POWER, IDENTITY, CREDIBILITY & COOPERATION:

EXAMINING THE DEVELOPMENT OF COOPERATIVE ARRANGEMENTS
AMONG VIOLENT NON-STATE ACTORS

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by
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ABSTRACT

Much of the empirical and theoretical work on the external politics of violent non-state actors (VNAs) has focused on either their conflict behaviors or their potential for cooperation with state actors. However, cooperation among VNAs themselves has received limited systematic scrutiny, despite significant anecdotal evidence suggesting that this behavior has been prevalent in and significant to world politics over time. In this dissertation, I examine the development of inter-VNA cooperative arrangements, specifically showing how organization-level characteristics influence how VNAs answer three key questions about inter-group cooperation: 1) What are the general costs and benefits of cooperation as a strategy for increasing security; 2) With which other VNAs to cooperate?; and 3) How should that cooperation be designed?

My main argument is that variation among VNAs in terms of bargaining credibility – as inferred from organization-level power and identity characteristics – partly explains why some VNAs cooperate with other violent organizations while others do not, as well as why there is variation in the design of the arrangements that are formed. In quantitative analyses of my hypotheses, I use original data to examine the relationship between various power and identity characteristics and arrangement onset and design for VNAs based in Latin America during 1940-2005.

The empirical results point to significant differences among VNAs in terms of what they bring to the negotiating table, with respect to both material capabilities and social capital. I find that power characteristics have a relatively small practical impact on both the likelihood of cooperation onset and the likelihood that a given dyad will choose to institutionalize their relationship. Comparatively however, power characteristics matter much more for explaining variation in design than variation in onset. Additionally, while identity characteristics play a large role in determining
the development of inter-VNA cooperation, I find that while these actors may choose their arrangement partners based largely on socio-political affinities, they more often choose institutional designs in response to patterns of past cooperative (or non-cooperative) behavior.
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Chapter One

INTRODUCTION

Cooperation among Violent Non-State Actors: When and Why?

In 1982, the Unidad Revolucionaria Nacional Guatemalteca (Guatemalan National Revolutionary Unity, URNG) emerged to govern strategic and tactical collaboration among the four main guerrilla groups fighting against the military-dominated government during the Guatemalan Civil War. United around a detailed five-point program and a common strategy, these organizations began cooperating among themselves both for increasing each individual group’s chances of surviving battle with government and counter-insurgency forces and for improving the overall left-wing rebel movement’s chances for governing the country (URNG 1982). Perhaps due as much to the URNG’s role in providing a unified negotiating front for the allied groups as to the intensified warfare made possible by the union, the war ended in 1996 with the signing of a peace accord between the allied rebels and the Guatemalan government, and the URNG’s transformation into a legitimate political party.

As the Guatemalan Civil War ended in 1996 and more than 8,000 miles away, five factions of Afghan mujahadeen contesting the Taliban government of Afghanistan created the Jabba-yi Muttabid-i Islami-yi Milli bara-yi Nijat-i Afghanistan (United Islamic Front for the Salvation of Afghanistan, UIF). Also known as the Northern Alliance, the purpose of this umbrella organization was similar to that of the URNG: the UIF was created to facilitate tactical coordination and intelligence/information sharing among the participant groups, for increasing the military strength of both the allies and the broader insurgent movement. After decades of internecine fighting and
competition, the cooperative arrangement among these actors has since become one of the most recognizable examples of cooperation amongst insurgent groups in the 21st century, especially by way of its role as one of the U.S.’s greatest allies in its attempts to overthrow the Taliban government, beginning in 2001 (Coll 2004).

Since 2001, the world has witnessed strategic alliances among rebel and insurgent organizations in the Middle East, sub-Saharan Africa, and Central Asia, as well as transnational collaborations among violent separatist, terrorist and extremist organizations based in Europe, the Americas, and South and East Asia. These collaborations have been both domestic and transnational in nature. In an increasingly prominent example, numerous connections among violent political organizations have been organized under and facilitated by the decentralized and widely dispersed al-Qaeda network, allowing it to play a part in terrorist events, civil conflicts and escalating interstate tensions since its inception. Intelligence, government, research and media sources have all noted the increases in strength, efficiency and bargaining leverage that violent organizations have enjoyed over time as a result of this cooperation, leading many to surmise that cooperation among violent non-state actors constitutes one of the most significant current threats to international security.  

As these anecdotes suggest, cooperation among violent non-state actors (VNAs) has been a significant feature of world politics over time. Although this behavior has received fairly extensive anecdotal recognition, rarely have its correlates been analyzed systematically over time and across

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Extant theories of interstate cooperation would predict that inter-VNA cooperation should emerge only in infrequent and extreme cases, given the assumption that they are strictly weak actors with little meaningful strength or credibility. The proliferation of inter-VNA cooperation over time provides an interesting challenge to conventional wisdom in IR about such an event, suggesting that more systematic research on the cooperative potential of VNAs, and the cooperative arrangements that they consolidate, would be useful.

Pursuant to this, the primary research question in my dissertation is: **What factors predict to the development of cooperative arrangements among violent non-state actors (VNAs)?**

More specifically, through my dissertation I aim to shed light on how organization-level characteristics influence how VNAs answer three key questions about inter-group cooperation: 1) What are the general costs and benefits of cooperation as a strategy for increasing security and ensuring survival?; 2) With which other VNAs to cooperate?; and 3) How should that cooperation be designed?

**Definitions: Violent Non-State Actors (VNAs) and Cooperative Arrangements**

In this project, the category of ‘violent non-state actor’ (VNA) reflects a wide range of sub- and non-state organizations that use violence as their primary tool in bargaining with others over some political goal or outcome. This category includes those often referred to as rebels, guerrillas, paramilitaries, terrorists, revolutionaries and/or social subversives in other social scientific work (see Suedfeld 1999 or Schmid and Jongman 2005 on naming violent non-state actors). For my purposes, to qualify as a VNA a non- or extra-state organization must exhibit four main characteristics: 1) the organization must have some preference aggregation mechanism that provides strategic direction, 2) the preference aggregation mechanism must be independent of that of any other VNA, 3) the
organization’s activities must be motivated primarily by some political goal and 4) the use of violence must be the organization’s primary political tool. Taken together, these conditions exclude spontaneously violent mobs or crowds that are not governed by any central command; most legal political parties that, while affiliated with an extra-state organization, do not formally direct its activities; groups for which non-violent activities do not constitute the bulk of the organization’s activities; and non-state actors that are motivated primarily by economic or social considerations, such as trafficking organizations or criminal gangs.

I define an inter-VNA cooperative arrangement as a formal or informal arrangement that has been collectively decided upon by the cooperating parties and governs the management or execution of some level of resource sharing, strategic coordination and/or tactical collaboration. This terminology describes negotiated agreements to which two or more VNAs have consented, and to the terms of which all involved parties aware. Traditional IR studies tend to focus on formality, publicity and constraining power when defining and identifying cooperative arrangements. Examples of this include the classic definition of an interstate alliance as a written agreement between two states that delineates specific defensive and/or offensive obligations for the members-parties (Singer and Small 1966, Small and Singer 1969). However, other definitions of strategic cooperation often focus less on the formality of the arrangement, and more on the importance of coordinated activity among the linked members. For example, Milner (1992) broadly defines cooperation in international relations as a state in which “actors adjust their behavior to the actual or anticipated preferences of others, through a process of policy coordination,” which “implies that the policies of each state have been adjusted to reduce their negative consequences for other states” (467). My working definition of an inter-VNA cooperative arrangement follows more closely the latter orientation.
Study Relevance

Interest in investigating the external politics of VNAs has grown quickly (see Atkinson, Sandler, and Tschirhart 1987, Walter 1997, Jenne 2004, Bapat 2006, Walter 2006a, Walter 2006b), though there still exists only a small body of literature that addresses the politics of cooperation among these actors. Very little recent scholarship has explored the impact of group characteristics on inter-VNA relations, or how these and other factors that may work counter to anarchic pressures and instead promote VNA cooperation, particularly among themselves; most research within this sub-topic has dealt with cooperation between states and violent non-state actors. However, it is important to know whether the obstacles that VNAs face in consolidating cooperation are common to all types of cooperation involving these actors, or are unique to the situation of state-VNA cooperation.

Broadly, the arguments and conclusions in my dissertation contribute to extant research on both institution-building and security studies in world politics. I use extant arguments in IR about the correlates of interstate cooperation as a platform for my own hypotheses about why and how cooperative arrangements emerge among VNAs. I take this approach primarily for two reasons.

