypotheses are reasonably falsifiable such that if either:

- High rules stability leads to low compliance,
- Medium stability leads to either high or low compliance across all issues of the nuclear safety agreements, OR
- Low stability leads to high compliance,

stable type of rule and one low.

then compliance variations do not depend on variations in rules stability.

One potential counter argument is that political parties determine compliance, such that policy decisions matter more than rules effects. If every election in Ruritania installs a different party in power, which in turn changes the previous government's policies, this would produce policy instability but reliable informal rules (assume as well that these new governments also come to power under stable formal rules of the game).⁴³ Elites can count on a short life span for their decisions, and therefore, pursue short-term goals as a result. Such a case of stable informal (and formal) rules would lead to low compliance. However, if successive governments do not *regularly* overturn earlier policies such that no reliable pattern exists, elites would not be able to predict the brevity of their policies' futures, and subsequently, would not have an overriding incentive to think exclusively in terms of short-term interests. Long-term planning would be possible as there would be no overriding incentive not to do so. Hence, stable formal rules would establish the structures of government, but unstable governance would persist due to uncertainty about the durability of government programs. They could last for a decade or they might be reversed after the next election. The same problem would result from unpredictable changes to ministerial responsibilities. In that case and with arbitrary policy reversals, instability in the informal rules would vitiate the positive effects of

⁴³ Post-1945 Italy is a good case of repeated changes in government through regular pre-term elections. These early elections were the norm, and in each case ruling parties changed, but the center of gravity in the political system remained the same – democratic governance and resistance to inclusion of the communist party. This allowed for continuity in both policy formation, and reliable predictions about the normal practice of politics.

stable formal rules. This would produce medium rules stability, and lead to medium compliance.

An additional factor to consider is the problem of uncertainty in the election cycle. If the norm is for pre-term elections to determine the government, and those elections occur with little regularity, but instead occur once within six months, the next time after three years, and continue without a discernible pattern, uncertainty would constrain long-term thinking.⁴⁴ There would be no normal practice of politics given the inability to establish reliable, authoritative governments. Comparing this to the previous hypothetical Ruritania case, short-terms in office would be better than inconsistent ones. If such a scenario corresponds to highly stable formal rules, in that the methods of power transfer are clear and everyone accepts the clear delegation of authority established in governmental structures, then the rules would be labeled as moderately stable and predict medium compliance.

Such situations accurately represent the Bulgarian case. While the formal rules of the game have been stable from the beginning of the 1990's, there has been no normal process of governance on which political officials can rely in making evaluations of the costs and benefits of compliance. There have been repeated alternations in power

⁴⁴ One possible counter to this is that short, unpredictable tenures in office could lead elites with long-term views to lock in the next government by choosing policies with high sunk costs that prevent easy policy realignment. In such a case, rules effects may not accurately explain discount rates. This would still leave my model some room to explain compliance based on the connection between discount rates and framing. Rules effects may not be the source of the discount rate, which is something I will consider in future research.

between the two main political parties, but successive governments have not regularly overturned their predecessor's policies. Nor have these governments been elected under a predictable pattern of election cycles. Uncertainty about both the durability of policies and respective terms in office has prevented both exclusively short- and long-term planning.

Two hypothetical conditions further indicate the importance of certainty in the rules of the game. *First*, if elites know they only have a brief window of opportunity to accomplish their goals, based on reliable patterns in the political process – regularly timed pre-term elections and repeated policy reversals due to consistent alternations in power – short-term thinking will likely be the norm. This would be a case of instability in terms of policy decisions, but stable processes of governance. Such a scenario would disprove my claim that stability mirrors compliance by showing stable rules leading to low compliance. *Second*, conversely, if Bulgarian elites could reliably expect to complete their full terms in office, and policy programs could last beyond the current term, either as a result of successive election victories or policy convergence across governments, this would produce stable informal rules. If these combined with stable formal rules high compliance would be the outcome. This latter condition appears in Lithuania, discussed in chapter 5. However, neither condition has existed in Bulgaria to date. Bulgaria shows how unstable informal rules diminish the positive effects that stable formal rules bring to compliance decisions, specifically, the inability to establish authoritative processes of governance despite stable government structures.

On the other hand, a case of low stability producing either medium or high

compliance could falsify my argument. In the case of Ruritania, if various government officials frequently challenge the constitutional framework delineating institutional responsibilities by regularly testing the boundaries of and usurping the other's delegated authority, this would indicate low stability in the formal rules. Suppose also that as part of their competition rival groups also try to take over responsibilities for compliance decisions. If the informal rules of the game are to be unstable given arbitrary changes to the procedures for governing the country, such a case would be a clear example of low rules stability.⁴⁵

At first glance this appears to be the case in Ukraine. While my approach accurately explains the connection between instability in the rules of the game and a total unwillingness to pay short-term costs to gain long-term benefits (high discount rate), Chernobyl still closed down before its scheduled termination date. However, technical viability of nuclear reactors sets an important boundary condition for my approach. The plant had to close down despite tremendous reluctance by Ukrainian elites to do so. In addition, compliance is both progressive and cumulative. Therefore, while Chernobyl eventually shut down, I discuss in chapter 6 why this does not equate to high compliance and how my model still applies.

A final example to consider refers to conditions of highly stable rules that do not correspond to high compliance. In the case of Armenia (chapter 4), both the formal and informal rules have stabilized since May 2000, but compliance lags behind. As a

⁴⁵ I discuss this scenario in the Slovakia, Armenian, and Ukrainian chapters. Allen Lynch has appropriately labeled them as “attempts to consolidate a patrimonial political system

potential boundary condition for my study, the Armenian case introduces variations in the date for early closure. My argument assumes the date does not change. This allows me to set a benchmark for determining high compliance. Only Armenia challenges that assumption, but final determination on compliance must be deferred due to the revised decommissioning schedule. I make predictions about future compliance in the chapter.

Competing Argument: Safety Culture

In contrast to the model presented here, arguments based on nuclear *safety culture* look at the synergy of domestic norms with those embedded in international nuclear safety agreements, all of which emphasize risk aversion.⁴⁶ In the countries under review, domestic safety culture is almost universally risk tolerant.⁴⁷ According to the argument, risk aversion will produce high compliance, while risk tolerant norms lead to low

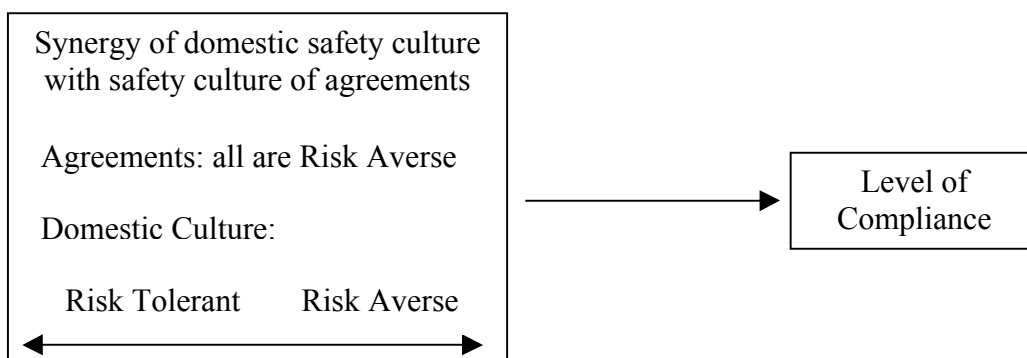
under the conditions of façade democracy.”

⁴⁶ For a good discussion on strong vs. weak norms see Legro (1997) and Finnemore and Sikkink (1998) for norm internalization processes. For more general discussions of normative influences see Andrew Davis and J. Cortell, “How Do International Institutions Matter? Domestic Impact of International Rules and Norms,” *International Studies Quarterly* 40 (1996): 451-78; and Andrew Davis and J. Cortell, “Understanding the Domestic Impact of International Norms,” *International Studies Reviews* 2,1 (Spring 2000): 65-87 for solid evidence of domestic constraints impacting norm internalization. See also Richard Herrmann and Vaughn Shannon, “Defending International Norms: The Role of Obligation, Material Interest, and Perception in Decision-Making,” *International Organization* 55,3 (Summer 2000): 621-654 for the psychology of normative (re)evaluation. Risse (2000), Schimmelfennig (2001) and Roger Payne, “Persuasion, Frames, and Norm Construction,” *European Journal of International Relations* 7,1 (2001): 37-61 also discuss learning processes, addressing both rational and normative elements.

⁴⁷ In terms of safety culture, the causes of the Chernobyl explosion illustrate two outlying norms: *risk averse* culture lays the blame on fundamental design deficiencies that warrant drastic measures like shutting down all similar reactors that do not possess a containment around the core, while *risk tolerant* culture asserts the design is “safe enough” and that

compliance.⁴⁸ The following diagram represents the basic model of the safety culture argument.

Figure 3: Safety Culture Model



The safety culture model predicts that

- A. Risk tolerant domestic safety culture is out of sync with the norms in the agreement. Actors are willing to endure greater risks of a nuclear accident regardless of the international agreements they signed, and as a result, compliance is low.
- B. When domestic safety culture is risk averse, the result will be high compliance since elites hold to the norms embedded in the international agreements they signed.

These hypotheses can be falsified if:

- Elites meet the conditions for high compliance while maintaining a risk

the isolated incident resulted from a single person's carelessness.

⁴⁸ The obvious implication is that if safety culture can become risk averse then compliance will increase. Whether or not international actors can influence such a change remains to be seen, but that tactic is the basis of I.A.E.A. technical exchanges and training programs. I propose that the I.A.E.A.'s efforts may improve safety culture, but not compliance since it rests on other factors.

tolerant safety culture, OR

- They believe in risk aversion but fail to rise above low compliance.

In either case some other factor must be significant.⁴⁹ If however, safety culture determines compliance, than any change in risk propensity among decision-makers from tolerance to aversion will correspond to increasing compliance from low to high. In the opposite direction, if those same elites change their view of nuclear safety and became more willing to endure risks in the operation of the country's nuclear reactors, then compliance declines. If along the way, middling values of compliance were seen as a step in the process towards either end point, such behavior would not indicate a distinct choice as my theory predicts. This creates another way to falsify this cultural theory. If safety culture remains constantly risk acceptant, but elites decide to do more than just implement safety improvements (low compliance) and build up a regulatory authority with sufficient capacity (medium compliance), than safety culture is neither a necessary nor a sufficient explanation for compliance behavior. The same criticism would apply if safety culture remained risk averse but politicians backed away from previous early closure commitments (high compliance) yet maintained sufficient regulatory capacity (medium compliance).

The safety culture model also fails to distinguish the effect of divergent safety

⁴⁹ My approach captures the middle ground of compliance better than does the safety culture argument. Even though safety culture could be somewhere between total aversion and tolerance, in the area of nuclear safety, the evidence points to the predominance of either extreme, and not much middle-of-the road behavior. Compliance varies more closely to rules stability, while safety culture is fairly static in all of my case studies.

cultures between nuclear industry elites and ruling politicians. I test for that possibility and show that due to the inclusive nature of the nuclear community and their exclusive authority to manage state resources, political elites are the source of safety culture.⁵⁰

Where typically there is a high degree of uniformity in their normative views of nuclear safety, variations in elite risk propensities are addressed in each case study.⁵¹ Evidence for my evaluations of safety culture comes from the same sources used to determine compliance (listed on pages 14-15). This does not jeopardize the authenticity of either set of results as the evidence deals with both aspects concurrently, and is sufficiently diverse to handle both variables. The combination of these sources provides an accurate assessment of elite risk propensities as part of each country's safety culture.

Case Selection

Having laid out the models and the methods for evaluating variations in compliance, I examine five countries in Eastern Europe and the former Soviet Union over

⁵⁰ Despite privatization of oil and gas industries in most of the former communist countries, nuclear power remains firmly under state control. It seems unlikely states will relinquish control any time soon, with clear national security implications due to the risks involved in nuclear energy and potential fears that foreign ownership could endanger environmental conditions in times of international crisis, as well as the relatively low costs of energy production compared to fossil fuels giving nuclear power great potential for revenue to the state. To maintain that control, ministries of atomic energy usually enjoy cabinet level positions, and often have powerful political connections. As an extreme example of this, Yevgeny Adamov, former Russian Minister of Atomic Energy, was rumored to have close ties to Yeltsin's financial supporters and had a great deal of influence in domestic politics due to the revenue "his" ministry generated for the Russian state. [Interviews with Carol Kessler as well as information obtained from classified sources while working at the U.S. State Department.]

⁵¹ Armenia is an interesting case of the nuclear regulator having a different safety culture than the rest of the community for a period of time. I present full details in chapter 4.

a ten-year period.⁵² I look at three countries that are in line for membership in the European Union – Slovakia, Bulgaria and Lithuania. They are considered European for this study, although Lithuania could also be included as a former Soviet state. The other two – Armenia and Ukraine – have no real chance of inclusion in the E.U., which tests the claims that E.U. accession determines compliance.⁵³ My argument prefaces the conditions that determine elite frames of E.U. membership and cooperation with the West more broadly, rather than rely on the nature of the international incentives themselves.

The study is limited to these countries because each operates at least one Soviet-designed nuclear power plant.⁵⁴ Soviet centralization produced a common background in personnel training, reactor design, fuel processes, as well as dependence on Moscow for

⁵² For Armenia and Ukraine, there is no simple term that does not refer to their time in the historic Russian empire. Technically, “Newly Independent States” includes not only Eastern Europe as a whole, but any other country that has recently gained independence as well (obviously East Timor has no place in my study). Convention usually applies this term only to the former Soviet states, but that does not mean convention is correct. Even more vaguely, some have simply dubbed these countries as simply “post-communist,” but that is also problematic as Nicaragua and Cambodia could be included in that category. Thus, I use “former Soviet Union” as a catchall term, but since it defines these countries’ identities by their past rather than their current independence, I use it sparingly. While the terms employed are as exact as I prefer, they do offer sufficient descriptive accuracy for the purposes of this project.

⁵³ This does not mean they have no prospects for inclusion into Europe. The Council of Europe is one avenue, along with the Organization for Security and Cooperation in Europe, both of which promote integration and follow-on benefits through economic, infrastructural, political, and social cooperation and assistance.

⁵⁴ As Kelly Erickson pointed out to me, my case selection insures greater internal validity but at some cost to external validity since rules effects could be applied to other countries in the region, but they do not meet the criteria for inclusion in this study. However, my focus on the temporally fixed costs and benefits of compliance compensates as a more generalizable factor. I recognize the limitations of my approach but I do not think they are overwhelming.

guidance in resolving operational problems. The relatively uniform history provides a good baseline to evaluate later deviations in rules stability and compliance. Like the other cases, Russia remains dependent on nuclear energy to meet a considerable part of its domestic electricity needs (much is organized regionally as opposed to a national grid system like the smaller countries). Empirically though, I do not include Russia for the simple reason that unlike the five cases in this study, Russian elites have never entered into the compliance regime based on early closure of the country's nuclear reactors. Russian elites have not had the option of high compliance since they have never faced the prospect of closure as a condition of gaining assistance from the West – the central benefit of compliance across all five cases. It is not relevant to measure a comparably full range of Russian compliance since Russian elites have never agreed to the same principles of compliance facing the other countries. Excluding Russia from a study of nuclear safety seems counterintuitive at first, but since the goal is to examine compliance and not the safety criteria contributing to the formulation of international agreements, I think it is justifiable. The Czech Republic, Hungary, Slovenia, Romania, Finland and Germany are excluded for the same reasons.⁵⁵

⁵⁵ While the Czechs have incurred sizable costs and considerable international opposition regarding their hybrid-Temelin reactor, a nearly-finished V.V.E.R. 1000 Soviet reactor that underwent a core redesign to make it more compatible with Western technology, neither Temelin nor the 2nd generation Dukovany plant have been subject to early closure commitments. The same holds for the Paks plant in Hungary. Slovenia and Romania relied heavily on Western design assistance eliminating the need for early closure, and most of the safety work done in Finland came under the Finns own initiative. Thus, none of them have entered into early closure agreements. Additionally, I could also have included Germany as another European case given its recent decision to “go green” and even close the country's safe Western reactors. The process of reunification would also be a fertile ground for analysis of the rules of the game. However, Germany's status as a

I could have included other countries from different regions that either operate Soviet-designed reactors or have received considerable Soviet/Russian assistance in the construction and operation of their own plants.⁵⁶ India and China are two excellent cases that might produce interesting comparisons in the future. I excluded them because they have not followed the same timeline of transition as the Eastern European and former Soviet countries, they do exhibit significant variations in stability, nor are they party to any early closure agreements.⁵⁷ Similarly, I left Iran out of the study since Bushehr is still under construction.⁵⁸

Layout of the Dissertation

Following this introductory chapter, chapters 2 and 3 address Slovakia and Bulgaria. Elites in both of these countries have strongly resisted demands to close down their reactors. While both seek E.U. membership, Slovakia has recently been invited into the candidate club by agreeing to comply with their early closure commitments. This is

member of the E.U. at the time of its decision to close its few Soviet-designed reactors creates different costs and benefits, and it also never entered into an early closure agreement.

⁵⁶ Kazakhstan could have been included as an interesting case of stable rules in an authoritarian system, but its Aktau nuclear reactor does not fit into the same category as the facilities under consideration in the study. There were very low immediate costs to shutting down the reactor since it only provided power for a desalination plant that was easily converted to fossil-produced electricity. Kazakhstan also does not possess comparable potential for long-term benefits from compliance, as do the other countries. Therefore, while interesting in its own right, it does not meet the criteria for inclusion.

⁵⁷ Again, I am referencing specific policies or political alignments, rather the larger issue of rules of the game that overshadow those specific issues.

⁵⁸ Cuba's Jagura plant also does not qualify since it was never completed, nor are there any plans to continue construction.

interesting because Slovak elites consider these plants safe and vital to the economy. In contrast, Bulgaria continues to exhibit lower levels of compliance than Slovakia, and recently Bulgarian President Purvanov even claimed that to comply with the shutdown commitment would lead his country to lose its tenuous hold on democracy. Both show a strong connection between stability and compliance.

Chapters 4 and 5 look at two countries heavily dependent on nuclear power. Armenia and Lithuania both rely almost exclusively on their nuclear facilities for domestic electricity needs, and therefore, face considerable costs in closing their reactors. Despite those costs, both entered into early closure agreements and took steps to fulfill them. The Ignalina (Lithuania) and Metzamor (Armenia) plants have serious design deficiencies making them clear targets for early shutdown. Metzamor is situated on an active seismic fault, and Lithuania is the world's largest R.B.M.K. reactor – the same kind as Chernobyl – operating without a containment structure needed to prevent a catastrophic release of radioactive material. Both countries have been offered long-term benefits for compliance and Lithuania's entrance into the E.U. membership seems assured. In comparison, Western governments have offered Armenia diplomatic assistance in resolving the Nagorno-Karabakh crisis and considerable infrastructural assistance to resolve its energy supply problems. However, while the stability of the rules of the game in Lithuania has been high since its entrance into several nuclear safety agreements, Armenian compliance seemed to be improving only to decline after the forced resignation of the president and later assassination of the prime minister. While the rules have stabilized in Armenia since then, compliance has not rebounded. Chapter

4 explains the situation in detail.

The 6th chapter focuses on the original source of Western safety assistance. Ukraine has been central to the focus of nuclear safety discussions since the explosion in Chernobyl's number four reactor seventeen years ago. Throughout most of the country's post-Soviet period compliance has been problematic, and the rules of the game in Ukraine have been broadly contested. Unfortunately, there are few signs they will stabilize in the near future. Ukraine depends heavily on nuclear power to meet domestic electricity needs and decrease its dependence on Russian oil and gas. However, Chernobyl accounted for only a small percentage of the country's generating capacity. That dependence factored into Ukrainian elite framing of compliance costs and benefits, but chapter 6 demonstrates that political uncertainty had a larger impact on compliance behavior. Despite widespread resistance among Ukraine's political elites to closing Chernobyl, by December 2000 the government had no other choice but to comply with the closure deadline. Serious technical problems prohibited the reactor's continued operation. Conditions had degraded too severely to fix the myriad problems facing the stricken plant. While Ukrainian elites did not want to close Chernobyl, they simply had no other option.

Finally, the conclusion reviews the results from each empirical chapter and presents implications for the field of political science and policy-makers in general. Aside from adding to the theoretical debate between rational choice and normative approaches, this project effectively engages the larger international collaboration literature by explaining how previously under-examined domestic factors have significant

impact on elites' handling of their international commitments. With the introduction of elite risk framing, the project can also help Western officials more accurately focus their assistance projects. The model and conclusions presented in this dissertation provide important implications for ensuring the safety of nuclear power plants in Eastern Europe and the former Soviet Union for the foreseeable future.

Chapter 2 - Slovakia

“The problem with Meciar was that he behaved arrogantly with people. He couldn’t play the game. That was stupid.” – former senior Slovak government official, September 2002⁵⁹

“After Meciar, E.U. membership was the first priority for the Slovak government. I was only given ten minutes to present on the safety of Bohunice, and I had to fight to even get invited to the meeting with the E.U. It was a political decision not based on safety.” – Miroslav Lipar, former chairman Slovak Nuclear Regulatory Authority (1997-2001), September 2002

Introduction

The fall of 1999 was a banner season for nuclear safety. In late September, Slovakia agreed to shut two of its oldest and most unsafe reactors by 2006 and 2008, two years earlier than their respective 30-year design lifetimes. The decision came after the state utility had invested several hundred million dollars to enable the plants to run at least until the early 2010’s. The commitment to shut down the reactors represented a previously unattained level of compliance of a 1993 E.B.R.D. Grant Agreement requiring early closure in the 1990’s.

A few months before the landmark decision, Vladimir Meciar was soundly defeated in the May 1999 presidential elections. Meciar was the catalyst for Slovakia’s political instability since the “Velvet Divorce” from the Czech Republic in 1993. His party, the Movement for Democratic Slovakia (M.D.S.) had won the 1998 parliamentary

⁵⁹ The official requested that I not mention his name. He may have felt free enough to make such a statement in private given the improved political stability in Slovakia, but Vladimir Meciar still remains a potentially dangerous figure in his country, one known to

election but had been unable to attract enough coalition partners to form a ruling government. When opposition parties took over in late 1998, the country began a steady movement away from the previous five years of political uncertainty. Those early years of independence had been characterized by both formal instability between the various branches of government, and arbitrariness in the informal practice of politics. Stable governance, however, did not happen over-night with a change in the government's political agendas and foreign policies. The process took time, but reached a tipping point after Rudolf Schuster's victory in the May 1999 presidential race significantly reduced the threat of Meciar's return. This chapter makes the case that rather than place the onus on a single actor or policy program, the larger issue of rules stability determined the level of compliance with Slovakia's nuclear safety commitments. As the rules gradually stabilized, so too did compliance as elites became more willing to pursue the long-term benefits of compliance even at considerable short-term costs. I will show three periods of incremental progress in rules stability – both types – and compliance, in each case indicating 1) the predictability of power transfer mechanisms, 2) the clarity of the differentiation of delegated political power between groups in the political system, and 3) the absence of challenges to said delegation.

Rules of the Game

The Slovak Republic came into existence in January 1993 after the Velvet Divorce separation from the Czech Republic. Throughout the remaining decade

“disappear” opponents who publicly speak out against him.

competition between rival politicians unwilling to abide by the formal rules of the game raised questions about the progress of democratization in Slovakia.⁶⁰ Unlike the comparatively docile Czech Republic, Slovakia retained the more typically “eastern” strongman determined to run the game his way regardless of precedent or prescribed patterns of governance.

From the earliest days of *glasnost* and *perestroika*, Vladimir Meciar dominated Slovak politics. Party chief for M.D.S., Meciar was instrumental in pushing forward the independence movement, even when the general public was less than enthusiastic. In the 1992 elections leading up to the breakup of Czechoslovak federation, M.D.S. gained a plurality of the vote largely due to Meciar’s assurances that the transition to a market economy would take into consideration the vital role of state involvement in the economy, something the Czechs largely rejected. As an example of this, Meciar stopped privatization in its tracks despite considerable progress towards marketization of Slovakia’s economy. After his first, brief ouster from power in March 1994 and the subsequent government reintroduced coupon privatization. Once Meciar returned, he invalidated all sales, even those to foreign investors.⁶¹ Considerable effort and “sunk

⁶⁰ Freedom House “Freedom Report” and *Nations in Transit* studies show slow progress during the first five years of Slovakian independence. Those same five years coincide with the rule of Vladimir Meciar and his assault on the constitution and its prescribed division of political powers. Once he was removed from office improvements followed but not overnight and not completely in all areas. In the last few years however, the rules of the game in Slovakia have become sufficiently entrenched and defended by political elites that the European Union has agreed to let the country into the candidate group.

⁶¹ Sharon Wolchik, “Democratization and Political Participation in Slovakia,” in Karen Dawisha and Bruce Parrott, eds., *The Consolidation of Democracy in East-Central Europe* (New York: Cambridge University Press, 1997), p218.

costs” had gone into early privatization programs, and Meciar arbitrarily disregarded them. Capriciousness became a hallmark of his time in power. His personal appeal to average working-class Slovaks to ensure their economic well-being engendered an individualistic policy making style that conflicted with nascent democratic rules and institutions. His personalized politics only added fuel to the growing conflict between competing elites for the course of Slovakia’s political development.

To some degree the constitution defined the course of progress, but the formal rules of the game were problematic from the start. According to the Slovak constitution, the National Council (Narodna Rada Slovenskej Republiky) is the center of legislative policy making. However, the formalized rules in the constitution established an unclear division of political authority, thus “creating the preconditions for unstable governments in general.”⁶² These formal rules have also been at odds with “informal rules developed since 1994 [which] allowed the cabinet to take effective control of governance... These informal rules have expanded to include practices at variance with the constitution [and have] impeded the institutionalization of formal rules and undermined the constitutional government.”⁶³

The constitution gives total governing power to the political majority in Parliament; the government largely determines cabinet positions and controls the

⁶² Darina Malova, “Slovakia: From the Ambiguous Constitution to the Dominance of Informal Rules,” in Jan Zielonka, *Democratic Consolidation in Eastern Europe: Institutional Engineering, Vol. 1* (New York: Oxford University Press, 2001), p370.

⁶³ Ibid., p374. “In spring 1997 the deputy prime minister for legislation said that the high proportion of unconstitutional bills does not mean the cabinet neglects the legal system, but rather it seeks ‘unusual ways in decision-making.’ [Ibid]

legislative process given its position as representative of the ruling party majority. Parliamentary opposition and the president have very limited influence.⁶⁴ Slovakia would be an interesting case for testing Linz's conclusions about the benefits of parliamentarianism.⁶⁵ Rather than delve into that debate at this time the central issues at hand remain the broader rules of the game. Throughout his time in office and the time leading up to Meciar's defeat in the 1999 presidential election, the rules of the game have been repeatedly challenged by the prime minister, his cabinet, and opposition groups within parliament. Uncertainty has resulted not from authoritarianism per se, but rather elite conflict over the formal and informal rules of the game. So while "the most outspoken advocate of change was the former Prime Minister Meciar... alternative institutional structures were frequently proposed"⁶⁶ by his opponents as well.

Formally the prime minister is the *de jure* head of government, and while in office Meciar was clearly the unrivaled *de facto* ruler of the country. Even so, the president still retains a central role in governing the country. Taking full measure of the authority at his disposal, President Michal Kovac was the proverbial thorn in Meciar's side. While Kovac originally ran on the M.D.S. ticket, and thus had Meciar's initial support, he soon proved himself to be fiercely resilient to the prime minister's regular attacks on the

⁶⁴ Initial presidential powers included the ability to call for early elections and appoint high-ranking national security officials. These became the battleground between President Kovac and Prime Minister Meciar during their terms in office.

⁶⁵ Juan Linz, "The Perils of Presidentialism," *Journal of Democracy* Vol 1 #1 (Winter 1990): 51-69.

⁶⁶ Malova, p374. She cites several examples of this some of which are included in this chapter.

presidency. What is more, like Meciar, he too operated under generally uncertain constitutional provisions, which formally codified a separation of governing powers but failed to establish clear mechanisms for resolving disputes between the government and the president. The constitution itself need not bare the brunt of the blame; the political elites themselves contributed greatly to the underlying and overpowering instability that defined the times. The lack of a clear differentiation of delegated authority was compounded by a lack of consensus about that delegation.

The conflict between President Kovac and Prime Minister Meciar began early after independence. In 1993 Meciar started to dismiss cabinet ministers and ambassadors who resisted him.⁶⁷ Whether they were initially loyal to him or not, Meciar began to clean house based on his own personal whims. Article 116.4 of the constitution gave the prime minister the power to put forth a motion to that end, but not to carry it out himself. In what would become a long-standing practice President Kovac petitioned the constitutional court to reign in Meciar. The court ruled that only the president has dismissal authority; the prime minister can merely propose such action to the president. Structurally, the problem originated in unclear constitutional provisions that failed to adequately delineate the president's power from that of the government. That uncertainty enabled him to express his lust for power through the structures of government. In the process, Meciar's growing megalomania also made the processes of governance very unstable. Yet Meciar was not alone in destabilizing the rules of the game. Those opposed to him also used whatever means at their disposal to challenge the prime

⁶⁷ Ibid., p361-2.

minister, sometimes with unconstitutional and arbitrary legislation. The combined effect was to introduce a significant level of uncertainty in to the political system.

Trying to resolve the situation by removing the troublemaker, Kovac went after Meciar in March 1994 by calling for and winning a no-confidence vote. The tactic worked in the short-term, but did not remove Meciar from political contention. M.D.S. won a considerable victory in the ensuing parliamentary elections six months later. Two months after that, Meciar was back in office, but as in his early government, without a constitutional majority to pass amendments designed to strip the president of his legal authority and power.⁶⁸ Stymied by the formal provision, Meciar used extra-constitutional tactics to change the situation. He called for a no-confidence vote in Kovac in May 1995, even though it possessed no legally binding force, a fact that the constitution court affirmed the following November. Unrelenting, Meciar savagely cut the president's budget and tried to strip him of key appointment powers, first by taking away his ability to appoint the head of the Slovak Intelligence Service (S.I.S.), then transferring the president's power to designate the army chief of staff to the cabinet instead. The constitutional court ruled in November 1996 that while the first move was constitutional, the second was not. Even this decision was not perfectly in line with the constitution. Article 102 gives the president the power to appoint and dismiss high-ranking officials, of which the S.I.S. director is an example.⁶⁹

⁶⁸ Three-fifths majority is needed to amend the constitution and under the original constitutional provision, elect the president.

⁶⁹ Ibid., p364.

In addition to “those actions which violate the spirit of the democratic political life but are not strictly illegal, political institutions and actors controlled by or affiliated to the government have [also] been associated with politically motivated violence in a number of cases since the 1994 elections.”⁷⁰ The clearest example was the kidnapping of President Kovac’s son. “Unknown” assailants grabbed up the boy, got him drunk and took him to Austria. While some may consider that a typical college vacation, the president was not amused and the young man suffered considerable injuries in the process.⁷¹ No one was beguiled into thinking it was a random act. “The timing and style of the act, as well as the reactions of constitutional representatives and the course of the investigation, indicate that the abduction was politically motivated.”⁷² S.I.S. chief Ivan Lexa stood out as the ringleader, most likely under Meciar’s personal direction.

Meciar’s efforts were not limited to trying to usurp presidential authority, although he seemed to take particular delight in it. M. Stephen Fish [1999] cites an example of this when Meciar ordered a huge clock to be constructed within clear sight of President Kovac’s office. Rather than actually keep time, and thus provide at least a marginal benefit to the local citizenry, the time was set to run backwards counting down the days of Kovac’s term. Even this was done arbitrarily. The time was not set to the

⁷⁰ Wolchik, p231.

⁷¹ I do not mean to marginalize the violence of the incident or the trauma caused by the abduction. My point is simply to state that while Meciar may have crossed some lines by taking Kovac’s son, he remained within other important boundaries by not permanently disabling the young man, or worse. Again, the incident indicates more of Meciar’s destabilizing practices than a murderous level of political violence.

⁷² Martin Butora and Zora Butorova, “Slovakia’s democratic awakening” *Journal of Democracy* 10, 1 (January 1999), p97.

days left as determined by the constitution, which measured the time from when the president took office. Instead, Meciar had it set to the time from his election date. “Meciar insisted – in contradiction to the law – that Kovac must step down on the earlier date, even though the difference in time was trivial and made no difference whatsoever in substantive political terms. The clock served as a constant reminder to Kovac and all of Bratislava that Meciar’s whims soared above the law, and Meciar indignantly refused to restore the timepiece to its proper function even when opposition deputies challenged his antics in parliament.”⁷³

Parliament was another venue in which Meciar and his cronies in M.D.S. continually tried to change the rules of the game, producing endemic uncertainty about the processes of governance in Slovakia. Shortly after the September-October 1994 elections Meciar tried and failed to remove the election mandates of fifteen Democratic Union officials after they switched party platforms. If successful this would have given M.D.S. a constitutional majority, something Meciar had long coveted. M.D.S. petitioned the constitutional court to that end, but the court eventually denied their request. In response, Meciar ordered Interior Minister Ludovit Hudek to “investigate” every signatory on D.U.’s original petition to participate in the election. This too failed as over 10,000 people came forward and confirmed their support for the opposition party.⁷⁴

While these overt attacks on his political opponents ultimately failed, he also tried

⁷³ Fish, “The End of Meciarism.” *East European Constitutional Review* Vol 8 #1/2 (Winter/Spring), 1999.

⁷⁴ Malova, p375.

to introduce what could be labeled party discipline, at least in the sense that dissenters were punished if they left the party. Election laws do not clearly mandate strong adherence to the “party line”, so informally Meciar and M.D.S. tried to strengthen obedience by forcing elected members to sign a preemptory letter of resignation in case they ever voted against the party, or more precisely, against Meciar. Frantisek Gaulieder did just that in December 1996, but his gamble did not pay off as the party leadership simply filled in the date on his resignation letter and sent it to the Parliamentary Immunity and Mandate Committee. Trying to forestall the inevitable, Gaulieder also sent letters saying he had no intention of resigning. His house was subsequently bombed.⁷⁵ Again, as has been the case in so many instances in Slovak politics since 1993, the constitutional court was called upon to help define the rules of the game, this time the processes by which ruling parties resolved internal dissent. And as has been equally common, its decisions in July 1997 did very little to resolve the uncertainty and arbitrariness of governance under Meciar.⁷⁶ The court agreed with Gaulieder saying that Parliament (controlled by M.D.S.) had violated his constitutional rights, but even with that concession, the former M.P. could not return to duty until the legislature reversed its decision; the court did not have that kind of authority. Several times opposition parties tried to resolve the issue, but each time the ruling parties vetoed or simply boycotted the

⁷⁵ Ibid., p359.

⁷⁶ For other examples see *East European Constitutional Review* Vol. 6 #2,3 (Spring, Summer) 1997, Vol. 8, #4 (Fall) 1999, Vol. 9 #1,2 (Winter, Spring) 2000. I do not mean to impugn the court or the validity of its decisions. Rather, I mention these cases to show that the rules of the game remained undetermined even by those assigned to ensure their clear observance.

proceedings by walking out of parliament. This quorum busting further destabilized the informal rules of the game by making governance even more difficult.⁷⁷

Electoral laws also remained in flux during Meciar's reign, and have only recently become more stable with the re-election of the anti-Meciar bloc. M.D.S. and its coalition partners "constantly attempted to change the rules in order to improve their chances of remaining in parliament."⁷⁸ Under Meciar's direction, Parliament voted in March 1996 to redistrict the entire country to form a single administrative unit. This gave Meciar and M.D.S. two powerful advantages: it enabled charismatic leaders to capitalize on their support throughout the country rather than have it squandered in a few localities. It also gave more power to the Ministry of the Interior by reducing the Central Electoral Commission's ability to ensure free and fair elections. Arbitrary changes in election laws and ministerial responsibilities kept politicians guessing about the actual processes by which the country was to be governed.

In another obvious attempt to change the situation in his favor, in May 1998 Meciar and M.D.S. pushed through a law that forced smaller parties to coalesce into larger single parties or be forbidden to compete in the general elections. While the tactic

⁷⁷ The case of Emil Spisak is another example of the persistent uncertainty about the rules of the game. Spisak was denied his legitimate place in parliament after Bartolomej Kunc died and his party refused to give Spisak, the next name on the party list, the spot since he had allegedly betrayed the party earlier in his career. The constitutional court ruled that Spisak's rights had been violated but it could not compel parliament to give him the seat, as with the Gaulidier case, since only Parliament can retract its own decisions. The key is that all groups have operated under unstable rules even when those rules have been formally institutionalized in law and court precedence.

⁷⁸ Malova, p353.

did not produce the electoral results Meciar wanted, it did lead to an even greater sense of instability in the political rules as party officials scrambled to redefine their platforms and the electorate struggled to keep up with the changes.

It would be a mistake to assign blame to single person or group for the instability in the rules of the game. “Rather, both the functioning of political parties and the conflictual nature of politics reflected deeper social and attitudinal cleavages, as well as the impact of the transition within the electorate, and the lack of consensus on political values and the rules of the game among the members of the political elite.”⁷⁹ Thus it “is quite evident that the government coalition and the opposition hold fundamentally opposing views and interpretations of democracy and constitutionalism, and that there is a lack of dialogue between them.”⁸⁰

Meciar’s personal style and *modus operandi* can accurately be classified as confrontational and arbitrary, even quasi-authoritarian, and his attempts to consolidate patrimonial power took place under the conditions of what he hoped would become merely façade democracy, and not the real thing. His personal political style prevented him from building and maintaining any type of broad-based lasting political consensus, and eventually brought him into conflict with some of his former allies, but he was never able to destroy democracy outright, even if that had been his intention.⁸¹ Prior to the 1998 general elections, “Slovakia was governed by a coalition of misanthropes and

⁷⁹ Wolchik, p236.

⁸⁰ Butora, p96.

⁸¹ Ibid.

harlequins, headed by a politically wily but mentally unbalanced prime minister.

Vladimir Meciar established a regime based on thuggery, incompetence and contempt for the law.”⁸² In doing so, Meciar pushed for personalized, and therefore “de-ideologized” politics.⁸³ This affected more than his cronies as opposition groups banded against Meciar, and in the process setting aside policy differences to achieve their common goal – remove Meciar and bring order to the political system. As shown later, the lasting effects of Meciar’s capriciousness would come to haunt him in both the 1998 and 2002 parliamentary elections. He had angered so many politicians that even though M.D.S. won the election, too few parties would willingly submit to his leadership. This allowed the democratic opposition to form a broad based coalition government designed to keep Meciar out of power.

While in power, Meciar arbitrarily replaced competent bureaucratic and party officials with unqualified lackeys. Anyone with “triple-digit IQ’s” was a threat to Meciar.⁸⁴ When these loyal ministers were questioned by opposition members during open parliamentary debates, their ineptitude “was often excruciatingly evident. The prime minister would rise from his seat, elbow the befuddled minister under questioning away from the podium, and declare that he would tackle the query himself, demonstrating that only he was capable of shouldering the weighty task. This reduction of even top government officials to a cadre of hapless lapdogs suited Meciar perfectly, underscoring

⁸² Fish, *ibid.*

⁸³ *Ibid.*

⁸⁴ *Ibid.*

his indispensability and superiority.”⁸⁵ All of this contributed to the destabilization of formal rules institutionalized in the constitution and law. Frantisek Sebej, “a leading liberal intellectual,” noted that even the communists had rules they followed; not so with Meciar.⁸⁶ His “utter contempt for regular procedures, norms and rules was not limited to the realm of coercion and control. It was the defining characteristic of his whole style of rules. Meciar reveled in arbitrariness and in breaking even those laws that he had made, or earlier acquiesced to, himself. There was an almost anarchical abandon in the manner in which he flouted and undermined established procedures, which he himself had established, as well as simple norms of decency.”⁸⁷

A clear example of this occurred when opposition parties sponsored a proposal for a public referendum on direct presidential elections. At the time, the constitution stipulated that parliament appointed the president, but in December 1996 the opposition called for a referendum to change the constitution and allow popular election instead.⁸⁸ Meciar refused to allow the referendum pointing out that the constitution does not

⁸⁵ Ibid.

⁸⁶ Ibid.

⁸⁷ Ibid.

⁸⁸ Both opposition and governing parties wanted most of all to obtain a three-fifths majority to force a constitutional amendment that would have rendered referenda unnecessary. Under Meciar, the method of power transfer established in the constitution had been challenged by the threat of referenda. Yet even the use of public input outside the election cycle remained unstable as both the president and the constitutional court continued to present unclear decisions regarding the legality of popular plebiscites. After opposition parties gained control of parliament and the government, subsequent M.D.S. threats have been troubling but not destabilizing due to their inability to approve the necessary legislation authorizing such a move. A petition drive to call for early elections in early 2000 is an example of such a muted threat. The government opposed the move,

specifically allow for popular plebiscites to change the constitution. The opposition countered that the constitution locates the real power to govern with the citizenry, thus making referenda a legal form for constitutional change.⁸⁹ Both appealed to the constitutional court, which ruled in May 1997 that the referendum was legal but the wording of the ballot question was not. As a result, “the government took the opportunity provided by the court’s unclear decision to delete the question on direct presidential elections from ballots, and issued ballot papers with only the three questions about NATO membership. Most voters refused to vote when presented with a ballot of only three questions.”⁹⁰ Low turnout also invalidated the results.

Parliamentary opposition groups and the President countered Meciar and maintained that the court had instead legitimated their argument that the referendum itself was legal. Kovac called for a new referendum in April, but this too was cancelled when Meciar preempted it by assuming some of Kovac’s presidential powers. “This decision further intensified institutional and political conflicts, as it was unclear whether he had the authority to do so.”⁹¹ The fact that both sides continued to use the court as both an arbiter for political conflict, as well as the final constitutional authority could have been a stabilizing factor in Slovakia. Regrettably however, the fact that the court’s rulings were often interpreted with such contrasting meanings shows the rules defining the method of power transfer were unpredictable and open for challenge. The rules remained unstable

the president petitioned the constitutional court, and the court said it could not intervene.

⁸⁹ Article 2.1

⁹⁰ Malova, p367.

despite the court's best efforts.

The same power transfer mechanism was also challenged informally when for six months in 1998 Parliament tried and failed to elect a new president. Each time, neither side could muster the necessary three-fifths majority. After the fifth time, Meciar simply took over the job. In a symbolic act to show his “unrivaled supremacy over the country’s political life”⁹² he announced that his cabinet would meet in the building of the presidency from that day forward. Each parliamentary attempt took place within the structural context defined in the constitution – in parliament with a necessary three-fifths majority, but the actual process of determining who would govern from the President’s office was very uncertain due to Meciar’s illegal maneuvering.