3 Admittedly, new scholarship on this topic is also rapidly emerging. However, thus far such work either a) confines the universe of potential cooperators to a single country or conflict (Edwards 2004, Castillo 2006) or b) restricts its scope to those non-state actors that approximate states in all but name (Lemke 2007, Lemke 2008). A number of studies on the political organization of terrorism did reference terrorist coalitions among terrorist groups in the late 1970s to mid-1980s (for examples, see Bell 1975, Crenshaw 1983, Mickolus 1981, Midlarsky, Crenshaw and Yoshida 1980 or Milbank 1978). However, the analyses were generally limited in both case selection and temporal domain, and I am not aware of any updates to them. For example, Oots (1986) used coalition theory and basic quantitative methods to explain the relationship between group size and a transnational terrorist organization’s decision of to act in a coalition or as an individual. While this work was a significant advance in the quantitative study of cooperative behavior amongst terrorist groups, the data used were limited to the Argentine ERP, the Northern Irish IRA, and the Palestinian PFLP and Black September Organization, observed for the period 1968-1977. While updating the temporal scope, more recent quantitative work on this topic also has focused on a small number of discrete cases. For example, Karmon’s (2005) empirical analysis of inter-terrorist coalitions focuses only on cooperation between European and Palestinian terrorist organizations from 1968-1990, and among European left-wing terrorist organizations from 1984-1988. While these are useful studies, further empirical and theoretical work is necessary to validate the generalizability of their conclusions.
First, in order to consolidate an arrangement, both states and VNAs interested in cooperation must go through the process of identifying some set of potential partners with whom to cooperate, separating the more-desirable potentials from the less-desirable, and agreeing upon mutually-acceptable terms of cooperation with one or more of those potential partners. Secondly, the environment within which VNAs and states make these decisions is very similar: the main structural characteristic that impacts the emergence and design of cooperation among states and among VNAs is the presence of anarchy.

In addition, answers to these questions may be useful to policy practitioners and others concerned with neutralizing the violent potential of these actors. In order to better understand the strategic conflict behavior of rebel and insurgent organizations, we must also look further into the ways in which these groups interact with each other. In many conflict environments, there are often a number of other rebel groups whose existence and capabilities influence each others’ strategic choices. Through identifying the conditions under which these actors form links that fortify them against their opponents, scholars and practitioners may be better able to differentiate among the correlates of a violent dissident organization as necessary and/or sufficient for its operational success and overall security. Particularly in terms of international security, an understanding of the ways in which these groups organize themselves for conflict should increase a government’s understanding of how to counter their opportunities for collaboration.

**Dissertation Outline**

This dissertation consists of six chapters. In the next chapter (Chapter Two), I review extant scholarship in IR that relates individual state power and identity characteristics to the formation and design of different types of interstate institutions, and explain the opportunities for (and some
challenges to) analogizing these arguments to inter-VNA relations. Specifically, I argue that a VNA’s credibility can be inferred from its power and identity characteristics, as both provide insight into not only a VNA’s incentives for unilateral defection from a cooperative arrangement, but also its vulnerability to those incentives. Additionally, I argue that variation in credibility across VNAs leads some groups to emerge as better equipped to consolidate reliable cooperative arrangements with others, and may partially explain differences among VNAs in who cooperates, who they cooperate with, and how that cooperation is designed.

In Chapter Three I explain the methodology that I used to collect the data for testing my hypotheses about the relationship between VNA power, identity and different facets of inter-VNA cooperation. To my knowledge, there are no pre-existing large-N datasets that provide systematic, explicit, time-varying and detailed information on either individual VNA power and identities or the onset and design of inter-VNA cooperation. Given this deficiency, I constructed an original dataset – the VNA Characteristics and Cooperation Dataset – that includes time-varying information on various aspects of VNA military capabilities, social affinities and political affiliations, all observed at the organizational level. Additionally, these data offer information on the existence, breadth, and depth of cooperative arrangements among these actors over time. The dataset is focused on VNAs based in Latin America during the period 1940 – 2005. The chapter includes a discussion of my motivations for collecting these data, detailed descriptions of the coding rules and procedures, and descriptive statistics.

Chapters Four and Five provide applications of my general argument in Chapter Two to specific hypotheses about individual involvement, strategic partner choice, and arrangement design.

In Chapter Four I show how variation among VNAs in terms of credibility – estimated as a function of power and identity characteristics – impacts the likelihood of cooperation onset for both
individual VNAs and distinct VNA dyads. I argue that the credibility of an individual VNA is determined partly by the strength of incentives to defect unilaterally from an arrangement, and partly by its demonstrated ability to commit to its strategic choices; furthermore, these characteristics can be inferred from both power and identity characteristics. With respect to individuals, the empirical findings in this chapter show that 1) VNAs with a low-level of power have a lower likelihood of starting up cooperation with another violent organization than do VNAs with high levels of power, 2) VNAs that have exhibited both resolve and an affinity for cooperative strategies are more likely to begin cooperation with another group than are organizations of any other reputation, and 3) the positive effects of good reputations and moderate power levels are as likely to be independent as they are to be conditional. Additionally, I argue that the likelihood of cooperation for a given pair of VNAs is determined by the members’ combination of credibility, or power and identity characteristics. With respect to dyads, I find that symmetry of characteristics has a stronger relationship to the likelihood of cooperation onset than asymmetry. Specifically, I find that 1) pairs of high-power VNAs are in fact more likely to form a cooperative arrangement than are other power-symmetric pairs, 2) not only are pairs of good-reputation VNAs less likely to form cooperative arrangements than are other reputation-symmetric pairs, bad-reputation dyads are more likely to begin cooperation than any others, and, surprisingly, 3) individual desirability as a cooperation partner does not always translate directly to pair-wise compatibility; in other words, two ‘desirable’ organizations are no more likely to cooperate with each other than are other pairings.

In Chapter Five, I investigate the relationship between the credibility of VNAs in a cooperating dyad and the decision to institutionalize their relationship. Specifically, I argue that VNAs will use information about each others’ credibility to choose an institutional design that also minimizes the potential for losses due to unilateral defection. I find that 1) similarity between cooperation partners in terms of power makes them more likely to choose informality in their
arrangements, and 2) cooperating dyads of two groups with good reputations for resolve and commitment are more likely to institutionalize their arrangements.

In Chapter Six, I summarize my empirical findings and discuss their implications for further studies of the politics of cooperation among VNAs. Overall, my results indicate that although amassing material capabilities for fighting conflicts may be an important goal for VNAs, the development of reputations for resolve and commitment to strategic choices – both based on observable past behavior – plays a much larger role in explaining which groups cooperate with each other, and in what fashion. This is a somewhat counterintuitive finding in that most explanations for VNA behavior focus on these actors’ power resources (or lack thereof), conceptualizing violence is viewed as a means of acting out of frustration or a means for gathering enough power to be able to rival the strength of state actors. In this chapter I also suggest some areas for improving and extending the research in this dissertation.
Chapter Two

POWER, IDENTITY, CREDIBILITY & COOPERATION:
APPLYING AND REFINING STATE-BASED PERSPECTIVES FOR VNAs

Competing Explanations, Open Questions and Research Opportunities

Extant scholarship in international relations (IR) tends to explain the behavior of rational state actors in one of three ways: in terms of power, in terms of identity, or in terms of information. Shorthand definitions for each of these concepts would equate power to the coercive abilities of an actor, identity to its socio-behavioral characteristics, and information to what is understood about the actor on the basis of observed behavior and qualities. With respect to cooperation in particular, scholars have used these three concepts for estimating the value and appeal of different cooperation partners and different cooperation styles, as well as the overall utility of cooperation as a strategic alternative.4

In many ways, comparison of these three explanations highlights an important underlying question about what best motivates cooperation under anarchy: is it the power-based impulse to respond effectively to threats or the identity-centric desire to build communities and foster trust among sympathizers? This leads to a number of related questions as well: for example, What constitutes power or identity for a given actor? What sorts of information do raw power and identity characteristics communicate? Is the characteristic itself more or less important than any

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4 For example, Hasenclever, et al. (1996) argue that the study of “rule-based cooperation in the international system” can be described as having developed three main perspectives: those that focus on shared interests (neoliberalism), those that focus on power relationships (realism) and those that focus on communication and the production of knowledge (cognitivism) (177-178). Information-based explanations allow all of these factors to be incorporated as correlates of inter-VNA cooperation, as they each represent distinct types of information to be used in generating estimates of the utility of cooperation in general, with specific partners and in specific configurations.
additional information derived from it for determining the dynamics of cooperation? These questions have garnered much attention in studies of interstate cooperation, but have been largely overlooked with respect to VNAs. However, I consider these questions and the debates surrounding them to be rather useful for trying to understand how and why cooperative arrangements emerge among VNAs.

Existing IR theories of cooperation provide a good theoretical starting place because states and VNAs are both in the business of identifying some set of potential partners with whom to cooperate, separating the more-desirable potentials from the less-desirable, and agreeing upon mutually-acceptable terms of cooperation with one or more of those potential partners such that cooperation actually begins. Additionally, the environment within which VNAs and states make these decisions is very similar. Specifically, the main structural characteristic that impacts the emergence and design of cooperation among states and among VNAs is the presence of anarchy. Traditionally, a key assumption underlying studies of VNA behavior has been that, in their interactions with the governments they oppose, these actors operate as subordinate powers within that state’s hierarchical structure. This same assumption is often analogized for transnational groups, as interactions among VNAs are still considered to be conducted on a level below that of interstate relations, and as such subject to the influence of national and supranational organizations.

However, there are few, if any, structural imperatives that mandate states – host or otherwise – to involve themselves in inter-VNA relations. Rather, the most common incentive for states to get involved in inter-VNA relations comes from some individual national interest. While state actors do step in from time to time to guarantee group credibility, to sanction or to promote certain behaviors, they are motivated by their own gain and on a purely ad hoc basis. For example, Byman, et al. (2001) argue that state actors are most likely to support an insurgent organization only when...
they portend increased political, military, social or economic influence from their involvement. Similarly, Bapat and Bond (2010) argue that a government actor opposing an alliance among militant groups will act to prevent it only when the alliance is perceived as a truly serious threat. Given that there is little reason to expect that state governments exist as natural arbitrators of inter-VNA relations, I proceed under the assumption that VNAs – like states – consider their options and execute their decisions without the benefit of any central authority that uniformly monitors, punishes and/or promotes particular group behaviors.5,6

Also, like states, VNAs are motivated in their interactions under anarchy by the pursuit of security as a means to survival. For both types of actors, offensive and defensive capabilities are paramount to security, given their impact on one’s ability to eliminate proximate threats and deter future ones (Glaser 1997, Levy 1984, Quester 1977, van Evera 1998). Increases in security in turn offer greater protection against annihilation, or an increased likelihood of survival. The pursuit of survival by security for the VNA hinges on its ability to remain militarily viable against its enemies while maintaining political relevance vis-à-vis its peers.7 Consider, for example, the VNA that has neither material power nor political clout: without sufficient conflict-fighting capabilities, the organization has lost the ability to effectively employ violence as its main bargaining tool. Further, the organization can neither count on political allies to offer protection against enemies and/or aid in rebuilding if attacked. It is clear that the least secure VNAs are those that can neither take care of themselves nor energize others to take care of them. To the extent that a VNA exists in order to be

5 This is not to say that central authorities and/or hierarchical relationships cannot be nor are created among VNAs; elsewhere in the dissertation I explain how this occurs through the development of VNA institutions. These structures are created by the VNAs themselves (much like international institutions) however, and so simply represent instances of cooperation despite anarchy.

6 This statement is likely attenuated for VNAs that are strictly domestic actors, those mostly in those cases where there actually exists a single government actor that can monitor, punish or promote behavior.

7 While most VNAs exist in conflict with some state actor, it is also true that many also face “enemy threats” from other non-state actors (i.e. counter-revolutionary or reactionary groups opposing the VNA and its associates).
successful in its attempts to engender some change in the status quo distribution of some political
good, more security means greater chances of surviving for long enough to be able to do just that.

Given the above similarities between VNAs and state actors, in the following section I turn
to extant work on the relationship between state power, identity and estimated credibility for
additional assistance in determining what organization-level VNA characteristics are most likely to
influence the development of inter-group cooperation.

**Extant Perspectives on Interstate Cooperation**

**Power and interstate cooperation**

In extant work, power-based arguments focus on the impact of material capabilities on
cooperative behavior. For actors interested in security-based cooperation especially, a key
component of the expected value calculation for any negotiated arrangement is the size of the
related expected gains (Grieco 1988). Proponents of realism see power as particularly important for
alliance formation and alliances as essential to increasing security and protecting survival. For
instance, in standard capability aggregation models, states form and join alliances in order to change
relative and absolute power distributions vis-à-vis some common opponent, thereby changing also
their probabilities of survival and/or success in amassing even more security (Morgenthau 1967,

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8 Others who study the development of cooperation from a sub-national perspective also have made strong statements
about the role that organizational power plays in determining who cooperates when, why and with whom. For example,
some scholars of interest-group politics have found that resource-pooling is a key motivation for these organizations to
form ad-hoc coalitions among themselves; as such, they choose among potential partners based upon how much each
can bring to the joint gains from cooperation (i.e., Hojnacki 1997; Hula 1995; Hula 1999; Mahoney 2007). This argument
is strikingly similar to conclusions reached by studies of the unit-level motivations which underlie strategic business
alliances and social movement coalescence (see Das and Teng 2000).
summarizes the core assumption of the capability aggregation framework in his statement that states value each other as allies only “for the military assistance they can provide one another” (907). Alternatively, in trade-off models like Morrow’s (1991) security/autonomy framework, alliances are seen as tools for allowing states to pursue either greater capabilities to “maintain the current resolution of the issues that it wishes to preserve” (security) or more capabilities for increasing “the degree to which it pursues desired changes in the status quo” (autonomy) (908-909). Although Morrow makes the case that these are two separate goods to be traded, they both describe state power in the sense that both security and autonomy are integrally related to a state’s ability to engender changes in the status quo when and if it sees fit. In general, authors working in this tradition have concentrated overwhelmingly on the role of power differentials for explaining two things: whether alliance decisions maximize one’s ability to deter or defeat some mutual threat and/or how they lead to variation in global and local alignment patterns (see Kaplan 1957, Wayman 1984 or Kim 1991 for the effect of alliances on aggregate capabilities).

Research on international regime and organization formation also discusses state power as a key correlate of interstate cooperation. For example, in their review of the dominant theoretical perspectives on international regimes, Hasenclever, et al. (1996) point out that the distribution of capabilities among states influences not only how the joint gains from cooperation will be distributed in an organization (pursuant to any given regime), but also the distribution of preferences among them as well (205).

In each of these frameworks, power is important insofar as it sheds light on how large the joint gains can possibly grow. In turn, this has obvious implications for each partner’s individual material benefit from cooperation. However, there also exist alternative explanations for interstate cooperation among actors that focus instead on the non-material gains from cooperation.
Identity and interstate cooperation

Identity-based arguments explain behavior in terms of how an actor relates to others. They focus on affinities, the impact of community-mindedness, and/or social ties on the likelihood of cooperation. One of the more prominent identity-based explanations for interstate alliance formation centers on the development of “security communities.” This explanation concentrates less on alliance formation in response to a threat, and more on alliance formation as a means for communicating and fostering trust among states, establishing in-group/out-group identities and codifying stable social neighborhoods (Adler and Barnett 1996; Barnett 1996; Owen 2008; Risse-Kappen 1996; Wendt 1992; Wendt 1994); affinity and in-group identifications are the characteristics that discriminate among suitable and unsuitable potential partners in cooperation. While Hasenclever, et al. (1996: 215) note that this tradition generally maintains that “[T]he emergence of collective identities…strengthens the readiness of these actors to cooperate even if the dominant strategy of a self-interested actor would be to defect,” Wendt (1994) more straightforwardly argues that a sense of collective identity ‘discourage[s] free-riding by increasing diffuse reciprocity and the willingness to bear costs without selective incentives’ (386).

Information and interstate cooperation

A third perspective on explaining cooperation in world politics focuses on information, or what is known and unknown about an actor, usually on the basis of some observed characteristic. Information-based models often take the form of institutional bargaining setups, allowing scholars to use a variety of unit-level characteristics as a basis for making predictions about future behavior. The rationalist bargaining framework also highlights the fact that decisions about whether, with whom and how to cooperate are strategic, and based on expectations or beliefs about how others are likely to behave pursuant to one’s own behavior (see Lipson 1984 for a review of bargaining
models of international security and economic cooperation or Reiter 2004 for an overview of the use of bargaining models in international conflict studies).

Both power and identity characteristics have been shown to provide important information about an actor’s credibility and/or likely bargaining strategies. Information-based models that center on power characteristics focus on how expectations about a state’s ability and willingness to use forceful versus peaceful coercion to adjust the status quo are tied to its level of military capabilities. For example, Slantchev (2007) argues that estimates of when a state will employ forceful coercion should be based on its ability both to impose and to absorb the costs of non-cooperation. On the other hand, information-based models that focus on identity characteristics primarily consider how the cooperative behavior of states appears to cluster on social identities, strongly highlighting the role of similarity in increasing mutual understanding of actor types. For example, Axelrod (1984) argues that identity labels – “fixed characteristic[s]” of an actor that are observed at the start of any interaction – are an important tool for helping players to recognize each other in a consistent way (147). With respect to regime type as a specific identity label, Lai and Reiter (2000) find that shared regime type increases the likelihood of alliance formation, while others have concluded that the effect of shared identity on cooperation varies across issue areas (Remmer 1998) and with changes in global strategic imperatives (Siverson and Emmons 1991, Simon and Gartzke 1996). Additionally, patterns of past behavior allow states to generate reputations by which they can be identified in their future interactions. Extant literature has discussed the importance of a good reputation for being both interested in cooperation before hand, and a faithful cooperator once an agreement has been

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9 Calling this the “power to hurt,” Slantchev also argues that it includes not only standard indicators of military capabilities, but also non-traditional sources of power, including leverage based in economic interactions or demographic characteristics (2007: 131).

10 In the form of either shared democracy or shared autocracy.
made. For example, Wendt (1994) argues that without mutual reputations for being unselfish and ‘collective-oriented’, cooperation would be unlikely to emerge between some states.