Eventually the election of a new president “resolved” the situation. However the change took place only after opposition parties had gained a constitutional majority in Parliament after the September 1998 elections. The presidential election the following May removed Meciar from power altogether when he lost by a decisive margin to the Democratic Coalition candidate Rudolf Schuster. However, before that momentous event Meciar remained a catalyst for instability. As a further sign of his disregard for the rules of the game, shortly before to the parliamentary election Meciar tried to use his previously usurped presidential power to grant immunity to Ivan Lexa to guarantee his protection from prosecution for his reported involvement in the kidnapping of Kovac’s son in 1995. He tried the same for Gustav Krajci, the former Interior Minister who

⁹¹ Ibid.

⁹² *East European Constitutional Review* vol7, #1, (Winter) 1998

single-handedly destroyed the previous referendum on direct presidential elections.⁹³ In both cases, the new opposition-led parliament revoked the miscreants' immunity. Yet Meciar was not alone in challenging the rules of the game; the constitutional court ruled that such parliamentary action was in violation of the constitution. Showing that instability was not a result of one person or group alone, but rather systemic across the political system, "officially nobody from the government or the Parliament has declared that the court's decisions should not be obeyed. In some controversial cases, though, the government has delayed the implementation of or simply ignored the court's rulings."⁹⁴

In another example of anti-Meciar groups contesting the delegation of power to groups in the political system, in this case informal divisions of power, the newly-installed Dzurinda government fined Meciar for failing to answer certain questions about the two officials, prompting him to say that he would go on a hunger strike if Parliament tried to take away his oath of silence. The law considers the oath inviolable, but that fact did not stop Meciar's enemies from threatening the former prime minister. At best, both sides continued to appeal to the same set of laws, but with diametrically opposed meanings attached to their pronouncements. At worst, they simply ignored them to get at their rivals.⁹⁵

⁹³ Kracji personally ordered all the ballots with the original four questions dealing with NATO membership and presidential elections to be swapped for ones that only had the three-questions ballots dealing with NATO. See *East European Constitutional Review* Vol 6 #2,3 (Spring, Summer) 1997.

⁹⁴ Butora, p98.

⁹⁵ Opposition efforts to test the boundaries of Meciar's power were not as severe as the Prime Minister's actions to change the system in his favor. The fact that they did it at all

Mikulas Dzurinda's opposition-led government has attempted to bring Slovakian politics out of this vicious cycle, but Meciar's legacy loomed large until the government was given a modicum of peace after his defeat in May 1999. However, that threat has never disappeared entirely as seen in M.D.S.'s attempts to call for early elections in 2000, without a legal basis and in contravention of the constitution, and in M.D.S.' election victory in September 2002, when it once again gained the most seats in parliament. A good sign of elite willingness to move beyond Meciar and his debilitating antics was the fact that a majority of parliamentary parties banded against M.D.S. rather than give Meciar another chance in power.

The threat remains, but it has been minimized. He could easily reintroduce serious changes to government procedures and structural rules if he regains the prime minister's chair or wins the presidency must be considered a latent destabilizing effect. Yet for the moment, Meciar remains an ineffectual figure with little real power to challenge the rules of the game. His only potential influence rests with popular opinion. However, as long as the current parliamentary coalition remains cohesive, M.D.S. will not be able to call for early elections, and referenda will merely signal public protest rather than an attempt to change the current configuration of political power.

The ruling coalition has been able to operate under stable rules of the game since May 1999, and has concurrently pursued the benefits of integration with the West. Issues of unclear delegations of power and power transfer mechanisms have been resolved with widespread support under Dzurinda, and without constant challenges from Meciar as long

gives credence to the emphasis of rules effects.

as he remains institutionally marginalized, stability has become the rule rather than the exception. Similarly, informal rules have also stabilized without the rampant personalization of politics under Meciar's rule and from those united against him. Regular, constructive policy debates within stable government structures and according to stable procedures now characterize Slovakian politics. This stands in contrast to the period under Meciar, and to a lesser degree the intervening period from September 1998 until May 1999. Political actors have been able to reliably count on continuity in the day-to-day practice of politics⁹⁶ as the Dzurinda / anti-Meciar government continues to take the necessary steps to stabilize Slovakian rules of the game.⁹⁷

Consequently, even though Meciar remains a potential threat, that threat appears to be deferred until the next election. By then the sunk costs of bringing Slovakia further into Europe can offer an additional barrier to Meciar if he attempts to reintroduce instability to the rules of the game. Therefore, I believe it is possible to delineate the rules of the game into three periods of increasing stability: low stability from the beginning of independence in 1993 until M.D.S.'s defeat in the September 1998 parliamentary elections, medium stability as pro-constitution/anti-Meciar elites gained control of the political system but were still under threat of Meciar's arbitrary rule

⁹⁶ While it is also possible to ascribe increasing certainty to a change in government alone, that change brought with it more than a pro-Western policy shift. The new government also emphasizes the legal framework and democratic political behavior necessary for integration, not just piecemeal cooperation as under Meciar.

⁹⁷ Bringing national legislation in-line with E.U. requirements has been the most obvious attempt. Minority rights, judicial independence, private property rights, and compliance with nuclear safety commitments show the increasing harmony of elite behavior concerning both political goals and how to achieve them.

leading up to the May 1999 presidential election. During this period, any reasonable political actor could assume that Meciar would use that institutional base to continue his assault on the formal structures of government, and destabilize the processes of governing the country. His defeat removed that threat and ushered in a new period of uncontested stability in the rules of the game (high stability). From that time until the present, the threat of Meciar's return continues to diminish with every election cycle. His threat is as a potential catalyst for instability. However, without any real political power to change the system now or the immediate future, the rules of the game remain highly stable and impervious to Meciar. This progressive movement towards increasing stability has coincided with decisions regarding compliance with nuclear safety agreements.

Compliance

In 1993 Slovakia and the European Bank for Reconstruction and Development agreed to nearly \$600 million in loans and credits to fund completion of two nuclear reactors. As a provision of that agreement, Slovakia committed to close its oldest reactors sometime in the next few years. This commitment, along with signature of the 1994 Convention on Nuclear Safety, became the baseline for measurements of Slovakian compliance over the following decade. A similar pledge was also made to the European Commission as a means of securing entry into the E.U. candidates group.⁹⁸ Yet even as early as the following fall, it became increasingly clear that Slovakia would not keep its

⁹⁸ These commitments establish the three levels of compliance: safety modifications alone (low), modifications plus regulatory sufficiency (medium), and finally, the former two combined with early closure (high).

end of the bargain. Over the next six years this issue would become a central dilemma for Western and Slovak officials alike.

Currently, Slovakia operates six nuclear reactors: four at Bohunice and two recently completed units at Mochovce. All are V.V.E.R. units that use a pressurized water design to maintain and control the fission reaction. The V.V.E.R. has certain design similarities to Western plants, but the biggest difference between them is the lack of a solid containment structure in the older models.⁹⁹ Two such units operate at Bohunice (440-230's), while the other two Bohunice and both units at Mochovce plants are the newer V.V.E.R. 440-213's. Two principal differences distinguish the 230's and the 213's. The first refers to the size of pipe rupture the reactor can withstand in the event of a loss-of-coolant-accident (L.O.C.A.). Despite smaller rupture figures, the 213's are somewhat "safer" than the 230's due to higher quality components and safety redundancies. The second is that 230's have a bubbler condenser tower to act as a *confinement* system to reduce the potential of a catastrophic radiation leak into the atmosphere. However, it still lacks a containment structure should all other safety systems fail.

When the Soviet Union and Slovakia first planned to build a nuclear power plant at Bohunice in 1978, the Russian team decided that the 213 model was too expensive so they "convinced" the Slovaks to build the cheaper, less safe 230 reactor. From the beginning of construction though, the Slovak ministry of atomic energy and nuclear plant

⁹⁹ The newer V.V.E.R. 1000 has a containment structure, and is considered "more safe" than its predecessors.

engineers endeavored to compensate for the plant's design weaknesses. One thing both Jozef Misak and Miroslav Lipar, former chairmen of the Slovak Nuclear Regulatory Authority, were very proud of was the fact that their plants are not like other V.V.E.R. 230's due to the extensive safety modifications built into the plants throughout their operating lives.¹⁰⁰ They explained that immediately after startup of Bohunice the plant began safety upgrades. Then, in 1986, the Soviet Ministry of Atomic Energy sent a letter requiring an additional set of modifications. Chernobyl had forced the design problems out into the open, so safety work accelerated through 1989. After the collapse of the Soviet Union, Slovakia began a "Small Reconstruction" at Bohunice in 1991 while still a part of the Czechoslovak federation. A "Major Reconstruction" began in 1995 to make the units comparable to nuclear power plants in the West, and was completed in 2000.

To understand Slovakia's compliance with international agreements, it is first helpful to differentiate its nuclear power plants into their three component parts. Bohunice units 1-2 are collectively referred to as V1, while Bohunice 3-4 (the "safer" 213 model) is known as V2. Mochovce 1-2, also model 213's, are currently operational but plans to complete the other two half-finished units 3-4 are still unresolved. V1 falls into the category of "first-generation" Soviet reactors, which according to a G-7 decision in 1992 meant "non-upgradable" to a safety level commensurate to Western reactors. The G-7 decision continued that model 213's should only be upgraded if they could meet strict least-cost criteria. As a result, Western officials pressed for early closure of Bohunice V1 from the earliest days of the new Slovak Republic, and had serious doubts

¹⁰⁰ Interviews at I.A.E.A. 46th General Conference, September 16-20, 2002.

about Slovakia's ability to upgrade V2 and Mochovce 1-2 given the high costs involved.

More than any other nuclear power plant in Eastern Europe or the former Soviet Union, Bohunice V1 has been caught between competing concepts of safety. While the I.A.E.A. has consistently given both units a favorable safety rating,¹⁰¹ as did some Western experts after the major reconstruction achieved marked success in upgrading certain safety features,¹⁰² Western governments have maintained the position stated in 1992 that the plants can never be upgraded to a safe level.¹⁰³ Again, the principal reasons for such condemnation are the lack of a containment structure, and doubts about the strength of pressure valves that could burst with the sudden inflow of cold water used in the event of a core accident.

V2 has been slightly less controversial than V1 in that the West was initially willing to evaluate the possibility of continued operation. Mochovce has also generated a fair share of rancor between Slovakia and E.U. member states. In particular, Austria, the perennial bane to all eastern European countries unlucky enough to operate Soviet-

¹⁰¹ A recent example was the "Report of the Review of Results of the Gradual Upgrading at Bohunice V.V.E.R. 440/230 N.P.P. Units 1 and 2, November 19-24, 2000" done by the Expert Mission of the I.A.E.A. Technical Cooperation Project, Document RER/9/046.

¹⁰² Notably the Western European Nuclear Regulators Association (W.E.N.R.A.) in their October 2000 report on "Nuclear Safety in E.U. Candidate Countries."

¹⁰³ Before the Major Reconstruction Western European nuclear industry officials roundly condemned V1 (see *Nucleonics Week* 8/5/93 p1 for an example.) However, as the upgrade work progressed industry opinion fractured between French proponents and German opponents. Whether this had more to do with domestic politics or different safety standards is not the central issue here although it does factor into the discussion as I state later. However the core of this project is the issue of Slovak compliance, not the basis of safety assessments per se.

designed reactors, led the fight to keep Mochovce 1-2 from entering service.¹⁰⁴ While eventually bowing to pressure from its E.U. counterparts,¹⁰⁵ Austria has remained an ardent opponent to all Soviet reactors, especially those that wring its borders.

Austria's complaints result from a strict adherence to the safety criteria established by the G-7 in 1992. That standard is by no means universally accepted, especially in Eastern Europe and the former Soviet Union. Complications in defining universal safety standards result from a lack of consensus on which body has the authority to apply its particular notion to the entire industry. The Euratom charter states the responsibility lies with individual states, while the European Commission bases its decisions on the G-7's containment / no-containment criteria. As a result, no uniform standard exists.¹⁰⁶ Nor do I.A.E.A. guidelines definitively spell out the tipping point beneath which a reactor is unsafe, or once attained, ensures a reactor's safe operation. This dissertation looks at state behavior in relation to international commitments to implement safety upgrades; develop a capable regulatory authority with sufficient resources, autonomy and authority; and close specific reactors within a given timeframe. The legitimacy of standards against which that behavior is based, or even the uniformity

¹⁰⁴ Much the same as with Temelin in the Czech Republic, which underwent a complete core redesign to increase its safety. On both accounts Austria failed to prevent the reactors from coming online.

¹⁰⁵ *Nucleonics Week* 12/16/99 p8.

¹⁰⁶ Carol Kessler told me that this was an important reason why Western pressure failed to force early closures of "unsafe" reactors. My argument emphasizes less the quality of international pressure than the domestic receptivity to those efforts. So even though no one agrees on what "safe" really means, I do not need to explain such variations in order to explain compliance. The crux is commitment, not its scientific legitimacy.

of the standard do not affect the model given the emphasis on compliance rather than safety. Each country signed similar agreements so that even if government officials still contest certain norms implicit in the agreement, they are still bound by the terms of their commitment. As such, it is possible to avoid an already contentious and unresolved issue by exploring compliance, not the relative merits of safety requirements themselves. In that regard, Slovakia has evidenced variations in compliance that correspond to changes in the stability of the political rules of the game.

This study also offers a good marriage of policy studies and theory by establishing causal connections for things policy makers take for granted. As an example, Deputy Assistant Secretary of State Dick Stratford's shared his approach to nuclear safety; it rests on a state's commitment to comply, whether through good-faith overtures or outright signature of a binding agreement. The reasons for compliance successes or failures are secondary if not immaterial. As the chief negotiator for the United States in all things nuclear, his is an interesting and vital perspective. My own theory-based argument helps to ground the larger framework in which compliance takes place.¹⁰⁷

The time under Meciar was problematic from the start. The prime minister had his hands in everything, including nuclear safety. He was not the only one trying to control the nuclear industry, but his position as prime minister gave him considerable power. The limits of that power were regularly tested by his opponents. Even still, one former senior Slovak government official told me that while on the one hand Meciar

supported efforts to upgrade plant safety, on the other he refused to allow independent action by the regulator, part of the conditions for medium compliance. He told me that he “had to take a lot of preparations with documents because [Meciar] would study them. But he wouldn’t accept any discussion at times. He was just issuing his decisions.”¹⁰⁸ The problem was that Meciar’s arbitrariness carried over to the major reconstruction, the goal of which was to increase design and operational safety to such a point that shutdown was no longer necessary and compliance irrelevant. This blatantly contradicted the original 1993 commitment to shut V1 down based on fundamental, irreparable design flaws; no amount of upgrading could obviate that commitment.

The E.B.R.D. Grant Agreement, and subsequent pledge to the European Commission, provided \$600 million in assistance whereby the bank would fund completion of Mochovce 1-2 on the expressed condition that V1 be shut down earlier than its official 30 year design lifetime.¹⁰⁹ As early as September 1994 though, rumblings began spreading west that Slovakia was considering a major upgrade. One E.B.R.D. official said at the time, “What worries me are the reports out of Bratislava of a

¹⁰⁷ Interview, September 17, 2002.

¹⁰⁸ Interview, September 17, 2002.

¹⁰⁹ Miroslav Lipar explained his position, and the I.A.E.A.’s for that matter, is that design lifetimes are an arbitrary number based on the number of times a reactor “trips”. It was assumed by Soviet engineers that this would happen roughly once a year and the reactors were designed to experience 30 trips. Lipar asked me, “What if the reactor only trips once in five years, or ten years? The issue is lifetime management not extension.” He has a point, but it still contradicts the fundamental requirement to shut down reactors that have no solid structure confinement. Operational safety can reduce the possibility of an accident, but without a containment structure, if those measures fail, the release of radioactive material would be considerable. A former senior Slovak government official admitted this to me during an interview in September 2002.

big backfit program for V1. It's obvious that if S.E.P. [the state utility that runs Bohunice and Mochovce] decides to invest \$200 million in Bohunice V1, no one will be convinced that they will shut it down in 1999 or 2000, and nobody on the E.B.R.D. board would believe us if we said so.”¹¹⁰

Whether or not Slovak officials had any initial intention of complying with the agreement is not the issue at hand. The decision was made in 1995 to forgo early decommissioning based on current energy needs and an unwillingness to pay the immediate high costs of shutting down the plant. In March 1995, Meciar clearly stated that he would not shut down V1 without a clear “guarantee that Mochovce 1-2 would be commissioned by then, and that raising electricity rates 25% as the E.B.R.D. demanded would bankrupt most small businesses in the country.”¹¹¹ Meeting with Meciar around the same time, the chairman of the French contracting firm EDF, Gilles Menage, said Meciar was incensed by the West's insistence that Slovakia comply with its commitment to shut V1 as a condition of assistance, and responded “I have decided to finish Mochovce, and I'm asking for resources to do it, not for permission.”¹¹²

Things began to unravel in mid-1995 as Bayernwerk AG and EDF, the principal Western contracting companies working on Mochovce, pulled out due to the “unfavorable political situation.”¹¹³ Reneging on its shutdown commitment to the

¹¹⁰ *Nucleonics Week*, 9/8/94 p13.

¹¹¹ *Nucleonics Week*, 4/6/95 p10.

¹¹² *Nucleonics Week*, 3/3/95 p17.

¹¹³ *Nucleonics Week*, 6/1/95 p4.

E.B.R.D., Meciar's government proceeded with plans to upgrade V1 even though it drew harsh criticism from the West. According to S.E. senior manager, Karol Bodorik, "The E.B.R.D. had no basis for expecting us to shut V1. V1 provides Slovakia a quarter of our electricity. The plants are safe. We are going ahead with this, whether they like it or not."¹¹⁴ Short-term needs trumped long-term perspectives. Ultimately, this led to the E.U.'s decision to pass over Slovakia in the first-round of accession negotiations.

The loss of this long-term benefit coincided with instability in the rules of the game. Challenges to the constitutional structures and arbitrariness in government by Meciar and those opposed to him created uncertainty about long-term planning. As a result, short-term needs and the high costs of compliance overshadowed the potential benefits of E.U. membership in the future. Since the issue is not safety per se,¹¹⁵ but rather a commitment to honor agreement requirements, in this case, compliance was clearly seconded to short-term needs. Those needs were framed by the uncertain domestic rules of the game as Meciar and his opponents jockeyed for power in the political system, often through illegal means.

Compliance was not simply a victim of policy differences though. The problem was much larger due to the continued destabilizing effects of highly contested political practice in Slovakia. Meciar, his cronies, and those opposed to him both suffered under and added to the uncertainty of the times. Even when officials just tried to do their jobs

¹¹⁴ *Nucleonics Week*, 3/7/96 p1.

¹¹⁵ The I.A.E.A. gave numerous favorable reports on the safety status and upgrade program at Bohunice, and Misak and Lipar told me that such reports supported their own evaluations for continuing the upgrade work.

within the structures of government, the practice of governance was highly unstable. In such cases, Meciar would supplant, ridicule, and generally limit their ability to function properly. Those opposed to him often did the same thing. This created uncertainty as to how things would get done and by whom.

Uncertainty about the formal mechanisms of power transfer and unclear differentiation of delegated authority between the government and the president, combined with disagreement about the divisions that existed, made medium and high compliance unlikely. Low compliance was acceptable because it did not cost very much compared to the other two options and met short-term needs. In terms of the informal rules of the game, the uncertainty about ministerial responsibilities as part of Meciar's arbitrary style of governance prevented the establishment of a sufficient nuclear regulator. Early closure was also rejected. Thus, short-term thinking was more likely as political elites could not count on a reliable future, and the need to defend their interests "right now" framed compliance as too costly.¹¹⁶ In such a situation it is reasonable to assume elite discount rates were high and accordingly, produced the decision to restart V1 in strict contravention of the agreement to decommission it. The same systemic uncertainty affected Mochovce as well. The new plant came online before all the safety modifications required by the nuclear regulator were completed,¹¹⁷ and Western companies working on the project cited "intense pressure from the Slovak leadership to

¹¹⁶ See *Nucleonics Week*, 10/19/95 p10 and 4/4/96 p1.

¹¹⁷ *Nucleonics Week*, 11/13/97 p1.

get Mochovce 1 online.”¹¹⁸

Again, Slovak compliance under Meciar did not just fail regarding shutdown, though. A second problematic area relates to the weakness of the regulatory authority, something Slovak officials had committed to rectify when they signed the Convention on Nuclear Safety (C.N.S.) in 1994. Recalling his tenure under Meciar, Miroslav Lipar said that 1997 and 1998 was a “very challenging time.”¹¹⁹ The regulatory authority was created from scratch in 1993, and once Lipar took over from Jozef Misak in 1997, the organizational staff had increased but it still lacked the autonomy and authority necessary to ensure compliance with the C.N.S.¹²⁰ As a result, almost from the beginning under Meciar, the nuclear regulator was insufficiently supported. However, it is important to note that this early lack of autonomy did not result in a lack of policy coordination between Meciar and those in the nuclear industry. Both former regulators told me that they supported Meciar’s plans to continue operating Bohunice despite international commitments to shut it down early. Like Meciar, a former senior Slovak government official “said that N.R.A.-S.R. would accept no connection between Bohunice closure and Mochovce completion.”¹²¹ He later commented that he “couldn’t understand that the [1993 government] statement was made without technical evaluations. For me it was

¹¹⁸ *Nucleonics Week*, 1/22/98 p3.

¹¹⁹ Interview, September 16, 2002.

¹²⁰ The treaty explicitly calls for “adequate authority, competence and financial and human resources to fulfil its assigned responsibilities.” (Article 8.1) Those responsibilities include licensing, inspection and enforcement of safety requirements contained in domestic and international commitments. (Articles 2.2, 7.2.i-iv) The C.N.S. also calls for shutting down reactors that cannot be upgraded. (Article 6)

certainly not fair.”¹²² Lipar agreed, “V1 could operate much longer than the shutdown agreement of 2000.”¹²³

This pattern of insufficient regulatory autonomy coincided with short-term thinking continued until changes began in mid-1999, after which point Western experts declared Slovakia in compliance with the C.N.S. protocol regarding the Nuclear Regulatory Authority (N.R.A.). After Meciar lost his job as Prime Minister in September 1998, the new Dzurinda government began to improve the status of the nuclear regulator. This was a condition to fulfill the C.N.S., something that the European Union demanded as a condition for accession discussions. The government increased the payroll of the N.R.A. and gave it more autonomy to determine the safe operation of Bohunice and Mochovce. Confirming those decisions as movement in the right direction, W.E.N.R.A. and the Second Review Meeting of the C.N.S. Contracting Parties claimed that the N.R.A.’s “status is comparable to that of the regulatory bodies in Western European countries.”¹²⁴ Such actions moved Slovakia from low compliance to medium compliance according to the criteria established in chapter 1. That movement resulted from increased stability in the rules of the game, and by inference, lower discount rates and longer-term elite perspectives. However, the rules of the game during the period from September

¹²¹ *Nucleonics Week*, 11/11/93 p1.

¹²² Interview, September 17, 2002.

¹²³ Interview, September 16, 2002.

¹²⁴ “Nuclear Safety in E.U. Candidate Countries”, W.E.N.R.A., October 2000. Another panel of Western safety experts, government officials, and industry representatives concluded that the Slovakian nuclear regulatory authority is strong (see the following internet site, <http://europa.eu.int/comm/dg1a/nss/index.htm> for details.)

1998 until May 1999 are not categorized as highly stable. Meciar still retained the possibility of being a catalyst for renewed instability, only from the president's office instead of the cabinet. Accordingly, this period did not produce high compliance: early decommissioning as the most costly aspect of compliance. This condition in the rules of the game did not last long though, as the situation improved once Meciar lost his bid for the presidency in May 1999.¹²⁵ Almost immediately, just four months later, the Slovakian government recommitted itself to early shutdown of V1, established a decommissioning fund to pay for its eventual closure, and developed a new energy strategy to compensate for the loss in generating capacity.¹²⁶ The stability in the rules of the game afforded the Dzurinda government the ability to consider long-term benefits as more valuable than short-term costs of compliance. I argue that they did this once the stability of the rules of the game improved from what I categorize as medium stability to high stability, and not beforehand. The change in stability produced high levels of compliance that have been evident ever since.

Conclusion

Similar to other constitutional systems, opposition groups cannot to block the

¹²⁵ Carol Kessler, former U.S. Senior Coordinator for Nuclear Safety and current Deputy-Director of the O.E.C.D.'s Nuclear Energy Agency also acknowledged that after a few years without Meciar the situation had stabilized a great deal. Personal conversations in the month of July, 2002.

¹²⁶ "Ondrej Studenec, director general for the section of Energy, Mining, and Metallurgy in the Slovakian Economy Ministry, told *Nucleonics Week* that he expects (Bohunice's) capacity to be replaced largely by imports as European electricity markets deregulate and as Slovakia integrates into the E.U.. He also sees as feasible buying natural gas cheaply from Russia and building gas-fired power plants." *Nucleonics Week* 12/16/98 p8.

passage of government-sponsored legislation when the government holds a parliamentary majority. That inability worked against efforts to stabilize the situation when Meciar was in power, but benefited the pro-democracy, pro-West government that followed. It is reasonable to argue that the rules of the game remained somewhat unstable as the Dzurinda government had so much to fix from Meciar's reign, and remained unsure of Meciar's return until the May 1999 presidential election. The problem of defining and measuring a tipping point for stability is an important challenge to resolve, but in my study I do not assume the need for a universally applicable defining moment that separates stable and unstable rules. This treatise offers a category for medium stability and medium compliance, as applicable. In the case of Slovakia, the rules began to stabilize once Meciar was removed from power in late 1998.

The delineation of delegated authority in the constitution favors the prime minister over both parliament and the president. With such the preponderance of power on his side, Meciar was able to challenge rivals in both institutions. He also used his power arbitrarily causing uncertainty as to what the actual "normal" practice of politics would be. His opponents regularly tested the boundaries of his power, sometimes stepping outside their constitutional mandates to do so. However, once Meciar could no longer threaten the political system from the most powerful elected office, opposition elites could begin to resolve the inconsistencies in the constitution, and ensure predictable mechanisms of power transfer, both in electoral laws (formal rules) and ministerial appointments (informal). They could do this because without Meciar to threaten the stability of the system, the nascent widespread acceptance of the rules could come to the

fore.

After taking office, Dzurinda began to remedy some of the problems stemming from Meciar's rule. However, until Meciar's defeat in the 1999 presidential election the possibility of truly high rules stability would have to wait. After that point, Meciar became the leader of a vocal opposition. M.D.S. tried to challenge the constitutional framework again in 2000, but the structural rules of the game prevented them from succeeding. From 1999 onwards the rules began to stabilize, not so much from direct effort on the new government's part as from the absence of repeated challenges and widespread contestation.

Therefore, the rules of the game did not totally stabilize at the moment Dzurinda assumed office. The inability of M.D.S. to capitalize on its electoral victory in 1998 and Meciar's defeat in May 1999 boded well for the rules of the game, but they remained unstable until the threat of Meciar's return diminished. The structures of government established in the constitution had as yet never been free from interference and challenge. New patterns of governance also needed to become entrenched without Meciar's constant interference and opposition efforts to limit him through unconstitutional means. The intervening months between September 1998 and May 1999 were a time of increased stability compared to the previous five years. Until Meciar was officially "out of the game" he retained the possibility of reintroducing endemic instability. It would not have been unreasonable to assume that if Meciar had won the presidency he would have used his popular mandate to usurp legislative and governmental powers, as he had done when he was the prime minister. It appears that no institution is sacrosanct to him; they are all

instruments to increase his own power.

In addition, none of the governing-coalition members had had any experience in politics without Meciar to confront. The novelty of their situation did not sustain the previous level of uncertainty, but it still took time to ebb away.¹²⁷ Uncertainty remained in terms of compliance since decisions to implement full closure commitments necessitate long-term thinking. The short-term costs are so great that elites must see a brighter future down the road that will make up for immediate losses. That future must also be a likely outcome, and as the Meciar-induced uncertainty diminished with his 1998 and 1999 successive political defeats, the rules of the game became more stable, and elites more confident the rules would remain unmolested for the foreseeable future. This made compliance more likely as the benefits of compliance became more realistically attainable.

One obvious challenge to the argument I have presented asserts that the change in government is sufficient to explain changes in compliance; without Meciar the problem was solved. My argument transcends the personality of political actors as well as specific

¹²⁷ For some interesting insights on the process of learning to play by new rules see Jeffrey Checkel, "Why Comply: Social Learning and European Identity Change" *International Organization* 55,3 (Summer 2001), 553-588; Barbara Koremenos, "Loosening the Ties that Bind: A Learning Model of Agreement Flexibility" *International Organization* 55,2 (Spring 2001), 289-325; Herbert Kelman, "Compliance, Identification, and Internalization: 3 processes of Attitude Change" *Journal of conflict resolution* (March 1958), 51-60; Clark McCauley, "The Nature of Social Influence in Groupthink: Compliance and Internalization" *Journal of Personality and Social Psychology* 57 (1989), 250-60; Rodger Payne, "Persuasion, Frames, and Norm Construction." *European Journal of International Relations* 7, (2001), 37-61; and Frank Schimmelfennig, "The Community Trap: Liberal Norms, Rhetorical Action and Eastern Enlargement of European Union" *International Organization* 55 (Winter 2001), 47-84.

policy alignments. First, Meciar was the catalyst for instability but not the sole cause of it. Other parties and political actors operated under unstable rules, often violating them to achieve their agenda when it suited them. His legacy was more than just as a thorn in the side of reasonable political actors; he destabilized the rules of the game and until his defeat in the May 1999 presidential election, the day-to-day procedures of governance remained uncertain. His arbitrary personalistic rule remained a threat. Under such conditions, government elites were willing to endure some of the costs of compliance, but given the tremendous short-term costs of closing Bohunice (including considerable popular disapproval), the new Dzurinda government pursued medium compliance. As evidence of this, the new government did not immediately change the preceding government's policy regarding V1 shutdown despite improvements to the regulator's autonomy at the same time.

In an attempt to comply with the Convention on Nuclear Safety, on April 21, 1999, the government officially renounced its earlier commitment to shut V1 by 2000 and deferred to Lipar and his N.R.A. staff to determine the appropriate course of action, even though it meant partially breaking Slovakia's commitment to the E.B.R.D. and the European Commission. The regulator was given sufficient autonomy and authority to make and enforce its decisions for the first time. This meant full compliance with the C.N.S. regarding regulatory sufficiency. However, uncertainty caused a less-than-perfect measure of overall compliance; compliance with safety upgrades and regulatory sufficiency, but not shutdown. One year after the 1998 elections, and shortly after Meciar's defeat in the presidential election, the Slovak government changed its position

and committed to decommission Bohunice V1 before years before the end of its operational lifetime. This was done despite the nuclear regulator's assertions that the plant was safe and should operate for the remainder of its design life. The hard decision had been made. Why? The threat of Meciar's return would have been greatly magnified prior to May 1999 if the government undertook a decision that would have added political clout to M.D.S.'s claims that Dzurinda was sacrificing Slovakian interests for E.U. membership. The timing of the presidential election less than a year after the new government took power established the timeframe for evaluations of progressive rules stabilization. Only after his defeat could elites make the final and most costly compliance decisions.

Additionally, the Dzurinda government has always maintained a pro-E.U. position that, as required by the European Commission and the E.B.R.D., mandated early shutdown. The delay in compliance was not caused by a policy shift in the Slovak government; nor was it due to a weakening of the bargaining criteria imposed by the E.U. Instead, the delay came from the need to be certain, or at least sufficiently certain given the structural limitations imposed on the political opposition, that Meciar was not able to throw the game into turmoil again. Thus after a year in office, the Dzurinda government came to accept that high short-term costs were worth paying to gain the long-term benefits of E.U. membership.¹²⁸ Accession became the single most important policy objective. Yet the long-term frame did not begin right away, nor was it evident in the

¹²⁸ *Nucleonics Week*, 12/16/99 p8, conversations with Marta Ziakova, chairwoman of the Nuclear Regulatory Authority and members of her delegation at the I.A.E.A. General Conference, September 17, 2002.

run-up to the 1998 election; it developed over time as the rules stabilized.¹²⁹

Another counter argument states that E.U. overtures to the new Slovak government explain the change in compliance. Yet, the E.U.'s policy never changed – shutdown was always required to begin accession negotiations. The decision to pass over Slovakia in 1997 may have precipitated an electoral victory for democratic opposition parties, but it did not cause them to immediately and fully comply with Slovakia's compliance commitments. The stability of the rules of the game varied, E.U. policy did not.

The most common alternative argument relates to the nature of domestic safety culture. In the Slovak case, nuclear and political officials form a tight-knit group. Plant personnel, regulators and state utility managers essentially come from the same academic institutions, possess comparable knowledge and experience, and more importantly, hold common views about their safety culture as do the country's political officials.¹³⁰ That safety culture is generally risk tolerant but not completely so. The emphasis on operational safety and the long history of safety upgrades from the very beginning of Slovakia's nuclear industry show an appreciable aversion to risk. This is most clearly seen with the introduction of a "bubbler condenser" at V.V.E.R. 440-213's at Bohunice

¹²⁹ The same argument can be made concerning coalition stability in the Dzurinda government. The Hungarian party regularly threatened to withdraw unless its agenda was met. This was a fact of life for the new government for several years. Neither coalition stability nor foreign policy alignments changed, as did the level of compliance. Only the level of stability in the rules of the game changed in a similar direction and magnitude.

¹³⁰ Interviews, September 16-17, 2002.

V2 and Mochovce 1 and 2.

However, the same officials responsible for those upgrades also reject the inherent necessity of a solid containment structure for their nuclear power plants. This indicates a more risk acceptant aspect to their safety culture because containment structures are designed to prevent the release of dangerous radioactive material *in the event everything else goes wrong*. Worst-case protection is not comparably guaranteed with confinement procedures, the Slovaks selected option. A former senior Slovak government official repeatedly offered assurances that the type of “major loss-of-coolant-accident” foreseen at Western plants would not happen at Bohunice or Mochovce. He did admit however, that if such an accident did occur, confinement systems could not protect the people in the surrounding regions.¹³¹ Therefore, moderated risk tolerance in Slovak safety culture has been a constant feature throughout this period. In contrast, compliance has clearly changed despite reservations by nuclear safety officials, including the now independent, sufficiently funded nuclear regulatory agency.

Safety culture cannot explain variations in compliance. Rules stability and compliance progressed along similar trajectories at the same times. The European Commission noted this in several reports from August 1998 to September 2002. In each case, Slovakia was seen to move progressively towards E.U. accession through increasing stability in the rules of the game.¹³² *Nations in Transit* ratings from 1997 to 2002

¹³¹ Interviews, September 16-17, 2002.

¹³² The following reports give indications to that effect: “Report on the Slovak Republic’s Progress in its Integration into the E.U., August 1998 to June 1999,” “Annex to the Report on the Slovak Republic’s Progress in its Integration into the E.U. during the

corroborate these findings, and reveal significant changes in Rule of Law scores that occurred once Meciar was no longer in power or a viable candidate for the next few years. *N.I.T.* offers the following scores.¹³³

Table 1: *N.I.T.* Ratings for Rule of Law and Economic Liberalization

	1997	1998	1999-2000	2001	2002
Rule of Law	4.00	4.00	↑↑ 3.13	↑ 3.00	↑↑ 2.63
Economic Liberalization	3.38	↓ 3.58	↑↑ 3.25	3.25	↑↑ 2.33

It is important to note that the largest change in the Rule of Law category took place between 1998 and 1999-2000, and that change was also larger than the corresponding Economic Liberalization score – a .35 improvement for Economic Liberalization compared to .87 for Rules of Law. Rule of Law changed more significantly in this time period, and over the course of the *N.I.T.* study, Rule of Law also showed the largest change overall compared to Economic Liberalization. This too minimizes the argument that economic capacity determined compliance. G.D.P.

period of 1 July –15 September 1999,” “Report on the Slovak Republic’s Progress in its Integration into the E.U., September 1999 – June 2000,” “Addendum to the Report on the Slovak Republic’s Progress in its Integration into the E.U., June – August 2002,” “2002 Regular Report on Slovakia’s Progress towards Accession.”

¹³³ “The ratings are based on a scale of 1 to 7, with 1 representing the highest and 7 the lowest level of democratic progress. These ratings are then averaged to obtain scores. Scores that have changed by less than .25 points since the previous survey period are indicated with a single upward or downward arrow. Changes of .25 or more are indicated with a double upward or downward arrow.” *N.I.T.*, 2002, p10. Scores for Slovakia – *ibid.*, p346.

remained relatively constant throughout the entire period, and real G.D.P. growth actually declined after the change in government in 1998. This indicates that the real costs of compliance had increased, yet long-term benefits prevailed as a result of increased rules stability and lower elite discount rates.¹³⁴ The following table illustrates the convergence between levels of rules stability and levels of compliance.

Table 2: Covariance of Rules Stability and Compliance

		Rules Stability		
		Low	Medium	High
Compliance	Low	Slovakia T ₁		
	Medium		Slovakia T ₂	
	High			Slovakia T ₃

Accordingly, T₁ represents the time from the Velvet Divorce in 1993 until M.D.S.'s September 1998 political defeat to the Dzurinda-led democratic opposition. T₂ begins with the formation of the new government and continues until Meciar was defeated in the May 1999 presidential election. T₃ continues from then until the present, including M.D.S.'s second electoral victory without forming a coalition government in 2002, and the continuation of the Dzurinda government. Table 3 breaks down the individual aspects of the formal and informal rules.

¹³⁴ Again, the rules became more stable initially after Meciar was ousted, and have become more so over time as the rules of the game are unchallenged. Even though M.D.S. won the 2002 parliamentary elections, due to staunch opposition from enough of the other political parties Meciar is still constitutionally constrained.

Table 3: Formal and Informal Rules Stability

Formal Rules				Informal Rules			
	Predictable Power Transfer Mechanism	Clear Differentiation of Delegated Authority	Absence of challenges to that Delegation		Predictable Power Transfer Mechanism	Clear Differentiation of Delegated Authority	Absence of challenges to that Delegation
T ₁	NO	NO	NO	T ₁	NO	NO	NO
T ₂	YES*	YES*	YES	T ₂	NO	NO	NO
T ₃	YES	YES	YES	T ₃	YES	YES	YES

* The Dzurinda resolved the lingering problems and left the constitution and electoral system unchanged afterwards.

In summation, *first*, mechanisms for power transfer were unpredictable. This was evident formally through a) unconstitutional no-confidence votes, b) changes to electoral laws just before election, c) fraudulent elections, d) Meciar's attempts to force President Kovac out of office before the end of his term, and e) uncertainty about the use of referenda to cut short election mandates. Informally, a) arbitrary changes in ministerial appointments, b) the overwhelming personalization of power by Meciar – oftentimes seen in his public humiliation of government officials, and c) persistent parliamentary inability to elect a new president after Kovac's term expired and the subsequent assumption of many presidential powers by Meciar's without an election mandate to do so.

Second, the differentiation of delegated power was not clearly established. In terms of the formal rules, a) the constitution remained unclear about key responsibilities, and b) the constitutional court failed to play an independent role in resolving those discrepancies. The informal rules also suffered from uncertainty a) since only Meciar

knew who would be in charge of what, b) combined with his regular attempts to disrupt opposition parties and minimize their input by staging “walk outs” from parliament to prevent discussion and denying election mandates for opposition MP’s, and c) arbitrary changes to ministerial responsibilities.

Third, there were significant challenges to the delegation of power formally, as seen by a) regular testing of Meciar’s constitutional and extra-constitutional power by opposition groups, and b) Meciar’s repeated challenges presidential and judicial authority; and informally due to a) capricious governance and b) political violence.

These were all parts of Meciar’s attempts to consolidate patrimonial control over what he hoped would become merely façade democracy, and the efforts of those who opposed him. These conditions began to change after September 1998, but the interim period lasted until Meciar was no longer a threat capable of challenging the system as he had done so before, and his opponents no longer needed to use whatever means were at their disposal, legal and otherwise, to reign him in. Since then, the system has become stable and compliance has been complete. As such, Vladimir Meciar’s legacy was to infect the Slovak political system with debilitating uncertainty and instability in the rules of the game. His adversaries often used similar tactics to challenge the boundaries of his power, further calling into question both the legitimacy of government structures as well as the processes of governing the country. While Meciar remains a potent political actor, given four years of highly stable governmental operation within both the formal rules and informal of the game, Slovakia’s future looks brighter with each passing year.

Chapter 3 - Bulgaria

“In Bulgaria the political situation changed every year. The political instability affected the industry because it changed personnel each time. This was very detrimental to the nuclear industry.” – Yanko Yanev, former chairman Bulgarian State Committee for the Utilization of Atomic Energy for Peaceful Purposes (C.U.A.E.P.P.), September 2002

Introduction

In 1994, Bulgaria signed a grant agreement with the E.B.R.D. to shut down the four operating units at its Kozloduy plant within four years. The agreement was conditioned on replacement power being available from two next-generation nuclear reactors awaiting completion, and the modernization of several fossil fuel plants. Neither of those conditions was met, and Kozloduy continued to operate past the deadline. Western donors are not to blame. Throughout the last decade Bulgarian elites have repeatedly delayed the costly commitments of compliance by choosing not to raise electricity prices or invest state revenues, in order to enable the closure of some of the most unsafe reactors in Eastern Europe.

In 1999, one year after the initial deadline had passed, the Bulgarian government again committed itself to close units 1 and 2 by 2003, leaving the fate of 3 and 4 to be decided in 2002. The 1999 Memorandum of Understanding (M.o.U.) signed with the European Union contained a clear promise that the shutdown date for units 3 and 4 would take place no later than 2006. For both groups, decommissioning was scheduled to occur several years earlier than the reactors' 30-year design lifetimes. The M.o.U. referenced Bulgaria's prior commitment to the E.B.R.D. and clearly indicated that a repeat performance would not be acceptable. Despite the ironclad commitment, in the last year

the Bulgarians have attempted to shirk their commitment to shut units 3 and 4. More problematically, some government officials have even questioned the need to comply with the shutdown order for 1 and 2, the worst reactors of the lot.

The Bulgarian political system appears as Janus faced throughout the past decade. On one side, Bulgaria stands as “an island of stability in the Balkans”¹³⁵ due to the strength of formal democratic institutions established during the early round-table negotiations in 1990. “Since [then] there have been no serious public threats to the democratic order by any political party of former communist state structure, and no significant acts of violence.”¹³⁶ On the other, the processes of governing the country have been seriously disrupted by the contest between the Union of Democratic Forces (U.D.F.) and the Bulgarian Socialist Party (B.S.P.). The competition between the two rival parties has taken place according to the formal provisions laid out in the constitution, but the mechanisms of the rivalry have caused a great deal of uncertainty and instability in the actual governance of the country. Even the introduction of a relative newcomer and political outsider, former King Simeon II, failed to bring stability to the informal rules of the game. Throughout the post-independence period, the Bulgarian political system has failed to produce authoritative governments.

Accordingly, the formal rules of the game are well defined in the Bulgarian

¹³⁵ John Bell, “Democratization and Political Participation in ‘Postcommunist’ Bulgaria” in Karen Dawisha and Bruce Parrott, eds., *Politics, Power, and the Struggle for Democracy in South-East Europe* (New York: Cambridge University Press, 1997), p353.