**Power and Identity as sources of information about credibility**

In IR, these information-based models largely build upon the rationalist assumption that private information about one’s willingness and ability to commit credibly to the terms of any bargain struck is one of the key obstacles to the development of cooperation (Fearon 1995). Therefore, a crucial piece of information for actors considering cooperation highlights credibility, or the degree to which behavior can be trusted to be a genuine reflection of preferences and intentions. In discussing the characteristics of mediators in interstate disputes, Maoz and Terris (2006) define credibility as the extent to which others “believe the mediator’s statements, threats, or promises and her ability to deliver the promised agreement” (410); alternatively, Zagare (1985) points out that in standard deterrence theory, credibility refers to the extent to which an actor issuing a threat is believed to be able and willing to back it up with action (158). Credibility is so important because, in the absence of an authority that can issue punishments for unilateral defection, problems of credible commitment mount strong pressures against cooperation (Axelrod and Keohane 1986; Oye 1985).

The gist of the problem is that with no expectation that commitments will be fulfilled and/or the terms of agreement will be respected, actors also should be unwilling to enter into cooperative arrangements; to boot, absent the ability to establish credibility, actors should be unable to construct lasting and/or reliable cooperative arrangements.

However, in the literature on interstate cooperation, both power and identity characteristics have been used to generate estimates of credibility and help to mediate the credible commitment problem. Credibility can be derived from power characteristics in that they suggest the strength of an actor’s incentives to exploit its partners and make off with more than its (negotiated) share of the
joint gains. In other words, power characteristics can highlight how much an actor actually needs the joint gains from cooperation; the importance of the joint gains is likely tied to how much the actor has to begin with on its own. Given that an actor’s credibility in bargaining is often directly tied to its capacity for action, power characteristics also can illuminate the degree to which an actor is able to back up its threats and/or promises (Lawler, Ford, and Blegen 1988; Lawler 1992; Kydd and Walter 2003 on terrorist groups; Slantchev 2007). While material capabilities underscore a VNA’s ability to make believable threats and promises, they also highlight an actor’s willingness and ability to suffer the costs of non-cooperation (Zagare 2007). Additionally, an understanding of how much an actor may be able to benefit materially from realizing some distribution of joint gains from cooperation should provide insight into how willing that actor may be to enter into a cooperative arrangement.

Credibility also can be derived from identity characteristics, to the extent that they communicate a proclivity for (or against) cooperation and/or reliability. For example, Sartori (2005) argues that states with ‘bad’ reputations – or a history of bluffing in international crisis situations – end up with damaged credibility and a weakened effectiveness in future crises. Similarly, while a history of war can provide a state with a reputation for being credible with respect to threats of force (Crescenzi 2007; Crescenzi, Kathman, and Long 2007), a history of cooperation could provide a state with a reputation for being credible with respect to future cooperative gestures (Gibler 2008). Alternatively, identity labels that describe particular social groupings to which the actor belongs – i.e., based on regime types, ideological affiliations or policy preferences – can inflate others’ estimates of the actor’s trustworthiness by a sort of ‘mirror effect’. In sum, once estimates of an actor’s credibility have been made, others can more easily estimate its propensity to engage in genuine negotiations and/or to respect the terms of any agreement reached through those negotiations.
It is clear from the above discussion that power and identity provide important information about the credibility of state actors. In the following section, I discuss the usefulness of the information-based approach as a heuristic for assessing the impact of VNA power and identity on the potential for inter-group cooperation.

**Power and Identity as sources of information about VNA credibility?**

Scholars have studied cooperation involving VNAs largely using information-based arguments, again with an overwhelming focus on the relationship between credibility and the group’s cooperative potential. For example, in discussing the strategies used by terrorist organizations versus their adversaries, Kydd and Walter (2006) argue that “[T]o obtain their political goals, terrorists need to provide credible information to the audiences whose behavior they hope to influence” (57-58).

The possibility of being exploited by a partner that chooses unilateral defection from an arrangement is the main risk that a VNA assumes when deciding to pursue a cooperative arrangement with others. While both parties should only enter into an arrangement they believe will reflect their interests and a favorable (or at least tolerable) distribution of the joint gains (Oots 1986; Fearon 1997; Koremenos, Lipson and Snidal 2001), they do so recognizing that as a result of cooperating, they could leave with less than they came to the table with (and possibly leave with nothing at all). Since the (potentially) detrimental effects of unilateral defection are likely to be greater for VNAs than for other actors in the world system, an ability to demonstrate credibility is especially critical for a group interested in cooperation. For example, in order to consider joining forces with another group, a VNA must be willing to relinquish at least some jurisdiction over how its contribution to the joint gains is used and distributed. The group must also agree to the potential
for similar sacrifices with respect to the management and distribution of the joint gains from success as a result of cooperation. Furthermore, once joined by cooperation, VNAs implicitly allow others to use their characteristics as leverage in other, possibly unrelated, relationships. In any of these scenarios, the resources that a VNA puts into a cooperative arrangement can be easily used against it, especially considering the lack of a (reliable) external guarantor. The strong security dilemma that this possibility produces is obvious: in an environment in which there is no guarantee that groups are motivated to accumulate resources for purely defensive purposes, the potential for one’s own resources to be used against it (as a result of cooperation) can be easily perceived to be more real than hypothetical (see Jervis 1978 or Snyder 1984 on the security dilemma for state actors; see Walter 1997 on the security dilemma for civil war combatants).

In almost all extant work on cooperation involving VNAs, scholars have argued that VNAs suffer from a pronounced lack of credibility, due in no small part to general power deficiencies and negative behavioral reputations. According to conventional wisdom, these conditions are what often prevent these actors from overcoming the security dilemma and consolidating cooperation successfully.

Relative to the power of other types of actors in the international system (i.e. states), the average VNA is described in most studies in IR or comparative politics as being rather weak in capabilities (Kydd and Walter 2006; Pollard 2002; Schmid and Jongman 2005). For example, a common argument is that these actors choose violence as a political tool in the first place out of frustration with their lack of resources for mainstream/legal participation in a national context or coercive influence in an international context. Most power-based models of the alliance behavior of weak powers\(^\text{11}\) in IR suggest that agents with little capabilities should seek alliance partners that are

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\(^{11}\) Most often discussed as weak or small states.
stronger than they are, especially since under conditions of anarchy, the most reliable means for ensuring one’s own security is to maximize one’s capabilities. While an alliance among weak powers is preferable to no alliance, scholars have argued that alliances involving small powers are more likely when there is at least one alliance partner that exceeds the small power in power and/or influence (Handel 1981; Keohane 1969; Rothstein 1968). This expectation leads to a fairly dire prediction for VNAs interested in inter-group cooperation: it appears that while they, as the weakest actors in the international system, would be among those most likely to want to consolidate cooperative arrangements for increasing their own security, they should also be among those least likely to be able to pursue them amongst themselves, given that they are the weakest actors in the international system.

Again, relative to other actors in the international system, VNAs are generally discussed as being fairly unable to generate credibility on the basis of clear identities. For one thing, these organizations are generally not thought to be secure or transparent enough to make costly gestures signaling a true willingness to cooperate, or at least realistic constraints on their ability to defect on agreements (Kydd and Walter 2006). Whereas state actors can rely on observable, institutional characteristics as markers of their identities that are not easily manipulable (i.e. regime type), it has been argued that the lack of transparency that VNAs engender affords them an enhanced ability to manipulate their true identities to fit strategic imperatives (Cronin 2006). Some would argue that a key characteristic that erodes the development of a strong identity is the relatively short life span of these actors, at least as compared to state actors (Cronin 2006; Schmid and Jongman 2005). According to this train of thought, since VNAs have such weak prospects of future relationships with those that they interact with today, they are more likely to pursue exploitative behaviors, thus making them suboptimal cooperation partners. Relatedly, their short life spans are not conducive to the sorts of long-term observation that would allow them to form consistent behavioral reputations.
on their own, or for others to ascribe a reputation to them. Another often-discussed factor that reduces the likelihood that these actors can build identity-based credibility is that they not only have little incentive to trust others but also stronger incentives to misrepresent capabilities and resolve than do other actors in the international system. For example, Walter (1997; 2003; 2006) has argued that, in a host of contexts, the lack of institutionalized constraints on the behavior of VNAs and their inherent untrustworthiness greatly inflates fears of being duped by a partner into agreeing to a cooperative arrangement, only to be exploited in the end. Walter argues that these fears are so intense that cooperation involving VNAs (let alone among VNAs) is extremely unlikely to emerge (see also Kydd and Walter 2006).

Finally, extant scholarship suggests that the very nature of a VNA renders it particularly incredible, mostly because it is designed to take advantage of both information asymmetries and uncertainty. Many scholars have noted that private information and the potential for time inconsistency in decision-making are key correlates of the ‘credible commitment problem;’ as barriers to trust, these conditions often decrease the likelihood that cooperative arrangements will be formed and sustained (Beardsley 2008: 725; Fearon 1995; Martin 1993). Various scholars have argued that the ephemerality of VNAs, the critical importance of strategic mis- and disinformation to their campaigns and egotism prevent others from trusting that these groups will keep their ends of any bargain (Cronin 2006; Hoffman 2006; Kydd and Walter 2003; Walter 1997). Given this, states usually will prefer at best cooperation at arm’s length and at worst no cooperation with them at all (Walter 1997).
Opportunities for a better conceptualization of VNA credibility

These studies have been convincing in highlighting the difficulties that these groups may face with respect to cooperation with state actors. This makes it easy to draw the conclusion that what renders state actors distrustful of VNAs also reduces trust among VNAs themselves, thus increasing the likelihood that they will operate alone. However, to extend the underlying assumptions about group credibility and the pervasiveness of private information between states and VNAs implies that 1) the state’s assessment of group characteristics is the critical one for explaining when, why and how VNAs cooperate, regardless of partner choice and 2) there is no meaningful variation among these actors in terms of ability to signal credibility. I contend that both of these implications are questionable, however. Instead, I propose an orientation to conceptualizing VNA credibility that would focus on the conclusions VNAs can draw for themselves about other’s characteristics and allows for variation among the groups in terms of those characteristics.

First, it is unclear why a state’s appraisal of VNA credibility should exert as much influence on inter-VNA relations as conventional approaches would suggest, for a number of reasons. First, it is possible that the degree to which information is shared among states and VNAs and amongst these groups themselves may not be the same. If this is true, private information may not be as strong of a barrier to the consolidation of inter-VNA cooperation as it is for cooperation among states and VNAs. Second, given expectations of such an extreme lack of trust between VNAs and states, there is little to suggest that a VNA would trust a state actor’s assessment of another group’s capabilities and/or credibility. When considering inter-group cooperation, it is more reasonable to assume that a VNA evaluates the characteristics of its potential partners against its own, rather than against the characteristics of a different class of actors. Finally, it is also possible that the value of cooperation with a state partner differs from the value of cooperation with a non-state partner. If
this were true, a VNA’s incentives for appearing to be (or actually being) trustworthy in negotiations would depend on whether or not it was facing a partner of the ‘more valuable’ type.

Secondly, it is also unclear why an assumption of homogeneity among VNAs in terms of credibility is appropriate. To begin, there is some research that alludes to differentials among VNAs in terms of their activities (e.g., Asal and Rethemeyer 2008) and their conflict strategies (e.g., Kydd and Walter 2003). This alone seems to suggest that there is no well-founded reason to assume, even given such variation in behavior, that all VNAs are unlikely to have or communicate credibility to others.

From extant research on interstate relations, we also know that there is significant variation in the cooperative potential of state actors, usually as a result of variation in state-level characteristics. For example, with respect to power characteristics, almost all of the interstate alliance formation literature in IR has been predicated upon the existence of significant power differentials that have been theorized to provide different incentives for alignment behaviors, and that have resulted in the theoretical expectation that alliance patterns will differ for great powers versus others (see Levy 1981 or Walt 1985 on major power alliance formation; see Handel 1981 on alliances involving weak states). With respect to identity characteristics, states clearly vary in their cooperative potential by cultural grouping and regime type (Lai and Reiter 2000), as well as by real or perceived interests (Downs, Rocke, and Barsoom 1998; Wendt 1994). Finally, in terms of overall credibility, states that are better able to signal both an ability and commitment to deter future threats and eliminate present threats for themselves and their allies are more likely to form alliances in the first place (Fearon 1997; Morrow 1994). Additionally, Gibler (2008) has concluded that reputation matters for interstate alliance formation, insofar as while states’ reputations for cooperation vary, so too varies their future cooperative potential.
Taken together, all of these works maintain that the presence of and variation in power or identity characteristics has significant importance for determining interstate cooperation patterns. Similarly, I contend that any fair assessment of the cooperative potential of VNAs should acknowledge similar variation among VNAs where it exists. The above ‘conventional wisdom’ conclusions about VNAs’ ability to generate credibility have been generated largely by comparing VNAs to states in the global system. However, by allowing for variation in credibility within the broader VNA category, we may find that some groups are better equipped to signal the kind of credibility necessary for the consolidation of cooperative arrangements.

To summarize, in this chapter I have argued that VNAs can use information about power and identity characteristics to generate estimates of each other’s credibility, and that these estimates are useful to them for determining the general expected utility of cooperation as well as the expected values of cooperating with specific partners and cooperating in specific configurations. In subsequent chapters, I show how VNAs use these estimates to make two key decisions about the development of any cooperative arrangements that they form: 1) about with whom to cooperate and 2) about the terms of any resulting agreement.
Chapter 3

BUILDING THE VNA CHARACTERISTICS AND COOPERATION DATASET

Part I: Introduction

The purpose of this dissertation is to investigate the relationship between VNA credibility – as a function of power and identity characteristics of these actors – and different facets of inter-group cooperation. Very specific data are necessary for testing the arguments of this dissertation. With respect to the right-hand side variables, detailed information on the power and identities of individual VNAs is critical. With respect to the dependent variables of interest, the most appropriate data would include information about the onset and occurrence of inter-group cooperative arrangements, as well as the range of institutional forms that the arrangements can take. While this information should be collected from the perspective of an individual VNA, these variables should also be able to be combined and transformed to reflect dyadic relationships – i.e., similarity and/or difference with respect to power and identity for given pairs – and outcomes – i.e., the likelihood of cooperation onset and particular institutional designs for given pairs of VNAs.

Limitations on existing datasets that include this type of information required that I collect an original dataset. My new dataset focuses on VNAs based in Latin America during the period 1940 – 2005, and includes time-varying information on various aspects of VNA military capabilities, social affinities and political affiliations, all observed at the organizational level.\textsuperscript{12} The broader data can be subsetted into three sub-categories: 1) information on individual VNAs (Monadic Data), 2)

\textsuperscript{12} In this study, Latin America includes all countries located in the Americas south of the Rio Grande and/or in the Caribbean Basin, plus Puerto Rico.
information on VNA dyads (Dyadic Data) and 3) information on cooperative arrangements (Arrangement Data); the units of analysis in each of the three data subsets are the VNA-year, VNA dyad-year, and arrangement-year, respectively. In this chapter I explain the coding rules and procedures that I used for developing each of these subsets. I also provide some basic descriptive statistics on each of the variables included. Specifically, in Part II I discuss the Monadic Data, in Part III the Dyadic Data and in Part IV the Arrangement Data.

**Limitations of extant data**

Although some previously-constructed datasets do provide some of the information needed for testing my hypotheses, they suffer from some shortcomings that required me to put together an original dataset that was more unit-comprehensive, more detailed in the information included, and more focused on the details of inter-VNA cooperation. To begin, most pre-existing datasets on VNA behavior focus on conflict relationships. These datasets generally provide information on when and with whom these organizations fight, how they fight, and/or what happens when they win or lose. Notable examples of these include the Cunningham, Gleditsch, and Salehyan (2009) dataset on government-rebel dyads in civil wars, the PRIO/Uppsala Non-state Conflict Data (Kreutz, et al 2005) on the characteristics of non-state actors in conflict with states or other non-state actors, and the US National Counter-Terrorism Center’s Worldwide Incidents Tracking System (U.S. ODNI 2009) on event characteristics. While these datasets are useful for testing hypotheses about the conflict behavior and characteristics of VNAs, they do not provide any information on their cooperative behavior, nor do they provide detailed, time-varying information on the organization-level power and influence characteristics of the VNAs involved.

Of the pre-existing datasets that approach the topic of inter-VNA cooperation, only two appear to take a highly detailed look. These are the Minorities at Risk – Organizational Behavior
(MAROB) dataset (Minorities at Risk Project 2008) and the Terrorist Groups Worldwide dataset (Pedahzur 2008). However, both of these datasets are limited in the detail with which inter-VNA cooperation is coded. For example, the MAROB dataset focuses on 188 ethnopolitical organizations in the Middle East and North Africa, from 1980 to 2004. While the dataset includes four variables meant to capture the existence of inter-VNA cooperation in different forms, these variables provide little detail about nature of the cooperation, or the ways in which the arrangements are managed. For instance, the coding of the ‘coalition-building as a strategy’ variable suggests that cooperation among these actors is generally a commonly-used strategy. Additionally, based on the codings of the ‘cross-border alliance’ variable, the ‘cooperates with domestic criminal networks’ variable and the ‘cooperates with transnational criminal networks’ variables, it appears that the cooperation established by these organizations is mainly domestic. However, the user is not told specifically among whom these arrangements are formed, nor is there information about which organizations would have comprised the set of potential cooperators (apart from others operating in the same country). Similarly, though the Terrorist Groups Worldwide dataset includes a variable for ‘relations with other terrorist groups,’ there is no mention of what those relations are, or with whom they are consolidated.

Given the limitations of these extant datasets about VNA characteristics and behavior, I have concluded that there are no pre-existing large-N datasets that provide systematic, explicit, and

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13 81 percent (95 out of 118) of the organizations in the MAROB data are coded as using cooperation as a major or minor strategy (ORGST11 = 1 or 2). Only the Progressive Socialist Party and the PFLP in Lebanon are listed as ever using cross-border cooperation as a strategy (and an infrequent one at that; ORGST8B = 1). None of the included organizations are listed as having established cooperative relations with domestic criminal networks (in all cases, DOMCRIMNET=0); only Amal, Fatah and Hezbollah in Lebanon are listed as having established cooperative relations with any transnational criminal networks (TRANSCRIMNET = 1).