¹³⁶ Romyana Kolarova, “Democratization in Bulgaria: Recent Trends” in Mary Kaldor and Ivan Vejvoda, eds, *Democratization in Central and Eastern Europe* (New York: Pinter, 1999), p152.

constitution. There is a predictable method of power transfer, one that legitimizes pre-term elections and votes of no confidence to change the government. The differentiation of delegated authority between the president and parliament is also clear, and that delegation has been widely accepted among Bulgarian political elites. The few attempts to challenge it have been isolated and ineffectual. The structures of government work well. Because the formal rules have been so stable, “the various dimensions of institutional engineering in Bulgaria amplifies the case for a more subtle analysis of the peculiar ways in which a post-communist context tolerates both elite constraints and elite irresponsibility, institutionalization of governance and endurance of corruption, democratic control and democratic debility.”¹³⁷ The informal processes of governance have been problematic due to unreliable procedures for assigning ministerial appointments, unclear bureaucratic responsibilities between government ministries, and unpredictable policy reversals between successive governments.

Political elites in Bulgaria have been unable to establish authoritative governments. They cannot count on regular tenures in office, short or full-term, nor can they reliably predict whether their policy programs will be reversed after election defeat. This type of uncertainty does not force short-term thinking, nor does it automatically lead to long time horizons. The future may be bright, but there is no way to count on it. Therefore, the condition of medium rules stability, with stable formal rules and unstable informal rules, produces medium levels of compliance. Safety upgrades and regulatory

¹³⁷ Venelin Ganev, “Bulgaria: The (Ir)Relevance of Postcommunist Constitutionalism” in Jan Zielonka, *Democratic Consolidation in Eastern Europe: Institutional Engineering, Vol. 1*. (New York: Oxford University Press, 2001), p211.

sufficiency have been far more acceptable than the final element of compliance, the early decommissioning of Kozloduy's four unsafe nuclear reactors.

Rules of the Game

For the first time in its post-communist history, the 2001 parliamentary elections marked the completion of a government's full term in office. The preceding four ruling governments were all forced out due to early elections or votes of no-confidence, and replaced by the opposition party. In none of these instances did the election cycle repeat itself; terms in office changed each time. Before 2001, the Union of Democratic Forces (U.D.F.)¹³⁸ and the Bulgarian Socialist Party (B.S.P.) traded seats after each election. Only after former King Simeon Saxe Coburg-Gotha's National Movement for Simeon the Second (N.M.S.S.) pulled off an election victory heavily laden with protest-votes did the country get off the ineffective U.D.F. / B.S.P. see-saw. Even after that change, the situation has not markedly improved. On the one hand, Bulgaria's constitutional framework has been remarkably stable; there have been a few isolated challenges to the formal rules but none has been determined or persistent. On the other hand, closer examination reveals the presence of destabilizing trends throughout Bulgaria's first democratic decade, specifically the dichotomy of stable formal rules and instability in the actual governance of the country.

At the beginning of the post-Soviet era, Bulgaria experienced a relatively peaceful transition characterized by elite cooperation between reconstructed communists and

¹³⁸ Party leadership later changed to the name to United Democratic Forces as a response

democratic reformers. The round-table talks produced a solid constitutional basis for new governing institutions, with clear divisions of power between the parliament and the president, predictable mechanisms of power transfer for those institutions, and a lack of challenges to the established delegation of institutional authority. Under the new rules, the first elections were held in 1990 for the Grand National Assembly, which the B.S.P. captured by defeating the loosely coordinated democratic groups. Less than a year later U.D.F. took control of parliament with only a four-seat advantage over the socialist party. Early the next year Zhelyu Zhelev, backed by the U.D.F., defeated the socialist candidate, Velko Valkanov. Zhelev won by a slim majority (53%) in the second round of voting. The polarization within the political elite had begun to surface after the relative calm experienced during the constitution formation period. The turn-around vote for U.D.F. in the parliamentary and presidential elections less than two years after B.S.P. won control of the legislature presaged the instability to come.

The socialists had lost some popular support but the closeness of both election results in 1991 and 1992 reflected in the division between Western-leaning free marketers and those who valued close traditional ties with Russia and the maintenance of some state-run economic programs.¹³⁹ This division existed throughout society as it did

to changes in the election laws requiring stricter election mandates for coalitions.

¹³⁹ Neither party has advocated cutting ties completely with either East or West. Over time the B.S.P. gradually began leaning more towards a European alignment, supporting E.U. accession, even if doubts remained about joining N.A.T.O. To do so would alienate Russia, something utterly unacceptable to the Socialists. Despite this later convergence, in the early years of the republic U.D.F. and B.S.P. offered policies that were almost mutually exclusive. The type of policy differences is not as important as the fact that, at times, both sides inconsistently overturned the other's legislation once in power. Elites

through the political elite. Forced to govern from a minority position, U.D.F. often relied on smaller anti-B.S.P. parties for support. The parliament was so polarized that B.S.P. could not overcome the four-seat deficit to gain control of the government. Few parties were willing to work with them. Despite its election victory, U.D.F. had little time to consolidate its government. The democrats had a chance to get comfortable with their new positions before internal divisions threatened to pull the coalition apart. Several members defected and joined the M.R.F. (Movement for Rights and Freedoms) vote of no confidence on October 28, 1992. Filip Dimitrov's U.D.F. government lost the vote and collapsed. The next two months were characterized by uncertainty as to who would rule, and how long they would last. There was a great deal of internal party maneuvering within U.D.F., as well as between the two main parties and M.R.F., which had become increasingly important as the coalition swing-vote. The constitutional provisions for power transfer made a temporary way out of the mess.

The constitution assigns very limited powers to the presidency, but one of its most important functions is to call for the formation of a new government. If the parliament fails to elect a new government three times, the president can dismiss it and call for early elections. President Zhelev used that power and announced U.D.F. could try again in late 1992. Unfortunately, the party leadership remained unable to gain enough support for Dimitrov to regain control of the government. As a result, M.R.F. put forward a

could neither count on "short-lived" policies, nor could they reliably plan long-term policy goals because there was always the potential of electoral defeat and a policy reversal.

compromise candidate for prime minister, Liuben Berov, who convinced several U.D.F. and opposition party members to support his selection. However, like the U.D.F. government before him, Berov's team was equally unable to resolve the country's underlying economic and social problems. He resigned two years later, and nothing had changed in the configuration of power in the legislature; nor had the two main parties gained any greater success convincing smaller parties to join them in a new government. As no single faction could win sufficient support, the president threatened to dismiss the parliament. In fact, Zhelev even called for a revision of the constitution to replace the existing parliamentary republic with a presidential one.¹⁴⁰ The formal rules survived, thanks in no small part to the constitutional court declaring that Zhelev was out of line. Fortunately, this brief attempt to alter the division of power died before it gained any real momentum.

As revealed above, the formal rules have been stable. No serious changes ever occurred, even though there were times when key actors called them into question.¹⁴¹ Despite certain resilience, the constitution has one weakness, which became evident after Berov's resignation. It lacks clear stipulations for how the government should function in the event the president dismisses parliament. For a time, this vagueness produced uncertainty of how power would be transferred, as no one at the time knew for certain

¹⁴⁰ Ganev, p.191.

¹⁴¹ The following B.S.P. government attempted at times to restrict the influence and independence of the judiciary, but the constitutional constraints on government power limited its success; rather than take over some of the court's powers, the government limited the scope of its involvement. Despite this, the judiciary has survived largely in tact.

who would be in charge before the next elections produced a new government.¹⁴² To avert a potential crisis, both U.D.F. and B.S.P. agreed to early elections in December 1994. The democrats may not have acquiesced to this idea had they known beforehand how extensively they were blamed for Bulgaria's problems.

Because of its disastrous failures to maintain party solidarity beginning shortly after taking over in 1991, U.D.F. began tearing itself apart with recriminations of blame when it lost the 1992 vote of no confidence. By the time of the 1994 election, the increasing economic hardships and rising social tensions over ethnic divisions within the country dwindled popular support for the democrats and B.S.P. easily swept the election. For the first time the socialists had a clear majority in parliament. B.S.P. gained nearly double the number of votes of the former government party (43% to the democrats' 24%). "In the wake of defeat in the parliamentary elections, the leadership of U.D.F. resigned en masse,"¹⁴³ and appointed Ivan Kostov to replace Dimitrov as party leader.

Zhan Videnov headed the new socialist government with a solid majority coalition, but governance remained uncertain under the socialists. Part of the problem lay with a disturbing trend that continued under the B.S.P. government. Throughout most of the decade, members of both parties would walk out of parliament to prevent the passage of opposing legislation. The practice was widespread and not representative of a few disgruntled M.P.'s or even a single opposition party. Quorum busting limited the government's ability to effectively govern; it hindered the establishment of authoritative

¹⁴² Ganev, p.191.

¹⁴³ Bell, p.389.

government. The constitution allowed this for this possibility, but the effect contributed to instability in normal governance of the country. In response to this practice, the B.S.P. government began arbitrarily changing the procedures for ministerial appointments and bureaucratic responsibilities to bypass parliament.

When Videnov's government entered power with a considerable mandate it faced an institutionally weak opposition party president. The president could veto legislation, but given the socialist's parliamentary majority, the threat was largely toothless. Thus unhindered, Videnov set off on a course that nearly destroyed Bulgaria's economy and international reputation. Not addressing his personal motivations, the structures of government enabled B.S.P. to push its agenda through parliament largely unhindered by the president or parliamentary opposition. Unfortunately for Videnov, his government's failures to address the country's mounting problems caused even greater hardships than those imposed by U.D.F.'s earlier privatization and austerity measures. "Perhaps due to inexperience and perhaps due to lack of commitment to serious reform, over the next two years Prime Minister Videnov's government presided over a disastrous economic tailspin – even by East European standards – and tolerated widespread corruption in and out of government."¹⁴⁴ Corruption scandals also plagued U.D.F. while in office. The socialists followed the same pattern and even extended the influence of organized crime in the processes of managing the Bulgarian political and economic systems. These processes of governance added further uncertainty to the informal rules of the game as non-state actors

¹⁴⁴ Ray Taras, "The Politics of Leadership" in Stephen White, Judy Batt and Paul Lewis, eds., *Developments in Central and East European Politics 2* (Durham: Duke University Press, 1998), p115.

began to exert tremendous influence on how Bulgaria was governed.

Corruption affects the informal rules by making the delegation of power in the cabinet and state bureaucracies unclear, and by introducing recurrent challenges to that established division. Because the constitution allows for irregular election cycles, corruption is one more tool for punishing the party in power. As argued above, pre-term elections do not create instability per se. It is rather the lack of predictability in how often they occur that creates uncertainty.¹⁴⁵ The intervening effect is that elite time horizons are shorter than they could be given the formal stability in the structures of government. Shorter-term thinking reasonably prevents elites from pursuing the most costly aspects of compliance due to the inherent risk of pre-term elections. Why pursue something wildly unpopular, which could only further limit one's chances of being office for the full four-year term?

Like other former communist countries in Eastern Europe and the former Soviet Union, the most common form of corruption resulted from privatization of Bulgaria's massive state-run enterprises. In the early 1990's, three main groups took over organized crime. Some reportedly had considerable connections to government officials.¹⁴⁶ As

¹⁴⁵ In some ways the Bulgarian mechanisms resembles those in the U.K. and Germany, where the constitutional provisions allow for early elections depending on the collection of sufficient votes among parliamentarians rather than prescribed dates exclusively. In Bulgaria though, the inability to establish authoritative governments has limited the establishment of stable informal rules of the game.

¹⁴⁶ A good example was the 1995 incident when Videnov let several of his close friends export large quantities of wheat despite government restrictions. His actions led to severe domestic shortages for several weeks. (*East European Constitutional Review*, Vol. 6 #4, Fall 1997)

soon as U.D.F. began changing the state's role in the economy, former athletes (the “wrestlers”), state security agents, and former *nomenklatura* effectively penetrated local businesses, customs bureaucracies, and privatization schemes.¹⁴⁷ Compounding the problem, many political elites maintained financial interests in privatizing companies.¹⁴⁸ Recent anti-corruption campaigns have curbed some connections between organized crime and elected officials, but the problem remains a serious hindrance to effective governance.¹⁴⁹

Consequently, even though political elites follow the formal rules of the game, “in Bulgaria, the rule-structured ‘constitutional’ behavior of elites is either a prelude to or an attempt of looting of state resources. In no other type of state is such a high percentage of the national wealth concentrated in the hands of elected officials as in post-communist states.”¹⁵⁰ So even when rules are followed they are “superimposed on a web of opportunities shaping the conduct of incumbents. Foremost among these is the opportunity to strike it rich during a period of chaotic privatization, license private banks operating with state money, and create a discretionary regime for granting tax exemptions.”¹⁵¹ The legacy of those corrupt dealings often outlasts the politicians who

¹⁴⁷ Ibid.

¹⁴⁸ See Boicho Panev and Vassil Prodanov, *The Crime Explosion in Bulgaria* (1995) for more specifics.

¹⁴⁹ The E.U.'s *Regular Report from the Commission on Bulgaria's Progress Towards Accession*, 1998, states that “Corruption remains a serious problem in Bulgaria, [and that] despite measures and a substantial increase in public awareness, considerable further efforts are needed in order to achieve tangible results.” (p9)

¹⁵⁰ Ganev, p.209.

¹⁵¹ Ibid.

commit them; voter concerns about corruption often shape how long they stay in power. Whether those concerns are based on actual fact or merely perceived by the public, the effect is still the same when it comes time to vote.

Corruption was at its worst under the 1994 B.S.P. government. That government pursued a disastrous course of economic mismanagement and outright theft of state revenues. As a result, living wages plummeted, inflation and unemployment soared, and the country seemed to drift internationally, neither committing fully to the Western sphere nor to an exclusive alignment with Russia.¹⁵² Eventually, it too was swept from power before it could either consolidate the new processes of government or its policy agendas. Mass anti-government demonstrations in January 1997 precipitated pre-term elections of that year, through which U.D.F. gained a considerable majority in Parliament and regained control over the government. No predictable timeline existed to delineate those elections vis-à-vis earlier electoral contests. The duration ranged from one year to three. This unpredictability added to the instability in the informal rules of the game. Parties also could not count on repeat election victories between presidential and parliamentary elections. Election mandates were very difficult to achieve, thereby further limiting the establishment of authoritative governments. The situation did not favor any particular party. Whoever was in office was blamed for the country's mounting woes, removed from office at unpredictable times; the process started all over again.

¹⁵² An interesting aspect of the time under B.S.P. rule is that while both parties pursued opposing economic policies, for the most part both supported closer ties with the West. In the area of policy alignment, the difference was minor, with U.D.F. favoring a strictly Western-centered policy of E.U. and N.A.T.O. membership, while the B.S.P. did not

The formal rules functioned smoothly, and perhaps too efficiently by making it relatively easy to remove the ruling politicians without giving them full opportunity to serve out their terms. The informal practice of back room bargaining and quid-pro-quo policy tradeoffs became extremely difficult, as elites could not count on a foreseeable future. Compromise is more difficult when the future offers little hope of recouping short-term concessions.

These problems continued after U.D.F. gained a majority of seats in the parliament in 1997. With 137 seats, B.S.P. had less than half that number (58), U.D.F. had the chance to push through its legislative agenda. This created another opportunity to change the way government worked by disrupting the previous B.S.P. government's connections to organized crime, and initiating new government procedures for appointing ministers and defining their responsibilities. This issue is not the difference in policy agendas, but rather the changes in policy-making procedures. How government functioned changed with each successive government. Policy programs were affected though, and in that regard, uncertainty about the pattern of policy reversals continued. Some socialist policies remained unmolested by the new government, specifically social welfare policies, but by and large, U.D.F. discarded most foreign and economic policies of their predecessors.

Accordingly, the democrats' second term in office was marked by general improvement in the economy and a decidedly pro-E.U. policy of integration and legal harmonization with the *acquis communautaire*. Challenges to both policies and procedures

want to sever ties with Russia to do so.

by the B.S.P. continued as the socialists readily tried to exploit any mistakes made by the government. They tried several times to call for a vote of no confidence in an attempt to capitalize on policy failures.¹⁵³ The specific result of which has been to maintain uncertainty regarding the “basic legislative acts regulating governing procedures”¹⁵⁴ in an otherwise stable constitutional framework.

Again, “several important ‘rules of the game’ have been firmly established. Disputes over jurisdiction, expansionist institutional strategies, and truculent usurpation of authority are rare occurrences. Sometimes the ‘war’ is in fact nothing more than the principle of separation of powers in action.”¹⁵⁵ In that sense, while in power, the B.S.P. tried twice to curtail the president’s appointment powers by making them contingent on parliamentary approval, and President Zhelev “expressed his view that Bulgaria should become a presidential republic and that the constitutionally delineated domain of presidential prerogatives should be expanded,”¹⁵⁶ in all cases the formal rules survived in tact with minimal challenge. “Obviously a grudging respect for [these] rules does not in itself bespeak a willingness to cooperate on policy-making. Nonetheless, the rules of the game have so far kept the vituperative skirmishes between politicians from degenerating

¹⁵³ *East European Constitutional Review* Vol. 7 #1, Winter 1998. U.D.F. has used the same tactic against the current N.M.S.S. government. This points to unstable informal rules, not the particular policy strategies of a single political party. Opposition parties by nature oppose the ruling government, so neither B.S.P. nor U.D.F. added to the problem, they just perpetuated it.

¹⁵⁴ Kolarova, p.155.

¹⁵⁵ Bell, p.194.

¹⁵⁶ *Ibid.*, p.191.

into a ‘bare-knuckles’ brawl between institutions.”¹⁵⁷

In particular, the judiciary has often been a target, but not in terms of its structural independence. “Parliamentarians keen on usurping chunks of presidential power may expect that the court will strike down their laws, and ministers disregarding laws may be brought to court by ordinary citizens. But while this constraining function has been robustly displayed in Bulgarian political practices, the ‘enabling’ elements inherent in the constitutional edifice have remained inoperative.”¹⁵⁸ Challenges by both B.S.P. and U.D.F. have focused on the procedures defining its influence, not the constitutionally defined independence of the courts.¹⁵⁹

Those challenges added to the overall instability in the informal rules of the game, which produced uncertainty about the durability of long-term policy agendas and how long politicians could reasonably predict they would be in office to ensure their completion. Expectations about both affect decisions about the costs and benefits of compliance. As such, during the one period when Bulgarian elites could reasonably predict both long-term policy successes and personal play in the game, compliance made some marked improvements. The 1997 democratic government was extremely successful in curbing inflation, bringing it down from its zenith of over a 1000% to a modest 22% within a single year. In that same length of time, real G.D.P. showed positive growth and foreign investment jumped 600% from the preceding year. Anti-

¹⁵⁷ Ganev, p.195.

¹⁵⁸ Ganev, p.210.

¹⁵⁹ Assessments are given in *Nations in Transit* 1998 (p.163), 1999-2000 (p.183), 2001

corruption efforts also had a good beginning, although the problem still remained severe.¹⁶⁰ How they succeeded is less important than the fact that their successful policies bode well for an election victory in 2001. The future looked bright for the ruling U.D.F. elites. The successes of those first two years, resulting from a clear majority in parliament and sound economic management, increased support and recognition for the U.D.F. government as both stable and cooperative by the West,¹⁶¹ and popular opinion was at least marginally encouraging.¹⁶² This translated to increasing stability in the processes of governance. The declining threat of unpredictable pre-term elections meant that U.D.F. could reliably count on their procedures lasting for some time. This gave the government a newfound freedom to pursue longer-term goals, something not possible under previous governments.¹⁶³ They could take a longer view of costly compliance decisions in order to gain long-term benefits.

The case should not be overstated. Successes in the economy and control of both

(p.140), 2002 (p.133), and the European Union's *Regular Report* (1997-2002).

¹⁶⁰ *East European Constitutional Review*, Vol. 6 #4, Fall 1997 gives an overview of the initial steps taken by U.D.F. in 1997. The E.U.'s *Regular Report from the Commission on Bulgaria's Progress Towards Accession*, 2001, details the marginal successes resulting from those efforts.

¹⁶¹ *Regular Report from the Commission on Bulgaria's Progress Towards Accession* (1997, 1998, 1999) for evidence of the change.

¹⁶² See Kolarova for more details on public support.

¹⁶³ U.D.F. had won the 1996 presidential election. This gave them unopposed power in the country for the first time. The Socialists had had similar control for two years as well from 1994 to 1996 when Petar Stoyanov (U.D.F.) was elected president. I do not mean to imply this enabled either side to escape the instability in the informal rules resulting from early elections and hostile opposition attempts to derail government policies. It is simply to say that at that time, things looked good for U.D.F. to win the next election.

the presidency and parliament were ultimately insufficient to prevent the return of widespread uncertainty in the political system. While outright failure can be the cause of electoral defeat in any democracy, in Bulgaria the necessity of always keeping a protest-laden electorate on one's side was not grounds for sustained long-term policy making. At best, during the first two years of U.D.F.'s term, certainty and stability in the informal rules of the game increased. However, this did not represent consistent progress towards increasing stability over a sustained period of time.

Problems began in 1999 when U.D.F.'s strategy began to unravel as two years of renewed privatization continued to be a source of corruption in the government, and austerity measures bit into the country's economic progress. As a result, growth slowed and inflation rose sharply in 2000. Despite considerable efforts to stabilize the economy with "comprehensive macroeconomic and structural reforms, the introduction of a currency board, an intensified privatization process, and a revamped tax system, these changes had an increasingly negative impact on family budgets."¹⁶⁴ In the end, U.D.F. became the scapegoat as once again voters punished the party in power.¹⁶⁵ The scheduled elections were almost at hand by that point so the socialists opted to wait, not calling for a vote of no confidence. During that period, as the likelihood of a repeat election victory dwindled, U.D.F. elites once again began to adopt short-term goals in an attempt to win back popular support. As I discuss in the next section, this had an

¹⁶⁴ *N.I.T. 2002*, p127.

¹⁶⁵ For a good study on voter behavior and the weakness of Bulgarian civil society, see John Nagle and Alison Mahr *Democracy and Democratization: Post-Communist Europe in Comparative Perspective* (London: SAGE Publications, 1999).

immediate effect on compliance with nuclear safety commitments. Yet even this attempted rapprochement with the populace could not take root as a political wild card entered the scene, changing the nature of the political process once again.

In April 2001, three months before the first full-term parliamentary election, voters were given a new choice as the former ruling monarch, King Simeon II, entered the political scene with the creation of a loosely organized, vaguely articulated policy agenda, fittingly called the National Movement for Simeon the Second (N.M.S.S.).¹⁶⁶ Like a breath of fresh air, Simeon's party swept through the country with claims of increasing women's participation,¹⁶⁷ ending corruption, and revitalizing the economy in 800 days.¹⁶⁸ N.M.S.S. won a landslide victory over U.D.F., gaining 120 out of 240 seats in the National Assembly. Falling one short of an outright majority, Simeon entered into a coalition with the Turkish minority party, the same M.R.F. that had broken up U.D.F.'s first governing coalition in the early 1990's.

While several B.S.P. members accepted seats on Simeon's team, U.D.F. remained in staunch opposition refusing any part in the government. In the November 2001

¹⁶⁶ The constitutional court ruled that he could not run for president, as he originally intended, since the constitution requires all candidates to live in Bulgaria for a minimum of two and a half consecutive years out of the preceding five. So he "settled" for going after the prime ministership instead.

¹⁶⁷ He had been forced to create a coalition early on with the Bulgarian Women's Party and the National Movement for Revival "after a Sofia City court refused to register his movement since it failed to meet certain requirements." (http://www.ipu.org/parline-e/reports/2045_E.htm)

¹⁶⁸ This was an interesting move to give himself two years to work out the kinks in his agenda – enough time to quell short-term criticism, but still not so long as to minimize the immediacy of his plans when he presented them to the public.

presidential election, N.M.S.S. supported the incumbent U.D.F. candidate, Petr Stoyanov. Unfortunately, the high hopes placed on the novelty of the Prime Minister's presence quickly wore off. Six months had passed since Simeon's victory but his support had degraded so much that even the popular Stoyanov could not survive against the B.S.P. candidate. Despite accepting a few government positions, the Socialist Party presented itself as the alternative to the U.D.F./N.M.S.S. presidential candidate. Thus, even though Stoyanov had several things going for him – he was the most trusted national politician,¹⁶⁹ had the backing of the Prime Minister, and held a sizeable lead over Parvanov in opinion polls leading up to the election – Stoyanov still narrowly lost in the second round of voting.

Once again, no Bulgarian party could hold on to power for two consecutive terms, and procedural instability continued from government to government. As a result, there is not a sense of uniform stability in both formal and informal rules of the game. This medium rules stability has been the case throughout Bulgaria's democratic experience, leading elites to make contradictory and often short-lived sacrifices. Uncertainty about future opportunities to implement legislation, recover losses, and gain long-term benefits have made costly short-term decisions, such as decommissioning Kozloduy, unlikely. The stability of the formal rules enables elites to function within a known structural framework; the constitutional provisions have been clear, durable and predictable. Yet beyond that assurance, elites frame their evaluations based on the realities of politics in Bulgaria: the chances of being around for very long are slim, so do as little as possible to

¹⁶⁹ *N.I.T.*, 2002, p127.

precipitate the inevitable. Consequently, it is reasonable to assume that elite discount rates are higher than they would be if the country operated under both stable formal and informal rules. This makes some compliance decisions acceptable, but also prevents full compliance.

Compliance

In June 1991, safety experts from the I.A.E.A. inspected the four V.V.E.R. reactors at Kozloduy. Their report made it clear that the problems at Chernobyl were not isolated to that one fatally flawed plant. Severe deficiencies in operational management, uncoordinated and inadequate staff training, woefully out-dated equipment, and insufficient safety measures, often hastily constructed and poorly implemented, all seriously threatened the safety of the Bulgarian facilities. Most troubling was that these plants all lacked a containment structure to prevent the release of radioactive material in what was then considered a likely catastrophic accident. A year later, the G-7 issued its edict that all first-generation Soviet reactors should be shut down. Kozloduy has four such units. As an interim stopgap to prevent an accident during the time it took to coordinate closure agreements, the West offered significant assistance for short-term safety upgrades.¹⁷⁰ Since Kozloduy was in such bad shape, the plant received the lion's share of the G-7's assistance package.

Kozloduy operates with four V.V.E.R. 440-230's, but they are not identical in

¹⁷⁰ The E.B.R.D. called for "band-aid" solutions which were echoed by German Minister for Environment and Nuclear Safety, Klaus Toepfer, who said that the only "reasonable solution [was] definitive shutdown." *Nucleonics Week*, 2/4/93 p1. Upgrades were never

terms of the level of safety. Unlike units 3 and 4, which had some additional safety measures built into the plant at the time of their construction, units 1 and 2 embodied all that was wrong with early Soviet reactor design. As with other 440-230's, potential problems with the reactors' pressure vessels have been a serious concern. Embrittlement due to insufficient maintenance over the years of operation had led Western safety experts to the early conclusion that in the event of a primary system leak, the sudden inrush of cold water could cause the pipe to rupture, threatening the safety of the system. If the rupture was severe, the emergency cooling system could fail leading to a meltdown in the fuel rods. As such, V.V.E.R. plants are not immune to the dangers of poor Soviet design. In addition to concerns about the pressure valves and lack of a containment structure, fire protection systems were completely inadequate – there were wooden doors separating the generating rooms from command and control offices.¹⁷¹ All of these problems made Kozloduy a disaster waiting to happen, even more dangerous than the other Soviet-designed reactors in Eastern Europe.

Western safety work begun under the E.U.-P.H.A.R.E. program was important but relatively small compared to what was proposed by the E.B.R.D. in 1993. As the first recipient of a Grant Agreement under the Nuclear Safety Account (N.S.A.), Bulgaria was supposed to set the standard for later work. The hope was that the standard would be a

intended to keep the plants running.

¹⁷¹ A fire in September 1992 was just the “tip of the iceberg” according to Thierry Baudon, director for Public Infrastructure, Energy and the Environment at the E.B.R.D.. In an interview with *Nucleonics Week*, he said the “the real problem is that it is poorly managed, badly run, and could run into trouble every day. Today it’s the generator, tomorrow it could be a primary circuit leak.” *Nucleonics Week*, 1/28/93 p1

good one. Unfortunately, things did not turn out that way.

With nearly \$28 million set aside from the \$90 million initially donated to the N.S.A. fund, Bulgaria accepted the terms of a strict closure agreement, which called for early decommissioning of all four reactors by 1998. Shutdown was conditioned on alternative energy supplies being made available, either through domestic production or imports. To meet that condition, the agreement called for significant restructuring of the country's energy sector to improve efficiency and reduce demand. At the time, Bulgaria had one of the most inefficient energy markets, something which has only recently begun to change.¹⁷² Using the money from the E.B.R.D. and P.H.A.R.E., Western politicians and safety experts argued that Bulgaria should take the necessary steps to

- 1) improve the immediate safety deficiencies at Kozloduy,
- 2) begin to reorganize the energy sector to make it more efficient, including improvements to the autonomy and financial sufficiency of the nuclear regulatory authority – as per the 1994 Convention on Nuclear Safety – , and most importantly,
- 3) honor its commitment to close Kozloduy's most dangerous reactors before anything disastrous happened.

Standing in the way of these three hopes were two factors: the Bulgarian economy was in shambles and would get worse over the next few years, and no one really wanted to shut down any reactors, let alone force costly changes to the fragile economy. During his tenure as chairman of Bulgaria's early nuclear regulatory agency (the Committee for the

Utilization of Atomic Energy for Peaceful Purposes),¹⁷³ Yanko Yanev was extremely eager to get Western money, and equally resistant to any discussion of closing down Bulgaria's nuclear reactors, no matter what condition they were in at the time.

However, Yanev made it clear throughout his time as chief regulator that safety was still important. He shut down unit 4 in May 1993 to upgrade several systems, even though it was the best of the lot.¹⁷⁴ Yanev regularly stressed the need to improve Kozloduy to make it both safer and more profitable. Around the time the politicians agreed to shut down the first two reactors, Yanev repeatedly called for full-term operation as a critical way to get Bulgaria out of its economic woes.¹⁷⁵ Bulgarian views of safety contrasted those embedded in the E.B.R.D. Grant Agreement and C.N.S., which Western officials continued to stress despite Bulgarians resistance. Those agreements demanded sacrifices in the short-term to gain considerable benefits down the road.¹⁷⁶

Short-term thinking was evident even before the government committed itself to

¹⁷² Interviews with Carol Kessler.

¹⁷³ C.U.A.E.P.P. was a part of the Energy Ministry, something that would put Bulgaria into non-compliance with the Convention on Nuclear Safety beginning in 1994. That would not full change until 2001 when the regulator was finally made autonomous, although limited steps towards that end were taken between 1997 and 1999.

¹⁷⁴ Interview, September 17, 2002

¹⁷⁵ *Nucleonics Week*, 5/13/93 p1.

¹⁷⁶ Yanev told me that Bulgaria was going to run Kozloduy whether it was upgraded or not. The country needed the power more than it needed safety – a very clear example of short-term thinking. (Interview – September 18, 2002) According to one Western expert who was involved in the Kozloduy enterprise, “come what may, if Kozloduy’s power is needed, the units will continue to operate. If we help them, they’ll improve the plant, but they’ll run it in any case. When you come right down to it, the Bulgarians are saying, ‘if you want to help us, great. If you don’t, too bad.’” (*Nucleonics Week*, 6/24/93 p1)

close Kozloduy's first two units though. Nikita Shervashidze, chairman of Bulgaria's Nuclear Energy Committee (N.E.C.) – the state utility that managed Kozloduy – refused to allow his country to become a “Trojan Horse that [would] let Western banks impose unacceptable conditions on east European countries.”¹⁷⁷ He adamantly resisted the E.B.R.D.'s demand that 1 and 2 be shut by 1996, followed by 3 and 4 two years later, calling it “absurd to require the closure of units 3 and 4, more modern than the first pair, and added that closure of units 1 and 2 could be considered only after 1998.”¹⁷⁸ Shervashidze did not agree with closing them in 1998, just that it *could* be considered at that time. Thus, despite a commitment to do so, the prospects of Bulgarian compliance remained dubious from the start.

The Grant Agreement conditioned closure on several factors, which made the decommissioning dates somewhat flexible compared to other agreements. However, the commitment was no less firm, nor were Western expectations of full compliance any less persistent. It was a “gentlemen's agreement.”¹⁷⁹ Francois Demarcq, the N.S.A. Administrator at the time, said that the Bulgarians had “officially committed to following the path of the pact of trust.”¹⁸⁰ Six months later France's nuclear regulator, Andre-Claude Lacoste said that “Bulgaria promised the E.B.R.D. to put in place investments in new capacity that would allow closure of Kozloduy 1 and 2 around 1998, in exchange for \$28 million in grants for equipment purchases. But donors are now beginning to doubt

¹⁷⁷ *Nucleonics Week*, 6/10/93 p1.

¹⁷⁸ *Ibid.*

¹⁷⁹ *Nucleonics Week*, 12/9/93 p10.

the strength of the Bulgarian commitment.”¹⁸¹

The state utility, N.E.C. willingly took whatever equipment was offered and began to implement a modernization program at Kozloduy. Even though the assistance was meant as a short-term upgrade, it became increasingly clear that neither the state utility managing the plant, nor the nuclear regulator responsible for ensuring the plants operated safely were going to shut Kozloduy any time soon. They also had the support of the politicians as well; the U.D.F. government put state resources into modernization rather than replacement energy sources. Kozloduy supplied necessary power for both domestic industry, which was barely limping along in the wake of disastrous privatization programs, and an extremely inefficient residential consumption infrastructure. The level of uncertainty in the political system created strong incentives to reject the more costly aspects of compliance in favor of safety upgrades alone.

At the same time as Bulgarian nuclear industry and government officials skirted their early closure commitments, they also sought continued or increased Western assistance. Delays in implementing liability legislation to protect third-party contractors from lawsuits in the event of a nuclear accident, as well as slow progress installing equipment that had already been delivered, placed Bulgaria in jeopardy of violating the Grant Agreement as early as 1994.¹⁸² Instability in the government as a result of Berov’s

¹⁸⁰ *Nucleonics Week*, 6/24/93 p13.

¹⁸¹ *Nucleonics Week*, 12/9/93 p10.

¹⁸² The Agreement stipulated that all equipment had to be installed and upgrades progressing by 1995. Very little work had been done by late 1994, making it unlikely the schedule would be kept.

resignation and the confusion over which group would govern prior to the December 1994 elections, prevented the passage of the necessary legislation to enable Western companies to begin working. In the meantime, N.E.C. and Kozloduy personnel continued their upgrades, but with the clear expectation that the plants were being outfitted for long-term operation, not early closure a few years down the road.

Another delay in implementing the Grant Agreement occurred regarding increases in electricity prices to repay part of the loan. By late 1995 prices had not been raised, and there was very little indication that they would in the near future. One safety expert said in September 1995, “the difficulty of implementing the initial N.S.A. grant at Kozloduy does not augur well for the bigger safety improvement programs. It will have taken five years to install about 40 valves at Kozloduy, how long is it going to take to do the big backfit?”¹⁸³ The bulk of the safety work had not begun, and its completion began to stretch further and further into the future. With an essentially unchanged set of reactors, N.E.C. and the nuclear regulator agreed to restart unit 1 in late 1995, despite serious concerns about the strength of its pressure valves. Regulatory chairman Yanev accused the West of violating the spirit of the Convention on Nuclear Safety, which states that all decisions regarding the operation of domestic nuclear facilities will be undertaken by the host country, and are not subject to international controls. He would have been correct if Bulgaria had not explicitly committed to early closure in the E.B.R.D. Grant Agreement.

The restart decision caused immediate effects. The French company E.D.F. pulled out after almost single-handedly maintaining a working relationship with the

wayward Bulgarians. Yanev went ahead with the restart anyway, approving it in October. “We will shut it the moment we have information that it isn’t safe. But I can’t accept that any country pronounces a dictat and holds political press conferences. They claim that what the Russians have done [to test the valves] is not correct. They say ‘it’s not enough, we feel there should be more information.’ But I cannot regulate on the basis of feeling.”¹⁸⁴ Both the limited authority C.U.A.E.P.P. had to do its job, and the divergence in safety culture between the Bulgarians and the agreement they signed tremendously affected compliance. When asked about the obvious connection between the vessel issue and Bulgaria’s commitment to shutdown the reactors by 1998, Yanev said, “that’s not my business.”¹⁸⁵ He argued that the vessels would be safe enough to allow the plants to run until 2002 or 2003.

In what would become a pattern corresponding to the instability in the informal rules of the game, shortly after he issued the restart order, Yanev was fired “without warning.”¹⁸⁶ The country was heading into a presidential election, and the socialist government seemed to split along this issue of compliance as part of the larger East-West policy alignment division. The government’s position had become very unstable due to massive social dislocation caused by its half-hearted economic reforms. Political violence was on the rise as U.D.F. and B.S.P. tried to take control through new, extra-constitutional means. President Zhelev called for an end to the parliamentary system in

¹⁸³ *Nucleonics Week*, 9/21/95 p1.

¹⁸⁴ *Nucleonics Week*, 10/12/95 p1.

¹⁸⁵ *Ibid.*

favor of a presidential one, adding greater uncertainty to the situation (even though his calls went unheeded). While the constitutional court quickly and easily rebuffed Zhelev's efforts, instability in the informal rules of the game remained a serious problem. Yanev's replacement, Ladchezar Kostov, was certainly qualified with the requisite technical expertise to do the job; but like Yanev, he took his cues from political elites struggling to gain their footing in the tumultuous political system.

Despite the change leadership, the problems with Bulgarian compliance remained. In an attempt to delegitimize the reasons behind the early closure commitment, testing in late 1996 of unit 1's pressure vessel showed that they would last at least until the end of its operational life in 2004. Dodging that bullet gave the Bulgarian's more leverage to opt out of the Grant Agreement's requirements. However, the issue is compliance not the appropriateness of safety standards defining those requirements.

The political situation continued to affect compliance due to persistent instability in the informal rules of the game. As the socialists presided over an ever-worsening economic crisis in 1997, and early elections loomed on the horizon, Kostov was replaced by Gueorgui Kastchiev. The latter tended to fall more on the green side of the political spectrum, favoring a reduction in fossil fuel consumption while continuing to operate Kozloduy. The B.S.P. leadership may have hoped his appointment would bolster popular support for their continued governance. His appointment was not the most important change regarding the operation of Kozloduy. A major shakeup in the state utility also coincided with a renewed emphasis on long-term safety upgrades designed to keep

¹⁸⁶ *Nucleonics Week*, 9/12/96 p5.

Kozloduy running well into the future. These were designed to eliminate the need to comply with the E.B.R.D.'s early closure requirements. In late 1997 Kastchiev asserted, "the safety upgrading will never be finished."¹⁸⁷

The work being done was originally intended to be short-term upgrades prior to closing the plants in 1998. But as the Bulgarians continued to delay initiating plans for replacement power and energy sector reform, the upgrades became a means of continued operation since early shutdown was seen as too disastrous in the short-term. No one wanted to pursue this since it would only diminish their legitimacy in the eyes of a very Kozloduy-friendly populace. Even when U.D.F. came to power in 1997, the new government took some positive steps by approving a new energy bill designed to bring the country's legislation more in line with E.U. accession requirements, but remained adamant about not closing Kozloduy before the end of its design lifetime. Accordingly, closure dates for units 1-4 were set for sometime between 2004 and 2012, noticeably later than the original 1998 dates established in Bulgaria's Grant Agreement with the E.B.R.D., and almost identical to the units' scheduled end-of- lifetime dates. However, Western officials viewed even this small step as a move in the right direction since it represented at least some recognition that Kozloduy had to close down sometime in the near future.¹⁸⁸

¹⁸⁷ *Nucleonics Week*, 12/11/97 p1.

¹⁸⁸ Repeated interviews with Carol Kessler and David Sycamore, Director for Institutional Affairs, Foratom. Ms. Kessler said it was progress towards closing Kozloduy and Mr. Sycamore said it represented a more accurate understanding of the plant's true safety status.

Despite general reluctance for early shutdown among Bulgaria's political and nuclear industry elite, differences appeared between those favoring so-called on time closure between 2004 and 2012 and those pursuing lifetime extensions beyond those dates. In either case, Bulgaria was in violation of the E.B.R.D. Grant Agreement. In April 1998, N.E.C. vice president for research and development, Ivan Hinovski, said Kozloduy 1-4 would undergo a "very extensive modernization with the goal of bring the units to international standards and operating them to the end of their design lives."¹⁸⁹ While regulatory chairman Kastchiev asserted N.E.C. would have to show the plan met all safety requirements deemed necessary by his organization, there was little doubt the regulator would stop the utility's program. According to N.E.C. and Kastchiev's arguments, safety had become a justification for rejecting Bulgaria's early closure commitments to the E.B.R.D. and the E.U. - "as long as the plants are safe they can and will be allowed to operate." In response, Western officials were prepared to hold up the Bulgarians' accession to the E.U. if they continued breaking their commitments.

Complicating that process was the fact that the Bulgarian government could not afford to do the safety upgrade its own given the high costs and very limited state resources. Nor were Western banks and governments likely to foot the bill for a plan that clearly violated the agreements they were trying to ensure the Bulgarians kept in the first place. As part of that pressure, the ultimate long-term benefit of compliance remained greater integration with the West, specifically E.U. membership. Western officials had used accession before as an incentive to increase Bulgarian compliance, but in each case

¹⁸⁹ *Nucleonics Week*, 4/23/98 p7.

the Bulgarians' short-term needs outweighed long-term membership benefits. Subsequently, they complied with some aspects but not the most costly ones. As mentioned above, that process began to improve slightly after U.D.F.'s victory in the 1997 election, which the European Commission reflected in more favorable reports of the country's progress towards accession.

From 1997 to 1999 the economy experienced some marked improvements. U.D.F. maintained a considerable majority in parliament at the time, as well as a greater sense of popular legitimacy due to the widespread blame leveled at B.S.P. for the country's earlier economic and social woes. Ministerial appointment procedures became less arbitrary and responsibilities between various bureaucracies dealing with Kozloduy became clearer. Limited steps were taken to improve the independence and sufficiency of the nuclear regulatory authority. Corruption also declined. All of this helped to bring some measure of stability to the informal rules of the game. Increasing certainty about the future made long-term benefits somewhat more valuable, which made costly compliance measures somewhat more likely.

Unfortunately, increases in the U.D.F. government's certainty about its future in office were short-lived. The certainty did not carry over to every elite involved in the process of compliance. By early 1999, B.S.P. had regrouped and was once again calling for early elections. The economy improved but at a slower rate than U.D.F. predicted during the election campaign. As a result, an increasing number of voices within parliament began to call for lifetime extensions for Kozloduy in contravention to the government's already questionable energy bill authorizing on-time closure of the plants.

As the political situation grew more tenuous and the economy deteriorated once again, U.D.F. members in parliament began supporting opposition calls to run the plants as long as possible.

After the short-term upgrades turned into long-term modifications, Kozloduy became safer for continued operation (according to the Bulgarians) and more profitable. Bulgaria exported nearly 50% of its generated power to Southern Europe, the money from which was desperately needed to alleviate the country's social and economic problems. In that sense, the cost of low compliance became negligible; money from domestic and international sources proved sufficient to initiate and maintain safety improvements at Kozloduy. However, the more costly aspects of compliance remained a sticking point for Bulgaria's elites. In March 1999, the parliament approved a plan to renegotiate the E.B.R.D. Grant Agreement and unanimously rejected any shutdown of the units before the end of the design lives.¹⁹⁰ Pro-Western democrats controlled the parliament. Therefore, policy alignment cannot explain this blatant rejection of the early closure compliance commitment. Persistent instability in the informal rules of the game and the resulting uncertainty about future play in the political game framed elite considerations of the costliest aspects of compliance.

Even though Bulgaria had continually failed to meet its commitments to invest in alternative energy, reform the energy sector,¹⁹¹ and shut down Kozloduy's first-

¹⁹⁰ *Nucleonics Week*, 3/18/99 p13.

¹⁹¹ The problem was that energy demand had fallen far short of earlier predictions and fundamental infrastructure changes had not been accomplished. An example is that most buildings in Sofia used centralized heating. This did not allow individual customers to

generation V.V.E.R. reactors before the end of the decade, surprisingly, key Bulgarian officials rejected Western criticism and instead maintained they were either in full compliance or the terms of the agreement were unacceptable from the start. Milo Kovachev, head of N.E.C.'s safety and operations divisions, claimed that there was "no formal statement from anywhere in the E.U. that closing reactors is an absolute precondition to start negotiations. Our theory is that we are sticking to our commitments."¹⁹² The European Commission did not agree; membership talks hinged on compliance.¹⁹³

Yanko Yanev also expressed a common view at the time. During my interview with him, Yanev repeatedly referred to the West's attempts to bankrupt Bulgaria by forcing it to shut down its perfectly safe nuclear power plant. He told me early closure demands were politically motivated; they had nothing to do with safety. In his view "safety is determined by a given society, not some politician in another country that could never fully understand the needs of another country."¹⁹⁴ While he may have been right, the government had committed to early closure regardless of differences in safety assessments. The Grant Agreement does not contain any provisions for removing closure requirements based on improved safety.

control the temperature in their apartments. As a result, many would simply open to windows to cool down the room in the winter. Enormous amounts of energy were simply wasted. Even still, demand remained low, and the claims that Kozloduy was necessary to meet domestic needs carried little weight with Western officials.

¹⁹² *Nucleonics Week*, 9/16/99 p12.

¹⁹³ *Nucleonics Week*, 10/21/99 p18.

¹⁹⁴ Interview, September 17, 2002.

Despite his rejection of the political nature of compliance, Yanev did not blame the West for the weakness of Bulgaria's nuclear regulatory authority, a condition many Western officials acknowledge.¹⁹⁵ That same conciliatory attitude did not carry over to Western assistance in general. Yanev complained that the money was all too often wasted on reports studying the need for more reports. "I would say, 'Why are you giving me all these papers?' Even in the beginning in 1991, when I was in Brussels to sign an agreement for crash assistance, \$30 million, I looked and all the money went to study this or that. Where is all the money for real needed work? They said, 'No, this is to study the need.' I didn't sign it and went home, and the government said, 'What the hell are you doing? You've created a big mess.' 'I'm not going to sign it because there isn't anything for us.' That was the problem."¹⁹⁶ Yanev was certainly not alone in his view that non-safety agendas lay behind the West's demands to shut Kozloduy.¹⁹⁷ Yet, the fact remains that the Bulgarian government committed to do that by 1998, but has consistently attempted to get out of the arrangement.

One bright spot in the overall negative patter was the November 1999 announcement by Prime Minister Kostov that Bulgaria would shut down units 1-2 before

¹⁹⁵ See WENRA's *Nuclear Safety in E.U. Candidate Countries* (2000) and the Council of the European Union's *Report on Nuclear Safety in the Context of Enlargement* (2001) for important examples.

¹⁹⁶ Interview September 18, 2002.

¹⁹⁷ The I.A.E.A. and Foratom have regularly backed up the Bulgarian claim that Kozloduy is now safe and does not need to be shut down. That may or may not be true. The central issue for my project is compliance, not the validity of safety standards or the legitimacy of commitments.

2003 and 3-4 some time around 2006 was not a long-lived decree.¹⁹⁸ He signed a complementary Memorandum of Understanding with the European Commission, and as a result, Bulgaria was invited to begin E.U. accession talks. Almost immediately though, rival elites in both parliament and the nuclear industry began questioning those dates. At the time the nuclear regulatory authority enjoyed limited autonomy from the state utility, and lacked sufficient financial resources as mandated by the Convention on Nuclear Safety. This became evident when the N.E.C. board decided to forgo upgrades at units 1-2 as a result of the 1999 M.o.U. early closure commitment. The state utility saw no need for costly upgrades when the reactors would be closed in only a few years time. Regulatory chairman Kastchiev countered that he did not think the reactors would close then, and continued to push for their continued operation.¹⁹⁹

Prime Minister Kostov initially continued to push for compliance with the 1999 agreement despite opposition regarding the first two units, but as time went by and the government's political fortunes began to grow dim, more elites acknowledged that sticking to the 2006 shut down of units 3 and 4 was unlikely. Kozloduy's executive director confirmed in June 2000 that 1 and 2 would close on time, but he said "plant management is going ahead with modernizing 3 and 4 in a bid to operate them through their design lifetimes."²⁰⁰

¹⁹⁸ As a result of the November 1999 *Memorandum of Understanding* with the European Commission, the E.U. officially invited Bulgaria to begin accession talks.

¹⁹⁹ *Nucleonics Week*, 3/30/00 p7

²⁰⁰ *Nucleonics Week*, 6/22/00 p6.

Even the prime minister himself eventually expressed reservations about his 1999 commitment. A year after his November announcement, Kostov claimed that the M.o.U. conditioned the shutdown of 3 and 4 on receiving sufficient financial assistance from the West to pay for the decommissioning of the first two units. He wanted to run the newer units until 2008-2010 respectively – still short of their design lives but also beyond the agreement dates set with the European Commission. A year had gone by and once again Bulgaria's elites continued to deny the need to comply fully with their international agreements due in large part to the persistent uncertainty in the actual governance of day-to-day politics. Formal stability gave a measure of certainty since elites did not have to worry about changes in the constitutional framework, as was the case under Meciar in Slovakia. Even so, short-term concerns still carried a lot of weight for elites as they tried to establish some form of authoritative government under conditions of severe governmental uncertainty.

Shortly after the change in government in 2001, Simeon fired Kastchiev and replaced him with the former C.U.A.E.P.P. deputy director, Robert Popits. The new N.M.S.S. government initiated legislation to give the nuclear regulator authority much-needed, and long-overdue autonomy and financial resources to do its job. This was not finished until mid-2002. Some progress also continued on decommissioning units 1 and 2 as the E.B.R.D. agreed to nearly \$265 million in assistance conditioned on Bulgaria's compliance with the 2006 early closure commitments for units 3 and 4.

2006 is a critical date because the E.U. had made it clear that first-generation Soviet reactors will not be allowed in the Union. Since Bulgaria initially hoped to get in

by 2007, the date was set one year before. However, a serious contention arose among Bulgaria's elites when Lithuania and Slovakia both received invitations to begin accession talks that granted admission dates several years prior to their closure dates. Yanev told me he thought that was completely unfair.²⁰¹ In response to increasing Bulgarian complaints, E.U. officials countered that the other two countries had made much more progress on the side issues necessary to ensure closure. The Bulgarians had burned too many bridges with Western officials to engender the trust that they would actually keep their word.

The new government has maintained the previous government's policies regarding Kozloduy because it too operates in an environment of unstable informal rules within the context of stable formal rules. It is still difficult to establish clear, predictable procedures for governing the country despite the prime minister's early claims to the contrary. This problem continues to create unwillingness among Bulgaria's ruling elites to guarantee long-term commitments, such as decommissioning Kozloduy. Moreover, after a visit to the plant, Simeon said he thought units 3 and 4 should operate longer than 2006, and he would try to convince the E.C. to change its position. Former Energy Minister Roumen Ovcharov blasted Simeon, saying he did not have that kind of power. Rival groups in parliament and the government continue to vie for control over compliance decisions. For a brief period under the U.D.F. that competition appeared to diminish, only to resurface a year later. The problem remains unresolved.

²⁰¹ Interview, September 17, 2002.

Milo Kovachev, the new Energy Minister, stated publicly that Kozloduy 3 and 4 must operate beyond 2006 to ensure the energy balance of the country and the region. He and Ovcharov want to run them until 2010-2012.²⁰² The new nuclear regulator, Emil Varipev, agreed that there was “no justification for shutting Kozloduy 3 and 4 in 2006, or even 2010-2012. The E.C. position was based on information from the early 1990’s when the plant was in bad shape. But the situation has changed dramatically since then. The so-called design lifetime assigned to Soviet reactors is an outdated idea. I can’t say what the predicted life of the units would be. It could be 2020 or even 2024.”²⁰³

In mid-2002 Bulgaria’s political and nuclear officials began their move to keep units 3 and 4 running beyond 2006. After an I.A.E.A. Safety Review team concluded in June that the reactors had reached a comparable safety level to Western plants, additional supporters from Slovakia, Euratom, and the World Council of Nuclear Workers joined the effort to keep Kozloduy online.²⁰⁴ In addition to the chairman of the nuclear regulator authority, Kozloduy’s new manager, Jordan Kostadinov, said he wanted to pry Bulgaria loose from its commitment to the E.U. to shut the third and fourth units by 2006.²⁰⁵ The Bulgarian energy law at the time envisioned the shutdown for 2008-2010.

Bringing out an even bigger weapon for the fight, B.S.P. President Georgy

²⁰² *Nucleonics Week*, 1/31/02 p1.

²⁰³ *Ibid.*

²⁰⁴ WONUC brought suit against the European Commission claiming that the M.o.U. agreement in 1999 was non-binding. The E.U. court ruled that no legal grounds existed for forcing closure in any E.U. candidate country. *Nucleonics Week*, 8/15/02 p1.

²⁰⁵ *Nucleonics Week*, 7/4/02 p1.

Purvanov sent a letter to the leaders of all the E.U. member state. In it he claimed that if the E.U. forced Bulgaria to comply with its shutdown commitments, social unrest would become so great that the country's move towards greater democratization would be jeopardized. At the time, nearly 70% of the population thought the "Bulgarian government should resolutely insist on postponing the decommissioning of the 1st and 2nd Kozloduy units by the end of 2002, even at the cost of delaying entry in the E.U."²⁰⁶ The issue was a political time bomb waiting to explode on whichever government was in power at the time.

Purvanov has been an ardent opponent to shutting any reactors at Kozloduy in general. In late July he met with W.O.N.U.C. President Andre Maisseu, and according to Maisseu, Purvanov said that "Kozloduy 3-4 will not be closed by 2006, as the E.C. wants, and that units 1-2 will be kept closed for the time it takes to modernize them."²⁰⁷ This blatant unwillingness to comply was not limited to any particular party. Veselin Bliznakov, N.M.S.S. chairman of parliament's energy committee, and Vladimir Kossiev, deputy chairman of U.D.F., also voiced their disapproval with early closure. Kossiev called it the "worst possible mistake" given what Bliznakov called the "religion" of nuclear power in Bulgaria.²⁰⁸ These statements indicate the lack of consensus on both what should be done about Kozloduy, and who decides when to do it.

Despite the reluctance to shut the first two, decommissioning plans have

²⁰⁶ B.B.S.S. Gallup International, March and May 2002.

²⁰⁷ *Nucleonics Week*, 8/15/02 p1.

²⁰⁸ *Nucleonics Week*, 7/11/02 p1.

proceeded to a limited degree. In early September 2002, Kozloduy plant management received bids for the Project Management Unit, the group that will be responsible for running the shutdown work. The prime minister has also said Bulgaria will abide by the 1999 agreement concerning units 1 and 2. On September 26, 2002, the Bulgarian Council of Ministers officially accepted the 2006 date for closing 3 and 4, but asked for a safety review to prove that the date was inappropriate – since they consider the plants safe enough to continue running past the deadline. Bulgarian European Policy Minister Meglena Kuneva added that “if the [European] Commission does not agree to a Kozloduy safety review, we won’t reach agreement and sign the energy chapter.”²⁰⁹ However, two months after Simeon’s government accepted the date, U.D.F. and the left-wing Coalition for Bulgaria filed motions stating the government overstepped its bounds and cannot override a parliamentary decision.

Simeon’s government is holding a fragile majority in Parliament, and almost 80% of the population does not want Kozloduy closed.²¹⁰ In the face of such overwhelming popular pressure, and the weakness of its hold on power, the National Movement’s governing coalition voted in early October 2002 to reject closing units 3 and 4 before Bulgaria joins the E.U. Earlier, U.D.F. had demanded the government change its position on Kozloduy or face a vote of no confidence. The procedures for governing the country remain unresolved as different groups claim authority over Kozloduy and uncertainty about who really determines policy persists throughout the political system. Under such

²⁰⁹ *Nucleonics Week*, 10/3/02 p1.

²¹⁰ *Ibid.*

conditions of uncertain governance, within a stable formal structure of government, it is reasonable to assert that elite discount rates are sufficiently high to reject the most costly aspects of compliance, while low enough to foster agreement with those measures that are more easily justified and endured.

The stability of the formal rules has not produced a total disregard for safety and compliance; unstable informal rules have moderated the potentially positive effects of a stable constitutional order to produce partial compliance behavior. Uncertainty produces an unwillingness to invest the nuclear regulator with full autonomy and financial sufficiency, but not strip it of all regulatory authority. It has also meant incomplete compliance efforts to prepare the way for decommissioning. Medium stability has led to medium compliance

Conclusion

How then can we explain the different degrees of Bulgarian compliance? Elites have committed to shutdown Kozloduy's first four reactors before the end of their operational lives, but those commitments appear hollow since shortly after they were made, those same elites once again argued to keep Kozloduy operating beyond those dates. Progress has been made on closing the first two units, but the Bulgarians continue to claim that units 3 and 4 do not fall under the original classification of first generation 440-230's. Yanev told me that they want them reclassified as a hybrid model of the V.V.E.R. 440 since the plant has undergone tests for pipe rupture scenarios that show it could withstand a break in as large as a 500 millimeter pipe and still prevent damage to the reactor core. From his perspective at least this would mean units 3 and 4 do not fall

under the G-7 decision, and therefore are not subject to the terms of Bulgarians existing international commitments. Different concepts of safety are at odds with compliance. While the justification for the original E.B.R.D. Grant Agreement and the M.o.U. with the European Commission that followed six years later may be contested, the fact remains that Bulgaria signed those agreements and has consistently failed to fully comply with their commitments.

Regarding the issue of competing safety norms, the Western officials I interviewed have often deplored the lack of safety culture in their Bulgarian counterparts. They claim that if only the political and nuclear officials could understand the inherent risks of operating a nuclear reactor without a containment structure they would accept their commitments more readily and comply more fully. The Bulgarians clearly do not want to shut down Kozloduy. They believe it is safe, and the I.A.E.A. has offered some support for that conclusion. While politics between the E.U., the U.S. and the I.A.E.A. shed some light on why the former disregard the assessments of the latter – throughout most of its history the West has claimed the I.A.E.A. is merely a pawn of Russian interests – the real problem is compliance, not the unique merits of competing safety assessments. A safety culture argument cannot explain why elites with a highly risk acceptant culture would make any safety improvements at all. Even more to the point, the Bulgarians have made progress towards increasing the autonomy and authority of the nuclear regulator, while remaining adamant that their view of safety is correct. That view stands in opposition to the one espoused in the international agreements they signed. There is evidence of some movement towards a modicum of increased compliance, but

essentially no change in their safety culture.

Another competing claim rests on a country's prospects for integration into the European Union – those selected to join will comply, those on the outside will not. In which case, the only reason the Bulgarians are even considering closing units 1 and 2 is to get into the E.U. However, my model captures the possibility of E.U. membership by showing that domestic elites have to frame the benefits of membership according to the relative stability of the political rules of the game. E.U. membership is certainly the motivation for compliance, but the stability of the rules of the game shapes their willingness to pay the short-term costs of compliance to gain that almost exclusively long-term benefit.²¹¹

The formal rules have remained unchanged and resilient over the last decade. The constitution provides for predictable power transfer mechanisms, even if the result is to limit the establishment of authoritative governments in the process. Whereas the mechanisms are predictable, they are not necessarily efficacious. Differentiations of delegated authority are clear, and despite a few challenges to the parliamentary system, and lingering concerns about the influence of the judiciary, most clearly in the criminal court system, the formal rules of the game have lasted without serious alteration. They have been contested a few times, but often weakly and without much support from either the public or political elites with the institutional power to change them. In addition, the

²¹¹ As stated in the first chapter, the nature of compliance benefits is fixed in the context of nuclear safety agreements – they are high but only in the long-term. In this sense, it is not really possible to discuss the influence of offsetting immediate benefits since they do not exist in this context.

constitutional court has consistently denied those attempts, which has helped to maintain the stability. In contrast, the informal rules remain largely in flux. Actual governance of the Bulgarian political system has been interrupted by numerous votes of no-confidence, unpredictable pre-term elections, contestation about the delegation of bureaucratic responsibilities, and unreliable methods of power transfer for those making safety and compliance decisions. Table 1 shows this. The conditions have been largely consistent throughout the period under review.

Table 1: Formal and Informal Rules Stability

Formal Rules			Informal Rules		
Predictable Power Transfer Mechanism	Clear Differentiation of Delegated Authority	Absence of challenges to that Delegation	Predictable Power Transfer Mechanism	Clear Differentiation of Delegated Authority	Absence of challenges to that Delegation
YES	YES	YES	NO*	NO	NO

* Unpredictable policy reversals are particularly important for this factor because it creates uncertainty as to how long-term decisions will be implemented. Yanko Yanev testified to this problem.

Still, to explain the marginal progress made towards medium compliance there must have been at least a brief increase in stability, and the potential lowering of elite discount rates. The evidence points to just such an event during the first few years of U.D.F.'s control of the Parliament and the presidency. During that time, U.D.F. elites experienced a previously unseen sense of legitimacy due to the disastrous economic failures of the previous B.S.P. government, and the rapid, if short-lived economic

recovery from early 1998 to early 2000. The opportunity turned out to be short-lived, but at the time, there were indications that the government could realistically establish clear, predictable, authoritative governance procedures; and with strong popular opinion to support them, a measure of informal stability existed. Increasing certainty was neither complete nor long lasting. As a result, the government did not admit Bulgarian non-compliance after the original closure dates had passed, but it did commit to decommissioning the first two units by 2004, a date well before the scheduled 2012 end-of-lifetime deadline. The situation changed in 2000 as the socialists began once again to challenge how U.D.F. was running the country, organized crime elements reentered the political system despite earlier successes in eliminating that form of “politicking,” and rival groups in parliament and the government scrambled to gain control over compliance decisions for Kozloduy. Simeon II has faced the same challenges despite his early efforts to bring order to the political process. *Nations in Transit* confirms this condition.

Table 2: *N.I.T.* Ratings for Rule of Law

	1997	1998	1999-2000	2001	2002
Rule of Law	4.25	↑↑ 3.75	↓↓ 4.13	4.13	↑ 4.00

Table 2 shows that compliance is not tied to economic performance. While the initial cost of decommissioning resulted from almost exclusive reliance on Kozloduy for domestic consumption, increased export revenues have not diminished the cost of compliance. Domestic demand has fallen, while foreign demand has increased. In both instances, high compliance is still costly. Economic growth has not changed either the

costs compliance, nor led to increased compliance overall.

Table 3: *N.I.T.* Economic Growth ratings from 1997 to 2002

	1997	1998	1999	2000	2001
Real GDP (% change)	-6.9	3.5	2.4	5.8	4.0

Of all the countries in this dissertation, Bulgaria presents the only instance of persistent medium rules stability and medium compliance. While some steps have been taken to improve compliance, the end result remains unclear. Additionally, as of late 2002 doubts still remained among Western officials as to the sufficiency of the regulator to ensure safety at the Kozloduy nuclear power plants. Compliance appears to have middling values, and it is unlikely the progress taken so far will be reversed. But there are not clear indications it will continue to improve. Nor are there clear signs the informal rules of the game will stabilize. Eventually though, the E.U. may force the Bulgarians to make a choice: full compliance or no membership. Whether or not the informal rules will stabilize to allow that choice to be made in favor of compliance remains to be seen. The arrows and question marks in the following chart point to the potential for improvement, but lingering uncertainty about its likelihood.

Table 4: Covariance of Rules Stability and Compliance

		Rules Stability		
		Low	Medium	High
Compliance	Low			
	Medium		Bulgaria → ? ↓ ?	
	High			

Given the structural and procedural conditions facing the Bulgarian political system it is not surprising that compliance decisions have been inconsistent and incomplete. Will the Bulgarians shut Kozloduy's first two units as promised? The government is moving in that direction despite widespread popular opposition, but the decommissioning project will probably not continue as long as successive governments fail to establish authoritative governance procedures. If that pattern continues, units 1 and 2 will likely continue operating beyond the early closure deadline for the second time. It is even more likely the Bulgarians will keep the modified third and fourth units running well past their time as well. Short-term costs will continue to trump long-term benefits. As a result, Bulgarian elites will continue to straddle the fence and fail to completely fulfill their international commitments.

Chapter 4 - Armenia

“We can tolerate the risk of running Metzamor because other risks are intolerable, they are much higher. As long as we can make it run, we will make it run. Nobody is going to tell us to close it.” – Jivan Tabibian, Armenian Ambassador and Chief of Mission to the Organization for Security and Cooperation in Europe, September 2002

Introduction

Unlike the other cases in this dissertation, the Armenian nuclear power plant at Metzamor closed down as a result of domestic pressure years before Western attention called for decommissioning. After a devastating earthquake in 1988 killed 25,000 people, widespread popular outcry forced the Soviet-era elites to close Metzamor even though it was not seriously damaged at the time, a fact Western safety experts confirmed when they visited the site. Popular fears centered on the on the fact that Metzamor rests on an active seismic fault line, and as greater details about the Chernobyl disaster were made public, the Armenian people demanded the closure of their own nuclear facility regardless of its safety or ability to withstand another disaster. Metzamor would not stay down for long though. Shortly after the collapse of the Soviet Union, the plant restarted in 1995 to meet the country’s dire economic needs. Despite the severity of those problems, the government made a commitment to the European Commission a year later stating that Metzamor would close down once more.²¹² The Partnership and Cooperation Agreement (P.C.A.) set the date for decommissioning at 2004, several years before the end of Metzamor’s design lifetime. The deal promised long-term benefits from the West

²¹² Armenia also entered the Convention on Nuclear Safety at the same time.

if Armenia complied.

At the same time, the political system was undergoing a period of increasing stability under President Ter-Petrosyan. The methods of power transfer for the president and parliament were becoming more predictable as electoral laws clarified the process, a new constitution further established the preeminence of presidential power, and there appeared to be widespread support for the constitutional separation of powers. The formal rules of the game seemed to be stabilizing after the transition from Soviet control to independence. Informally, the dominance of the president as the top man in the patronage hierarchy was widely accepted as the normal practice of politics. Governance centered on the president, while government structures concurrently gave him the greatest share of institutional power. The situation changed in 1998 and only recently have the rules of the game once again stabilized around the presidency.

During the intervening years, Armenia underwent a period of extreme political instability. In comparison to the other countries in my dissertation only Armenia has experienced the outright murder of the government's highest political officials. (Political violence has occurred in Slovakia and Ukraine, but the top elites have as of yet only masterminded it, and have not suffered the consequences themselves.) On the heels of President Ter-Petrosyan's forced resignation in February 1998 by his former subordinate, Defense Minister Vazgen Sarkisian, and five months after the subsequent parliamentary elections brought Sarkisian to power, armed assassins burst into the National Assembly building and murdered the prime minister, the speaker of parliament and six other government officials. Before 1998 Armenia had made slow but marked

progress in both the stabilization of the rules of the game and compliance with nuclear safety agreements. The murder of the prime minister and speaker hastened the intense institutional and personal competition between the president, the government, and different elite patronage networks operating in the Armenian political system.

Ultimately, the resurgence of the presidency as the strongest government institution and President Kocharian as the chief political patron in May 2000 stabilized the rules of the game. Interestingly though, compliance remains incomplete. However, final determination about Armenia's compliance cannot be made at this point as the terms of the P.C.A. agreement have been amended to allow for a later closing date. The Armenians still have to comply by closing Metzamor before the end of its design lifetime; they just have a few more years to do it.

In contrast to the change in compliance requirements, Armenia's chronic energy shortage remains constant, generating enormous short-term costs to closing the country's nuclear power plant. While there has been some improvement with Azerbaijan over Nagorno-Karabakh, Turkey's continued embargo and irregular fuel shipments through Georgia continue to deny the country a reliable alternative to Metzamor. Equally problematic is the ecological devastation caused by over-reliance on the Lake Sevan hydroelectric plant, which has seriously threatened the capital city's water supply. Massive deforestation has also resulted from energy shortages as many Armenians chose to chop down their ancestral woodlands in order to keep from freezing in the winter. Immediate needs have been undoubtedly high.

However, until the murder of Prime Minister Sarkisian, Armenian political

officials generally accepted early closure as a means of securing the long-term benefits of cooperation with the West. The rules were becoming more stable and compliance progressed concurrently. That process came to an abrupt halt after President Ter-Petrossyan's forced resignation in February 1998, and only worsened after the October 1999 assassinations. Compliance began to decline as a result of growing uncertainty in both the formal and the informal rules of the game. It is reasonable to assume that elite discount rates had previously been declining, but then increased as the rules of the game became very unstable. This made compliance very unlikely. As this chapter shows however, despite President Kocharian's reassertion of control over the country's patronage hierarchy and the reestablishment of presidential preeminence in Armenian politics, compliance has still lagged behind. Of all the countries in my study, only Armenia has followed this particular pattern of rules effects. I address the implications of that fact in the following sections.

Rules of the Game

In September 1991 the Armenian government held a public referendum to leave the Soviet Union. An overwhelming majority agreed and the country joined the ranks of newly independent states. The first contested election had been held for the Supreme Soviet one year earlier, and the Armenian National Movement (A.N.M.), headed by former Nagorno-Karabakh advocate Levon Ter-Petrossyan, emerged as the dominant party in Armenia. The emergence of A.N.M. led to Ter-Petrossyan's victory in the first presidential election one month after the referendum. The creation of the presidency limited parliament's effective governing power, but elites in the legislature accepted the

new institutional division of power as beneficial for the country. The existing formal rules were largely uncontested for the first four years of independence, and the informal patronage rules became fixed to the presidency under Ter-Petrosyan. That is not to say they were inviolable. The country was in the midst of a transition from communist rule so the rules of the game were understandably changing. The direction of the change was fairly predictable though.

At the same time, the country entered a period of devastating economic and social crisis. The Georgian civil war all but eliminated regular fuel shipments from Tajikistan and threatened the fragile stability of the region. Nagorno-Karabakh, which had become a popular rallying cry for anti-Soviet resistance – in much the same way as fears of Metzamor’s safety after the 1988 earthquake – erupted in armed conflict as Armenians joined in the struggle to drive the local Azeris out of the area. Forced relocation from both countries followed shortly thereafter. In the aftermath, Turkey imposed an embargo on all goods and services to Armenia, effectively cutting off Western trade to the country. Russia and Iran remained the only two neighboring countries positioned to assist Armenia, but because both were undergoing their own difficulties at the time assistance was limited and sporadic. The Armenians faced a myriad of problems but stability in the rules of the game was not the most pressing.

In that regard, the timing of the introduction of the presidency in late 1991 enabled post-communist elites to accommodate the new institution contemporaneously with their newly gained independence from the Soviet Union. In addition, the informal rules remained fairly stable as family connections, regional affiliations, and clan-based

identities continued to define the allocation of resources and political positions. Patronage determined who governed what, how they did it, and for how long. This had been true in the Soviet era, continued during the early years of transition, and it remains so today. Unfortunately, “these patron-client groups constitute a strong barrier to democratization because they use political pressure and coercion to sharply restrict access to positions of political power and economic influence.”²¹³ Yet the presence of clientalism did not inherently produce instability in the political system. Those relationships were established on long-standing traditions with widely understood and unchallenged boundaries so that patronage was a stable form of informal rule. It may not have been great for democracy, but governance remained fairly stable nonetheless. In that sense, my argument does not condemn the Armenian political system out of hand for its lack of democratization due to strong clientalism. Instead, this enabled elites to take a longer view towards the future than would have been possible without stable patronage relationships.

The formal rules were also fairly stable, even after the constitution changed in 1995, since the new institutional arrangement did not dramatically alter the division of power between the parliament and president. A measure of continuity ran through the process – the presidency had been the most influential institution in Armenian politics since 1991 and remained so in the years immediately after the change. The mechanisms for power transfer became clearer with the new constitution, and elites were largely

²¹³ Nora Dudwick, “Political Transformations in Postcommunist Armenia: Images and Realities,” in Karen Dawisha and Bruce Parrott, eds., *Conflict, Cleavage, and Change in Central Asia and the Caucasus*. (New York: Cambridge University Press, 1997), p70.

united in their support of the changes. Yet the fact that revisions occurred means that the rules had not yet reached a status of high stability. They were moving in that direction; the best way to describe the situation would be as promising.

As I mentioned in the introductory chapter, rules are both an object and a constraint on elite action. As such, during the first four years of his presidency, Ter-Petrosyan strengthened his existing formal powers over parliament and his personal power over the Armenian patronage system because the rules of the game allowed such actions. The existing constitutional framework gave the president considerable institutional influence, but constraints and limits still existed to prevent him from acting arbitrarily and contrary to the constitution. Operating within that system, Ter-Petrosyan used his personal popularity (as evidenced in an election mandate of 83%) to further consolidate the presidency as the center of elite patronage relationships. One avenue he took was to introduce market reforms including the introduction of a new currency based on strict I.M.F. guidelines, tax reforms, privatization of many state enterprises, deficit reductions and the elimination of subsidies on consumer goods.²¹⁴ He worked with existing clients and established new connections as well. The irony was that as Ter-Petrosyan attempted to bring the economy more in line with the West, his control over the political realm set him against the liberal democratic principles followed in those same states.²¹⁵ Accordingly, the Armenian political system was not becoming more

²¹⁴ “Armenia’s Parliamentary Election and Constitutional Referendum July 5, 1995: A Report Prepared by the Staff of the Commission on Security and Cooperation in Europe, p3.

²¹⁵ When the president ordered the suspension of the Armenian Revolutionary Federation

democratic, just more stable in terms of its rules.

Yet Ter-Petrosyan's efforts to reform the country's economy were not the only focus of his attention. As stated above, while war raged in Nagorno-Karabakh, Ter-Petrosyan used the 1995 Parliamentary elections to introduce a new constitution that expanded presidential power over the legislature. In the run up to the election, once his plan became clear to the members of parliament, a few opposition groups formed to present an alternative draft to the electorate. However, the president's position as top political patron and the existing institutional separation from parliament gave Ter-Petrosyan considerable power to resist them. As a result, the president overruled the opposition through his clients in the constitutional court, which summarily denied their petition. In addition to his patronage power, in the days leading up to the referendum Ter-Petrosyan took his case to the people, arguing that the new constitution was needed to prevent the "party of war" from dragging the country into an even greater regional conflict with Azerbaijan and Turkey over Nagorno-Karabakh. He accused opposition groups of attempting to destabilize the government, which the new constitution was designed to prevent. His plan worked. On July 5 the A.N.M.-led Republic Bloc and the new constitution won the day.²¹⁶

(A.R.F.) for six months, which he did this four months before the 1995 elections to minimize their "revolutionary" potential, his actions drew sharp criticism from the West. This did not affect his control over the existing patronage networks that maintained his position in power though.

²¹⁶ One of the chief weaknesses of Armenian democracy is the lack of an effective civil society. Popular disillusionment of elected officials and political institutions in general results from several factors, not least the economic and social dislocation that followed independence. The rules of the game were becoming more stable though, despite the

The new constitution gave the president more power than in the older version, but it was more of a progressive step rather than a complete revision. Under the new constitution the president can appoint and remove the prime minister without legislative oversight, and he can more easily dismiss parliament if it fails to support his candidate. Once he gained these new powers, Ter-Petrossyan put them into effect by regularly changing prime ministers so as to prevent an alternative base of patronage power from developing; he used his structural powers over the government to further entrench his control over the patronage system. The unification of structural preeminence and supremacy in governance in one person stands at odds with liberal democracy, but it was at least more stable than other hyper-presidential systems.²¹⁷

In that regard, while the National Assembly remains the sole legislative body, the president can issue decrees that have the same binding authority. To limit presidential power, parliament can remove the executive with a two-thirds majority, but only after the constitutional court has found him guilty of treason or other serious crimes against the state. His control over foreign policy making expanded under the new constitution, as did presidential oversight of the military. Some of these powers were new, but on the whole, the new constitution enhanced the executive's position vis-à-vis parliament rather than generate new abilities altogether.

weakness of democracy per se. For more on the historical roots of the problem see Dudwick (1997).

²¹⁷ In Russia, the structural power granted the president has been far greater than his ability to control the patronage system. Boris Yeltsin struggled against alternative centers of power throughout his time in office. It remains to be seen how successful Vladimir Putin will be in centralizing both structural and governance power in his hands.

In addition, the structural adjustments to the constitution did not inherently alter the mechanisms by which the country was actually governed. Informal patronage links between Ter-Petrosyan and his clients still determined governance procedures. The most important of link centered around Defense Minister Vazgen Sarkisian. That specific patrimonial relationship carried more weight than the relationship between the prime minister and the president, as would become evident a few years later.

From the beginning of his first presidential term in late 1991, Ter-Petrosyan placed relatively compliant prime ministers in office to support his economic reforms and maintain the prestige of the presidency. Hrant Bagratian was the longest serving of that group. Increased cooperation with the West and domestic economic reforms characterized his three years in office. Bagratian and Ter-Petrosyan worked well together to set Armenia firmly on the path of economic liberalization. Even still, the privatization of many state enterprises was fraught with corruption and insider dealing, but during the process, the informal rules of the game operated smoothly as patrons rewarded loyal clients with political positions and economic resources.²¹⁸

To put a better spin on the non-democratic behavior among Armenia's ruling elites, the president asked Bagratian to resigned on November 4, 1996 and replaced him

For a time, Ter-Petrosyan was successful in both aspects.

²¹⁸ Corruption during privatization was just one aspect of the generalized corruption running through most economic transactions in Armenia. This contributed to the weakening of an already weak civil society. Unlike Bulgaria however, where concerns about government corruption can affect the stability of the informal rules of the game, in Armenia the informal rules remained resilient, and until early 1998 the president was widely accepted as the chief patron of that system.

with a more familiar face to the West. Armen Sarkisian (no relation to Vazgen and Aram of later notoriety) had previously served as the Ambassador several European countries as well as Head of Mission to the European Community. Under the president's direction the new prime minister continued the work begun by Bagratian and worked for greater integration into Europe, specifically entrance into the Council of Europe. Close ties with the West remained paramount, and stabilizing rules of the game characterized the political system for two more years.

However, problems for Ter-Petrosyan began in the wake of the September 22, 1996 presidential election. Previously, the president had counted on the support of his allies and clients in the "power" ministries: Defense, Internal Security, and Economic Affairs. In the 1995 parliamentary elections, international observers had cited considerable vote tampering and some instances of outright vote theft. Ter-Petrosyan and his Western-leaning supporters in parliament and the government set out to increase Armenia's reputation as a developing democracy through the operation of free and fair elections. Unfortunately, that did not happen. In the contest between Ter-Petrosyan and the country's first Prime Minister, Vazgen Manukian, the incumbent essentially stole the election.²¹⁹ Ter-Petrosyan won 51.75% of the vote, thereby narrowly avoiding a runoff that would likely have led to his removal from office.²²⁰ Little did the president know that in trying to avoid that possibility he would instead hasten its arrival.

²¹⁹ For a list of infractions see "Armenian Presidential Election September 22, 1996: A Report Prepared by the Staff of the Commission on Security and Cooperation in Europe."

²²⁰ Ibid.

Shortly after election day, as officials counted the votes, both men preemptively claimed victory and urged the international community to validate their positions. Unfortunately for Ter-Petrosyan, members from the O.S.C.E. saw evidence of “vote tampering, very serious violations of the election law that [raised] questions about the integrity of the election process and could even question the results.”²²¹ More problematically, three days after the election a mob of Manukian’s supporters stormed the parliament building, “broke through the ranks of its defenders and gained entry into the building, where they beat up Speaker Babgen Araktsian and his deputy. In response President Ter-Petrosyan banned rallies, ordered opposition parties closed and called in troops and armored personnel carriers to quell the riot and disperse the crowd.”²²² Whatever the president may have intended, his actions only increased discontent with the election results. In addition to the riots started by Manukian’s supporters, violence even broke out among political elites as parliamentarians took it upon themselves to make their opinions known by “pummeling each other, with opposition legislators getting the worse of the encounter, while television broadcast the edifying spectacle to the nation.”²²³

Prior to the introduction of this kind of violence in the political system, Ter-Petrosyan’s power had been uncontested by his clients in the power ministries. In the wake of the election debacle, his former clients began to challenge his position even as the president continued to court the West in hopes of greater integration into European

²²¹ Ibid., p3-5.

²²² Ibid., p15.

²²³ Ibid.

institutions. However, the informal rules of the game had begun to shift as new players entered the scene and worked with former presidential clients to displace the existing patronage system.²²⁴ Presidential patronage became less important as the power ministers set themselves up in rival clans. The president's former client and friend, Vazgen Sarkisian, factored preeminently in the most dominant new faction. Robert Kocharian was also a member of that group. Both men had served in Nagorno-Karabakh, one as the leader of defense forces, the other as the former president of the republic. Their entrance on the scene set the stage for Ter-Petrosyan's eventual fall from power.

As international condemnation increased over the handling of the presidential election, Ter-Petrosyan began to lose face domestically as well. Generally a distant politician often seen as unapproachable to the average Armenian voter,²²⁵ his few press conferences did little to improve his image. Ter-Petrosyan even appointed Kocharian to replace Armen Sarkisian as prime minister. Kocharian was extremely popular at the time, and is perhaps the most outwardly "Western" of all the current cadre of elites in Armenia given his connections in the United States.²²⁶ Ter-Petrosyan's move to shore up domestic support among Karabakh veterans and those paramilitary groups with strong connections to the defense and internal security ministers failed to win him the approval he had so quickly lost after his reelection.

²²⁴ While much of the shift necessarily took place behind the scenes, when the change came the entire political system experienced it.

²²⁵ Ibid.

²²⁶ From 1992 to 1994 he raised support for the Nagorno-Karabakh campaign among diaspora Armenians and U.S. politicians.

As a result, on February 3, 1998 Ter-Petrosyan resign under pressure from his former allies and clients in the power ministries. Rather than maintain the existing patronage hierarchy whereby the presidential chief appointed those under him and eventually gave way to his nominated successor, Sarkisian used his own patronage hierarchy in the defense and internal affairs ministries to remove the president. This shift in the patronage system had far more extensive effects on the rules of the game than the mere act of defrocking of the president. It signaled a change in the political hierarchy and replaced a formal process of removing the president with a new informal one of “revolution from below.” The informal rules had become unstable, and because of the centralization of both structural and procedural power in the presidency, the formal rules were now threatened as well.

That threat emerged almost immediately. As a consequence of Ter-Petrosyan’s resignation, constitutional measures to keep the government functioning kicked in. However, these were predicated on parliamentary dismissal of the president for serious crimes against the state. Ter-Petrosyan had committed no such acts, so the provisions for power transfer were disrupted; they were no longer as clearly predictable as they had been before. Even still, the Constitution allowed the prime minister to step in as acting president and call for early elections within 40 days. Even though the president’s dismissal had not followed the prescribed mechanism, a new acting president was eventually nominated.

In his first act, Robert Kocharian called for early elections in March and ran as the incumbent against Karen Demirchian, the last communist leader to rule Armenia. In a

runoff election Kocharian handily defeated the old communist, but even though the results strongly favored the incumbent acting-president, Demirchian and his group of supporters refused to concede. Like the 1996 election, the mechanism for power transfer was once again contested. Additionally, as with earlier elections, international observers cited numerous instances of fraudulent election practices, notably one instance where the bottom of a ballot box had been hollowed out to hold a secret compartment with hundreds of neatly stacked Kocharian-votes waiting to be counted. One observer said the ballots were so obviously illegitimate due to their “untouched” appearance when compared to normal ballots that he wondered how the perpetrators could have imagined they would be counted for Kocharian in the first place.²²⁷ However, despite these irregularities the elections were graded as free and fair and marked improvements over the previous contest. They may have been fair but they were not universally accepted, indicating growing instability in the formal rules of the game.

During the election, Kocharian had counted on the support of his Karabakh allies, but Vazgen Sarkisian seemed to consider the new president his subordinate since he now controlled that particular patronage network. In terms of the actual governance of the country, the informal rules had already changed when instead of following the chief elected official – the president - or at least operating behind the throne, the political might of the power ministers had come out in the open. As a consequence, the president was obligated to nominate the powerful Minister of Finance and Economy, Armen Darbinian,

²²⁷ See “Report on Armenia’s Presidential Elections March 16 and 30, 1998: A Report Prepared by the Staff of the Commission on Security and Cooperation in Europe” for more details.

to the prime minister's office. Darbinian had been Sarkisian's co-conspirator in Ter-Petrosyan's ouster. While Darbinian's policies remained solidly pro-Western and marketization continued to be a top priority for the country, the underlying practice of governance had changed. Instead of owing allegiance to the president as the most important patron capable of dispensing political and economic rewards, the axis had shifted to the forces loyal to the power ministers. This process culminated in the May 1999 parliamentary elections that brought Vazgen Sarkisian to official power. From that position, the new Prime Minister would eventually try to challenge the separation of powers principles in the constitution. If successful, Sarkisian would have re-centered both patronage and structural power around the prime minister's office, in contrast to Ter-Petrosyan's efforts as president. The rules of the game remained very unstable during this period of attempted transition.

Previously, Ter-Petrosyan had relied on the power ministers and their respective clients, but his own legitimacy among those groups, within the population at large, and even among Western officials had also contributed to his preeminence in Armenian politics. Presidential influence had diminished since then, even more so after Sarkisian became prime minister in late 1999. Before then though, the new president was still viewed as weak and ineffectual compared to Sarkisian and Darbinian. What had once been veiled in the service of the president now stood in contrast even to the formal rules of the game. Those rules gave President Kocharian more *de jure* authority than he effectively possessed at the time of his election.