14 In the Terrorist Groups Worldwide dataset, about 75 percent (233 out of 308) of the organizations included are coded as having some relations with other terrorist groups. From the naming of the variable, I am assuming that these are cooperative relationships (the variable name references other groups as ‘sponsors’), although there is no clear discussion of this in the dataset documentation.
detailed information on the onset and design of inter-VNA cooperation. This deficiency, combined with my need for similarly detailed information on individual VNA characteristics, led me to construct an original dataset for testing the hypotheses included in this dissertation. Additionally, my data provide information on cooperative and non-cooperative behaviors, and on the characteristics of the resulting cooperative arrangements that have been created. Therefore, the data used in my dissertation provide much more detail about the nature and terms of cooperation among VNAs than was previously available, as well as information on how specific inter-VNA cooperative arrangements have changed and developed over time.

Definitions and Unit Inclusion Criteria

With respect to defining the units, this dataset is designed to provide information not only about the cooperative arrangements formed among violent political organizations, but also about the characteristics of the organizations themselves. I focused my collection efforts on the broad category of violent non-state actor (VNA), to allow for a wide range of organizations to be represented, instead of only those that belong to a particular sub-class of VNA (i.e. only guerrilla organizations, bands of insurgents, terrorist groups or rebel factions). In order to understand fully the variables collected and their relationship to the general argument, I first provide a description of the definitions of these two concepts.

1. Violent Non-State Actor (VNA)

Although the term VNA encompasses a range of actors under a broad umbrella, there are four main characteristics that bind these ‘types’ together, and exclude other kinds of non-state actors from my study. In order to be included in this dataset a sub- or extra-state organization must: 1) have some preference aggregation mechanism that provides strategic direction, 2) have a preference
aggregation mechanism that is independent of any other VNA, 3) be motivated in its activities primarily by some political goal, and 4) use violence as its primary bargaining tool over that goal.

Not only do these characteristics define what a VNA is, but they also highlight what a VNA is not for the purposes of this dataset. The first condition listed above excludes any spontaneously violent mobs or crowds that emerge in an *ad hoc* fashion and are not governed by any central command, nor intended to be. The second condition requires that the organization’s leadership exercises decisive authority over the military activities of its members; this therefore excludes most political parties that may be affiliated with a violent organization, but do not formally direct its activities. The third criterion excludes any non-state actors that are motivated primarily by economic or social considerations, such as trafficking organizations or criminal gangs. The fourth criterion eliminates most legal political parties, as well as front organizations that may be involved in occasional violence, but do not consider violent activities to be their primary bargaining tool. I do not exclude all political parties because in reality, there is likely a real difference between legal parties that *endorse* violence and those that *direct* violence. Given this, I used two corollaries for disentangling VNAs from associated political parties. First, violent elements within political parties that exercise operational autonomy within the larger party structure (i.e., groups that retain military leadership that is allowed to order, plan and execute operations without direct involvement by the party’s political leadership) are included as independent VNAs. Secondly, if the political leaders of a party are also key military leaders of an organization that otherwise fulfills the four main criteria for inclusion, the party as a whole is designated a VNA and included in the dataset. A summary of the inclusion and exclusion rules is included in Table 3.1.

<INSERT TABLE 3.1 ABOUT HERE>
All told, the VNAs in this dataset reflect a wide range of left-wing, right-wing and ideologically undefined organizations that use violence as their primary tool in bargaining with others over some political goal or outcome. This category includes those often referred to as rebels, guerrillas, paramilitaries, terrorists, revolutionaries and/or social subversives in other social scientific work (see Suedfeld 1999 or Schmid and Jongman 2005 on naming violent non-state actors). In fact, my definition is very similar to that used by the Memorial Institute for the Prevention of Terrorism’s Terrorism Knowledge Base (part of the Global Terrorism Database as of March 2008) to define a terrorist group: “A collection of individuals belonging to an autonomous non-state or sub-national revolutionary or anti-governmental movement who are dedicated to the use of violence to achieve their objectives. Such an entity is seen as having at least some structural and command and control apparatus that, no matter how loose or flexible, nonetheless provides an overall organizational framework and general strategic direction” (MIPT 2007).

2. Cooperative Arrangement

A cooperative arrangement among VNAs is defined in this dataset as a formal or informal arrangement that has been collectively decided upon by the cooperating parties and governs the management or execution of some level of resource-sharing, strategic coordination and/or tactical collaboration. Not all networked connections qualify as cooperative arrangements; for my purposes, these arrangements exist because both parties are active and aware participants. For example, two VNAs that share the same state sponsor are not involved in a cooperative arrangement with each other, even though they share the same resource font. However, two VNAs that create a popular support organization that will generate resources to be used and/or managed by both groups are involved in a cooperative arrangement. This definition broadens the scope of what is considered to be a cooperative arrangement past what has generally been discussed as such in literature on inter-
state relations. Traditional IR studies tend to focus on formality, publicity and constraining power when defining and identifying cooperative arrangements. Examples of this include the classic definition of an interstate alliance as a written agreement between two states (Singer and Small 1966, Small and Singer 1969), or the oft-cited definition of international institutions as negotiated arrangements that explicitly “prescribe, proscribe, and/or authorize behavior” (Koremenos, Lipson, and Snidal 2001).

In contrast, my definition more closely follows the definitions of strategic alliance used by scholars of interest group politics (e.g. Hojnacki 1997), multinational corporations (e.g. Culpan 1993) and social movements and advocacy networks (e.g. Keck and Sikkink 1998). As such, it focuses on the importance of coordinated activity and resource-sharing among the linked members, regardless of formality, rigidity or publicity. Whether VNAs prefer to create arrangements that have the characteristics of inter-state alliances, international organizations, interest group alliances or advocacy networks is, I believe, an empirical question. My definition allows enough room for each variant to be included as part of the broader concept.

Part II: Monadic version of the dataset

Collection strategy and coding procedures.

I first gathered a list of VNAs active in Latin America during my time period of interest using a number of standard non-state conflict datasets, encyclopedias of non-state actors in conflict and revolutionary events, historical records of inter- and intra-state conflict in Latin America, and

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15 Descriptive statistics for the variables in this version of the dataset are available in Appendix B.
government and journalistic sources.\(^\text{16}\) As previously mentioned, I collected and corroborated information on VNA existence and lifespan using a variety of sources. I believe that this strategy allowed me to construct a unit list that suffers as little as possible from some types of biases that afflict similar collection efforts. If I had generated the unit list using some conflict behavior as the main inclusion criterion, it is likely that I may have systematically excluded a number of organizations engaged in cooperation. For example, some datasets use how many people the VNA had killed in a given year as the inclusion criterion. There are myriad reasons why a VNA may not be involved in altercations resulting in high death counts, but those organizations will be necessarily excluded by researchers using strictly such data to construct their unit lists. Historical accounts, government records, journalistic sources and case studies of specific conflicts, countries and/or organizations help to ameliorate some truncation-related bias by giving more treatment to the full range of VNA activity, basing their identification often on indicators of simple existence. By using a variety of source materials, I was able to add a number of VNAs to some previously-used VNA lists and develop a more unit-comprehensive dataset.

As each VNA was noted, I also recorded identifying information for the organization, as well as information about its power characteristics, its influence characteristics and whether it ever engaged in a cooperative arrangement with another VNA. All of this individual-level information was initially collected in cross-sectional format, and later disaggregated by year. I did this in order to minimize the chances that my coding of the values of a particular variable in one year might influence the values that I recorded for subsequent years. In total, these efforts resulted in a dataset that contained group-level information on VNA power and influence characteristics, as well as indicators of individual participation in cooperative arrangements. Additionally, these data contain a series of identification and location variables. The Monadic Data subset contains information on

\(^{16}\) The bibliography of works consulted in creating the dataset is available in Appendix F.
individual VNA power and influence characteristics as well as indicators of individual participation in cooperative arrangements. These data contain information corresponding to 1,674 VNA-years. Those VNA-years themselves correspond to 176 individual organizations observed over the 1940-2005 time period.

Most of the information available about each individual VNA (as well as the cooperative arrangements) came in the form of case histories, accounts of conflicts that included that VNA, or general narratives about that and surrounding organizations. Generally speaking, I recorded as much of the qualitative information as possible for every VNA in the unit list and used that as the basis for many of the quantitative measures. The raw data was originally organized into five broad categories: identifying information, indicators of military power, indicators of resolve/commitment, cooperation history and transformations. In the next section, I discuss further how I derived the specific variables included in the dataset from the raw data.

**Background information**

I first assigned each country represented in the dataset a number. While these numbers were not randomly selected – in fact, the numbers roughly correspond to an alphabetical ordering of the country names – they have no meaning other than for identification purposes. After recording the country identifier numbers, I then assigned a unique ID code to each VNA in my unit list. This Group ID (GID) is a four-digit string variable – the first two digits reference the home territory of the VNA in question, and the second two digits are simply a counter. For example, the Argentine Anti-Communist Alliance has a GID of 1001 – the first ‘10’ signals that this VNA’s home territory is Argentina, and the second ‘01’ signals that this was the first Argentine VNA that I entered into the
dataset. Next, I used the available formation and termination years to generate the full set VNA-years possible given these data. To do this, I created a separate observation for each year during which the VNA was known to be alive and operational. Finally, I created a unique identifier for each VNA-year (GYID) that appends the observation year of interest to each VNA’s original GID. For example, since the Argentine Anti-Communist Alliance is recorded as having been alive from 1974 to 1976, this single VNA corresponds to three VNA-year observations in the data, identified as 10011974, 10011975 and 10011976.

Unlike other datasets that include information on VNAs, I did not consider umbrella organizations or other fruits of cooperation to be individual organizations if it was clear that the constituent organizations retained independent central commands (and thus avoiding violation of two of my inclusion criteria). Rather, in the case of an umbrella organization or coordinating board, I attempted to identify all of the constituent organizations, and to record them as independent VNAs. While some umbrella organizations could be clearly and easily disaggregated, others proved more difficult. For example, it was relatively easy to disaggregate the Batallón de las Américas (BA) into its three constituent organizations: the Peruvian Movimiento Revolucionario Túpac Amaru (MRTA), Colombian Movimiento 19 de Abril (M-19), and Ecuadorian ¡Alfaro Vive, Carajo! (AAVC), or to unpack the constituents of the South American Junta Coordinadora Revolucionaria (JCR): the Bolivian Ejército de Liberación Nacional (ELN), Tupamaros in Uruguay, Frepalina in Paraguay, Movimiento de Izquierda Revolucionaria (MIR) in Chile and Ejército Revolucionario del Pueblo (ERP) in Argentina. On the other hand, umbrellas like the Liga Comunista 23 de Septiembre (LC-23S, or La Liga) – the coordinating body for a number of small, leftist VNAs based in Mexico during the 1970s – were much harder to pull

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17 Through the course of completing the dataset, I did find that some organizations should not have been included in the unit list, although I had already entered them and assigned them GIDs. When I removed these organizations from the dataset, I did not adjust the GIDs to reflect the new, smaller total number of VNAs for that country. Thus, the largest GID for any given set of VNAs with the same home territory does not represent the total number of VNAs included in the dataset for that country.
apart. Of the 32 umbrella organizations that I identified, I was unable to identify the full membership of only 5: La Liga, the People’s Vanguard Organization (based in Costa Rica and Nicaragua), the Uruguayan Anarchist Movement, the Cuban Liberation Junta and the Caribbean Pact.\(^\text{18}\)

Once each VNA and VNA-year was identified, I was able to farm out the information in the ‘basic ID’ raw data category into individual variables. Although each piece of information in the dataset is time-referenced, for the most part these variables do not vary over time. The variables are as follows:

1. **Name.**

2. **Alias.** For each organization, I recorded all aliases or secondary names also used by the organization.

3. **Ultimate fate/Reason for termination.** This variable describes the reason for the VNA’s termination, or its exit from the dataset. These organizations could exit the dataset as a result of: military defeat/elimination; transformation into a non-violent group/political party; fully merging into another VNA; or voluntary disbanding. In cases where the group was still active as of 2005, that was also noted. Also noted were cases in which a reliable termination date could not be identified (suggesting one of the first four fates) – for these organizations, the termination year was recorded as the date of last attack or the date of last mention, whichever was later. Finally, groups that fell under none of these categories received an ultimate fate coding of ‘unknown’.

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\(^{18}\) A complete list of the VNAs included in the dataset is available in Appendix A, Table A.1. A list of the multilateral arrangements included in the dataset is available Appendix D, Table D.1.
4. **Home territory.** This is a string variable indicating the location of the group’s primary headquarters. Essentially, it given the name of the country represented by the first two digits of the GID.

5. **Additional headquarters.** Apart from the primary base, I also recorded any other areas where the group had set up strategic command.

6. **Areas of operation.** This variable describes all of the areas in which the group had been known to operate, including staging attacks, recruiting, and distributing propaganda.

7. **Subregion.** I created subregion indicators that group countries into smaller ‘neighborhoods’ within the broader Latin American region. Residence in a given subregion was determined by the group’s home territory. After all of the organizations had been collected, they were placed into one of five subregions: **East Central South America** (including Brazil, Suriname and Paraguay), **Southern Cone of South America** (including Argentina, Chile and Uruguay), **Andean Region of South America** (including Bolivia, Colombia, Ecuador, Peru and Venezuela), **the Caribbean Basin** (including Cuba, Dominican Republic, Puerto Rico, Guadeloupe and Haiti) or **Central America** (including Costa Rica, El Salvador, Honduras, Mexico, Nicaragua, Panama or Guatemala). Each of these categories is represented by a dummy variable equal to one if the VNA is in that subregion, and equal to zero otherwise.

**Cooperation Onset**

For each organization, I recorded whether they had ever begun a cooperative arrangement with another VNA for each year of existence.
1. Ever formed a cooperative arrangement. This variable is measured as a nominal variable with two categories. The variable is equal to one if the VNA had formed at least one inter-VNA cooperative arrangement in the year in question, and equal to zero otherwise. There are a total of 241 onset-years in these data.

1a. Cooperation partner(s). Since the previous variable only indicates whether the VNA in question has ever cooperated, I include an additional string variable that lists that group’s partner(s). This variable includes the GID of each partner with which the VNA in question began cooperating in that year, separated by underscores (_).

Identity characteristics

Although much of the collection of my variables happened simultaneously, I made a concerted effort to collect information on indicators of identity first. Once I realized the highly qualitative nature of the majority of this information, I decided that I would introduce less bias into my coding of these indicators if I had not first seen any quantitative indicators of VNA characteristics that might have a relationship to their social identities/reputations.

A VNA’s identity label often indicates a group’s ability to cultivate trust (both in general and within particular social groupings) and/or to demonstrate a commitment to keeping its promises. I collected information on three characteristics from which reputations for trustworthiness could be derived: the type of violence that an organization employs (indicating a reputation for resolve), its history for having cooperated or not in the past (indicating a reputation for being committed to cooperation), and its ideological affiliation (indicating its motivational principles).

1. Violence type. I collected information on the type of violence that the VNA pursues as an indicator of its resolve, or commitment to violence. In these data, an individual VNA can
engage in: **light attacks**, including armed protest, armed propaganda or inciting riots;

**attacks targeting infrastructure**, including ambushes, ground assaults, hijackings, bank robberies, arson, bombings, sabotage, or any other activity designed to destroy property without emphasis on bodily injury and/or produce material gains as a result of property damage; **attacks targeting individuals**, including assassinations and other targeted killings, kidnappings, extortion, or any other activity designed to inflict bodily harm and/or produce material gains as a result of inflicting bodily harm; or some **combination** of the three categories. In most cases, organizations exit the dataset when they cease operations. Additionally, in some instances organizations that have a temporary lapse in operations remain in the data; if operations have been suspended for less than 2 years, and is due to regrouping after a large military loss, or for other strategic planning purposes, the organization is coded as being **latent** until it resumes operations. Each of these categories is represented by a dummy variable equal to one if the VNA engaged in that type of activity in a given year, and equal to zero otherwise.

2. **Cooperation history.** This concept is represented by a nominal variable indicating seven potential ‘cooperation histories’ that a VNA could have, based upon whether or not the organization’s leadership had ever gone into a cooperative arrangement with others (or not), expressed support for cooperation among VNAs, defected from an inter-group cooperative arrangement prematurely, or expressed support against cooperation among VNAs. The variable itself represents an organization’s commitment to cooperation as a strategic option. I identified support for cooperation as the expression of a desire and/or intent to cooperate with other VNAs, and/or expressions of support for cooperation amongst other groups.

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19 Defection from a cooperative arrangement could take a number of specific forms, but generally it refers to somehow reneging on the terms of cooperation.
On the other hand, I identified support for defection or non-cooperative outlooks as the expression of meaningful hostility towards other VNAs or a general disdain for inter-VNA cooperation. This information came mostly from my readings of individual VNA histories and histories of the relationship among organizations in different countries and at different points in time. Additionally, VNAs often offered this information through their public statements, manifestos, communiqués and correspondence with news media. For example, the right-wing Cuban anti-Castro organizations were well known for issuing statements advocating collaboration and unification within the opposition; similar statements were often made by many of the Puerto Rican separatist organizations. In a given year, a VNA could be identified as: highly invested in cooperation, meaning that it had both expressed support for cooperation among VNAs and actually formed a cooperative arrangement with another VNA in a previous year; a costly cooperator, having only actually formed a cooperative arrangement with another VNA in the past; a cheap cooperator, having only expressed support for cooperation among VNAs in the past; neutral, having either a) exhibited no cooperation or defection behaviors or b) exhibited all possible cooperation and defection behaviors; a cheap defector, having only expressed support for defection from agreements or a general disdain for inter-VNA cooperation in the past; a costly defector, having only actually defected from a cooperative arrangement in the past; or highly invested in defection, having expressed support for defection from agreements and having actually defected from an arrangement in the past.

Each of these categories is represented by a dummy variable equal to one if the VNA exhibited that behavior, and equal to zero otherwise. In these data, an organization’s

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20 I combine these two possible scenarios because in either, the organization has revealed no meaningful information about which strategy it would be likely to pursue in the future; in other words, there is a reasonable chance of cooperation and defection for this group in the future, and so its past behavior is uninformative.
cooperation history is sticky: for example, a group that has expressed support for cooperation in the past is coded as a cheap cooperator for all subsequent years.