Kocharian was by no means ineffectual though. Early in his term, Kocharian used

his constitutional powers over foreign policy to improve relations with Azerbaijan, even though it meant going against the most powerful group in the country, the Karabakh veterans headed by Vazgen Sarkisian. In spite of his successes in international relations, Kocharian faced opposition from the outset of his term in office. Almost immediately, Sarkisian's supporters in Parliament began calling on him to dissolve parliament and hold early elections in October 1998. This would likely have given Sarkisian a sufficient parliamentary mandate to facilitate any moves to change the constitution in his favor. The president resisted their efforts and stuck to the schedule of spring 1999. As was becoming increasingly clear though, Kocharian did not have the support of the power ministries and his refusal only worsened his position. The president less held his opponents at bay than they were willing to wait for their plans to come to fruition.

To that end, shortly before the May 1999 elections, Vazgen Sarkisian allied with Kocharian's earlier rival and hugely popular elder statesmen, Karen Demirchian. If elected, the prospects for restricting the constitutional authority of the presidency, and thereby institutionalizing its new *de facto* weakened position, seemed likely at the time. Given Sarkisian's control over the new patronage system and Demirchian's huge popularity to support such an amendment, the formal rules of the game had become very unstable. When the Unity bloc formed by Sarkisian's Republic and Demirchian's People's Parties won a sweeping victory and gained control of a majority of parliamentary seats, Kocharian nominated Sarkisian to become the new prime minister – he had little choice. Demirchian became the head of parliament as its speaker, Sarkisian rewarded his ally Darbinian with the Ministry of Economy, and the deal was done. New

government leadership formed, but more importantly, another step had been taken to alter the configuration of power between the president and the government. Whereas earlier prime ministers under Ter-Petrosyan had been loyal clients of their political master, the new prime minister was poised to concentrate power in his own hands. The informal rules had changed and Sarkisian was now in a position to change the formal rules as well. His main rival, President Kocharian, seemed to offer little resistance and had begun to be seen as the weak man of the triumvirate.²²⁸

Changes in the informal rules of the game, coupled with the possibility of changes to the formal separation of powers created a high degree of uncertainty about the future of the Armenian political system. During the attempted transition, governance became more uncertain than it had been under Ter-Petrosyan, but there was still the potential to stabilize the rules under Sarkisian as conflict between rival groups diminished under the growing power of the new prime minister. The possibility of a new center of power either at odds with the constitution, or one that transplanted constitutional powers directly to the prime minister, could have brought some stability in the long run if Sarkisian had succeeded in consolidating his power over the president.

The irony is that even though Sarkisian and Demirchian viewed the president as the weaker of Armenia's top three elites, Kocharian got his chance to bring both constitutional and patronage powers back in line with each other and under his control. The opportunity came on October 27, 1999 when heavily armed gunmen burst into the

²²⁸ "Report on Armenia's Parliamentary Elections May 30, 1999: A Report Prepared by the Staff of the Commission on Security and Cooperation in Europe," p13.

parliament building and assassinated Prime Minister Sarkisian, Speaker Demirchian and several other ministers of parliament. Former journalist Nairi Hoonanian and a few other disgruntled opponents of Armenia's current government carried out the slaughter. In the aftermath, the fragile Unity Bloc quickly fell apart after the loss of their leaders. Its collapse gave President Kocharian ample opportunity to begin reclaiming the benefits of uncontested power.

In the immediate aftermath however, Kocharian bided his time and dutifully turned over the initial investigations to military and internal security personnel. Even still, parliamentarians started talking about the president's possible role in the murders. These rumors carried some weight as a few months earlier Sarkisian and Kocharian had begun to show open dislike for one another. While it was a long way to proving the president's involvement, speculation pointed in that direction. Whether he had an active role in the event or merely reaped the rewards afterwards, Kocharian steadily began to move his supporters into key positions in an effort to take over the power ministries and reclaim the prime minister as his client.

At first Kocharian gave into Unity demands and appointed Vazgen Sarkisian's brother, Aram – the manager of a concrete plant – as the replacement prime minister. Aram had little political experience and even less power in terms of prestige and clout with the military or enterprise owners, but he nonetheless vowed to carry on the policies of his slain brother and maintain order in the government. Despite his efforts though, the wound to Unity had been fatal. Sarkisian's Republic party leadership differed with Demirchian's People's party on how to resolve the political crisis, new candidates to lead

the defense and internal security ministries, and what to do about Kocharian. The party bloc quickly fell apart. Meanwhile, as his enemies turned on each other, the president made his move. On May 2, 2000, just seven months after the assassinations, the battle for control was won: Republic split, the president sacked Aram Sarkisian and named a compliant Andranik Markarian to the post of prime minister. He had moved enough of his clients back into the power ministries to reclaim the throne.²²⁹

Robert Kocharian had reemerged as the most powerful man in Armenian politics, reasserting traditional patronage relationships based on allegiance to the president. In doing so, he helped stabilize the rules of the game after a period of intense uncertainty following Ter-Petrosyan's resignation. During that time, Vazgen Sarkisian had changed the procedures of governance by establishing a new, rival patronage network. Informally, power transfer mechanisms no longer owed their outcome to presidential favors, and the differentiation of bureaucratic authority depended on the power ministers themselves rather than the president. These changes remained unconsolidated as a result of the assassin's bullet. The formal rules had also been unstable due to the unpredictable power transfer mechanisms for the office of the presidency after Ter-Petrosyan's unconstitutional forced resignation, Sarkisian's attempts to redraw the constitutional lines of delegated authority in his favor, and the open contestation between the prime minister, the president and their supporters during that process.

²²⁹ While Vazgen Sarkisian had been the military leader of Karabakh, Kocharian still had strong support in the region and without Sarkisian as a counterweight, many of the veterans sided with the president.

Again, both types of rules had been fairly stable from 1991 until February 1998 despite a revision of the constitution in 1995. After February 1998 stability began a precipitous decline and bottomed out with the October 1999 assassinations. The situation improved with Kocharian's return as the top of the patronage hierarchy and the reassertion of presidential preeminence under the constitution. Aram Sarkisian's return in the 2003 presidential election did not reintroduce uncertainty into system since if elected, he would have operated under the same stable formal and informal rules Kocharian now enjoys. The most opposition parties could do in the run up to the 2003 presidential election was to cry foul and criticize the president for purging local election commissions as a means of aiding his chances.

Similarly, the power ministries are under the president's control and no alternative power base exists. Besides Aram Sarkisian, another rival also failed to diminish the president's structural and procedural power. Stepan Demirchian, son of the slain Speaker of Parliament, has risen through the ranks of his father's supporters to become Kocharian's most potent rival, taking nearly 30% in the first round of the presidential election, and even forcing a second round. However, he does not control the same power ministries as did Vazgen Sarkisian when he managed to change the rules of the game. Unlike their familial predecessors, Aram Sarkisian and Stepan Demirchian operate under the restored patrimonial hierarchy flowing from President Kocharian. This restoration looks to be successful with the president's victory in the second round of voting and the lack of an alternative power base on the immediate horizon.

It is important to note however, that while earlier variations in the stability of the

rules of the game corresponded directly to compliance behavior – 1) increasing stability, increasing compliance, 2) low stability, low compliance – recent developments have not been so clear. During the interim period of rules instability, uncertainty as to who was really in charge made governance difficult, and elites were hard pressed to make any long-term decisions to resolve the country’s woeful situation. However, renewed rules stability has not produced full compliance as my model predicts. Rather than disprove the model though, this fact owes more to alterations in the conditions defining compliance than a theoretical failure.

Compliance

The 1988 earthquake that devastated much of Armenia raised fears of another “Chernobyl” occurring in the Soviet Union. At the time, Metzamor suffered from the same safety deficiencies present in all the early V.V.E.R. and R.B.M.K. reactors: poor management, insufficient fire control (both prevention and suppression), outdated computers, lax training, bad construction, and no containment structure to keep radioactive material from reaching the outside environment in the event of a nuclear accident. Although it had been given some modifications to protect against seismic activity up to .8-ground force acceleration,²³⁰ the Metzamor plant operates a V.V.E.R. 440-230 – the least safe of the pressurized water models.

In order to make up for the loss of roughly 800 megawatts of power following Metzamor’s early closure in 1989 – roughly 40% of the country’s total energy

²³⁰ Correspondence with David Sycamore, December 10, 2002

consumption – increased oil and gas shipments from Central Asian began almost immediately. Armenia is a mountainous, resource-poor, landlocked country, dependent on good relations with neighboring countries to meet its electricity demands. This was not a problem within the centralized Soviet system. When the system collapsed in 1991 though, Armenia could no longer count on the enforced Azerbaijani goodwill to allow gas shipments along its pipeline. As a result, Armenia's energy supply was thrown into chaos. Civil war in Georgia also disrupted shipments as its pipeline was regularly bombed, rail cars destroyed and fuel trucks blown up before they reached Armenia.²³¹ With two of its access routes closed, the only remaining alternative for fossil fuel shipments lay to the West. Unfortunately, the conflict over Nagorno-Karabakh, Armenian demands for Turkish recognition and compensation for the massacre of thousands of ethnic Armenians in 1915, and the forced relocation of Azerbaijanis out of Armenia led to a Turkish embargo that effectively eliminated that possibility.

Cut off from the West and alternative energy sources, Armenia began running the Lake Sevan hydroelectric plant beyond capacity. The water level dropped eighteen feet in two years, turning the lake into a swamp and threatening the capital city's water supply. The sacrifice of the country's largest fresh water source produced one hour of electricity a day. All together, during those first two years of independence the country experienced massive unemployment, widespread starvation, and unprecedented emigration to the West and Russia.²³² "It was as close to hell as we want to get,"

²³¹ *Living on Earth*: NPR 11/12/93 transcript of broadcast.

²³² Some estimates are upwards of 25% of the population, many of them the educated and

according to Ambassador Tabibian.²³³

Meanwhile, not far from the capital, hundreds of megawatts of generating capacity remained idle as the country slipped further into the abyss. Yet the decision to restart Metzamor was not an easy one free from complication and controversy. On the contrary, it took almost two years from the time the government began talking about it in 1991 before the formal decision was taken April 7, 1993. Against the backdrop of such obvious immediate needs, the likelihood of an accident occurring seemed less important.²³⁴ In a bit of revisionist history, the same politicians who had earlier bowed to public pressure and agreed that the plant was unsafe back in 1989, when faced with the dire economic and social consequences of having almost no electricity, turned about face and considered “the 1989 decision hasty and wrong, taken in an emotional context.”²³⁵ Restarting Metzamor did not violate any international agreements though. It may have been reckless and foolhardy according to Western safety experts, but compliance was not an issue since Armenia had not yet signed any agreement regarding the closure of Metzamor, or the sufficiency of the nuclear regulatory authority to ensure its safe operation.²³⁶

The central problem plaguing Metzamor has been Armenia’s persistent lack of

middle class. See Edmund Herzig, *The New Caucasus: Armenia, Azerbaijan and Georgia* (London: Pinter, 1999) for more on the social costs of independence.

²³³ Interview, September 16, 2002.

²³⁴ Ibid.

²³⁵ *Nucleonics Week*, 1/9/92 p1.

²³⁶ Even though the plant closed down once before, its later restart allows me to hold

money. Prior to restart, the government could not afford to adequately test the plant to ensure its safety. This was deeply troubling to international safety experts, as serious concerns had been voiced in the aftermath of Metzamor's original closure in 1989. Commenting on that closure, Alexander Kalugin of the Russian Kurchatov Institute (one of the principal Russian design institutes for nuclear reactors) claimed, "it was insufficient safety levels that signed the death warrant of Metzamor 1 and 2."²³⁷ Western safety experts and political officials went further and cautioned that safety had actually degraded since 1989 due to neglect. An I.A.E.A. team in 1992 sent a letter to the Armenian Energy Minister and cited major problems, calling the situation "not good."²³⁸ Unfortunately, the immediate needs for power made safety a lesser priority. When asked if he thought the plant should remain closed for testing, and if the Armenians would listen to Western advice, World Association of Nuclear Operators (W.A.N.O.) president Lord Marshall of Goring said the plant would come back on line "no matter what shape it is in."²³⁹ With domestic needs mounting, political elites forged ahead to get the plant back on line as soon as possible.

When Prime Minister Bagratian's government formally announced the decision to restart unit 2 (unit 1 remained closed because its parts had been cannibalized to refit the second unit), the West offered to help but conditioned assistance on a nearly \$500 million safety upgrade program. Armenia could not easily afford such a sum on its own, and the

Metzamor as an extant fact comparable to other power plants considered in this study.

²³⁷ *Nucleonics Week*, 11/5/92 p12.

²³⁸ *Nucleonics Week*, 2/4/93 p4.

implementation of the extensive program would invariably delay Metzamor's restart. Caught between impending social disaster and strict conditions for assistance, political elites pursued a longer-term perspective regarding safety than might have been expected. They could have simply ordered the restart regardless of safety concerns using whatever money was available. However, Armenian elites needed Western assistance to continue into the future, so they accepted certain conditions that delayed restart. As stated in the previous section, the rules of the game were progressively stabilizing at the time. This allowed them to consider such costly decisions. Despite a measure of acquiescence, the Armenians were far from content with the level of assistance offered by the West. While waiting to restart Metzamor they regularly tried to squeeze more money out of international donors. What was offered went towards badly needed safety work, but also helped prepare alternative energy sources to replace Metzamor.²⁴⁰ Even still, serious short-term needs conditioned that perspective by limiting the scope of safety work that should have been implemented. Most of the work was fundamentally necessary for restart. While some safety upgrades were implemented, much of it had to wait.

In response to Armenian moves to restart Metzamor, Western officials began to propose alternative sources to replace the faulty nuclear power plant. The most important was the \$57 million E.B.R.D.-sponsored Hrazdan project to upgrade a 300-megawatt oil/gas plant and transmission line to Yerevan. However, the bank conditioned funding

²³⁹ *Nucleonics Week*, 1/9/92 p1.

²⁴⁰ E.C. and US agencies had offered assistance from the beginning in 1991-2, and the Armenian's readily accepted the promised assistance. The amount of assistance did not substantially increase over time; elite frames of the assistance changed instead.

on delaying Metzamor restart until all safety measures could be completed. “The idea behind the loan, a bank official noted, was to help avoid the need to restart Metzamor. The agreement allows the bank to back out and demand repayment if the plant restarts and is deemed unsafe.”²⁴¹

Lingering questions about the safety of the plant’s pressure vessels and supposed seismic upgrades formed the basis of those concerns, and dogged Armenia’s relations with the E.U. and the United States throughout the 1990’s. Detailing the specific nature of the problems, Richard Wilson of the Andre Sakharov Foundation wrote a comprehensive evaluation of the situation at Metzamor just before it restarted.²⁴² In it he described the Armenian regulators as very highly safety conscious with a strong safety culture to guide their efforts, but faced with almost insurmountable economic problems demanding less safety than they wanted.²⁴³ Carol Kessler confirmed that opinion, stating that the regulatory staff held plant personnel to very high standards of conduct and pursued safety with as many resources as they were given.²⁴⁴ Sadly those resources were

²⁴¹ *Nucleonics Week*, 9/15/94 p3.

²⁴² Andre Sakharov Foundation papers, “Armenian Nuclear Power Plant” 7/25/95.

²⁴³ Ironically, Wilson states that one of the chief problems resulting from the lack of a containment structure relates to commercial airlines using Metzamor as a visual reference point for landings. He mentions the unlikely event of a terrorist using a plane to strike the plant, and warns of serious radioactive contamination that would result since the plant has no fail-safe mechanism – i.e. no containment.

²⁴⁴ Not everyone had the same high safety standards though. In a story for *US News & World Report*, Alan Cooperman describes his trip to Metzamor in April 1996. I quote part of it to show the perspective of some of the Armenian personnel regarding Metzamor’s safety and what needed to be done to make it safer. “We are inside the belly of the beast, the Soviet-built nuclear power plant in Metzamor, Armenia, which environmentalists say is an excellent candidate for the next Chernobyl. The place where

far too limited to fulfill the requirements safety experts demanded.²⁴⁵

Safety experts did get some support after Armenia signed the Convention on Nuclear Safety in 1994. The president created the Armenian Nuclear Regulator Authority (A.N.R.A.) shortly thereafter as a means of trying to fulfill the C.N.S.'s requirements.²⁴⁶ As with so many of the countries in this dissertation though, the regulator struggled to ensure safe operation due to limited funds from the central government and insufficient training for personnel. Assistance from international donors made up some of the shortfall, but the C.N.S. clearly laid the government's responsibility for maintaining sufficient regulatory capacity. A.R.N.A. represented a step in the right direction, but not an arrival at the destination.

Despite the limitations facing the regulator, Metzamor underwent significant upgrades with E.U. T.A.C.I.S. and U.S.A.I.D. / D.O.E. support. When unit 2 went critical on October 27, 1995 it's safety was vastly improved over three years earlier, but it was still not safe enough. "Safe enough" according to Western officials at the time meant permanently shut down. To that end, the E.B.R.D. and the European Union began

we are standing, near a steam turbine, is hot, noisy and claustrophobic. But our guide, plant Deputy Manager Slavik Danelian, is acting like he just popped the hood on a Lamborghini. 'Look at this pressure valve,' he shouts above the din, 'French-made. Very expensive. And as sensitive as a woman's soul.' Down the ship's ladder, out a steel door. Cool air. Danelian looks back with regret. 'Give us more valves like that, and the plant will be safer. But instead, people come here and tell us what's good and what's bad. We already know what's good and what's bad,' he says." April 29, 1996, v120, n17, p46.

²⁴⁵ Interviews with Carol Kessler and David Sycamore, July 2002.

²⁴⁶ *Nuclear Energy Institute Source Book on Soviet-Designed Nuclear Power Plants, Fifth Edition*, p253.

moving towards conditioning further assistance on early closure in 2004.²⁴⁷

That date became firmly established in a 1996 Partnership and Cooperation Agreement (P.C.A.) between the European Commission and Armenia. In April the Armenian government officially committed to shut Metzamor in 2004, assuming alternative power was available if needed – the key escape clause for Armenia.²⁴⁸ Increased E.B.R.D. funding to the Hrazdan fossil fuel plant was intended to fulfill that vital condition, but only if electricity prices increased and the government took steps to decommission Metzamor – two conditions it regularly failed to meet in the following years. Additionally, international donors hoped that settlements with Azerbaijan and Turkey would free up oil and gas shipments. The preceding three years from 1993-1996 had also seen marked progress towards Armenian integration into the West, specifically the Council of Europe. Assistance had increased dramatically,²⁴⁹ and despite the slow progress of democratization in the development of a functioning and viable civil society, market reforms under the guidance of the I.M.F. and World Bank. continued to develop.

All was not well from the start, though. Shortly after signing the P.C.A. in 1996, Ter-Petrosyan's handling of the presidential election led to increasing political and

²⁴⁷ Carol Kessler confirmed to me that she personally secured a commitment by Prime Minister Bagratian that Metzamor would be shut in 2004 because Armenia wanted to become part of the West in the future, and they recognized early closure was the price of doing so.

²⁴⁸ See NATO Parliamentary Assembly Special Report: "Nuclear Safety in Central and Eastern Europe," p6 for reference to the Armenian commitment and conditions to closure. Unlike Ukraine, which did not need Chernobyl for domestic consumption, Metzamor was the only available source of power until new sources could be developed.

²⁴⁹ \$16 million in 1996 alone.

social unrest and growing Western criticism. In spite of these problems, international aid continued until Sarkisian's bloodless coup in February 1998 turned the political situation upside down and Armenian elites backed away from their compliance commitments. Once that happened Western donors began holding back their full assistance. The disruption of presidential patronage power had changed the informal practice of politics and called into question the constitutional roles of the prime minister and the president. If, however, Sarkisian had been able to consolidate his control over the political system, both structurally and procedurally, the rules could have stabilized despite the weakening of the presidency's constitutional powers. This might have led to a resumption of the progress towards high compliance as governance became more certain, enabling elites to have longer-term perspectives as presumably they had under Ter-Petrosyan. However, the October 1999 assassinations prevented such a process from occurring under Sarkisian, and kept the formal rules of the game unstable as no one really knew who was in charge, how the winners would be selected. Governance also became problematic.

It is reasonable to infer that high discount rates coincided with decisions to forgo costly compliance decisions during that time. Political elites faced challenges from the uncertainty in the political system, which compounded their concerns about the country's dire energy crisis. Since the restart in 1995 Metzamor had become a critical national resource and closing it would not only invite massive popular protest, but also exacerbate the worsening economic and social conditions. As a result, Armenian elites universally rejected the early closure commitment of 2004.

In contrast to the previously slow but steady progress towards high compliance

from 1994 to early 1998, compliance declined dramatically afterwards. Shortly after Ter-Petrosyan's resignation, the government began to pursue funding from Russian sources that would greatly diminish the need for Western assistance requiring early closure. In addition, one year later much of the safety work planned to begin after restart in 1995 still had not been completed, and A.N.R.A. continued to lack the funds necessary to make sure safety improved. Compliance had ground to a halt and Armenian elites were looking for a way out of their international commitments.²⁵⁰

To confirm this, in February 2000 Energy Ministry advisor Varatan Movesian said unit 2 would run until 2010.²⁵¹ His statement was followed shortly thereafter by Energy Minister Karen Galustian, who claimed Metzamor would not be shut until 2008 due to the lack of alternative energy sources.²⁵² The European Commission and the E.B.R.D. offered loans to cover the costs for developing those sources, but were repeatedly rejected in early 2000. It became increasingly clear to Western officials that Armenia would not shut Metzamor as promised, and compliance was no longer a major priority.

Economic conditions cannot sufficiently explain this behavior. Armenian elites were willing to endure the high short-term costs of decommissioning from April 1996

²⁵⁰ Despite the slowdown, this behavior did not represent non-compliance. Some important steps had been taken to improve safety, and while lacking sufficient funding and resources, the regulator possessed a degree of independence from other bureaucracies. Overall, I code this as low compliance because the safety measures were still ongoing, even if they were being done much slower than before. The Armenians still have not met the conditions for medium compliance though.

²⁵¹ *Nucleonics Week*, 3/2/00 p11.

until February 1998 despite the central role Metzamor played in alleviating the country's economic problems, which remain severe to this day. Economic conditions began to slowly improve after that time, but compliance declined. Rules effects more accurately explain the decline in compliance as a result of the decline in stability in the rules of the game. However, once President Kocharian reestablished the ascendancy of the presidency in May 2000, compliance should have become a higher priority as stability reduced uncertainty about the future, enabling elite time horizons to lengthen and discount rates to fall. That is what my theory predicts. Things did not work out that way though. Instead of holding the Armenians to their word, the terms of compliance under the P.C.A. changed; the long-term benefits of compliance no longer depended on the 2004 deadline.²⁵³

Beginning in the fall of 2000, E.C. officials began working on a new timeline as it became apparent that the Armenians could not keep to the original schedule.²⁵⁴ Without any viable non-nuclear alternatives, due in large part to the inability to continue operating the Lake Sevan hydroelectric plant beyond capacity and the lack of reliable fossil fuel supplies, the European Commission amended the terms of the P.C.A. to allow for a later

²⁵² *Armenian International Magazine*, vol. 11

²⁵³ European Community Technical Assistance Program – Action Program 2000: Republic of Armenia; European Union 2000-2003 Indicative Program: Republic of Armenia; European Union Tacis Nuclear Safety Action Program 2000.

²⁵⁴ As evidence, in October 2000 Energy Minister Galustian officially announced 2004 was no longer the target date for shutting down Metzamor because it was “a key element of the country's energy needs – it will not be closed then.” Instead, he said the plant would operate three years beyond its 30-year design lifetime until 2013, since it had been shut for three years. Bellona News Service, 10/5/00.

closure date. David Sycamore, formerly at the European Union and involved in those discussion, admitted that “at the time everyone knew 2004 was dead.”²⁵⁵ A year later Armenia renegotiated a later date for shutdown, sometime between 2006-2007.

However, doubts linger about the fulfillment of that date as well. In May 2002, Aram Gevorgian, head of the atomic energy department of the Energy Ministry urged Western donors not to force Armenia to close Metzamor in 2006, and later in September another member of the energy department, Nikolay Grigorian, stated that the plant could safely run until 2016.²⁵⁶ Whether or not these are isolated individuals expressing disagreement, or part of a larger move by the President to reject the terms of compliance remains to be seen.

Conclusion

The Armenian political system operated under stabilizing rules of the game until early 1998, when President Ter-Petrossyan was forced out of office. Before then, the rules were becoming increasingly stable due to fairly certain hierarchical patronage relationships (informal) and an institutional system based on strong presidential power (formal). Even before the adoption of the new constitution, the formal rules of the game established institutional space for the president to use informal patronage power to govern the country. The constitution further entrenched an existing reality rather than creating presidential power from scratch. The fact that the legal framework for the political system changed meant that the rules were still open for debate, but that debate

²⁵⁵ Correspondence, December 2002.

was diminishing. Therefore, according to the three criteria for measuring rules effects, power transfer mechanisms for parliament and the presidency became more predictable as Ter-Petrosyan consolidated his presidential power. Patronage also defined the procedures for ministerial appointments and dismissals, which also became more predictable over time. In addition, the constitutional change clarified the delegation of power between government institutions, while patronage networks determined bureaucratic responsibilities within the government, as well as “who did what” in the country at large. Both structural and procedural delegations of power underwent fewer challenges over time. Increasing certainty in the formal and informal rules enabled elites to begin considering long-term benefits as worth the short-term costs. One month before President Ter-Petrosyan was forced out of office, Energy Minister Gagik Markosian, who later took over operations at Metzamor in June 2002, confirmed Armenia’s commitment to shut the plants in 2004 as promised.²⁵⁷ Unfortunately, the situation changed shortly thereafter.

Table 1: Formal and Informal Rules Stability

Formal Rules				Informal Rules			
	Predictable Power Transfer Mechanism	Clear Differentiation of Delegated Authority	Absence of challenges to that Delegation		Predictable Power Transfer Mechanism	Clear Differentiation of Delegated Authority	Absence of challenges to that Delegation
T ₁	Increasing	Increasing	Increasing	T ₁	Increasing	Increasing	Increasing
T ₂	NO	NO	NO	T ₂	NO	NO	NO
T ₃	YES	YES	YES	T ₃	YES	YES	YES

²⁵⁶ *Nucleonics Week*, 5/23/02, p13; 9/26/02, p1.

²⁵⁷ Bellona News Service, 1/15/98.

T₁ represents the period from 1994 until February 1998 (building on the previous three years of increasing accommodation to the rules of the game), T₂ the intervening time from February 1998 until May 2000, and T₃ from then until now.

This progress in the stability of the rules of the game continued until the defense minister and his allies in the other power ministries forced the president to resign. After February 1998, the political system became very unstable, governance uncertain, and compliance declined as a result. *N.I.T.* scores pick up that problem by showing a considerable decline in the effectiveness of the rule of law from 1997 to 1998, which only worsened in 1999-2000.²⁵⁸

Table 2: *N.I.T.* Ratings for Rule of Law

	1997	1998	1999-2000	2001	2002
Rule of Law	4.75	↓↓ 5.00	↓↓ 5.38	5.38	5.38

²⁵⁸ *N.I.T.* ratings do not tell the whole story in Armenia since they are biased against clientalism and patronage as types of informal rules given their deleterious effects on democracy. Yet my concern lies with the relative stability of those rules regardless of their impact of the democratization project. In terms of the formal rules, *N.I.T.* shows a significant decrease in the rule of law scores from 1998 to 2000, as this captures the context of Vazgen Sarkisian's attempt to usurp the president's power. Sarkisian pursued "pro-democracy" initiatives that overshadowed his subtle attack on the constitutional order; the larger problem concerned the increasing instability in the rules, not the pleasant face of liberalizing the economy and protecting the media. He did not try anything as bold as Vladimir Meciar, but the Prime Minister was attempting to subvert the formal rules even he though did not ultimately succeed.

The scores for 2001 and 2002 show a discrepancy between *N.I.T.* and my assertion that the rules stabilized under President Kocharian after May 2000. I attribute that divergence to a difference in methodological focus. *N.I.T.* “Rule of Law” indices look at the stability of the constitutional order, how effectively laws are enforced, the depth and breadth of corruption, and popular confidence in the legal system to meet their needs. While both *N.I.T.* and my model deal with the formal rules of the game, informal rules based on patronage tend to be viewed in a negative light as a detriment to the democratization process. As such, informal rules are evaluated under the “Democracy” category, but this too includes aspects I consider to be outside the scope of my dissertation, specifically the authoritarian vs. democracy focus. In places where our methodologies coincide I use *N.I.T.* to confirm my results rather than as the sole basis for my evaluations.

Jivian Tabibian told me that during the period from February 1998 until May 2000 no one knew what would happen next. In a time of uncertainty in the rules of the game, he said Metzamor remained one of the only sure things Armenians could count on at the time.²⁵⁹ Elites held onto it even though it meant violating signed international agreements and jeopardizing future cooperation with the West. My model works well in explaining low compliance during this period and earlier moves towards increasing compliance under Ter-Petrosyan. It does not perform as well after the return of high rules stability in 2000 once Kocharian reestablished himself and the presidency as the preeminent center of political power in Armenia. Yet even then, since the terms of

²⁵⁹ Interview, September 17, 2002.

compliance changed by altering Metzamor's decommissioning date, a final verdict cannot be definitively made. It is also difficult to measure Armenian compliance regarding the Convention on Nuclear Safety and regulatory sufficiency since the nuclear regulator authority lacks sufficient resources to do its job but is structurally independent from the state utility and plant management.

Complicating the process is the fact that a) some political officials have recommitted to closing the plant in 2006-7 (the new deadline), b) there has been limited progress in establishing a decommissioning fund but nothing definitive, and c) despite a lack of overt fighting between Azerbaijan and Armenia, the Nagorno-Karabakh problem and Armenia's relations with Turkey remain unresolved. This last point means the country's fossil fuel generating plants remain unreliable alternatives to Metzamor. In the meantime, the E.B.R.D. continues to propose a new upgrade program for the Hrazdan thermal plant to provide replacement power. The European Commission will also support the construction of new gas-fired plants if Armenia sticks to the 2006-7 closure commitment.²⁶⁰ The West argues these can replace Metzamor if they coincide with efforts to increase energy efficiency throughout the country. Very few steps have been taken in that direction, but the progress to date has been fairly recent.²⁶¹

How then should Armenian compliance be evaluated? Current compliance could be categorized as low since some important safety measures have been implemented but the pace of safety work has been much slower than it was from 1994 until 1998. It also

²⁶⁰ No one considers the Lake Sevan hydro plant a long-term solution.

²⁶¹ Interview, September 17, 2002.

remains to be seen whether or not political elites will increase funding to the nuclear regulator and establish the necessary conditions to close Metamor in four or five years, the respective conditions for medium and high compliance. Rather than assign static values for compliance though, I believe it is more fruitful to describe compliance in progressive terms for Armenia. Since clear benchmarks have not been met, and the terms of high compliance have changed, the direction of movement more accurately defines the situation. The same method applied for Bulgarian compliance, while in the other cases it is easier to assign static values based on the evidence at hand.²⁶² The following chart illustrates this process. As with Tables 1a and 1b, T₁ represents the period from 1994 until February 1998 (building on the previous three years of increasing accommodation to the rules of the game), T₂ the intervening time from February 1998 until May 2000, and T₃ from then until now.

Table 3: Covariance of Rules Stability and Compliance

		Rules Stability		
		Low	Medium	High
Compliance	Low	Armenia T ₂	Armenia T ₁ → →	Armenia T ₃ ↓?
	Medium		↓	
	High			

Before February 1998 Armenian elites were moving towards increased

²⁶² Besides Slovakia, I show this in the following chapters dealing with Lithuania and Ukraine.

compliance, and afterwards reversed directions. The terms of compliance eventually changed to allow a later date for decommissioning Metzamor, but it remains to be seen if that date will be met. Important steps across the range of compliance requirements have yet to be taken before early closure becomes a reality. My argument predicts they will in fact be taken because of the high stability in the rules of the game, but I just cannot say for certain at this time. Elites may continue to view the situation as Ambassador Tabibian does, or with a longer period of time operating under conditions of high rules stability compliance may increase once more. It is much clearer that safety culture arguments cannot explain both periods of increasing and decreasing compliance since compliance changed but safety culture did not. In addition, the division between risk averse regulators and risk acceptant political actors remains unchanged. No matter how strongly they disagree about safety, unless political actors are willing to bear the costs of compliance, safety culture will continue to take a back seat to other considerations.

Models that focus on the nature of international benefits equally fail to explain variations since Western donors never offered enough money according the Armenians, and the amount neither increased nor decreased with changes in Armenian compliance. In contrast, compliance varied along the way. Considering the fact that the economic situation from 1994 until 1998 was worse than over the next two years, and compliance was higher during the earlier period, my model does a fairly good job compared to the alternatives. It also offers predictions for future behavior based on a more accurate reading of the past. Therefore, Armenia is not a boundary case, just an unfinished story.

Chapter 5 - Lithuania

“Ignalina is safe. We continue to implement safety measures on unit 1 and especially unit 2, but the political decision is done. The reactor is o.k., but Lithuania is pursuing E.U. membership. This is the price to pay.” – Saulius Kutas, Chairman, Lithuanian State Nuclear Power Safety Inspectorate (V.A.T.E.S.I.), September 2002

Introduction

The Ignalina nuclear power plant is the largest in the world. With nearly 3000 megawatts of generating capacity, it alone provides over 70% of Lithuania’s electricity needs, and still has enough left over to export several billion kilowatt hours to Poland, Estonia, Belarus, and Russia. Over the last ten years both units have undergone extensive safety upgrades and modifications, and have begun to generate considerable revenue for the plant and the Ministry of Economy that oversees its operation. Lithuania badly needs that money to further the beginnings of economic recovery started just a few years ago. There is only one problem. The Ignalina power plant operates two Soviet-designed R.B.M.K. nuclear reactors. Like the graphite-moderated reactors at Chernobyl, these have no containment structure to prevent the release of dangerous radioactive material in the event of a nuclear accident. The presence of a containment structure proved its worth at Three Mile Island, and its lack was painfully and devastatingly obvious when Chernobyl exploded.

Despite this inherent risk, plant management, personnel, nuclear regulators and politicians generally hold to the value of the plant, and stress their confidence in its safety. Standing in the way of Ignalina’s continued operation are two obstacles though: a 1994 E.B.R.D. Grant Agreement that explicitly called for early closure of both units by

2009, and strong E.U. pressure to begin decommissioning before Lithuania is admitted into the Union. While it is true that various political officials in successive Lithuanian governments have at different times expressed dismay at being forced to close Ignalina, they have still fully complied with the terms of the nuclear safety Grant Agreement and the Convention on Nuclear Safety. Some have clearly resented the pressure from the E.U. Yet always, these same actors, or those who follow them, have fallen in step with the commitment to close Ignalina before the end of its design lifetime.

Also unique among the countries in this study, Lithuania has had a stable political system from the beginning of the post-independence period. The structures of government established in the constitution have never been fundamentally altered. As a result, 1) the power transfer mechanisms have been predictable, 2) the balance of power between the branches of government is clear, and 3) the delegation of authority between parliament and the president has been largely unchallenged. While there have been a few isolated efforts to bring more power to the presidency, none proved lasting and ultimately the system emerged unchanged with even more deeply entrenched rules than before.

The procedures of normal, day-to-day governance have also been stable. Political office is transferred smoothly and predictably. Governments have alternated with each election, and only once did the party in power change before the completion of the election cycle; the minority coalition lost key support from smaller factional parties, and the election victors took over power. Bureaucratic responsibilities remain unchanged despite successive changes in government, and the delegation of authority between ministries has also been largely unchallenged. The certainty in the rules of the game

therefore enables elites to have long time horizons, which makes high compliance likely.

As a point of comparison to Bulgaria, corruption also plays a significant part in the daily governance of the country, but unlike Bulgaria, it has not hindered the establishment of authoritative governments. Corruption in Lithuania affects the procedures of governance, but mostly on a local rather than federal level. There have only been a few exceptional cases of high-ranking corruption cases. The most blatant offenders were removed from political power in the early to mid-1990's, i.e., before or within a few years after Lithuania entered into nuclear safety agreements with the West. In addition, while anti-corruption programs have only recently begun to take effect, the process has been deliberative and predictable. Even though widespread corruption still exists, it tends to be small-scale, local officials with little power beyond their immediate domain. As a further benefit for maintaining stable rules of the game, the Lithuanian constitution limits the possibility of calling early elections as a result of popular displeasure over corruption. The certainty with which Lithuanian elections occur contrasts the unpredictability of the election cycle in Bulgaria. Corruption is therefore a thorn in the side of Lithuania's civil society, but not a detriment to the informal rules of the game. Combined with stable formal rules, Lithuania presents the clearest case of high rules stability leading to high compliance.

Rules of the Game

The 2001 *Nations in Transit* report asserted that "Lithuania's system of checks and balances between legislature and executive authority provides for a proper separation

of functions, independent enforcement, and legislative oversight.”²⁶³ The foundation for this stability was laid “from the outset, [as] the Lithuanian independence movement advocated a law-based, democratic society.”²⁶⁴ Under the leadership of Vytautas Landsbergis, the Sajudis movement guided the early transition from communism through the period of constitution formation, and produced several political parties that each had a turn in government.²⁶⁵ Landsbergis remains a prominent political figure even though the highest office he has ever attained was as Parliamentary Chairman, both of the Supreme Soviet at the time of independence and later the Seimas from 1996 to 2000. Throughout 1991 he was the early front-runner for the December 1992 presidential election. His prospects changed when the financial costs of independence and economic reform became painfully evident and the electorate turned on the democratic parties pursuing marketization. In October 1992 the Lithuanian Democratic Labor Party (L.D.L.P.) – the reconstituted Communist Party – soundly defeated Sajudis backed candidates to gain control of the new unicameral Seimas (parliament). Economic woes and infighting hurt Sajudis more than the appeal of L.D.L.P.’s policies. After the loss of so much support, Landsbergis chose not to run against the former communist leader Algirdas Brazauskas for the presidency. Sajudis put up a weak contender, Stasys Lozorantis, whom

²⁶³ *Nations in Transit* 2001, p251.

²⁶⁴ Richard Krickus, “Democratization in Lithuania” in Karen Dawisha and Bruce Parrott, eds., *The Consolidation of Democracy in East-Central Europe* (New York: Cambridge University Press, 1997), p294.

²⁶⁵ Technically most of Lithuania’s political parties came out of Sajudis and/or the communist party. Some sprang up on their own, but the leadership of Sajudis created Homeland Union-Lithuanian Conservatives (H.U.-L.C.), New Union, Lithuanian Liberal Union (L.L.U.) and the Lithuanian Democratic Party (L.D.P.).

Brazauskas easily defeated in the February 1993 runoff.

However, the return of the former communists did not spell an end to democracy, as was often feared in Russia throughout the 1990's. In Lithuania, "procedural democracy is firmly established, free and fair elections are taken for granted, and no political figures of distinction harbor anti-democratic designs."²⁶⁶ From the beginning, the country's unchallenged democratic constitutionalism, firmly established after the October 25, 1992 referendum, set the foundation for stable formal rules of the game.²⁶⁷ Working within that system the new L.D.L.P. government espoused a similar pro-European position as its rivals, but offered more social assistance to those hurt by marketization and the decline in social conditions.²⁶⁸

For the next four years the former communists governed the country by controlling parliament, the government, and the presidency. This enabled the political leadership a measure of peace to finish resolving some of the "important but contentious

²⁶⁶ Kestutis Girnius, "Democracy in Lithuania" in Mary Kaldor and Ivan Vejvoda, eds., *Democratization in Central and Eastern Europe* (New York: Pinter, 1999), p51. There have been minor violations such as appointing generals as ministers of interior and allowing Kazys Bobelis (a U.S. citizen) to hold office before he denounced his U.S. citizenship (Ibid., p52). Both violate the constitution did not affect the stability of the formal rules of the game.

²⁶⁷ "The adoption of the 1992 constitution represented the penultimate step in what Vytautas Landsbergis has often called Lithuania's 'legal path to independence.'" Nida Gelazis, "Institutional Engineering in Lithuania: Stability through Compromise" in Jan Zielonka, *Democratic Consolidation in Eastern Europe: Institutional Engineering, Vol. 1* (New York: Oxford University Press, 2001), p167.

²⁶⁸ That number was very great given the Russian embargo and the lack of replacement markets for exports.

decision which had been put aside”²⁶⁹ during the initial formation of the constitution.

None of these issues called into question the separation of powers or specific power transfer mechanisms though. “The demand that a constitution be quickly adopted resulted in a constitution that is neither strictly parliamentary nor presidential, an electoral system that is neither strictly proportional nor single-candidate majority.”²⁷⁰

The hope was that with time advantages and disadvantages would become clear and a one system would be chosen. That has not happened, but actors have habituated to the system producing a high level of stability in the formal rules of the game.

Parliamentary majorities are for the most part the determining factor for institutional relationships and the functioning of government. A stable party system defines how appointments are made, and which particular group has responsibility over different policy areas; party politics determine the procedures of governance. These practices are also widely accepted making the informal rules stable as well. Reinforcing that process, the constitution assigns less institutional authority to the president in that he has limited power to call for new elections, and can only dismiss the prime minister with parliamentary approval. The president does have a potential popular mandate as the only nationally elected official, and this allows him to pressure Seimas members to follow his lead. That power is not codified in the structural balance of power codified in the constitution, it exists only when the president takes office after a strong election victory.

²⁶⁹ Gelazis., p165.

²⁷⁰ Ibid., p174.

Overall then, “though somewhat clumsy, the institutions are well balanced.”²⁷¹ As a result, while in office with an L.D.L.P. government and parliament, President Brazuokas had very little need to use his constitutional veto power. Of the nearly 1000 bills passed by the Seimas, he only sent back twenty-three, of which fewer than ten were overruled by parliament.²⁷² Party politics helped smooth out the early years of transition and further entrench of the formal rules of the game. Formal and informal rules reinforced each other.

Not every thing was rosy though. Despite many campaign promises to the contrary, L.D.L.P. could not solve all the economic problems facing the country. In addition, corruption charges began to mount against key political figures, most prominently the Prime Minister, Adolfo Slezevicius.²⁷³ Aside from other charges against members of his cabinet, he personally faced criticism when in December 1995 he withdrew \$30,000 from his bank the day before it closed, leaving thousands of pensioners, business owners and families without access to their meager savings intended to moderate the worsening economic conditions. “His touching story that he wanted to buy his wife a car for Christmas did not endear him to the mass of small depositors who received no advance warning and whose accounts were frozen after the crash... The case

²⁷¹ Ibid., p166.

²⁷² Ibid., p175-6.

²⁷³ “By November 1995 the Lithuanian press had reported 43 corruption scandals in the government.” Combined with the “serious decline in living standards of large sections of the population” this led to L.D.L.P.’s downfall, despite improvements in general economic indices. (Thomas Lane, *Lithuania Stepping Westward* (London: Routledge, 2001), p143.)

along with others suggested that corruption reached right to the top and that the government had lost its credibility.”²⁷⁴ However, it is important to note that the scale of corruption was limited. The illegality of his actions remains evident, but the damage such actions produced were limited by the formal and informal rules of the game. L.D.L.P suffered, but the political system had established mechanisms for dealing with wayward politicians. The rules remained undisturbed by the machinations of a few high-ranking officials.

Eventually, public outrage forced Brazauskas to distance himself from Slezevicius but this was more for personal reasons – the president was running for reelection in less than a year. For a time Slezevicius refused to resign; he had already survived a vote of no confidence in July 1994, so he may have figured on weathering this storm as well. His reluctance only added to public outrage, and charges of corruption, regardless of their veracity, grew with each passing day he remained in power. Finally on February 8, 1996 both ruling and opposition parties in parliament overwhelmingly voted no-confidence in the prime minister, and forced Slezevicius to resign. However, since the configuration of party politics remained unchanged in the Seimas, Brazauskas was able to appoint another L.D.L.P. member, Laurynas Stankevicius as caretaker in preparation for the October elections. While the change in government was caused by corruption, or at least the widespread perception of corruption, the day-to-day practice of politics remained unchanged. An L.D.L.P. member was still the president, a new L.D.L.P. member was the

²⁷⁴ Ibid., p143-144. Slezevicius had also received a much higher rate of return on his deposits, another insider benefit that further fueled the ire of an already irate public. (Krickus, p311.)

prime minister and kept much of the cabinet from the previous government, and the former communists still controlled the legislative agenda. The mechanisms for power transfer within the government remained unchanged, as did the delegation of power both between and within government institutions. No elites openly challenged the rules; even Slezevicius was within his legal right to remain in office until parliament removed him.

This is not to suggest stability in policy making is the same as stable informal rules of the game. The former is not a necessary condition for the latter, as was seen in 2001 when the minority Liberal Union government collapsed and a new Social Democrat government formed in its place. Yet in both 1996 and 2001 the informal rules remained stable. Nor had the delegation of power between the different branches of government changed. The center of power had not been altered – the prime minister was still the preeminent political actor with important limitations imposed by parliament and a popular president, and party politics continued to operate within the framework of governmental institutions.

The prevalence of stability does not mean the system is perfect, or completely free from challenges. When L.D.L.P. lost control of the parliament after the 1996 elections Brazauskas was forced to nominate a Homeland Union-Lithuanian Conservative member as prime minister. Shortly thereafter, as “Brazauskas’s influence became increasingly imperceptible,”²⁷⁵ he called for an increase in presidential powers through amendment of the constitution. His efforts failed to generate any support from the Homeland government, and many smaller parties in parliament also rejected his proposal. A similar

attempt to hold onto or increase power by L.D.L.P. members had occurred in 1994 when the government proposed an amendment to decrease the number of seats in parliament from 141 to 79. It too failed as most other parties banded together to reject the amendment, as did most of the electorate when L.D.L.P. tried to initiate a referendum. These two attempts to change the formal rules show that even though the rules were challenged a few times, they remained resilient during the early years of post-communist consolidation. Additionally, the challenges themselves were fairly benign as no one called for a return to autocracy, the abolishment of a rival branch of government, or even a major redistribution of institutional authorities.

The formal rules have not been challenged by anyone in government since these two incidents. Even after Valdas Adamkus – a former United States E.P.A. official who returned to his native country to run for the presidency – narrowly defeated the L.D.L.P. candidate, Arturas Paulauskas, by a mere 15,000 votes in the January 1998 run off, Adamkus did not use the popular mandate to challenge the system.²⁷⁶ This remained true

²⁷⁵ Gelazis, p176.

²⁷⁶ In contrast, Paulauskas had made it clear that he intended to change the constitution to strengthen the president's powers at the expense of the government. "This proposal alone was significant and would have substantially reduced parliament's role in Lithuanian politics." (*East European Constitutional Review*, vol. 7, #1, Winter 1998). Paulauskas also wanted to reinterpret Article 84 to enable him to dismiss the current government and appoint a new one. The constitutional court disagreed, ruling that only after a parliamentary election, when the power that invested the government changes, does the government also need to resign; after a presidential contest, the president simply confirms Parliament's approval with a vote of confidence. Accordingly, the mechanisms of power transfer and delegation of power between branches of government remained predictable and unchallenged. Paulauskas was more of a political rogue than representative of a widespread movement to challenge the rules of the game. His election defeat maintained stability in the system, but even if he had won it is unlikely his efforts

when the president's popularity and approval ratings soared to 70-80% during his term in office.²⁷⁷ Given the considerable potential to use popular support as a form of leverage, Adamkus could have challenged the formal rules of the game and brought more constitutional authority to the presidency, but he did not. Nor did he seek to disrupt the party system by using the institution of the presidency to re-center government procedures around himself.²⁷⁸ Whether his reasons stemmed from close policy alignment with Homeland Union, the ruling party in parliament after 1996, or some other purpose, the key is that the rules remained unchallenged and unchanged.

In another example of how the rules of the game allowed for the predictable resolution of intra-party conflicts, before the government shifted towards a firmer marketization economic policy in 1998, Prime Minister Gediminas Vagnorius and President Adamkus worked together to marginalize Vytautas Landsbergis, the Speaker of Parliament and a rival to Vagnorius for leadership of Homeland Union. They did this by removing ministerial appointees and staff loyal to the Speaker, most importantly the

would have succeeded. The rules had become solidly entrenched as the failure of earlier attempts shows.

²⁷⁷ Terry Clark and Andrea Adams, "Lithuania: The Year of the President" in Peter Rutland, ed., *Holding the Course: Annual Survey of Eastern Europe and the Former Soviet Union* (London: M.E. Sharpe, 1998), p126. Unlike Brazauskas or Paulauskas before him, who tried to change the formal rules of the game, Adamkus only tried to consolidate ministerial portfolios by reducing the number from 17 to 11 (the Seimas agreed to reduce the number to 14). The change to the informal delegation of power was accepted by all parties as necessary and a compromise reached within the legal means proscribed by the constitution.

²⁷⁸ The change to a personalized patronage hierarchy around the president would have destabilized the informal rules as would it have displaced a stable party system that determined governance procedures. Predictability and clarity mattered more for stability than the specific type of procedures, party system or patronage hierarchy (as in Armenia).

Minister of Internal Affairs, a key “Landsbergis protégé.”²⁷⁹ Adamkus also got rid of the unpopular Minister of European Affairs, Laima Andrikiene, another key Landsbergis supporter. These actions were well within their legal authority and followed established legal procedure; the system provided mechanisms for intra-party politics. In reality, the antipathy between the President and the leader of Homeland Union was a contest for control over foreign policy making, with the prime minister acting as the key player to determine the outcome. Given the constellation of power in the country with an H.U. coalition majority, the prime minister had almost total governing power as long as he controlled the party machinery. With Landsbergis out of the way, Vagnorius could effectively determine both domestic and foreign policy.

As an example of normal changes in government, their efforts took place in the context of stable rules of the game. In general, the rules constrain elites as they seek to advance their political agendas, personal ambitions, or both. Stable informal rules establish the procedures by which those interests are met. The rules of the game have persisted through the early resignation of two prime ministers resulting from intense popular pressure, which prompted President Adamkus to call for their dismissal, as well as the collapse of a minority coalition government midway through its election term in 2001.

In the first instance in 1999, Adamkus was able to force out Prime Minister Vagnorius by using his mandate as an enormously popular president. The president’s

²⁷⁹ Ibid., p125.

criticisms stemmed from Vagnorius's continued support of Economics Minister Vincas Babilius, whose privatization measures caused growing public opposition to the government. In an April 19th televised address Adamkus said he no longer trusted Vagnorius, "claiming that he could not adequately perform his presidential duties while Vagnorius held the premiership."²⁸⁰ He did not use his constitutional power to ask the Seimas to remove him, just that Vagnorius do the right thing and resign for the good of the country. The prime minister countered that Adamkus was violating the separation of powers clause in the constitution. Vagnorius still had all the structural power he needed as long the ruling H.U. coalition continued to support him. This was seen two days after Adamkus's speech when both H.U. and its coalition partner, the Lithuanian Christian Democrats (L.C.D.), voted their support for the prime minister in a non-binding resolution. Yet despite that support, the upcoming 2000 parliamentary election loomed on the horizon. The ultimate decision was not a hard one to guess. An unpopular prime minister, and a president voicing the complaints of 80-90% of the people led H.U. and L.C.D. to follow the prevailing political winds. Vagnorius resigned a week later.

Concerning Adamkus's motives, he may simply have distanced himself from the prime minister to protect his popularity. More troubling would be if he harbored designs to win "the right to veto nominees for prime minister, and indeed, other ministerial posts"²⁸¹ by using his popular mandate as a type of informal power to challenge the existing party system procedures. I have no evidence to determine which, if either was

²⁸⁰ Ibid.

²⁸¹ *East European Constitutional Review*, vol. 8, #3, (Summer 1999).

the case. In any event, the net effect on the rules was the same, the stability of the preceding years did not change, and governance procedures continued as before.

Adamkus appointed Rolandas Paksas as Vagnorius' replacement, but the president eventually asked him to resign due to unfavorable economic conditions. Andrius Kubilius took over for the last year of Homeland Union's term in office, and he managed to steer the economy more gently towards meeting E.U. austerity measures and privatization requirements than had either Vagnorius or Paksas before him. More importantly, despite the rapid turnover in the prime minister's office, the mechanisms by which the changes occurred were predictable and long-standing. The other aspects of the rules of the game remained unchanged as well. Politically, the revolving door severely damaged Homeland Union as the party had become increasingly unpopular with the electorate since 1998. It never fully regained its support before the 2000 election.

The party itself had not been particularly popular. Its earlier election victory in 1996 was "due mainly to disillusionment with the government rather than strong enthusiasm for the opposition parties."²⁸² L.D.L.P.'s "failure in office to honor many of its electoral promises undermined its socialist credentials with the electorate in 1996. Worse than that was the widespread belief in the corruption of its leading politicians."²⁸³ Yet corruption did not produce the same instability in the informal rules of the game as seen in Bulgaria. Since independence in 1991, ruling political parties have been subject to protest voting, as H.U. found out when it decisively lost the 2000 elections, but have

²⁸² Lane, p146.

²⁸³ Ibid., p134.

always been able to establish authoritative governments under the procedures established by the country's durable party system. The Lithuanian Liberal Union (L.L.U.) coalition government after the 2000 election was the only government to fail in that capacity, but it was a minority coalition and the election winning Social Democrats took over control shortly thereafter. The predictable transfer of power further testifies to the stability of the rules of the game.

As an added bonus to the stability in the rules of the game, policy programs have also converged in recent years. "Despite the change in government, Lithuania remains politically stable. Its major political parties continue to display unity on the most significant issues affecting the country's development... In January 2001, the ruling coalition and major opposition groups signed a joint statement on encouraging and supporting speedier integration into the E.U."²⁸⁴ The harmony of foreign policies among former communist L.D.L.P.-turned-Social Democrats; centrist parties Homeland Union, Center Union, and Lithuanian Christian Democrats; and the "free-market" Lithuanian Liberal Union and Lithuanian Democratic Party has been most evident in terms of E.U. membership. During to Lithuania's early years of independence, vulnerability to Russian political, strategic and economic pressure, and the need for Western assistance to strengthen the nascent democratic regime, made E.U. accession a consistent priority for each successive government. Even when Brazauskas and the Social Democrats took over after Paksas' L.L.U. coalition collapsed in June 2001, he maintained the same E.U.-centered policies proposed by the Liberal Union. He also chose not to make another

²⁸⁴ *N.I.T. 2002*, p255.

ineffectual attempt to change the formal rules as he had done as president. The rules of the game give him the greatest share of political power in the system. Given the structural preeminence of the prime minister in Lithuanian politics, and the decline in Adamkus' popularity such that he eventually lost in the second round of presidential elections to Rolandas Paksas in January 2003, Brazuiskas's position seems secure for the foreseeable future. In addition, both the formal and informal rules of the game remain stable.²⁸⁵ Therefore, he has no incentive to challenge them, and even if he did try, the constraints imposed by the system would once again limit his success. Stability has also had an impact on compliance with commitments to close Ignalina, despite the fact that many in Lithuania consider it safe, profitable, and essential to preserving the country's independent statehood.

Compliance

Soviet engineers completed Ignalina around the time Chernobyl exploded. Despite such an obvious example of the dangers inherent to first-generation Soviet-designed nuclear reactors, once Ignalina came online "no quality assurance and control programs were available. No proper state surveillance existed. As a result, deficiencies and defects were induced by the imperfect design, construction, installation and manufacturing."²⁸⁶ Compounding the problem, all R.B.M.K. reactors lack a containment

²⁸⁵ Every report from the European Commission on the status of Lithuania's application for membership since 1997 has stated that the country's political system is stable and meets the requirements for accession.

²⁸⁶ These formed the basis of the initial E.B.R.D. proposal to assist Lithuania with safety upgrades. (*Nucleonics Week*, 9/2/93, p10.)

structure. Chernobyl showed the cost of that deficiency, yet unit 2 at Ignalina was completed one year later in 1987 without any modification to protect the surrounding region from radioactive contamination. Beyond that structural defect, Ignalina's fire control systems were completely inadequate to resolve the dangers of slow-closing wooden control room doors, flammable paint and floor tiles, and a ventilation system that interconnected most of the rooms in the building, including those with safety monitoring and control systems. Early assessments by the I.A.E.A. and V.A.T.E.S.I., the nuclear regulatory agency, also pointed out the faulty welds at the tops of pressure valves at the second unit. Commenting in early 1993 on the problem, Jan Nistad, director of special projects for the Swedish Nuclear Power Inspectorate (S.K.I.) said "if the top breaks completely, you will have a missile going through the roof. A break would also create a local power increase in the core because the boiling water coolant in the fuel channel around the pressure tube would be drained."²⁸⁷ At the time there was little debate among Lithuanian and international experts that Ignalina needed serious safety modifications, and they had to come quickly if the plant was going to continue operating for even a short period of time.

Despite the pressing need, the lack of liability coverage for international companies engaged in safety work at Ignalina prevented work from starting right away. Lithuania had signed the Vienna Liability Convention and ratified it in November 1993, but throughout the year delays in implementing the agreement often left equipment sitting outside the plant still in its shipping containers. Even still, foreign workers did not have

²⁸⁷ *Nucleonics Week*, 5/20/93, p3.

long to wait considering the scale of the legislative task. All eastern European and former Soviet states that received assistance from international companies were first required to indemnify those corporations against peripheral damage related to their work. If the plant released radiation and the local population filed lawsuits, each country agreed to accept the costs of those lawsuits in exchange for safety work designed to minimize such occurrences in the first place. Western safety experts and governments considered an accident at Ignalina both imminent and potentially more devastating than Chernobyl.

Once the government and parliament approved a new national energy law that established liability coverage for international workers, safety upgrades began in 1993. Ignalina personnel had already started some themselves, but serious financial problems plagued the plant throughout the 1990's and their efforts were limited as a result. Because Lithuania depends on Russia for both fossil and nuclear fuels, and the latter maintained a less than friendly stance towards the break-away state after 1991, the Lithuanian state faced both cash flow problems and intermittent fuel supply shortages.²⁸⁸ Domestically, the economy struggled for several years, languishing under the onerous path of marketization and reform. Few customers could pay the new electricity prices, which they had previously received for free or at a ridiculously low price. As prices rose,

²⁸⁸ In addition, Ignalina plant management and V.A.T.E.S.I. were at the mercy of R.D.I.P.E., the Russian R.B.M.K. design institute, to send design schematics and information necessary to integrate new safety modifications with existing systems. Povilas Vaishnis, the first director of V.A.T.E.S.I. through the early years of assistance, lamented that the Russians would often delay requests for information, or send incomplete data. (*Nucleonics Week*, 9/8/94 p15) Interestingly, most of the personnel at Ignalina are Russian, or at least they are described as "Russian-speakers who don't speak Lithuanian."

the two largest debtors to Ignalina racked up several hundreds of millions of dollars in debt. The Lithuanian State Utility, Lietuvos Energija, and Belarus had no money to give in payment so safety work at Ignalina became increasingly dependent on foreign assistance. That pattern would continue throughout the decade. In recent years payments have increased making Lithuania more profitable, thereby lessening the country's dependence on foreign safety assistance. Compliance has remained consistently high though, despite the change.

At the beginning of the assistance process, the Lithuanian government signed a Grant Agreement with the E.B.R.D. in 1994 to fund short-term upgrades. As with all the other countries in this dissertation, the money was conditioned on early closure of both units. For Lithuania that meant sometime between 1998 and 2004 for unit 1, and 2009 for the second reactor. In the agreement the Lithuanians acknowledged that the reactors could not be brought to acceptable safety levels given the current level of technology.²⁸⁹ The dates were established based on the lifetime of operation for the fuel channels in the reactor's core. As R.B.M.K. fuel channels get older the gaps between the graphite moderator and the fuel channel begin to close, eventually needing to be replaced, and if not replaced, leading to the shut down of the reactor. On the basis of the expected gap closure rate for Ignalina, V.A.T.E.S.I. and Western experts calculated the dates for early closure. Only if V.A.T.E.S.I. certified the channels would last longer or if energy

²⁸⁹ If there was a way to cheaply construct a containment structure and change the reactor core from graphite moderated to some other form, like sodium moderated fast breeder or pressurized water, then maybe the plant could operate until the end of its design lifetime. Neither of those options is financially feasible or technically certified. The only safe option is to close down the reactors.

demand rose sufficiently to justify rechanneling, and that only if it was the least-cost option, could the plant operate beyond 2004. The Grant Agreement established these two exemptions, but the expectation was that they would not be met. Ignalina would close as planned.

In order to determine the status of the fuel rods, plant manager Viktor Shevaldin wrote a letter to the E.B.R.D. in 1997 asking permission to replace the ten worst channels as a way of studying the aging of the other fuel rods. He did not have to do this since the process was an established part of the routine maintenance program for an R.B.M.K.. However, officials at the Nuclear Safety Account (N.S.A.), which manages all E.B.R.D. funds for safety assistance and decommissioning, criticized Shevaldin and V.A.T.E.S.I. for violating the terms of the Grant Agreement. The Agreement states that V.A.T.E.S.I. shall determine the length of time the fuel channels can operate. However, Lars Larrson, N.S.A. director at the time, emphatically stated that any rechanneling constituted lifetime extension and was completely out of the questions. Despite such firm resistance, “a source close to the N.S.A. donor’s group said he believed changing only a few channels constituted maintenance, not life extension. He said that the Lithuanian government’s decision not to do major rechanneling hadn’t changed. But to change individual channels, that’s just like doing any other kind of maintenance on any other unit.”²⁹⁰

Ultimately, Shevaldin proceeded with V.A.T.E.S.I.’s blessing and replaced the ten worst fuel channels. Saulius Kutas, who took over after Povilas Vaishnis left in April 1997, simply stated that on September 17 “they were taken out. Nothing has been done

for life extension. We will study them to find out more about what is happening in the reactor. The process will continue with every [maintenance] outage.”²⁹¹ Shortly thereafter at the September 24-25 N.S.A. meeting in London, bank officials and donors conceded that limited replacement of fuel channels is not the same as lifetime extension for an R.B.M.K. reactor. What appeared to be a clear violation of Lithuania’s international commitment was nothing more than routine maintenance. The incident was one of a few cases where on the surface Lithuanian elites appeared to be in non-compliance, or at least heading in that direction, but in every case high levels of compliance prevailed and the agreements were honored.

One of those areas of compliance relates to regulator sufficiency. V.A.T.E.S.I.’s role has been central to all safety work and decommissioning efforts since its inception in 1992. The 1994 Convention on Nuclear Safety, which the Lithuanian government and Seimas approved, requires member states to provide sufficient financial resources, personnel, institutional autonomy and bureaucratic authority to ensure the regulatory agency determines plant safety and the government fulfills its national and international safety requirements. In Lithuania, V.A.T.E.S.I. has been able to do its job with limited personnel and financial resources, but along with its autonomy and authority, these have been sufficient for the task.²⁹²

²⁹⁰ *Nucleonics Week*, 9/11/97 p12.

²⁹¹ *Nucleonics Week*, 9/25/97 p13.

²⁹² See WENRA, “Nuclear Safety in E.U. Candidate Countries,” pp 59-70 for a thorough assessment of V.A.T.E.S.I.’s status. An interesting challenge to that status came early in November 1995 when President Brazauskas stated that Ignalina would not shut down

Under the auspices of the E.B.R.D. Grant Agreement V.A.T.E.S.I. began a comprehensive safety analysis of the entire plant. The original timeline called for them to present the report at the end of 1995. Almost from the beginning of the study though, that date became increasingly doubtful. The general economic conditions in the country and a lack of qualified personnel slowed down the process. Since most of the Ignalina personnel are Russian, and Lithuanian universities have not had ample time to produce trained nuclear engineers of their own, V.A.T.E.S.I. personnel come from a relatively small group. Increasing the number of inspectors has been a constant challenge but between 1998 and 2001 the organization added twenty inspectors, with plans to add seven more by the end of 2003.²⁹³ Funding has also been a challenge, but it has been a universal challenge for the government given the economic downturn throughout most of the 1990's. As the economy has improved in the last few years, so has V.A.T.E.S.I.'s budget. But it is important to note that even with limited resources, the nuclear regulatory authority has been able to fulfill its mandate.

As part of that mandate, the safety analysis report (S.A.R.) established the parameters for the licensing process. While the regulator worked on the report, E.B.R.D.

before 2000, but the decision was supposed to be based on V.A.T.E.S.I.'s assessment regardless of political "footdragging." However, even though the President made his statement, the decision still rested with V.A.T.E.S.I. Plant personnel, political elites and Western officials waited on V.A.T.E.S.I.'s performance, and although some attempts by the E.C. to speed up the process were offered, they were rejected out of hand. Current V.A.T.E.S.I. Chairman Kutas told me his organization was going to work independently if necessary, at their own pace to make sure everything was done accurately and in compliance with their mandate, and they did. [Interview, September 17, 2002] Carol Kessler also had high praise for Kutas and V.A.T.E.S.I. saying they had done a tremendous job, especially with limited resources. (Conversations, July 2002)

and European Commission officials reminded the Lithuanians of their commitment to close the first Ignalina unit by 1998. At the time, it was expected that after completing the S.A.R. it would take a year to get the license in order, after which V.A.T.E.S.I. would grant a two-year operating license for unit 1. The timeline set December 1995 for completing the report, December 1996 for the license, and decommissioning the reactor in 1998. The plan was ambitious and did not take into account the practical limitations imposed on V.A.T.E.S.I. due to lack of funds and limited few personnel. Again, the regulatory agency did its job, it simply took longer than expected.

Once V.A.T.E.S.I. completed the safety report in late January 1997 the whole schedule had been thrown off. Immediately afterwards, an international panel of Western safety experts criticized V.A.T.E.S.I. for taking so long and blamed the problem on insufficient resources.²⁹⁴ Yet the regulator did its job and there was no specific agreement mandating a time to complete the report. Nor was such a date set for completion of the licensing process that began shortly thereafter. Compliance with the shut down requirement would mean closing unit 1 by 2004, not 1998 necessarily. V.A.T.E.S.I. was on track with that schedule when it finished the S.A.R. and licensed the plant in August 1999 for two years of operation. The West had been pressuring Lithuania for the earliest accepted date, but the latter date was still within the bounds of the Grant

²⁹³ Interview with V.A.T.E.S.I. Chairman Saulius Kutas, September 17, 2002.

²⁹⁴ In an interview with *Nucleonics Week*, Vaishnis responded that his organization was completely up to the task. "We didn't deserve such an evaluation. We started practically at zero and worked very hard in the past five years to develop V.A.T.E.S.I. There wasn't a basis for some of these conclusions." (*Nucleonics Week*, 3/13/97 p6.) Vaishnis resigned later that year.

Agreement.

Aside from this disagreement, poor bill collection until 2001 limited the profits available from domestic consumption of power generated at Ignalina. At least 50% of its production went into exports because of low domestic demand, but as long as its customers continued to delay or make partial payments, plant management could neither invest in safety work nor pay Ignalina's staff their full salaries. Despite these obvious shortcomings to continued operation, various officials within the government and parliament, as well as in neighboring countries, made the argument that closing Ignalina before the end of its design lifetime would lead to devastating problems down the road.

Accordingly, in 1994 the Swedish and Finnish state electricity utilities issued a report stating that early closure would lead to serious economic costs to Lithuania and the region. The Lithuanian Energy Institute (L.E.I.) also began a long struggle to keep the plants operating beyond 2004 when at a conference in Stockholm in 1996, and later in July 1998, its leadership argued that "untimely closure of the Ignalina power plant would cripple the Lithuanian economy." L.E.I. also called for rechanneling and continued operation until sometime after 2020.²⁹⁵ Even Jan Nistad of the Swedish Nuclear Power Inspectorate (S.K.I.), an early critic of Ignalina's design flaws, expressed sympathy for the Lithuanians' plight. "It's easy for the bank to sit in London and negotiate, but if you don't have enough heat and your people are freezing, that's not so easy."²⁹⁶ Plant manager Shevaldin continually made the same arguments: the plant is safe enough to run

²⁹⁵ *Nucleonics Week*, 7/16/98 p7.

²⁹⁶ *Nucleonics Week*, 8/22/96 p6.

and the cost is too high to close it.²⁹⁷

Ever since the first L.D.L.P. government agreed to the terms of the Grant Agreement there has been political opposition to its terms across a wide spectrum. The Lithuanian Energy Institute and plant management were the earliest outspoken critics, but by 1997 different political officials began to challenge the government's position. In April of that year Prime Minister Vagnorius reiterated his country's commitment to honor the E.B.R.D. agreement. Shortly thereafter, rumblings within both the Seimas and the cabinet began to emerge. L.E.I. director Jurgis Vilemas remarked in an interview that "the Lithuanian government is discussing the possibility of keeping both Ignalina R.B.M.K.'s running for another 15 years. In the corridors, yes; officially, no."²⁹⁸ Then two months later in June 1997 Viktoras Valentukevicius, Vice Minister of Energy Affairs in the Economy Ministry made the first official statement questioning the timetable for closing Ignalina. "When we become stronger, it will be feasible. Now it is too big a burden to bear. If Lithuania is forced to shut down Ignalina as agreed it would be catastrophic for the country. It's important to continue operation at Ignalina. Any radical decisions might be harmful."²⁹⁹ He cited rising energy demands and recent safety assurances from plant management that the fuel channels could allow unit 1 to operate until 2005.³⁰⁰ While the E.B.R.D. agreement stipulated that alternative power must be

²⁹⁷ See *Nucleonics Week*, 11/28/96 p4 and *Nucleonics Week* 1/13/00 p11 for two examples.

²⁹⁸ *Nucleonics Week*, 5/15/97 p11.

²⁹⁹ *Nucleonics Week*, 6/5/97 p6.

³⁰⁰ Ultimately, V.A.T.E.S.I. called the shots, but while the regulator worked through the

available to replace Ignalina, and Lithuania had sufficient electricity generating capacity to process oil and gas shipments, those shipments remained at the mercy of relations with Russia. Understandably, the reluctance to hasten the country's dependence on that uncertain source of energy further increased the short-term costs of compliance.

No matter how vehemently he made it though, Valentukevicius's statement did not represent official government policy. A few weeks later Economics Minister Vytautas Bielauskas reassured an assembly of the Nuclear Safety Account that Lithuania would honor its commitments by ensuring all safety modifications and upgrades were completed, V.A.T.E.S.I.'s recommendations and directives would be followed, and ultimately by closing the plants as agreed.³⁰¹ Yet L.E.I. Director Vilemas continued to press his attack on the feasibility of early closure. In response to an interview of E.U. Environment Commissioner Ritt Bjerregaard in the Lithuanian daily newspaper *Leitovos Rytas*, when Bjerregaard conditioned closure on E.U. membership, Vilemas labeled such conditions as political maneuvering without scientific basis. "When the agreement was signed, Lithuania was a very young country. An infant really. We didn't have any experience. There was pressure from Russia. The most important thing was how to survive. We thought 'OK, the bank will help us study the reactors and if they are not all right, we will shut them down. But if there's new information, why not change the agreement?'"³⁰² Despite his claims that new information indicated the plant was "safe," testing at unit 1 in April 1998 found severe cracking in some of reactor coolant pipes.

mountain of technical requirements for the S.A.R., Shevaldin conducted tests of his own.

³⁰¹ Interviews with Carol Kessler, July 2002; *Nucleonics Week*, 6/19/97 p13.

When Algirdas Bražuška served as president from 1993 to 1998 he stressed the costs of closing Ignalina but never denied its inevitability, or Lithuania's commitment to do so within the bounds of the E.B.R.D. agreement. Adamkus followed a similar course, but seemed to be more sensitive to popular opinion on the matter. As euroskepticism began to grow in 1998, due in large part to the E.U.'s requirement to close Ignalina, Adamkus announced in June that "there is no condition that we have to shut down. There is a request."³⁰³ Prime Minister Vagnorius moderated the statement by stressing the value of accession before closure. However, the European Union held all the cards. In contrast to Armenia where elites welcomed Russian influence, Lithuanian elites have lamented their vulnerabilities to Russian pressure, recognized their need for Western export markets and assistance, and maintained a long-standing drive to rejoin Europe. All of these added weight to the E.U.'s demands that Ignalina close down early, much earlier than the Lithuanian would have liked. The costs of compliance have been high but stable rules of the game enabled elites to pursue long-term benefits instead of focusing exclusively on those costs.

The short-term costs for compliance stand at nearly \$4 billion dollars, which does not include the further long-term costs resulting from the loss of revenue from electricity exports and the need to buy more fossil fuels. Once it became clear that the E.U. would not budge on Lithuania's commitment, as evidenced by the November 1998 decision to pass over one of the stronger candidates for membership due in large part to Ignalina,

³⁰² *Nucleonics Week*, 3/19/98 p5.

³⁰³ *Nucleonics Week*, 6/4/98 p9.

some Lithuanian elites expressed lingering doubts and concerns, but the government complied nonetheless. E.U. membership would meet Lithuania's long-term needs, so even though the costs were high they complied. The stability of the rules of the game enabled them to have such long time horizons as certainty in the political system favored compliance. Elite decision-making took place within the context of a reliable political system based on institutionalized formal rules and reliable informal rules determining how the country was governed.

Stable rules do not mean complete acquiescence. Debate still continued and there was considerable reluctance to comply with the decommissioning requirement. This was evident in October 1999 when the Seimas passed a new energy bill that called for closure of unit 1 in 2005, and conditioned the decision on the second reactor as part of the regularly scheduled review of the country's energy policies in 2004. European Commission officials applauded the resolution on unit 1 but the praise was short-lived. In less than a year new demands arose to close the second reactor by 2009.³⁰⁴ Both sides made the same arguments, although in mid-1999 the E.C. conceded it would begin accession negotiations before the plant was completely shutdown, as long as that happened by 2009. Over the next two years Prime Ministers Vagnorius and Paksas, President Adamkus and current Prime Minister. Brazauskas each made attempts to

³⁰⁴ The original E.B.R.D. agreement stated a time period of 1998-2004 for unit 1. Unit 2 was to follow shortly thereafter assuming a similar rate of gap closure for its fuel channels. When V.A.T.E.S.I. determined that the channels could last longer if the plant continued to operate below full power – which it did until late 2001 due to weak demand and limited payment from the plant's customers – until 2005 and 2009 respectively, the dates were pushed back.

forestall the inevitable. Vagorius told a conference in Vilnius celebrating Ignalina's fifteen years of operation that he still did not grasp the necessity of closing the plant before the end of its design lifetime. "It is difficult to explain why we should sacrifice the economy of Lithuania for political motives."³⁰⁵ Paksas also asserted the right to determine national energy policy, something clearly articulated in both the Euratom charter and the Convention on Nuclear Safety. In April 2001 he told *Nucleonics Week*, "Lithuania will not be pushed by the E.U. into setting a date for the shutdown of Ignalina-2 before 2004. We all remember the Chernobyl accident. Ignalina-2 is different. It is absolutely safe. It's absolutely not comparable to Chernobyl."³⁰⁶ But the E.C. had made it clear earlier in 1998 that safe operation was not the issue, compliance with international agreements was.³⁰⁷ Two months after his statement Paksas did an about face, telling *Nucleonics Week* in June 2001 interview, "we now see indications from the European Union that this matter has to be speeded up."³⁰⁸ His statement left room for a decision regarding unit 2 closure before 2004. Further moderating his position, at an E.C. summit meeting in Sweden June 15-16, Paksas commented regarding his earlier statement in April, "I simply quoted the law. However, we always have to balance between our laws

³⁰⁵ *Nucleonics Week*, 4/15/99 p8.

³⁰⁶ *Nucleonics Week*, 4/5/01 p3.

³⁰⁷ Vagorius had asked for a new international review panel to see if the plant was safe and could operate beyond the closure timetable. European Commissioner Hans van den Broek sent a letter back saying no panel was needed – only Lithuanian compliance with the N.S.A. agreement that not plant management not rechannel the fuel rods, a position reiterated at the October 7 N.S.A. donors meeting.

³⁰⁸ *Nucleonics Week*, 6/21/01 p1.

and the E.U. requirements.”³⁰⁹

Prime Minister Brazauskas also initially wavered but later returned to the course. Shortly after taking power in July 2001 he told an E.U. summit meeting that the new government was not yet able to make a decision on the costs of closing unit 2. This did not contradict the previous government’s softening on 2004 but neither did it mean Brazauskas would necessarily keep the same policy either. He later repeated earlier claims that closing unit 2 so close to the shutdown of unit 1 would cripple the economy.³¹⁰ Yet even the Speaker of Parliament, Arturas Paulauskas, who formerly opposed Brazuaskas’s L.D.L.P. party but later joined with it to form the current governing coalition, recognized the need to give in to the E.U.’s demands. “‘Lithuania has to set a date for shutdown of the second unit if it wants to keep its E.U. membership negotiations on track.’ But he noted that Lithuanian nuclear experts say the unit can operate safely until 2012.”³¹¹ By the end of the year Brazauskas relented and the Seimas asked the government to prepare legislation to change the national energy law enabling a decision on unit 2 to be made before 2004 thereby cutting its operating lifetime short of the 2012 mark.

In the final attempt to keep Ignalina operating, President Adamkus stated in a February public address that he did not approve of the government setting specific closing dates. “We need a rational look at our energy policy, assessment of all

³⁰⁹ Ibid.

³¹⁰ *Nucleonics Week*, 11/15/01 p16.

³¹¹ *Nucleonics Week*, 9/27/01 p4.

possibilities and a decision based on this. I do not accept pressure at all. The government must be resolute.”³¹² His position is not surprising given the upcoming presidential elections were only a month away and membership in the European had lost much of its popular appeal.³¹³ However, even this move was only temporary as the president moderated his position a few days later when meeting in London with E.B.R.D. and European Commission officials. Adamkus’s had been the final attempt to change the terms of Lithuania’s international commitments. Like the previous resistance, it lasted for only a brief time and then passed away. As per the E.C.’s demands, on June 11 the government of Lithuania agreed to close Ignalina-2 by 2009. In doing so it also provisionally closed the energy chapter of the E.U. accession agreement. Four months later to the day the Seimas approved a new energy bill stating the same. A new decommissioning fund was established with the E.B.R.D. Along with the investment in alternative energy production and the acceptance of early closure deadlines, this signifies high compliance.

Conclusion

It is understandable that at different times, different actors would try to renege on

³¹² *Nucleonics Week*, 2/28/02 p9.

³¹³ “The director of the Vilmorus opinion research center, Vladas Gaidys, told RFE/RL that euroskepticism – roughly half the population supports E.U. membership compared to much higher levels in the early and mid 1990’s - is on the rise in Lithuania because of the unexpectedly small agricultural subsidies and the Ignalina issue. Although people are worried about the plant’s safety risks, they are also concerned about the economic consequences of shutting down the plant altogether.” (*RFE/RL* 4/3/02.) Also, L.D.L.P. had won the previous parliamentary election in 2000 on a less-E.U. friendly policy. Brauzaskas later saw the writing on the wall and changed positions.

the commitment to close Ignalina; the financial costs are staggering. Yet when repeatedly confronted by the hard reality of E.U. accession requirements, Lithuanian officials have chosen to comply fully. The long-term benefits of membership outweigh immediate costs. However, neither benefits nor international pressure themselves produce high compliance. Rather, highly stable rules (both formal and informal) enable elites to pursue long-term goals.

Table 1: Formal and Informal Rules Stability

Formal Rules			Informal Rules				
	Predictable Power Transfer Mechanism	Clear Differentiation of Delegated Authority	Absence of challenges to that Delegation		Predictable Power Transfer Mechanism	Clear Differentiation of Delegated Authority	Absence of challenges to that Delegation
	YES	YES	YES		YES	YES	YES

Under conditions of certainty resulting from predictable power transfer mechanisms, clear delegations of authority, and a lack of challenges to said delegations, it is reasonable to infer that discount rates have been generally low among Lithuania's ruling elites. Low discount rates make it likely that political officials will accept the burden of compliance to receive future rewards. If Lithuanian elites did not recognize the importance of E.U. membership, Western pressure would do very little to move them against their interests.³¹⁴

³¹⁴ Though outside this current study, Russia comes to mind as an example of this perspective. I got that impression from talking with the head of the Russian nuclear regulatory agency (Gozatomnadzor), the deputy director of the state utility managing Russia's nuclear facilities (Rosenergoatom), and even from a former scientist at the Kurchatov Institute responsible for designing and testing Russian nuclear reactors. Carol

More than any other country in this study, Lithuania needs the E.U. for security guarantees, economic development, and political legitimation in the face of Russian pressure. The need has been both immediate, as in the early post-independence period when the Lithuanians initially agreed to close Ignalina, but also more recently when the survival of the country was no longer immediately threatened, or at least perceived to be threatened. In both instances, the benefits of integration in the West still dominate elite thinking. Stable rules of the game produce the conditions necessary to allow that to happen.

Table 2: Covariance of Rules Stability and Compliance

		Rules Stability		
		Low	Medium	High
Compliance	Low			
	Medium			
	High			Lithuania

Safety culture cannot explain high compliance in Lithuania because it is generally risk averse. Kutas explained that in essence, if E.U. membership dropped out of the picture, and safety was the only evaluative tool for determining Ignalina's fate, the plant would operate for many more years beyond 2005 and 2009.³¹⁵ The thought of two 1500-megawatt nuclear reactors operating twenty more years without a containment structure

Kessler and Tobjorn Norendal (Norwegian Ministry of Foreign Affairs and current Chairman of the I.A.E.A. Contact Expert Group) also expressed the same conclusion about the Russians.

³¹⁵ Interview, September 17, 2002.

is quite disturbing and indicates the kind of risk acceptant safety culture among Lithuania's nuclear and political officials. In effect, each year would be one more role of the dice, and Kutas implied the Lithuanians would willingly accept that if they did not value E.U. membership so highly. Their view is that Ignalina is safe, regardless of the standard used in the West. However, the issue at hand is compliance not the relative merits of competing safety standards, and the Lithuanians agreed to shut down the plant before the scheduled end of its operational life. No matter how painful it may have been to bear the costs of compliance, when the E.U. made it clear that Lithuania had to make certain decisions to further its progress towards accession, each successive government accepted those terms. The rules of the game have been stable throughout the period enabling such decisions to be made.

Interestingly, *N.I.T.* ratings show a large drop in the rule of law category from 1998 to 2000. As with Armenia in the previous chapter, methodological differences in how governance procedures are codified, and the emphasis *N.I.T.* places on democratization vis-à-vis authoritarianism explains the different assessments I made in this chapter. In addition, the growth of organized crime throughout society has been primarily at the local level, and as such, its influence on governance has been reduced.

Table 3: *N.I.T.* Ratings for Rule of Law

	1997	1998	1999-2000	2001	2002
Rule of Law	2.25	↑↑ 2.00	↓↓ 2.88	↑2.75	↓ 2.88

The stability of the formal and informal rules enabled Lithuanian elites to make

the hard choice of closing Ignalina even though they consider it safe and a vital state resource. Once the decision had been made, the European Commission and N.S.A. donors committed to give nearly \$500 million to support the decommissioning of Ignalina's first unit, with the promise that more would be available for unit 2 as well. In addition, Euratom loan ceilings were raised to \$6 billion to cover whatever remaining costs might arise over the next decade. The subsequent E.U. regular report stated that "the European Union, for its part, recognizes that the decommissioning of the Ignalina Nuclear Power Plant will have to continue beyond the current financial perspectives and that this effort represents for Lithuania an exceptional financial burden not commensurate with the size and economic strength of the country. The E.U. expresses its readiness, on the basis of Community solidarity, to continue to provide adequate additional Community assistance to the decommissioning effort also after Lithuania's accession."³¹⁶ Foreign Minister Antanas Valonius summed up his government's response to the offer, "Lithuania got the deal it wanted on Ignalina."³¹⁷ Reflecting the high compliance Lithuania had achieved, the country was officially invited to join the European Union in December 2002.

³¹⁶ "European Commission 2002 Regular Report on Lithuania's Progress towards Accession," p88.

³¹⁷ *Nucleonics Week*, 12/12/02 p14.

Chapter 6 - Ukraine

“Chernobyl is the safest plant in Ukraine.” – Sergei Parashin, Chernobyl plant manager and Oleksandr Moroz, Speaker of Parliament, December 1995

“The deficiencies at Chernobyl have resulted in an unacceptable and unprecedented decrease in the level of nuclear safety.” – World Association of Nuclear Operators (W.A.N.O.) Chernobyl safety review report, September 1997

“Ukraine will not close Chernobyl permanently in 2000 if the West reneges on its 1995 promise to finish the reactors at Khmelnytsky and Rovno as replacement power.” – President Leonid Kuchma, April 1998

Introduction

In the early morning of April 26, 1986, fires broke out in the number-four reactor at Chernobyl. The reactor had been operating at dangerously low power levels when plant operators lost control of the reaction. The reactor overloaded and ignited the surrounding room. Fires quickly spread to the control room and throughout the building, easily overwhelming the woefully inadequate fire suppression systems. Personnel in the other three units managed to shut down the remaining reactors before the roof over unit four collapsed, spewing radioactive debris over the surrounding countryside. The cloud spread over much of eastern and northern Europe, eventually producing radiation spikes in Japan, Canada and the United States. Nearly fifteen years later on December 21, 2000 President Leonid Kuchma gave the world an early Christmas present when he ordered the final operating reactor, unit three, to close down permanently. Ukrainian arrogance and shortsighted resistance to the legacy of Chernobyl marked the journey between these two dates. Along the way, nuclear safety and political stability were in short supply.

Originally, the Ukrainian Supreme Rada (parliament) declared that Chernobyl would close in 1993. As the date drew nearer though, Ukraine's first President, Leonid Kravchuk extended the time until 1995. Then a year after his presidential victory over Kravchuk, Leonid Kuchma declared in April 1995 that Chernobyl would close down permanently five years later at the end of 2000. Whereas the first two dates had been domestic commitments, the last one became the core element for an extensive Western assistance program. When Kuchma signed a Memorandum of Understanding (M.o.U.) with the G-7 and the European Commission on December 20, 1995 establishing the conditions for a December 2000 closure Ukraine entered into a binding international agreement. A year later in 1996 another agreement with the E.B.R.D. confirmed the 2000 date. However, despite Kuchma's initial commitments in 1995 and 1996, the decision to close Chernobyl created tremendous resistance from the majority of political elites in Ukraine, including President Kuchma himself at times. Right up to the 2000 deadline, numerous political and nuclear officials argued that Chernobyl was vital to the economy and should not close down prematurely. Some even maintained that it should remain open indefinitely.

As late as the fall of 2000 Kuchma insisted that 1) Western assistance to fund construction of replacement power facilities and 2) compensation to Ukraine for the billions of dollars in lost revenue resulting from Chernobyl's early closure had not been met. He claimed both were part of the 1996 E.B.R.D. Grant Agreement. However, the Agreement does not explicitly state either condition as such a prerequisite for Ukrainian compliance. The single clearest point is decommissioning of Chernobyl by the end of

2000. Yet even after the plant finally shutdown the debate over Chernobyl remains unresolved. Some Ukrainian officials still persist in arguing that closing Chernobyl was a costly mistake. They make this claim despite repeated international safety assessments labeling it the most unsafe nuclear reactor in the world. Despite that resistance, the plant closed down on schedule as per the terms established in Ukraine's international commitments. Given how widespread their reluctance was, the question arises as to why the plant closed at all.

The political climate in Ukraine has been tumultuous and unpredictable. The rules of the game have been unstable from the beginning of the post-Soviet period. Despite the passage of a new constitution in 1996, the structural delineation of power has been subject to repeated attacks by M.P.'s and the president as each has tried to supplant the other's constitutional authority. Rules governing the election cycle have also been widely contested at best, completely disregarded at worst. There have been repeated challenges to the structures of government among Ukraine's ruling elites.

Informally, the rules more often reflect clan rivalries than institutionalized political practice. However, even clan-based rules have been unstable as groups splinter and re-form, and new actors challenge existing "old guard" *nomenklatura* elites in their attempts to gain control of the political system. Some of these new elites use their institutional offices to challenge the *nomenklatura*, but often this is done without a consistent party affiliation. Party systems do not determine the practice of politics despite strong communist, socialist and agrarian parties. By and large, elected officials are frequently independents seeking the highest bidder. In addition, bureaucratic

responsibilities for the country's nuclear power plants have also frequently changed, often moving from one ministry to another, then back again within a few years' time. Corruption also challenges the stabilization of the informal rules because it is tolerated but not legitimized; selective government efforts to reduce corruption challenge elite strategies and bring uncertainty as to how to get things done in the business of politics. Anti-corruption efforts target political rivals, not corrupt officials as a whole. Finally, popular disapproval remains a seedbed for elite threats of referenda designed to challenge the formal rules of the game.

All of these conditions give incentives for elites to pursue short-term goals and protect their current assets. In such a system of rules instability, closing Chernobyl was an extremely unpopular decision within policy circles. Yet the decision still came, even though it happened as a result of technical rather than political or economic reasons. In essence the plant fell apart. With no real way to fix the growing number of serious problems affecting Chernobyl, the government simply had no other option but to shut it down. As this chapter shows, Ukrainian elites across the political spectrum did not want to close Chernobyl, but they could not keep it running any longer. My model explains their reluctance to comply, and helps shed light on the final decision to close the world's most unsafe nuclear reactor.

Rules of the Game

On December 1, 1991 Ukrainians voted on a referendum to gain independence from the Soviet Union and decide who would be the first president of that new state. Leonid Kravchuk, former ideology secretary for the Communist Party, easily defeated

Vyacheslav Chornovil, the leader of the Ukrainian nationalist party Rukh. Kravchuk had the support of ethnic Russian and even some ethnic Ukrainians because of his stance on separation from the U.S.S.R. while maintaining close economic ties with Russia. More importantly though, “Ukraine’s powerful old industrial elite, already national communists, believed Kravchuk would not challenge their political and economic position. All of the *nomenklatura* mobilized their powers of patronage to guarantee a solid victory for independence and to elect Kravchuk to the presidency.”³¹⁸ Those patronage relationships would become an important element of the informal rules of the game during Ukraine’s continuing transition to democracy.

After centuries of “assimilation and acculturation, the absence of a common past retarded Ukrainian democracy from the start and enabled the old elite to survive despite a calamitous economic situation.”³¹⁹ *Nomenklatura* elites in industry and agriculture used their control over state assets to put forward members of their group as political candidates, or at the very least support representatives like Kravchuk. “This group has dominated all branches of power in Ukraine... It is characterized by economic and political conservatism, a penchant for authoritarianism and command-administrative methods, and clan connections.”³²⁰ Those methods helped to define the early processes

³¹⁸ Ilya Prizel, “Ukraine Between Proto-Democracy and Soft Authoritarianism” in Karen Dawisha and Bruce Parrott, eds., *Democratic Changes and Authoritarian Reactions in Russia, Ukraine, Belarus, and Moldova* (New York: Cambridge University Press, 1997), p343.

³¹⁹ *Ibid.*, p331.

³²⁰ Paul Kubicek, *Unbroken Ties: The State, Interest Association, and Corporatism in Post-Soviet Ukraine* 9 Ann Arbor: University of Michigan Press, 2000), p42.

of governance, but they would not remain unchallenged for long.

Early on though, the “party of power” began entrenching itself politically, economically, and socially given the early lack of counter weights in the party system. Rukh had splintered as its more radical nationalist faction lost support among the majority of Ukrainian voters. The remaining moderate nationalist democrats competed with other democratic parties to form a very loose opposition. Without strong, viable opposition parties to rival the communists, the *nomenklatura* and their political representatives continued the disastrous economic policies of the previous Soviet regime, despite the costs to society. However, at the time the *nomenklatura* were not all ardent supporters of the communist party. Above all they were and continue to be self-interested economic actors willing to use political influence as a means of protecting and promoting their interests. As command-style economic management failed to stem the economic slide, those policies began to change when Leonid Kuchma took over as Prime Minister in October 1992. Vitold Fokin, a former C.P.U. apparatchik, had been forced out by Rukh’s efforts to call early elections and a change in government. While the opposition groups fell short of the three million-signature mark required for new elections, Kravchuk and his allies in the communist party responded to the challenge by appointing the more reformed-oriented Kuchma.

It is important to note however, that Kuchma did not represent a decline in the old guard’s political influence as a means of introducing more democratic forms of governance. Rather, Kuchma’s appointment came out of inter-clan jockeying, as became clear in the following years. His loyalties lay in the Dnieprpetrovsk region in eastern

Ukraine, in contrast to Kravchuk's Donetsk base in the west. The nascent ties between them grew out of the general support given to each by the old *nomenklatura* elite as a whole. However, the economy began to unravel and quickly living standards and industrial production fell to "the level of a third-world nation."³²¹ As a result, divisions became exacerbated among the former industry managers. Whereas they had been initially united in opposition to market reforms and democratization, hence Kravchuk's early support for Kuchma, as the electorate's growing dissatisfaction became evidenced through growing numbers of demonstrations and protests, "old guard" elites began blaming each other for the country's woes. Kuchma and his clan opposed Kravchuk's, and both opposed rival factions arrayed against them in parliament.³²² As a result of the mounting divisions within parliament and between it and the government, "the majority of adopted laws were uncoordinated, random, and contradictory [as] the 'old guard' resisted any delineation of authority which would restrict its ability to plunder. At the same time, domestic actors were not ready to make clear-cut institutional choices... [there was] a shortage of risk-taking actors."³²³ Structurally, there was no clear

³²¹ Ibid., p38. "In 1994, according to one set of government statistics, as much as 80% of the population live below the government-established subsistence level, and consumption of basic foods such as meat, milk and fruit is reported to be lower than the essential physiological minimum." [Ibid.]

³²² This was both an inter-clan split as well as competition between the presidential, parliamentary, and governmental institutions. Within the clans specifically, "one group is steadfastly pro-state control, another is for reform from above that would benefit them, and still another faction is more disposed towards genuine reform and competition." [Ibid., p46.]

³²³ Kataryna Wolczuk, "Ukraine: Tormented Constitution Making" in Jan Zielonka, *Democratic Consolidation in Eastern Europe: Institutional Engineering, Vol. 1* (New York: Oxford University Press, 2001), p248-9.

mechanism for power transfer, the delineation of delegated authority was unclear, and most elites challenged rather than supported the delegations that did exist. Procedurally, governance remained in flux due to the uncertainty as to who was in charge, how long they would be in charge, and what could be done to remove them and place someone else in charge.

Uncertainty continued at the structural level for some time as “there were few moves towards political institutionalization in Ukraine, [namely] the degree to which regularized patterns were ingrained in the political arena and respected by social actors. These most explicitly included constitutional and legal provisions, as well as political institutions (parties, courts, legislatures) with well-defined rolls.”³²⁴ As such, unlike most other post-communist countries in Eastern Europe or the Baltics, Ukraine did not begin the constitutional process at the time of independence. Instead, the original 1978 constitution remained, albeit with revisions to express the independence of the state and the creation of the executive branch. From the beginning, the constitutional framework proved inadequate. “Even with dozens of amendments, it failed to define either the separation of powers between the legislature and the executive branches or their responsibilities.”³²⁵ The lack of clarity did not pose a serious problem during the heady days of the independence movement in 1991 and early 1992. Eventually, the relative harmony between rival *nomenklatura* clans, nationalists and democrats, both within the parliament and between the legislature and the executive, soon came to an end.

³²⁴ Kubicek, p47.

³²⁵ Prizel, p358.

“In this flux, President Kravchuk’s somewhat prevaricating style of leadership was not conducive to clarifying the rules of the game,”³²⁶ despite his initial vigor at state building. In one example of this problem, Kravchuk promised to call for a referendum of confidence in himself and the government in the fall of 1993. When the time came to keep his word, he backed out claiming that “referenda bring nothing but trouble to our people,”³²⁷ despite his reliance on the 1991 referendum to establish himself in the presidency. Referenda would remain an unreliable method of power transfer for the next decade. The situation only worsened after Leonid Kuchma became prime minister in 1992.

Even more troubling than the failure to carry out the vote of confidence, “in May 1993, during a crisis of authority between himself and then-prime minister Kuchma, Kravchuk tried to stage a bloodless coup and concentrate all executive power in his hands. He was rebuffed, but eventually succeeded in September 1993, when he issued a presidential order and assumed leadership of the Cabinet of Ministers... This step... had a very dubious constitutional basis.”³²⁸ His attempts to take control were made possible by the fundamental lack of constitutional clarity regarding the separation of powers, and a total disregard for the durability of the constitutional framework.

However, the president was not the only person to challenge that framework. Shortly after his appointment, Kuchma declared he could not do his job without

³²⁶ Wolczuk, p247.

³²⁷ Kubicek, p43.

³²⁸ Ibid.

extraordinary powers granted by the legislature. Despite increasing criticism from President Kravchuk, and a growing inter-clan rift between the Donetsk and Dnieprpetrovsk groups, Parliament gave Kuchma a free hand to “fix the economy.” The government supplanted legislative functions with the right to issue sweeping decrees, despite the unconstitutionality of such powers. However, the economic collapse in 1993 quickly dashed whatever hope there might have been in Kuchma’s abilities to accomplish his stated goals. In the aftermath, ruling communist party M.P.’s reasserted the Rada’s powers, even taking away some of the prime minister’s legal authority, and called for early elections for parliament and the presidency in 1994, despite the questionable legality of such actions.

Given the surge in inter-clan rivalries and mounting opposition from new political groups, before the elections the *nomenklatura* elite used their clients in parliament to pass a new electoral law that greatly reduced the chances of opposition victories. Most importantly the law called for a candidate to win votes from at least 50% of registered voters, not 50% of votes cast. As a result in March 1994, even in cities where democratic candidates had the best chance of winning due to a more educated, Western-leaning electorate, most often failed to meet the 50% margin of victory. “After some dozen runoff elections, the Kiev delegation to the Supreme Rada remain[ed] incomplete two years after the initial vote.”³²⁹ In addition, Kravchuk counted on low voter turnout and apathy to annul the first round of voting in the presidential contest.³³⁰ Even though the

³²⁹ Prizel, p355.

³³⁰ Ibid.

election proceeded, the results left the Ukrainian political system largely unaltered as the rules remained unstable and regularly challenged by numerous officials.

Even though the communists retained control of the parliament, and Kuchma defeated Kravchuk in the second round of voting in July 1994, the systemic uncertainty about the rules of the game had not diminished. The mechanisms for power transfer for the parliament and the chief executive were still unpredictable and unreliable. As part of the continuing problem, a new clan group had access to the president but still had to compete against rivals in the parliament.³³¹ Accordingly, “continued bickering among the elite and brazen corruption deepened. In the face of deepening political gridlock, in May 1995 President Kuchma threatened to call a referendum in order to force the issue of a constitution, bypassing the legislature altogether in the process.”³³² In response, Parliamentary Speaker Moroz submitted a draft constitution that strengthened the legislature, and stripped the president of the few defined powers that were established in the existing system. Kuchma retaliated with his Law of Power that gave institutional priority to the president at the expense of the Rada. Both side’s calls for reductions in the other’s authority illustrate not only the lack of agreement on the fundamental division on power in the formal rules of the game, but also the heightened antipathy between institutional structures.

At the time, Kuchma enjoyed a high level of popular support vis-à-vis the Rada,

³³¹ In some ways the situation contrasts with Armenia where Kocharian has stabilized the informal rules by reasserting traditional hierarchy patronage.

³³² Ibid., p358.

which ranked as the most corrupt and least trustworthy institution in Ukraine.³³³ In light of that support, Kuchma's threat of a referendum and early elections carried considerable weight. In the face of a potentially disastrous showdown with the president, parliament adopted the Law of Power with the expectation that it would confirm a final constitution sometime in June 1996. However, as that date approached, and in another questionably illegal move, Kuchma again threatened to suspend parliament and impose emergency rule if the new constitution was not approved.³³⁴ In the end parliamentarians gave in after an all night session on June 28, although the president did not win all the rights he had originally hoped to gain.³³⁵

³³³ 1997 Ministry of Justice and World Bank surveys of perceptions of service provision showed that "among a selection of government agencies, the Verhovna Rada, along with the Cabinet of Ministers, ranked negatively... tied for last place behind the local police and road traffic police. Once again, none of the government agencies rated positively, and few were ranked even near 'normal' on the scale." [Roman Zyla, "Corruption in Ukraine: Between Perceptions and Realities" in Taras Kuzio, Robert Kravchuk and Paul D'Anieri, eds., *State and Institution Building in Ukraine* (New York: St. Martin's Press, 1999), p256-7.] See the *Ukraine National Integrity Survey: Citizen's Experiences of Public Service Quality, Integrity and Corruption* (Government of Ukraine – Ministry of Justice, World Bank – Economic Development Institute, 1997) for more details.

³³⁴ "It was also unclear whether parliament alone could approve the constitution, or whether it needed approval through a popular referendum." [Kubicek, p57] Kuchma also tried to keep some of his "loyal" MP's from taking part in the debate so as to make his Law on Power the fall back document when time ran out. [Oliver Vorndran, "Institutional Power and Ideology in the Ukrainian Constitutional Process" in Taras Kuzio, Robert Kravchuk and Paul D'Anieri, eds., *State and Institution Building in Ukraine* (New York: St. Martin's Press, 1999), p285.]

³³⁵ "The Law of Power initiated by President Kuchma had one central goal: to establish his control over policymaking and implementation by changing the system of separation of powers... The most significant changes introduced in the Law on Power directly addressed the issue of control over the cabinet. These changes in the system were intended to terminate the Rada's powers of approval of the government as a whole and the power to affect the appointments of individual members of the cabinet." [Charles Wise and Volodymyr Pigenko, "The Separation of Powers Puzzle in Ukraine: Sorting

In contrast to the superpresidentialism of the Law of Power,³³⁶ the current system grants the president the right to appoint and dismiss the prime minister and cabinet, but he must have legislative approval to form a new government. In addition, presidential decrees have the force of law, but only in economic matters where no legislative statute already exists. Most importantly, Kuchma was denied the right to arbitrarily dismiss parliament. The only way for the president to do so is if the legislature fails to meet for more than thirty days (article 90). Kuchma tried to put that mechanism into effect when in July 1997 parliament voted to recess from July 18 until Aug 28. On July 30 Kuchma announced he was considering dismissing parliament and calling for early elections since they were going to be gone more than a month. Most M.P.'s were away for the summer vacation, but they quickly "scurried back from Crimea to reconvene for a day on Aug 19 to deny the president the chance to attack the assembly."³³⁷ Given the annual practice of recessing for the summer, it is doubtful the provision applied to that context. Kuchma may have followed the letter of the law, but certainly not its spirit.

Despite the constitutional limitations on some of the more dangerous aspects of

Out Responsibilities and Relationships between President, Parliament, and the Prime Minister" in Taras Kuzio, Robert Kravchuk and Paul D'Anieri, eds., *State and Institution Building in Ukraine* (New York: St. Martin's Press, 1999), p43.] Parliament's ability to vote no confidence in the government was also lessened so that it had to wait a year after passing a provisional, limited no-confidence measure. "Overall the Law on Power established a clearer control over the national government by introducing a disequilibrium in favor of the president." [Ibid., p45.] It "set the stage for the constitutional struggle, but it did not predetermine the outcome." [Ibid., p46.]

³³⁶ See John Ishiyama and Ryan Kennedy, "Superpresidentialism and Political Party Development in Russia, Ukraine, Armenia, and Kyrgyzstan," *Europe-Asia Studies* 53, 8 (2001), p1177-91.

³³⁷ *East European Constitutional Review*, 6, 4 (Fall, 1997).

superpresidentialism, the rules of the game were still unstable as “no effective instruments were provided to resolve potential deadlocks between the president and parliament. At the same time, as it soon became clear, few incentives for cooperation were built into the constitution.”³³⁸ Kuchma’s efforts to force a new structural framework for the political system by tapping into popular displeasure continued the institutional hostilities between the president and the legislature. Even M.P.’s supportive of Kuchma’s policies tended to vote along institutional lines. This could have been a stabilizing force for the day-to-day governance of the country; political elites can operate with some certainty if the normal practice of politics takes place in predictable institutional relationships, even if they are less than pleasant. However, this did not occur in part due to the ongoing challenges to the structures of government. It is one thing to know what the boundaries are; it is another matter when they are widely contested.³³⁹ Under such conditions it is reasonable to infer that elite discount rates would be high. To that effect, surveys by the Rada’s Parliamentary Development Project in 1997 and 1998 showed that at the time, nearly 75% of M.P.’s survey believed the current crisis threatened the future of democratic governance, 56% believed the constitution could not provide a stable foundation for democracy, and nearly half blamed both the president and

³³⁸ Wolczuk, p258.

³³⁹ Interestingly throughout this process the constitutional court has shown itself to possess very little independence and as a result, has not been able to quell the contest between the president and the parliament. Nor has the government been able to escape the control of either institution, leaving it more often the lackey of either pole in much the same way as is the court. See Wolczuk p 263-4 for details on the debate concerning the Law on the Cabinet of Ministers and Kuchma’s attempts to breach the constitution to gain more control over the government; and *Nations in Transit 2001, 2002* for more details on the weakness of the court.

the parliament for the ongoing struggle.³⁴⁰

In addition to the lack of clear differentiation of delegated institutional authority and widespread disagreement about the durability of those delegations, the mechanisms of power transfer were also subject to change. A new electoral law passed in October 1997 created a 50/50 proportional representation and majoritarian system. Kuchma opposed it because the new law would lead to a greater stabilization of the party system in parliament, something that would invariably decrease the need for presidential decrees as a means of managing the economy.³⁴¹ He proposed extending the term of the existing parliament and postponing the election, a power not granted to him by the constitution. His plan failed to stop the new law but it did succeed in continuing the instability in the rules of the game.³⁴²

Kuchma does not bear sole responsibility for disrupting the rules of the game, but he has played a large part. So have his rivals in parliament. After the 1998 Rada elections returned the communists to power they initiated a motion to abolish the presidency. After three attempts, the motion passed and went to the constitutional court for review. The issue is still pending. While waiting, in September that same year

³⁴⁰ Wise and Pigenko, p46-51.

³⁴¹ Wolczuk, p264.

³⁴² The new law also failed to civilize the electoral campaign as physical violence increased in 1998 and again in 2002. Challengers assaulted incumbents – one Mayor took a beating in his own office – election rallies were marred by violence, and criminal elements gained seats in several local and national parliamentary bodies. See Council on Security and Cooperation In Europe “Report on the March 29, 1998 Parliamentary Elections,” *East European Constitutional Review* 11, 1/2, (Winter/Spring, 1998); and http://www.ipu.org/parline-e/reports/2331_E.htm for more details.

parliament took a more limited approach by voting overwhelmingly to prohibit Kuchma from running for reelection. The decision had no legal power, but its intent was to discredit the president and weaken his popular support.

As a result of the ongoing tension, the presidential elections in 1999 became a competition for legitimacy in eyes of the electorate.³⁴³ Since almost all of Kuchma's opponents were current members of parliament, the election "put the question of the revision of the constitutional division of powers back on the agenda."³⁴⁴ Whatever hopes his opponents might have had ended with Kuchma's electoral victory. Emboldened by the strong showing of popular support, Kuchma "launched an assault on the legislature, on the grounds that its inability to form a majority supportive of the government was stalling the progress of economic reform."³⁴⁵ In turn, he called for a national referendum to be held in April 2000 that would address five issues:

- 1) no confidence in the current parliament,
- 2) the stripping of parliamentary immunity to make selective prosecution more feasible,
- 3) the creation of an upper legislative chamber responsible to the president for its makeup (like the Russian Federation Council),
- 4) a reduction in the size of the lower chamber from 450 to 300, and

³⁴³ See Sarah Birch, *Elections and Democratization in Ukraine* (New York: Macmillian Press, 2000), p106-7 for a breakdown of election results.

³⁴⁴ Wolczuk, p265.

³⁴⁵ Ibid.

5) granting the president the right to disband parliament if it does not form a majority within one month after the elections or approve the state budget within three months. Characteristically, “the decree blatantly violated the constitution.”³⁴⁶

The challenge by the president, as part of the ongoing institutional rivalry, could have formed a cohesive in-group identity among parliamentarians. Instead, anti-Kuchma parties often coalesced and fell apart based on personal interests. Internal conflicts about governance procedures continued to plague the system as well. In a spectacular instance of intra-elite competition, center-right groups challenged the C.P.U. Speaker and eventually received enough support from independent M.P.’s to force his resignation. Resisting the decision, despite its legality, the Speaker obstinately refused to leave. In protest, “the parliamentary majority (243 deputies) walked out and assembled in a separate session in another building. After two weeks of parallel existence, the majority (by that time 259) took over the parliament building amidst skirmishes with leftist deputies.”³⁴⁷ Two separate parliamentary sessions coexisted, only to have the issue resolved by M.P.’s physically beating each other up. In the midst of this chaos, and despite resistance from legislators across the spectrum, the president’s referendum passed on April 16, and the constitutional court later upheld the legality of its requirements.

Even still, the formal rules have yet to stabilize or at least remain unchallenged for very long. The new upper house has not been established and the lower house has not

³⁴⁶ Ibid., p265-6.

³⁴⁷ Ibid., p266.

been reduced in size. Additionally, in October 2001 democrats in parliament proposed a new electoral law based on a full proportional representation system. Kuchma vetoed the bill five times until parliament finally acquiesced to the existing mixed system. Six months later, shortly after the 2002 parliamentary elections, another attempt to impeach the president was put forward but it failed to get the necessary votes. More troubling, the motions' proponents had not followed the mechanisms prescribed in the constitution, which requires the constitutional court to initiate a case before any impeachment motion can be put forward in the parliament. Regardless of the constitutional process, the Tymoshchenko Bloc went ahead with its plans to remove the president on the basis of charges that Kuchma has been involved in attempted blackmail of collective farm managers to force their support in the 2002 parliamentary elections. A further charge of corruption deals with the so-called "tapegate" stemming from recordings of supposed telephone calls between Kuchma and members of the executive branch that implicate the president in the September 2000 kidnapping and murder of opposition journalist Heorhiy Gongadze. Kuchma denied any wrongdoing, but the issue has yet to be resolved.

The problem of corruption is rampant throughout the government and state bureaucracy.³⁴⁸ Aside from presidential and parliamentary rivalries, cabinet members and political elites also contend more generally with the "criminal-political nexus – the alliance of criminals who together penetrate the licit and illicit sectors. This is the most pernicious element of the crime phenomenon in Ukraine."³⁴⁹ In general, the number of

³⁴⁸ Transparency International ranked Ukraine 87th out of 91 in 2000, and 83rd in 2001.

³⁴⁹ Louise Shelly, "Organized Crime and Corruption in Ukraine: Impediments to the

criminals elected to parliament has increased, and state prosecutors even charged former Prime Minister Pavlo Lazarenko, one-time ally of the President and now leader of the Hromada party bloc, with illegally obtaining and laundering nearly \$900 million. He is also accused of arranging three contract murders, including that of a member of parliament, Yevhen Scherban. Interestingly, he did not deny the charges but rather implicated other top political officials including the presidential administration, which he claimed had embezzled millions from I.M.F. loans.

The problem with corruption in Ukraine is not just its obvious illegality and demoralizing impact on society.³⁵⁰ Corruption also destabilizes the informal rules of the game due in large part to the selective enforcement of anti-corruption legislation. Elites charge and counter-charge one another with corruption often regardless of the veracity of the claims. Political expediency has at times proved more compelling than evidentiary accuracy. Yulia Tymoshchenko, former vice Prime Minister, is a case in point. An ally of Lazarenko, she was appointed to her position with the support of the president in an attempt to divide the Hromada bloc in the Rada. However, shortly thereafter Kuchma fired her in January 2001 and then had her arrested on corruption charges. Two separate criminal courts ordered her release and the charges to be dropped.³⁵¹ Why he did it is less important than the effect of continuing the instability in the informal rules of the game. Power transfer mechanisms within government are unpredictable given the selective use

Development of a Free Market Economy” *Demokratizatsiya* 6,4 (Fall, 1998), p651.

³⁵⁰ “Only 7% of the Ukrainians believe that the government is doing a good job in fighting organized crime, whereas 87% believe the contrary.” [Ibid., p649.]

³⁵¹ *NIT* 2002, p402.

of corruption charges to dismiss unfavorable ministers.

In addition to the destabilizing effects of corruption, changes in government bureaucracies have also been quite frequent in Ukraine. Since 1997 Ukraine has had four different prime ministers. In itself this does not automatically destabilize the informal rules of the game, but given the context of corruption and institutional rivalries it certainly does not help the situation. The first instance occurred in July 1997 when the president fired Lazarenko due to his growing popularity and potential rivalry in the upcoming presidential election.³⁵² Six months later parliament demanded the removal of his replacement, Valery Pustovoytenko. The president responded that if parliament continued to oppose the prime minister, he would dissolve the legislature and call for new elections, despite the illegality of such an action. In response, the anti-Kuchma bloc in the Rada approved impeachment proceedings for “daily violations of the constitution,” on February 2. After that interchange nothing more was done due to the upcoming parliamentary elections a month later.

Eventually Pustovoytenko left in December 1999 to head up the “party of power”, For Integral Ukraine, and Kuchma appointed another loyal clan member, Viktor Yushchenko as his replacement. However, almost from the beginning, “the Yushchenko government [was] under attack by the oligarchs, i.e., leaders of the new politico-economic holdings whose power depends on the shadow economy and protection by the president.”³⁵³ Even within Kuchma’s own clan divisions had formed, and the president

³⁵² *East European Constitutional Review*, 6, 2/3, (Spring/Summer, 1997).

³⁵³ *N.I.T. 2001*, p393.

later withdrew his support. The communists eventually forced out Yushchenko in 2001 with a vote of no confidence, and Kuchma replaced him with yet another Dnieprpetrovsk clan member, Antatoliy Kinakh. He survived the 2002 parliamentary elections, but the presidential elections are on the horizon so his longevity remains in doubt.

Regrettably, criminal penetration of the government and the state bureaucracy as a part of incessant clan rivalries, arbitrary use of anti-corruption measures to remove government ministers, frequent and unpredictable changes in bureaucratic responsibilities, unreliable mechanisms of power transfer in the election cycle, threats of referenda to dissolve parliament and counter threats to impeach the president, and challenges to the delegation of constitutional authority represent endemic challenges to the formal and informal rules of the game in Ukraine. These problems have not moderated with time, nor has the 1996 constitution created greater stability. Even in the March 2002 Rada elections, “the executive branch became an election subject *de facto* when it supported the For Integral Ukraine, in contravention of the law.”³⁵⁴ As a result, unstable rules have engendered short-term thinking among Ukrainian elites, especially when considering costly decisions like Chernobyl and nuclear safety. As the next section shows, similar problems of corruption and repeated infrastructural reshuffling in the bureaucracies responsible for nuclear affairs created uncertainty and high discount rates leading to truly awful compliance levels in Ukraine.

³⁵⁴ Oleksandr Sushko “The 2002 Parliamentary Elections as an Indicator of the Sociopolitical Development of Ukraine”, *Democratizatsiya* 10, 4 (Fall, 2002), p573.

Compliance

At 1:18 p.m. on December 21, 2000 President Kuchma called the Chernobyl station manager and ordered him to shut down the last operating reactor. Unit 3 had been running at partial power for several days in order to save enough fuel so the plant could close on the day of Ukraine's planned international celebration. For those who had labored long years to see the end of the world's most unsafe nuclear reactor, a difficult and wearying journey had come to an end. Even from the beginning of G-7 support for nuclear safety measures in the former Soviet bloc, Chernobyl always stood out as the best case for early closure. The principal struggle had been against the short-term perspectives prevalent among Ukraine's political elites.

As the previous section demonstrates, instability in the formal and informal rules of the game has been a persistent problem throughout Ukraine's post-independence period creating uncertainty about governance in the political system. Under such conditions high discount rates have been the rule rather than the exception. These were evident even before Ukraine entered into international commitments to close Chernobyl by the end of 2000.

Despite initial support for early closure in 1990 and 1991, nuclear industry and government elites began to balk as the costs became more apparent in 1992. Institutional rivalries destabilizing the political system played a part in forestalling compliance commitments, in this case domestic commitments. In addition, since 2001 it has become apparent that generalized corruption within the government and state bureaucracy had also infiltrated the state utility Energoatom, as well as plant management at several

nuclear power plants.

When Ukraine entered the international community as an independent state, Ukrainian domestic commitments to close Chernobyl seemed genuine. Along with the subsequent decision to sign the Non-Proliferation Treaty and give up its share of the Soviet nuclear arsenal in exchange for immediate Western assistance, the Supreme Soviet declared that Chernobyl would be decommissioned by 1995 at latest. When a fire broke out in unit 2 and damaged most of the safety equipment for the entire plant, they moved forward the date two years. In 1992 the G-7 agreed to fund safety work in Eastern Europe and the former Soviet Union in part due to the positive actions taken by the Ukrainian legislature.

The rules of the game remained in flux from the beginning of Ukraine's independence. Institutional changes occurred after the 1991 Presidential election and reconfiguration of the Rada, and the number of competing elites increased beyond the "old guard" *nomenklatura*. This led to more frequent, disruptive clan rivalries. Uncertainty about the governance of the country increased, and it can be inferred that elite discount rates grew as a result. At the time, increasing numbers of elites began to question the necessity of closing Chernobyl in 1993; some resisted closure all together.

In February 1993, President Kravchuk's advisor for nuclear affairs and vice-chairman of the Academy of Sciences, Victor Baryaktar dropped the first bombshell on early closure. In what would become a litany for Ukrainian elites, he cited severe economic conditions, specifically the high cost of fossil fuel supplies from Russia, high

energy demands,³⁵⁵ the instability of the national electricity grid, and a lack of domestic funds as reasons not to close Chernobyl in 1993, 1995 or anytime soon. Aside from his comment, most elites with access to the West still publicly assured donors that Ukraine remained committed to 1993.³⁵⁶ As the time drew nearer, increasingly determined and widespread opposition eliminated that possibility. While still only a domestic commitment, the decisions indicate the pattern of short-term thinking among Ukraine's political elite.

In the context of unstable formal and informal rules of the game, uncertainty about the future made early closure of an operational nuclear reactor unlikely. Immediate and long-term costs were both economically and politically high, since while Ukrainian citizens had used the Chernobyl accident as a rallying cry for independence, when the harsh realities of independence set in with the subsequent disastrous decline in living standards, surviving the winter trumped the risks of operating an unsafe nuclear reactor.³⁵⁷ Even in Ukraine's proto-democracy elected officials still had to care about public opinion and the threat of referenda. Elites could see the tangible risks of half the population freezing, while lightning had already struck at Chernobyl once so it was not

³⁵⁵ Western assistance and negotiating positions continually stressed falling energy demands a reason Chernobyl was no longer needed. What was needed was increased energy efficiency. As was standard in Soviet-era residential and commercial construction, centrally controlled heating systems did not allow individual consumers to adjust their temperature settings. Open windows were a common sight even during the coldest months.

³⁵⁶ *Nucleonics Week*, 3/4/93 p15.

³⁵⁷ Western assistance would have helped tremendously because it targeted infrastructural reform, but the benefits would be deferred beyond the immediate winter needs.

likely to happen again any time soon.

Emblematic of the growing dissention, in April 1993 the deputy director of the State Committee of Ukraine for Nuclear and Radiation Safety (G.A.N.U.), Georgy Kopchinsky contravened parliament's earlier decree and stated that "no concrete decision has been made on the Chernobyl plant's future."³⁵⁸ His organization functioned as an early regulatory commission, or more accurately, a rubber-stamp for the nuclear industry by endorsing plant management safety assessments. The group responsible for Chernobyl maintained a risk acceptant safety culture even after the 1986 catastrophe, and G.A.N.U. had little or no power to change it even if its officials had wanted to do so. I return to the issue of regulatory insufficiency later but for now I state it to show that it coexisted with unstable rules of the game. Yet it was the effect of unstable rules of the game that principally overshadowed compliance with earlier legislative decrees and later international commitments.³⁵⁹

In the fall of 1993 Kopchinsky further confirmed that "chances are growing that the Chernobyl nuclear power plant will continue operating beyond the end of this year. The country's political crisis is preventing any decisions on Ukrainian nuclear matters."³⁶⁰ The government committee tasked with presenting a policy to parliament had not even met once since its creation in June in 1993. Almost nonexistent approval

³⁵⁸ *Nucleonics Week*, 4/8/93 p13.

³⁵⁹ While the legal Memoranda of Understanding with the G-7 and E.C., and the E.B.R.D. Grant Agreement were signed later, public statements had earlier confirmed the Ukrainian legislative commitment to close Chernobyl earlier than its design lifetime.

³⁶⁰ *Nucleonics Week*, 9/16/93 p4.

ratings for the President (3-4%) might have equalized parliamentary elites' chances to use public opinion in the "blame game", but the overall lack of legitimacy for the political system added weight to calls for early elections which threatened their position more seriously.

Consequently, prior to the elections, President Kravchuk asked parliament on October 19 to reverse its earlier decision and allow Chernobyl to continue operating, which it did the next day in a rare form of institutional unity. The plan called for restarting unit 2, and more problematically, it set no new closure date thereby allowing Chernobyl to operate "as long as its technical capacities would permit."³⁶¹ While G.A.N.U. chairman Nikolai Steinberg supported the directive, regulatory safety assessment was not the determining factor. Institutionally, G.A.N.U. did not make the decision, the president did. Besides agreeing with the president's move, Steinberg also initiated a tactic that would become the basis for almost every future renegeing on Ukraine's commitment to close Chernobyl – replacement power or no closure. At first, replacement power had to be up and running before Chernobyl closed, then the position moderated to allow concurrent operation, and finally, the plant would close as long as replacement power came along soon after shutdown. It took almost eight years to reach that final position, and along the way Ukrainian elites constantly balked at the conditions handed down by Western agencies trying to help the country reestablish solid economic performance and nuclear safety at its remaining plants.³⁶²

³⁶¹ *Nucleonics Week*, 10/28/93 p1.

³⁶² Safety has only increased due to international assistance and training. Some incidents

In addition to the closure debate, problems with the concrete shelter covering the ruin of unit 4 also caused concern among Western officials, and attest to the risk acceptant culture and high discount rates among Ukrainian elites. Originally established to last until at least 2006, as early as 1993 new evidence showed the shelter would give out ten years earlier without massive work to stabilize the roof and fill the nearly seventy square meters of cracks over the surface of the sarcophagus. There were also gaps at almost every joint where the shelter connected to the original building.³⁶³ Underneath the structure, a swirling radiation cloud blew through the building, and radioactive isotopes leaked from cracks in the floor into the ground water below. As if that were not bad enough, in 1995 “Ukrainian experts confirmed the risk that the sarcophagus could be destroyed by abundant snowfall, heavy rain, storms, or earthquakes. The Chernobyl region has a probability of a magnitude 7 earthquake once in 10,000 years, a magnitude 6 quake once in 100 years, and a magnitude 5 tremor once in 27 years. [Any of these would destroy the shelter.] It also has a relatively high probability of tornadoes, an event which could aggravate the consequences of sarcophagus collapse by lifting the radioactive dust to great height.”³⁶⁴ Shortly after the Ukrainians confirmed the dangers of the sarcophagus, a consortium made up of international safety experts and design manufacturers reported that in order to secure unit 4, unit 3 also needed to shut down

at Ukraine’s nuclear power plants indicate the problems: a fire at Zaporizhyya after a worker opened the wrong valve (similarly to Chernobyl), extreme radiation overdoses at South Ukraine, Rovno management hiring workers with falsified work permits and education credentials, blatant disregard to early warning systems (whenever they actually worked), not to mention the design flaws inherent in all Soviet-designed reactors.

³⁶³ *Nucleonics Week*, 2/25/93 p6.

since both units shared key water piping, and the chemical treatment equipment for unit 3's cooling system rested underneath the plant's smoke stack – the most dangerous area of the sarcophagus. According to a consortium official, “if the stack collapsed, the same thing will happen to unit 3 as happened at unit 4.”³⁶⁵

In the context of those two studies, the European Commission and the E.B.R.D. proposed a massive Shelter Implementation Plan (S.I.P.) to fix the existing structure and build a new sarcophagus to encase both the damaged reactor and the failing shelter surrounding it. The program called for a Ukrainian commitment of nearly \$200 million out of a total bill estimated at \$800 million. Yet despite the obvious risks of the potentially disastrous conditions, G.A.N.U. certified the existing structure as “acceptable to meet the safety requirements,”³⁶⁶ and a few Ukrainian officials even objected that a second shelter was not needed at all.³⁶⁷

³⁶⁴ *Nucleonics Week*, 3/23/95 p1.

³⁶⁵ Ibid. A year later Alexander Borovoy of the Kurchatov Institute in Russia, who helped design and build the shelter, issued a report to the I.A.E.A. confirming the serious dangers in the current sarcophagus. Fundamentally the structure could not be as safe as they wanted “given the urgent need to protect plant personnel, the public, and the environment against penetrating and dispersing radiation. Design and construction took only seven months.” The main problems, “insufficient data about the stability of existing structures, the need to use remote control methods, and the impossibility of welding in some areas because of the high radioactive fields led to the current structure’s two main defects: uncertain stability of the supports of the upper beams and non-hermetic construction. There are nearly 1000 square meters of holes in the shelter’s roof and walls.” “The worst-case scenario likely would be the fall of roofing and upper structures, still possible despite strengthening work done in recent years. The structures were assembled by remote control, largely without welding or bolt connections and remain in place only by weight and friction.” [*Nucleonics Week*, 2/22/95 p15.]

³⁶⁶ *Nucleonics Week*, 6/23/94 p16.

³⁶⁷ *Nucleonics Week*, 7/27/95 p14.

Despite those pockets of resistance among certain Chernobyl management personnel, and unlike the larger closure debate in general, comparatively little opposition arose from Ukrainian elites when it came time to start the new shelter plan. While the Ukrainian contribution was much smaller than the comparative costs to permanently close down Chernobyl, work still progressed slowly due to delays in implementing the Vienna Convention on nuclear liability. Throughout 1995 and 1996, the Ukraine government said it could not present a liability bill to the parliament for approval because legislators were occupied with constitutional reform.³⁶⁸ Even after the new constitution came into effect, liability legislation became hostage to institutional rivalries, and changes in government structures obscured agency responsibilities.

The delays continued until Valentin Kupny of the Chernobyl Sarcophagus Project issued a report on February 8, 1999 on “The Fire Safety of the Shelter Facility.” In it he stated that the sarcophagus posed “the gravest fire hazard. The distribution of combustible material [2000 tons] and the extent of their radioactive contamination are known only very approximately. Highly conflicting assessments have been made of dangerously explosive concentrations of a number of components. Existing assessments are not more than expert opinions and have not been confirmed by relevant research.”³⁶⁹ Less than a week later legislation went forward and the first contract was signed to begin work in mid 1999. Kupny’s report also spurred Western donors to contribute the remaining money needed for the project. Ukraine’s monetary contribution had been

³⁶⁸ *Nucleonics Week*, 10/31/96 p16.

³⁶⁹ *Nucleonics Week*, 2/25/99 p15.

small to begin with, but without the recourse of blaming Western intransigence to fulfill its financial commitments, and incontrovertible evidence of the need to begin work on the Shelter, the money came out of the budget. As with Chernobyl's final closure in 2000, they had no other viable choice.

Aside from closure, Kravchuk had also entered Ukraine into the Convention on Nuclear Safety in 1994. But like closing Chernobyl, compliance with that commitment suffered from similar delays. For nearly a decade elites have failed to comply with the terms of the C.N.S., specifically the creation and maintenance of a sufficiently funded, autonomous nuclear regulatory authority. G.A.N.U. was the first agency tasked with overseeing nuclear safety in Ukraine, but no law existed to give it formal autonomy, authority or the necessary funds to ensure it could do its job.³⁷⁰ Commenting on the government committee chaired by Mikhail Umanets that was responsible for ensuring the highest priority for safety, G.A.N.U. Deputy Director Kopchinsky said “I am afraid safety is not the main task of Mr. Umanets’ committee – only production of electricity.”³⁷¹ In addition, Kravchuk and the government sometimes made important

³⁷⁰ In 1994 Kopchinsky commented that “Ukraine still has no legal and regulatory basis for nuclear energy use – the parliament either has no time to consider the bill G.A.N.U. submitted over a year ago, or doesn’t understand the importance of the measure. Not only does G.A.N.U. not issue licenses to nuclear facilities – due to the lack of a licensing law – but safety audits of operating units are not completed and thus upgrade programs are on hold” [*Nucleonics Week*, 4/7/94 p10.]

³⁷¹ *Nucleonics Week*, 12/9/93 p11. Kopchinsky resigned due to the increasing risks of continued operation. Citing the October 20 decision to allow open-ended operation for units 1, 2 and 3 he said, “I don’t understand their decision. I spent long hours explaining the safety problems to government and parliament officials. I could have accepted a decision on short-term operation, but not one essentially giving carte blanche to a plant considered unsafe not so long ago. I don’t want to work in the safety committee under

decisions about Ukrainian nuclear safety without consulting G.A.N.U., including the president's unilateral decision to rehabilitate unit 2 after the fire in 1992 forced its closure. Whatever authority the regulator might have had during the Soviet era disappeared in the new Ukraine.³⁷²

However, lack of legal authority was not the greatest hindrance to the development of an autonomous regulator. Constant government restructuring under Kuchma presented greater challenges as it created uncertainty regarding responsibilities and authority. Not only did government bureaucracies change regularly, but redundant committees in parliament also struggled to wrest control of Ukraine's nuclear industry out of the government's hands. In December 1994, the president dissolved G.A.N.U. and the Ministry for Environmental Protection to create a Ministry combining both entities. The stated goal was to create "a more effective system of regulating nuclear power and radiation safety. It represented a victory for Yuri Kostenko (the former Minister for Environmental Protection), who had long pressed for control over the nuclear safety portfolio, and a setback for Steinberg, who argued that such a move would disrupt cooperation under way between G.A.N.U. and Western organizations. Supporters of an independent regulatory committee called the move a disaster."³⁷³ Even after the change,

those conditions. The situation in Ukraine today is very similar to the situation in 1985-86 which led to the Chernobyl accident." [Ibid.]

³⁷² Ibid.

³⁷³ *Nucleonics Week*, 12/22/94 p8. Despite the administration's claims, Steinberg countered that "all the efforts that have been made over the past three years to establish a civilized nuclear safety regulatory regime in Ukraine may end up being wasted." Kopchinsky also called the president's decree "another example of an impulsive and authoritative approach to the nuclear power issue. The team of specialists that has been

the chairman of the new Nuclear Regulatory Authority (N.R.A.) still did not report to the chief executive as stipulated in the Convention on Nuclear Safety, instead relying on the Minister of Environmental Protection and Radiation and Nuclear Safety for political and budgetary patronage. In addition, after two years N.R.A. had yet to be given sufficient financial and personnel resources as required by the 1996 E.B.R.D. Grant Agreement.

To make matters worse, Kuchma added a new advisory committee outside the Ministry in 1995, the purpose of which was to advise him on the operational costs and safety of Chernobyl, thereby diminishing the authority of the state utility Goscomatom and N.R.A. even further. Then in May 1996, as a condition for compliance with the Vienna Convention on liability and European Commission loans, Kuchma ordered the restructuring of the state utility to allow its merger with the owners of Ukraine's nuclear power plants. However, the new utility, Energoatom, was not finally incorporated and authorized to do its job until February 1998. During that time Kuchma reorganized the government infrastructure including Energoatom and N.R.A. two more times before 1998, then once per year in 1999, 2000, and 2002. Effective transitions were impossible and oversight became problematic at best, impossible at worst.³⁷⁴ There was no

put together with hard labor is being ruined. Very few of them will want to be transferred to the new ministry." [*Nucleonics Week*, 1/5/95 p12.]

³⁷⁴ Plants operated without licenses, ministry representatives asserted their control over regulatory matters, and plant management had special access to the cabinet that bypassed the ministry responsible for safety matters. Taken on its own, none of these is totally damning, but as a whole they illustrate the instability in the informal rules of the game, and how that instability enabled corrupt officials to circumvent what little government oversight remained. As an example of this, criminal charges have been filed against several key Energoatom leadership officials, and plant managers at South Ukraine and Chernobyl were replaced for failing to fulfill their management duties.

predictable power transfer mechanism for bureaucratic officials, ministerial responsibilities changed capriciously, and competing groups vied for control over the country's nuclear industry.

Throughout this period the debate on closing Chernobyl raged within parliament, between government institutions, and across the international negotiating table. At stake in the debate were several factors, including Ukraine's total dependence on Russia for both fossil and nuclear fuel. While a plan in the late 1990's for the U.S. Department of Energy to assist Ukraine in developing fuel using domestic uranium deposits, to date nothing has changed the country's reliance on Russia in that area. That dependence makes Ukraine vulnerable to shocks in the Russian economy as happened in 1993 and 1998, and gives Moscow leverage over contentious issues.³⁷⁵ Additionally, the electricity grid has been and continues to be unstable. Designed to operate at 50 megahertz, regular outages at Ukraine's nuclear power plants often cause it to drop below that level threatening to collapse the entire system.

Energy demand also fell throughout the 1990's due to low commercial production, yet elites still maintained Chernobyl was essential to the country's energy supply – it produced less than 10% of generating capacity. Even though residential consumers continued to need comparable levels of electricity, the loss of numerous industries to idleness, decay, outright theft, or corporate fraud meant that Ukraine did not need as much power as it was capable of producing. Equally problematic, payment for

³⁷⁵ The Black Sea Fleet and the rights of ethnic Russians in Crimea have been two examples.

that electricity has been abysmal as well. Goscomatom and its later incarnation Energoatom regularly accepted barter payment, and until 1999 only about 10% of all payments were made in cash. That figure has climbed to around 50% but customers still owe the state utility hundreds of millions of dollars for previous and current bills.

Low cash payments coupled with low state revenues in general meant that nuclear fuel could not be purchased on time causing either temporary shutdown, or even worse, running on partial power. The Chernobyl accident occurred while operators conducted tests at low power levels.³⁷⁶ Normal operations at that level might not automatically cause another accident, but given the other serious problems at Chernobyl the risk was high.³⁷⁷ In addition, workers' salaries started to lapse in the late 1990's leading to protests and under-shifting for daily operations. Even worse, safety modifications and even regular maintenance fell by the wayside as well.

In the midst of all this, Ukraine demanded compensation for closing Chernobyl in the form of cash grants and social impact assistance – nearly \$4 billion worth. The U.S. and U.K. built the International Chernobyl Center in Slavutych to absorb workers from Chernobyl after it closed, but cash compensation has not been forthcoming and is unlikely in the future. Additionally, replacement power stations were the perennial

³⁷⁶ O.E.C.D./N.E.A. "Chernobyl: Ten Years On – Radiological and Health Impact" (November, 1995), p15.

³⁷⁷ Operating at partial power does not present the same risks at the newer V.V.E.R. 1000's but that doesn't mean the V.V.E.R.'s are safe. They still needed improved information and control systems, technology transfer for diagnostic and monitoring systems, and they have the pesky problem of sticking fuel rods – half way in and they jam allowing only partial power operation.

sticking point for any discussion of Chernobyl's closure. Two nearly completed reactors at Khmel'nitsky and Rovno were the focus of E.C. and E.B.R.D. least-cost studies, but even after five years of assessment, in the end Ukraine balked at the austerity measures required by the West and opted to work with the Russians. The E.B.R.D. plan called for an electricity rate hike of nearly .25 cents per kilowatt-hour to pay back the loan, whereas the Russian plan required no price increase and cost about half as much as well. Unfortunately, the savings came at the expense of vital safety modifications.

Despite these constraints, in mid-1995 Kuchma declared that Chernobyl would close by the end of 2000. He confirmed that date in the Memorandum of Understanding signed between Ukraine, the G-7 and the European Commission on December 20, 1995. In November the following year, the same date was established as the principal condition for an E.B.R.D. Grant Agreement. Both agreements stated that replacement power would be made available only if it was needed at the time. As mentioned above, falling demand and international assistance to increase energy efficiency called that condition into question. However, those opposed to Chernobyl's closure maintained replacement power as a deal-breaker. Even when the first of two operational units closed in 1996, parliamentary officials, cabinet members, and plant management claimed it was only temporary.

In addition to resisting closure, options to restart unit 2, which had been severely damaged by a fire, reentered the discussion. Chernobyl plant manager Sergey Parashin

was one of the most ardent opponents of closing the plant anytime before 2007,³⁷⁸ and even questioned the need for some safety upgrades. Prime Minister Yevgheny Marchuk also pressed for continued operation despite the President's declaration to the contrary. He was fired two months later, but his replacements – Lazarenko, Pustovoytenko and Yushchenko – at times called into question the need to close Chernobyl in 2000. Even President Kuchma sometimes defied the terms of the international commitments he himself had made. Yet despite strong political, institutional, industry and popular opposition Chernobyl closed on time in December 2000. The Ukrainians didn't have the money and they ran out of time.

From the beginning of international assistance during the post-Soviet period, Western officials had stressed the necessity of closing Chernobyl as a condition of further good will. As the 2000 date got closer, Ukrainian elites called what they hoped would be a bluff, and resisted their compliance commitments. In response, the message from N.S.A. donors, the European Commission, and the E.B.R.D. was the same as it had always been – close Chernobyl or risk losing future assistance. Ukraine needed I.M.F. loans to stabilize the state currency, E.C. and E.B.R.D. assistance to restructure the energy sector, and the government could not afford to close Chernobyl on its own. Yet elites would have run that risk if Chernobyl could have continued operating beyond December 2000. It could not though, due to numerous fatal flaws.

³⁷⁸ *Nucleonics Week*, 2/22/96 p15. A week later, an official of the German Nuclear Safety and Environment Ministry told *Nucleonics Week* “They will never shut Chernobyl for another 15-20 years. Plant management is making plans to do serious backfitting with the help of Russian industry in a bid to keep the two operating units in service until

Aside from running out of fuel, regulatory personnel discovered several hundred cracks in the reactor coolant circuit and emergency cooling systems. Plant management wanted to keep unit 3 running – the only one in operation after unit 1 closed in 1996 and unit 2 never having been restarted due to the prohibitive costs involved – and fix them along the way. The problem was that the cracks were located in highly radioactive areas. In repairing a single breach, workers would receive a collective dose of 6-10 rem when the annual limit for an individual is set at only 5 rem. Management authorized piecemeal repairs but each time inspectors reviewed the work, new cracks were discovered. Eventually so many cracks had formed that the plant would need to be down for several months at a time to fix them, assuming they had the money to do so, which they did not. Consequently, Chernobyl limped along until it eventually ran so low on fuel that it squeaked by on less than 50% power just to make it to December 21. Kuchma did not terminate a healthy, viable nuclear power plant. Worn out and debilitated, Chernobyl simply died of old age.

Closure opponents fought until the very end to keep the plant running despite the tremendous risks of operating an R.B.M.K. at partial power. Moreover, indicating the continuing uncertainty about institutional roles, at the December 5 open hearings before parliament legislators questioned the president's authority to close the plant, and sought testimony from plant managers on why Chernobyl should keep operating. After the meeting, two French legislators who attended the hearings and later visited Chernobyl said they were “stunned and aghast by remarks of Chernobyl staffers who affirmed that

at least 2010.” [*Nucleonics Week*, 2/29/96 p2.]

their plant is safe and profitable and should continue to operate. [Those staffers] asked Ukrainian officials to strongly oppose the closure of Chernobyl 3, which they saw as imposed from abroad. It was as if nothing happened in 1986.”³⁷⁹ That opposition did not subside even after Kuchma gave the final order. Parliamentarians and Energoatom officials still called it a costly mistake, and the Mayor of Kiev, Alexander Omelchenko raised the possibility of modernizing and reopening the first and third reactors once the structure over the destroyed unit 4 was secured.³⁸⁰ Widespread unwillingness to close Chernobyl, and continuing resistance after the fact coincides with low rules stability and low compliance.

Conclusion

Chernobyl closed down because it could no longer operate. This technical condition sets a boundary for my approach. The prediction that unstable rules will lead to low compliance is born out by the fact that Ukrainian elites failed to meet the other criteria for medium, and were even spotty in terms of low compliance safety measures. Therefore, I can defend the model by arguing that the rules did not stabilize in a measure commensurate to what in other cases would have meant high compliance. There was no progressive fulfillment of the compliance requirements. Instead, elites in parliament, the government, and the president himself operate under persistent uncertainty as to the rules of the game. High discount rates exist across the institutional spectrum. Chernobyl did not close because these elites wanted it too, but because there was no other choice – the

³⁷⁹ *Nucleonics Week*, 12/14/00 p13.

state lacked the money to buy new fuel and fix the myriad problems mounting with each passing year of operation. In contrast, safety culture arguments do not adequately explain the decision to close Chernobyl because Ukrainian elites have a very risk acceptant norm on safety; that has not changed even after Chernobyl closed down two years ago. Neither do approaches based on selective incentives offered by international donors fare much better since incentives did not change either.

Even after closure in December 2000, the formal rules remain contested and unstable due to the unpredictable power transfer mechanisms resulting from arbitrary challenges to the electoral system, unimplemented changes to the Rada's structure and unclear delegations of power between rival government institutions, and the bitter personalization of that rivalry between parliament and President Kuchma. Informally, selective prosecution of corrupt officials and the capricious use of corruption charges to force out undesirable government officials, unclear and sudden changes to bureaucratic responsibilities, and intense competition between government institutions over control of the nuclear industry remains a serious hindrance to establishment of stable governance procedures. In addition, clan conflict has subsided but only until the next presidential election in 2004; the 2002 Rada elections were rife with it. The effect has been to produce arbitrary governance under conditions of façade democracy.

³⁸⁰ *Nucleonics Week*, 12/21/00 p12.

Table 1: Formal and Informal Rules Stability

Formal Rules			Informal Rules		
Predictable Power Transfer Mechanism	Clear Differentiation of Delegated Authority	Absence of challenges to that Delegation	Predictable Power Transfer Mechanism	Clear Differentiation of Delegated Authority	Absence of challenges to that Delegation
NO	NO	NO	NO	NO	NO

N.I.T. confirms the general trend by showing the decline in rule of law from 1997, and by giving the country consistently high corruption scores (D ratings followed by 6.0 from 1999 to 2002).³⁸¹

Table 2: *N.I.T.* Ratings for Rule of Law

	1997	1998	1999-2000	2001	2002
Rule of Law	3.75	4.00	5.25	5.25	↓ 5.38

In Kuchma's celebratory speech he condemned Chernobyl as a "negative symbol that has no right to exist on earth," and stressed that Ukraine willingly closed Chernobyl "following the highest-priority interests of its people and the international community. As Chernobyl is a threat to the entire world, Ukraine is ready to sacrifice part of its national interests for the sake of global safety."³⁸² Yet K2/R4 had not been completed as

³⁸¹ An example of the weakness of democracy in Ukraine occurred on June 26, 1994 when a local referendum to approve completion of Zaporozhe 6 took place and over 90% voted no. It went critical a year and half later after Kuchma approved funds for its completion in March 1995.

³⁸² *Ibid.*, p11-12.

the Ukrainians demanded as a condition for closing Chernobyl, no combined thermal plant existed in Slavutych, and Ukraine had received less than one-quarter of the nearly \$3 billion in promised assistance from the West. It is unlikely Kuchma had become a true believer in nuclear safety. Instead, he simply had no other choice. As such, persistent instability in the rules of the game has given Ukrainian elites high discount rates and short time horizons. They resisted closing as long as they could, but the plant just would not run any longer. Russian assistance was severally inadequate, and the West would not give any money to keep further its operation. Chernobyl was falling apart and they had no way to fix it. In general then, low rules stability corresponded to low compliance despite the closure of Chernobyl.

My model uses a cumulative scale to evaluate compliance. Each level of compliance represents a greater willingness to endure short-term costs to gain future benefits. Yet Ukrainian elites regularly delayed safety improvements and at times disavowed their necessity all together. Most have been completed at the remaining plants, but the work was years behind schedule. In terms of medium compliance, the legal establishment of an independent nuclear regulatory authority came around the same time as Chernobyl closed, but its sufficiency remains dubious. Kuchma's decree to create the Nuclear Regulatory Committee (N.R.C.) fulfilled part of the C.N.S. requirement, which the E.B.R.D. and E.C. had also pressed for in their negotiations on Chernobyl. Vadim Grishchenko, Chairman of the regulatory commission told me, "I have the support of the President, Parliament, the Prime Minister and the cabinet. The President said to me he will agree with all my decisions regarding all safety matters.

Safety comes first.”³⁸³ But despite legal provisions for independence, the N.R.C. lacks anything close to sufficient funding, and there is no guarantee its autonomy will endure in the future. Therefore, unlike Armenia, there have been no solid indicators these moves are either progressive or immutable. (The asterisk is to show that low compliance best describes Ukrainian compliance despite the early closure of Chernobyl.)

Table 3: Covariance of Rules Stability and Compliance

		Rules Stability		
		Low	Medium	High
Compliance	Low	Ukraine*		
	Medium			
	High			

The rules of the game have been unstable, elite time horizons have been short, and compliance has been low despite the closure of Chernobyl. If they could have fixed all the numerous problems, or even just the ones that prevented operation and left the others alone, it is extremely likely the plant would still be running today. That is a frightening thought. Perhaps the Ukrainians were right though – Chernobyl never exploded again, so it must have been safe.

³⁸³ Interview, September 18, 2002.

Chapter 7 - Conclusion

“It’s easy to get disappointed about nuclear safety in Eastern Europe and the N.I.S. At least Chernobyl closed – not that the Ukrainians wanted to do it though. We worked so hard to change safety culture in so many places, but unless they could see the light at the end of the tunnel they just wouldn’t budge.” – Senior State Department official, June 2002

Introduction

To date, none of the Soviet-designed nuclear reactors in Eastern Europe or the former Soviet Union has suffered a catastrophe like Chernobyl in 1986. Yet aside from such a terrible event, less disastrous accidents have been reported throughout the various reactor types. Some are routine computer glitches, wiring problems, or even the occasional secondary plumbing break. Other more serious problems are all too common, and include pipe cracks in the coolant system, radiation spikes that produce beyond-limit dosages for plant personnel, and valve embrittlement near the reactor core. Western safety assistance throughout the region has minimized some of the operational risks and design problems wherever possible. Unfortunately, the scope of the improvements has been limited. Even countries that have complied with the costliest aspects of international agreements have done so with an expectation of greater future benefits from the West, and not from acceptance of the inherent dangers of continuing to run their nuclear power plants. Safety culture remains largely risk acceptant.

In the introduction I presented a model based on the stability of the political rules of the game, and how stability frames elite considerations of the costs and benefits of compliance. Three criteria measure rules effects and each country studied exhibited

fairly consistent evidence across those factors. Predictable power transfer mechanisms, clear delineations of delegated authority, and the absence of challenges to those delineations form the basis for my evaluations of formal and informal rules of the game. The relative stability of those rules frames elite expectations and creates powerful incentives to view compliance in the following ways:

- 1) highly stable rules enable elites to accept the immediate costs of compliance to gain long-term benefits;
- 2) medium stability produces competing evaluations of the costs and benefits of compliance so that elites chose to comply in some areas but not the most costly ones; and
- 3) unstable rules produce uncertainty about the viability of government structures and governance procedures, yielding low compliance as a result of exclusively short time horizons.

The use of the discount rate in each hypothesis is important because it illuminates the connection between rules effects and compliance. For the most part I infer discount rates, but some directly observable evidence arose in the empirical chapters.

In terms of the overall applicability of my model to other political systems, formal rules need not exist solely in democracies, and may include divisions of power without a constitutional framework. Each country in my study operates in the context of a formal constitution, but my approach can also work in any system where non-codified delineations of authority prevail (such as monarchical, clan-based, or even theocratic systems). Informal rules also apply in non-democratic systems. Different types of

informal rules include the involvement of non-state actors in setting policy, popular input through referenda, and patronage hierarchies. These rules can operate within formal institutions, or in some other domestic structure that defines intra-elite and state-society relations.

Therefore, it is not the location within specific government structures or even the type of rules themselves, but rather their stability that shapes elite discount rates. In a reasonably secure environment, stable rules engender long-term thinking. Elites have time to consider the value of future benefits without questioning their immediate survival. Unstable rules create an overpowering uncertainty of their political and or personal futures. It is always possible that elites may misperceive the stability of the rules, the real costs, and or the reliability of future rewards. However, if it is assumed that elites are able to reasonably perceive the choices presented, the discount rate logic applies quite well to compliance with nuclear safety agreements. The logic is not perfect, but in cases where it does not fully explain compliance, alternative arguments do no better.

More importantly, rules effects have a high correspondence to compliance, with only two potential boundary cases – Ukraine and Armenia. In the former, technical failures of the Chernobyl nuclear power plant forced its closure. This does not represent high compliance, and the low rules stability produced high discount rates consistent with my model. Without the technical aspect, it is likely Chernobyl would still be operating today. In the earlier Armenian study, final decisions are deferred as a result of the new timeline for decommissioning Metzamor. In both cases, the vast majority of evidence is sufficiently explained.

A key part of the evidence is the presence of high and immediate costs to compliance. Allocating monetary and infrastructural resources for transitional economies is a costly endeavor. Financial limitations are not an exclusive feature of democratizing countries, but in post-communist Eastern European and former Soviet states the problem is severely aggravated. Regardless of short-term costs, the benefits from compliance predominantly pay off in the future. Increased operational safety and upgraded design modifications enable plants to operate more safely and with greater profitability for longer periods of time, but safety accrues over time and is an on-going endeavor. “The most profitable plants over the long run are also the safest. It’s a misnomer that safety decreases profitability. It just takes time to make money.”³⁸⁴ This applies for countries on the E.U. membership list, as well as those receiving Western assistance without formal integration.

While my model also applies to different types of international agreements with temporally fixed costs and benefits of compliance, it is not a perfect fit. It is difficult to find issues where benefits are directly available to the complying country. Environmental agreements dealing with ocean dumping, whaling, and greenhouse gases offer diffused benefits, making them less applicable to my approach. Monetary agreements offer a closer comparison, but the benefits are more comprehensive than in nuclear safety agreements. Financial assistance has immediate and long-term benefits; nuclear safety pays off primarily in the future. Finally, human rights agreements offer the best comparison for stability and elite discount rates, but the costs of compliance are

³⁸⁴ Interviews, Carol Kessler, July 2002.

different. Nuclear safety requires elites to give up an existing national resource, often against popular opinion, in order to secure long-term benefits. Human rights usually originate in popular protest, implying that compliance would benefit the public in the short-term. Benefits to elites would certainly be long-term if they survived the process. The challenge remains in that freeing political opponents and limiting police intimidation creates opportunities for changes in the political system that are not entirely predictable. These qualifications do not prevent me from applying my model to other areas. In order to capture a wider range of cases, modifications to the cost/benefit dynamic are required. In terms of nuclear safety though, the model works well.

The limitations on the use of fixed costs and benefits do not apply to the larger connection between rules effects and compliance. That part of the model seems more generalizable. While variations in incentives, the strength and dispersal of norms, and specific enforcement mechanisms can explain compliance behavior across different international regimes, cases within a single regime have a different focus. Introducing a domestic variable to the overwhelmingly third image compliance literature offers new explanations for variations within a consistent international regime. The following results indicate its positive performance.

Country Study Results

Slovakia represents the clearest example of a linear progression for both rules stability and compliance. Beginning with Prime Minister Meciar's emergence during the Velvet Divorce, the rules of the game in the Slovak political system underwent a period of considerable uncertainty. The initial constitution formation marked a period of

uncertainty due to the natural processes of negotiation, concession, and interest articulation among competing elites and social groups. Rather than act as a force for democratic consolidation, Meciar and his M.D.S. cronies regularly attempted to supplant the power and authority of the president and the courts. Meciar often used his position as head of government and leader of the ruling party to go beyond the prescribed boundaries of his office and take power away from rival institutions. In response, opposition groups in parliament and the executive branch began to use extra-constitutional means to try to reign in the troublesome prime minister. His style of arbitrary rule produced frequent unpredictable ministry shakeups, shifting bureaucratic responsibilities, and opponents often tested the boundaries of his power. Both the formal and informal rules were quite unstable.

When M.D.S. failed to form a coalition after the parliamentary election in 1998, Meciar remained a threat in the upcoming presidential contest the following year. Yet given the institutional strength granted to the prime minister in the constitution, once Dzurinda formed his anti-Meciar/democratic government, Meciar had very little chance to continue his assault on the structures of government. If he had won the ensuing presidential election his popular mandate could have empowered him to build up the presidency in order to bolster his own personal power. Given his past record, no one could accurately predict what he would do. Even so, during the interim period, the formal rules stabilized. Power transfer mechanisms and institutional delegations of authority were no longer threatened by the arbitrary rule that prevailed under Meciar. Aside from the M.D.S. bloc, there were no challenges to the constitutional separation of

powers. The loss of the prime minister's office structurally limited Meciar's influence.

Meciar attacked more than the constitution. He acted as a catalyst for challenges to the informal rules of the game. Rather than establish a party hierarchy that clearly assigned authority and responsibilities to different positions, Meciar favored the personalization of party loyalties. Patronage relationships centered around his good graces, which inhibited M.D.S. from developing into a mature party structure since elites owed their political survival to an unstable autocrat. Opposition parties on the other hand grew more experienced at coalition building. This was evidenced by Dzurinda's mid-term efforts to keep the Turkish minority party in the government despite serious policy differences (notably after Meciar's 1999 election defeat). While none of this was unique to Slovakia, the personal presence of Meciar kept elites guessing. Those in his group wondered if they would fall out of favor and end up in prison, or worse. Those opposed to him struggled to keep hold of whatever power they had. The informal rules remained unstable while Meciar retained the possibility of continuing his arbitrary style of rule in the presidency. During the intervening period from late 1998 until the presidential election the following May the day-to-day processes of governance were still largely uncertain. The threat of Meciar's return limited long-term thinking and constrained the new government's decision-making process regarding high compliance.

As a result of his 1999 defeat, Meciar's removal and marginalization gave ruling elites some breathing room and the comparative certainty to make long-term decisions without the fear that he would be able to discard their programs in the immediate future. A tipping point had been reached and the government undertook the precursory steps for

high compliance. Meciar remains a potential threat to the system of rules-based governance, but those rules effectively keep him out of power between electoral cycles.³⁸⁵ This continues even though M.D.S. won the 2002 parliamentary elections; once again Meciar failed to form a coalition. While certainly not guaranteed, there is reason to hope the developing stability in Slovakia will continue until Meciar, or anyone like him, can no longer challenge the system if given the chance.

In the context of increasing stability, Slovakia has progressively complied with all the costly aspects of its agreement with the E.B.R.D., despite a risk-acceptant safety culture. Safety work has been completed, the nuclear regulatory authority possesses sufficient capacity to do its job, and decommissioning efforts are underway at Bohunice. Even though opposition to its technical necessity persists, the political will has demanded decommissioning in order to secure the benefits of E.U. membership. High stability since mid-1999 has enabled long-term thinking so that elites have fully met the terms of their compliance commitments by agreeing to implement the early closure commitment, establishing alternative energy sources, and creating a national decommissioning fund for Bohunice. The prospects for continued stability look promising and it appears that Slovakia passed another important milestone when Meciar was denied power last year.

Compared to Slovakia, Bulgaria has had very stable formal rules but persistently

³⁸⁵ He can still impose fear on subordinates, as seen in the reluctance of one of my interviewees to allow me to use his name. Another high-ranking person I interviewed confirmed it was more than fear of political reprisals. “Disappearing” is still a real possibility as long as Meciar continues to be a player in Slovak politics. However, the structural constraints imposed by the constitution and the current government’s establishment of stable governance procedures have limited Meciar’s ability to challenge

unstable informal rules since the founding of the current state. Since the early constitution formation process, elites have left the separation of powers and electoral system largely unchallenged. In contrast, the informal processes of governance have been problematic due to unreliable procedures for assigning ministerial appointments, unclear bureaucratic responsibilities between government ministries. In part, these are the result of unpredictable policy reversals between successive governments, and inconsistent election cycles. Under such conditions, political elites in Bulgaria have been unable to establish authoritative governments. They can neither count on regular tenures in office, be they short or full-term, nor can they reliably predict the reversal of their policy programs after electoral defeat. This type of uncertainty does not force short-term thinking, nor does it automatically lead to long time horizons; it produces something in the middle. The problems of unpredictable term lengths, rapid changes in ministerial appointments, and alterations to bureaucratic responsibilities continue to affect the current government. Additionally, despite N.M.S.S.'s parliamentary victory, shortly thereafter, the B.S.P. candidate defeated Simeon's choice for the presidency. Bulgarian political parties continue to operate within an unpredictable election cycle. The constitution allows this to happen, but in general, the informal rules remain unstable regardless of who is in office.

This mixed stability has produced mixed levels of compliance as Bulgarian elites have accepted safety upgrades and are moving towards establishing regulatory sufficiency. Despite earlier commitments, closure of Kozloduy's four oldest reactors has

the rules of the game.

not been guaranteed. While some costs have been easier to bear, the enormous public pressure against decommissioning Kozloduy and growing unwillingness to pursue E.U. membership reinforce incentives to play it safe. Consequently, elite time horizons are too short to proceed with early closure. Interestingly, they appear long enough to accept middling aspects of compliance. Medium stability and medium compliance may not last much longer though, as N.M.S.S. seems to be strengthening its alliance with the Union of Democratic Forces. This may bring stability to governance procedures, but it is doubtful new actors will be able to gain as much political influence as Simeon did upon his return from exile. The current problems will likely prevail.

Like the other countries in this study, Armenia faces difficult constraints against closing its sole nuclear power plant. The country has suffered from unreliable energy supplies, armed conflict within its borders, diplomatic isolation from its most powerful neighbor, and extreme social privation caused by disastrous economic conditions. The commitment to close Metzamor came in the midst of that turmoil when the rules of the game appeared to be stabilizing over time. Unfortunately, that process did not last long. When the defense minister forced President Ter-Petrosyan to resign, a change in the existing rules of the game occurred. The formal mechanisms for removing the president were subverted, the delegation of authority in the structures of government became unclear, and there were competing groups vying for control over the developing system.

However, if Sarkisian had been able to consolidate his power, new informal rules based on different patronage relationships could have reintroduced a degree of certainty in governance. If he had managed to change the constitutional provisions to grant the

prime minister greater authority the formal rules could also have stabilized. He never got the chance as armed assassins broke into the parliament building and killed him. While the slain leader's supporters implicated President Kocharian, no evidence surfaced to condemn him. In either case, Kocharian and the former prime minister's supporters subsequently struggled for control of Armenia's political system. At stake were both the formal constitutional rules and the type of informal patronage relationships determining governance procedures.

Kocharian eventually gained control over the key power ministries that had been used to overthrow the previous president. His rivals turned on each other and Kocharian emerged victorious, reasserting the formal separation of powers between the president and parliament. In doing, so he once again established the presidency as the top of the patronage hierarchy and stabilized the informal rules. This eliminated the potential challenge to the formal division of power Sarkisian had initiated. Power transfer mechanisms have stabilized, and Kocharian recently won a second term in a widely contested, but deeply flawed election against the son of one of his former rivals. His position seems secure.

Until the reassertion of Kocharian's presidential authority a rules effects approach can explain compliance. After that, I can only predict future possibilities for the system. Concurrent to Kocharian's victory over his rivals, Western officials began to renegotiate the terms of Armenia's international agreements. The timeline to close Metzamor has been extended from 2004 to 2006/2007. A senior government official told me the plan was to give more opportunity for energy efficiency and replacement power programs to

decrease Armenia's dependence on the nuclear plant. From my interview with Ambassador Tabibian, I gathered that there was another goal – to let the political system regain some measure of stability after the preceding years of turmoil. As a result, I predict that compliance will increase due to the new stability in the rules of the game as elites become more willing to endure short-term costs in order to gain long-term benefits of compliance.

Unlike the situation in Armenia where the rules and compliance began well and then declined, post-1991 Lithuania started with high rules stability. One of the first countries to sign on to the Western agenda, elites made consistent decisions to comply with all levels of their international commitments despite the costs in closing the Ignalina nuclear power plant. Opponents called for delays and more money from the West to assist in decommissioning, but the final decision has never really been doubted. In terms of the benefits of compliance – specifically, closer ties with Western Europe – Lithuania's relationship with Russia was tenuous at best when Brazauskas and the L.D.L.P. government committed to early closure. Lithuania needed the West to ensure its security against a possible military incursion under the guise of protecting ethnic Russians living in Lithuania. Even if Russia did not pursue such an overt action, more subtle efforts to destabilize the country's nascent democratic regime seemed likely. Russia continues to exert strong influence through the control of fossil fuel shipments to Lithuania. Against that pressure, Ignalina represents a considerable bulwark to preserve the country's economic independence. Closing Ignalina costs the country a great deal. In spite of those costs, integration into the European Union offers greater security in the

long run through economic and political assistance. The stability of the rules of the game enabled elites to frame compliance in those terms, and as a result, fulfill their international commitments despite the short-term costs.

The positive outlook in Lithuania juxtaposes Ukraine, which to put it bluntly, is a mess. President Kuchma appears to maintain a stronger position than his rivals, especially after the emergence of an official party of power in the Rada supporting his initiatives against the communist party bloc. The formal rules of the game also favor the president in Ukraine's constitutional system. Parliamentarians still call into question the formal separation of powers principles, while informally, clan conflict remains persistent and widespread. Opposition groups continue to test the limits of Kuchma's authority. The electoral system has undergone several revisions, and even more attempts to change it as part of the overall struggle between the president and the legislature. Corruption runs to the top and political violence has increased. Anti-corruption initiatives are applied selectively and threats to use popular referenda to change the constitution continue to foster instability in the rules of the game. Informally, the pattern of ministerial appointments and dismissals are unpredictable, depending instead on the arbitrary decisions of the president. Bureaucratic responsibilities regularly change, and the various revisions elicit widespread resistance.

Yet unlike any other country in this study, Ukraine has already closed down its most unsafe reactor. This does not represent high compliance. Based on survey evidence and reasoned inference, it seems clear elites have high discount rates, which produced widespread unwillingness to close Chernobyl. Despite their reluctance, and as an

indicator of a technical boundary for my model, the plant shut down because it was no longer operational. It lacked sufficient fuel and the reactor had serious cracks throughout the coolant system. Even regular maintenance lagged behind schedule because the government did not have the funds to make necessary repairs. Assistance from Russia failed to meet the need, and Western donors flatly refused to offer any more assistance to the ailing plant. Even though Kuchma ordered the plant closed down on December 21, 2000, prior to that decision, both he and his political opponents rejected the terms of European assistance as too small and too costly to Ukraine's fragile economy. They were united in their opposition to close Chernobyl because no one wanted to make the costly short-term decision. Nonetheless, the plant closed for technical reasons, not political ones.

As further indication of their short-term perspectives, a Russian-led initiative to finish the K2/R4 reactors is supposed to provide replacement power for Chernobyl. It has been widely supported by both Kuchma and his rivals. Unfortunately, the Russian plan does not include many of the safety upgrades required by the E.B.R.D. and European Commission in their loan negotiations. Instead, the new reactors will be cheaper and go online faster than under the safer Western plan. Safety at the remaining nuclear plants has improved in terms of daily operational procedures. Given the extreme depth of corruption in the nuclear industry, and the country in general, how long it will last is anyone's guess. Top Energoatom officials have been charged with siphoning off increasing amounts of money as the utility has collected more revenues from errant customers. More money coming in seems to lead to more money going out through illicit

means. The status of the nuclear regulator also remains in doubt. While the N.R.C. currently has sufficient administrative autonomy from other ministries, the group lacks both the money and the personnel to do its job. Even the legal status of the regulatory authority may not last. Consequently, Ukraine fails to meet the criteria for medium compliance, although low compliance seems evident.

The following chart compares the results from each country, and points out that both across and within cases rules stability and compliance levels coincide.

- For Slovakia, T_1 represents the time from independence to the M.D.S. 's loss of power after the September 1998 parliamentary election; T_2 continues from September 1998 until Meciar's May 1999 presidential defeat; and T_3 covers the period from then until the present (including the 2002 M.D.S. electoral victory but failure to form a governing coalition in parliament).
- Bulgaria is hard to classify since medium compliance seems to have been met but some questions remain about the regulator's autonomy.
- Armenia T_1 goes from independence to February 1998 when President Ter-Petrosyan was forced to step down; T_2 covers the period of instability from then until early May 2000 when opposition to President Kocharian collapsed and he reasserted presidential control; and T_3 from then until the present.
- Lithuania has had high stability and high compliance throughout the period under review so its placement is fairly straightforward.
- Finally, closing a nuclear reactor before the end of its design lifetime represents the highest level of compliance, but only when part of a cumulative process of increasing

compliance. Even though Chernobyl is no longer in service, Ukrainian elites have resisted medium compliance despite some safety improvements at the remaining nuclear facilities. Therefore, Ukraine has not met the preceding conditions to score a cumulative value greater than low compliance (hence the asterisk * on Table 1).

Table 1: Comparative Placement of Rules Effects and Compliance

		Rules Stability		
		Low	Medium	High
Compliance	Low	Slovakia T ₁ Armenia T ₂ Ukraine*	Armenia T ₁ → → ↓ ↓	Armenia T ₃ ↓ ?
	Medium		Slovakia T ₂ Bulgaria → ? ↓ ?	
	High			Slovakia T ₃ Lithuania

Implications: Where Does That Leave Us?

Having examined ten years of evidence for the five countries in this dissertation, I can say that not only was Chernobyl the greatest nuclear disaster in history, it remains a reminder of the perils of nuclear energy in general. Notwithstanding assurances from Russian design engineers that the accident resulted from a single worker’s incompetence, Chernobyl shows the fundamental flaws of any reactor that lacks a solid-structure containment. When the Russians and their national counterparts in the former Soviet bloc built their first-generation reactors they probably assumed an accident *would* not happen. Sixteen years later, the Russians I spoke with told me the same type of accident

could not happen.³⁸⁶ Improved monitoring somehow unwisely takes the place of structural mechanisms designed to prevent the worst-case scenario.

Although I did not include Russia in this dissertation due to the lack of early closure requirements in its international nuclear safety agreements, I would like to mention the serious problems that exist in the other two areas of compliance. Safety upgrades have been planned for nearly all the Russian nuclear reactors, but many are behind schedule or have not even started. The nuclear regulator, Gazatomnadzor, owes its organizational existence to the continued goodwill of the Ministry of Atomic Energy. Low and medium compliance levels have not been achieved. Concurrent to Western safety assistance throughout the 1990's, institutional conflict ran wild under Boris Yeltsin. The problems of structural "superpresidentialism" and arbitrary governance procedures seem to have dissipated under Vladimir Putin's heavy hand. He has managed to stabilize the informal rules to some degree through his strong control over key business sectors, elements of the media, and Russia's internal security forces. Additionally, conflict with the Duma appears to be less about constitutional powers and more about policy differences. These improvements should lead to greater certainty in the rules of the game, but I can only speculate on increasing compliance with Russia's nuclear safety agreements. There is an overriding constraint on my model's application to Russia, which establishes a third as yet untested boundary condition.

³⁸⁶ Armen Abagyan, Director-General, All-Russian Research Institute for Nuclear Power Plant Operation and Vice President, Rosenergoatom (state utility); Yuri Vishnevsky, Chairman, Gozatomnadzor (nuclear regulatory agency); Mikhail Khorochev, former researcher, Kurchatov Institute (R.B.M.K. design facility).

Given the overriding risk acceptant safety culture and strong sense of national pride among Russia's nuclear and political officials, it is likely they will continue to do whatever they want concerning nuclear safety, despite the risks. They will likely accept any money offered them, but whether or not the money actually goes towards safety is uncertain. One thing is clear, the country's elites have successfully avoided any early closure commitment for their nuclear power plants, and are moving ahead with plans to build new R.B.M.K. reactors. They do not intend to substitute new plants for existing units, just add more. These unsafe reactors are the bane of the nuclear industry and present a very real danger to the world. The Russians appear to be concerned more about the generation of electricity than the risks of radioactive contamination.

Aside from this boundary condition, the applicability of my model is further limited by the criteria of an early closure commitment and the operational design of first generation Soviet reactors. These are sound methodological standards on which to base my approach. Beyond this study, they could be met in the future if Minatom successfully convinces Indian and Chinese elites to purchase R.B.M.K. reactors. If so, it is possible Western assistance may be offered to replace them, at which point my model applies. Even so, the best contribution is not to explain every nuclear safety agreement in existence, but instead to bring rules effects into discussions of compliance.

The issue of nuclear safety has global implications as well. In particular, Western countries have had to walk a fine line between condemning all Soviet-designed reactors for their lack of appropriate safety levels without condemning the entire industry. The French in particular face the challenge of making clear that containment is the minimum

key to safety, without which any reactor should be closed down. Whether or not the French domestic audience will accept that distinction remains to be seen. This leads to the question of how the rest of the world should view nuclear power as a extant fact of life.

While the U.S. government battles with the state of Nevada over the Yucca mountain nuclear waste repository, countries in eastern Europe and the former Soviet Union do not have the same options for storing the growing supplies of contaminated material and spent fuel. Some can be reprocessed, but most nuclear by-products end up in the ground. If former Russian Minister of Atomic Energy Yevgeny Adamov has his way, most would be in Siberia. At first glance it seems like a tempting offer, yet the Russians have consistently proven themselves so unconcerned with basic safety that the long-term costs must outweigh the short-term convenience.³⁸⁷

What, if any, is the solution to this increasing liability? The Armenian Ambassador, Jivan Tabibian, was right when he said that dealing with nuclear safety is all about degrees of risk. When elites in these countries evaluate the problems of their nuclear facilities, they weigh the risks of continued operation or early closure, compliance with the West or rejection of international assistance. The stability of the rules of the game defining the political system frame those evaluations. Most of the countries in this dissertation have improved in both areas of stability and compliance.

³⁸⁷ There have been dozens of submarine reactors sitting on the Murmansk docks awaiting disposal for years. At the Kola facility the ground has been so contaminated by radioactive waste that workers and residents have to walk on wooden planks to keep out of the festering mud around the area.

There are notable exceptions. Fortunately, in the near future, some of the world's most fundamentally unsafe reactors are set to close down. These plants operate without containment structures and pose the greatest threats. In contrast, Russia's Minatom surges ahead with plans to extend the operating lifetimes of its existing R.B.M.K. reactors and build several new ones. Economic conditions are dire and energy needs severe in some places, but the potential for catastrophic contamination of the Russian people and beyond remains unchanged.³⁸⁸

Nuclear power plants are expensive to build but comparatively cheap to operate. Sunk costs and the benefits of reducing fossil fuel consumption make nuclear energy an attractive alternative, especially after the Kyoto Accord. All that can be done to ensure another Chernobyl does not happen is mitigate the risks by closing the most dangerous reactors, and improving safety everywhere else. These efforts are succeeding, for the most part, in Eastern Europe. Work towards increased nuclear safety will continue in Russia, but no one I have spoken with is holding out much hope. In the end, we are left with the legacy of advances in science necessary to keep the engines of global development humming. The genie has been let out of the bottle for a long time with no way to put it back. Regret may haunt our future generations.

³⁸⁸ Moscow produce markets still register unacceptably high levels of radioactive contamination more than a decade after Chernobyl exploded. Cancer rates continue to climb in areas immediately affected by the blast, and no one really knows the long-term impact on the surrounding countries. [U.N., "Report to the U.N. Scientific Committee on the Effects of Atomic Radiation to the General Assembly, Annex J," (1999).]

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