Additionally, these histories are cumulative and not mutually exclusive. I code the cooperation histories this way mainly because I have no a priori reason to assume that any one history carries more substantive value than another, and can effectively erase another. While it is possible that cooperative behaviors may carry more weight than non-cooperative behaviors (and vice versa), I also find it plausible that contradictory behaviors simply confuse the signal about an organization’s ‘type’. If the first scenario is true, past behavior is likely overwritten by actions in the future; this suggests that VNAs should only be coded as having one cooperation history at a time. If the second scenario is true, all histories will be informative (though to varying degrees), and should be accounted for.

For example, once the individual paramilitary groups in Colombia agreed to cooperate with each other under the Autodefensas Unidas de Colombia (AUC) umbrella, each of the members were coded as being a costly cooperator (having assumed two-way cooperative arrangements with each other), beginning in the year after joining the collective. Once cooperation had been established however, observed instances of fighting among the collaborators (i.e. when the Casanare Self-Defense Group began to attack the Centauros and Llanos Blocs shortly before the first demise of the AUC in 2002) were enough to mark each as a costly defector until the end of cooperation altogether.21 Together then, these organizations retained a value of 1 on the costly cooperator dummy from the time they joined the AUC until their exit from the dataset and a value of 1 on the costly defector dummy from 2002 until their exit.

21 In most cases of infighting, I could identify which organizations were targeting others, and so only the initiators were given costly defector status if the targets did not fight back in a way that went above and beyond self-defense. In other instances of defection, it was clear which organizations were ignoring or violating the terms of agreement. For example, when the 1979 united bargaining front created by the FARC, ELN and M-19 in Colombia dissolved, it was clearly as a result of the FARC and ELN preferring to continue violent operations, rather than to pursue the peace talks with the Colombian government brokered on behalf of (and because of) the union.
While the Casanare group is coded as being simultaneously a costly cooperator and a costly defector, my current coding scheme allows me to empirically test which of the two impact scenarios garners more support: I can include the dummy variables for costly cooperator, costly defector and neutral history in the model and examine the difference in relative impact of these reputations on the Casanare group’s likelihood of cooperation with others.

3. **Ideology.** I coded a group’s main ideology to indicate the philosophy or doctrine that a VNA’s leadership expressed as motivating the group’s behavior; the majority of this information came from the group encyclopedia found at the end of Michael Radu and Vladimir Tismaneanu’s 1990 book, *Latin American Revolutionaries: Groups, Goals and Methods.*

The VNAs of Latin America were rather varied in their ideological orientation; in order to account for the nuanced differences among groups along the left-right spectrum, I recorded twelve separate ideological categories. Each of these categories is represented by a dummy variable equal to one if the VNA has that ideology, and equal to zero otherwise. Sometimes a single organization was discussed as being identified with more than one ideology, I coded this variable on the basis of the most often-cited or dominant ideological affiliation. For example, in the case of the Movimiento de Autodefensa Obrera (Workers’ Self-Defense Movement) in Colombia, Radu and Tismaneanu noted that while the organization was “committed to both Maoism and Trotskyism…Colombian authorities tend to consider it Trotskyist and associate it with the political orientation of the Fourth International” (1990). Specifically, in these data a VNA can be ideologically oriented as a: Right wing conservative, which includes VNAs that support the current government and seek to preserve the status quo; Right wing reactionary, which includes counter-guerrilla, mostly anti-Marxist VNAs that often want to return to the status quo ante (usually a military
government); **Orthodox Communist/Marxist-Leninist**, which includes Soviet-style
Communism and/or Marxism-Leninism; **Trotskyite; Maoist**, which includes VNAs
oriented by Maoism and/or Chinese-style Communism; **Castroite/Guevarist/Bolivarian**, 
which includes VNAs oriented by pan-Latinism; **Anarchist/Anarcho-Marxist**, which
includes VNAs opposed to all forms of government and nihilists; **Separatist**, which includes
VNAs seeking statehood on behalf of a minority ethnic or religious group; or a **Racist**, 
which includes VNAs that are motivated by a desire for ethnic or racial separation and/or
domination. Additionally, VNAs are allowed to have **no expressed ideology**; a good
example here is of Fidel Castro’s M-267, as he did not reveal himself as a Communist until
after the Revolution. Groups can also be of an **unknown or other** ideology. A good
example here is the Guatemalan ORPA, which adopted a hybrid ideology combining
Marxism, Leninism, Maoism, and racist nativism (Radu and Tismaneanu 1990). The
‘none/other’ category also include VNAs that appear to be motivated primarily by
opposition to a particular policy or program, rather than by broader principles. While
ideology is largely time-invariant, some organizations do change their orientations over time.
Where that occurs, it is reflected in these data – for example, the Vanguardia Revolucionaria
(Revolutionary Vanguard, or VR) is coded as Trotskyite from its formation year (1965) until
about 1975, at which time “the [VR] became more interested in Castroite and Maoist
ideology and was criticized by Trotskyist leaders" (Radu and Tismaneanu 1990).

These ideological orientations were also condensed into four broader categories, also
represented by a nominal variable. Pursuant to these categories, a VNA could be broadly
classified as being **Right-wing**, or of either a right-wing conservative or right-wing
reactionary ideology; **Conventionally left-wing**, of an Orthodox Communist, Marxist-
Leninist or Castroite/Guevarist/Bolivarian ideology; **Unconventionally left-wing**, of an
anarchist, Maoist or Trotskyite ideology; Ethnically- or Racially-motivated, of either a separatist or racist ideology; or Of some other ideology, including the ‘none’ and ‘unknown/other’ categories. Each of these categories is represented by a dummy variable equal to one if the VNA is in that ideology grouping, and equal to zero otherwise.

Power characteristics

A VNA’s power characteristics speak to its ability to conduct (successful) military operations, whether with defensive or offensive intentions. This dataset includes information on three indicators of organizational power: membership size, tactical expertise and financial independence. I chose these three indicators based on discussion in extant literature about the importance of not only ‘strength in numbers’ but also of maximizing the effectiveness of one’s capabilities. I conceptualize VNA power in such a way that it can be determined without knowing anything about other peer or rival actors; I do this in order to allow VNA power to be examined in either absolute or relative terms. For example, each of the three variables that I have collected can be included in a statistical model as the categorized absolute value of members and the presence or absence of a tactical specialty (both representing absolute power) or as part of a size and/or expertise ratio (both representing relative power).

1. Membership size. I created this variable by culling a number of estimates of a VNA’s membership for each observation year, and devising an ordinal scale that places these estimates into one of five size categories. In some instances these estimates were point estimates, while in others they were ranges based on a number of point estimates. In other cases, the information given about VNA membership size was strictly qualitative and only described size in general terms. Occasionally the best information available referred only to some starting value, and then described a series of ‘losses’ under or ‘growth’ over that value.
In order to construct the scale, I relied heavily on qualitative descriptions of VNA size in order to discern the most appropriate cut-points. Membership size is coded as an ordinal variable with five categories. In these data, an individual VNA could have a membership that is: very small (1), less than 100 members; small (2), between 100 and 450 members; mid-sized (3), between 451 and 1000 members; large (4), between 1001 and 5000 members; or very large (5), greater than 5000 members.

From this variable I also created a more blunt measure of membership size that reflects a collapsed version of the original 5-point scale. This version is coded as a nominal variable with two categories. Specifically, an individual VNA in these data could be alternatively classified as: relatively small (1), which includes the ‘very small’ and ‘small’ size categories; or relatively large (2), which includes the ‘mid-sized’, ‘large’ and ‘very large’ size categories.

2. Tactical expertise. This variable indicates whether a VNA has some specialized command of their military capabilities. For each observation year, I consider a VNA to have some tactical expertise if they have demonstrated some aptitude for a particular type of violence. Having some tactical expertise is not a sticky condition, and so the demonstration of expertise in one year does not mean that for all subsequent years this condition still applies for the VNA in question. Additionally, a tactical expertise does not have to be the only activity for the organization; nor does an expertise have to be the activity in which the

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22 I acknowledge the possible measurement error associated with coding a variable based on imprecise information. However, similar to the way in which the size of a state’s standing army is considered a strong indicator of its military capabilities, the size of a VNA’s ‘standing army’ would be similarly difficult to omit from any measurement of the military strength of these organizations. Rather than abandon the variable, I attempted to minimize the potential measurement error in three ways. First, only in limited instances did I rely on two or fewer sources for a size estimate for a particular VNA. Second, I prioritized information from scholarly sources with an explicit focus on reporting size information. Third, I include a measure of ‘coder confidence’ that accompanies this variable, indicating how assured I am of the accuracy of the size code for each VNA-year. This measure itself ranges on a five point scale, reflecting feelings of very high confidence (5) to feelings of being quite skeptical (1).
VNA engages most frequently. Tactical expertise is coded as a nominal variable with two categories. In these data, an individual VNA can have no expertise (0); or at least one area of tactical expertise (1).

2a. Nature of expertise. The actual nature of the VNA’s tactical expertise is represented in terms of the violence types previously described. This variable is coded as an ordinal variable with five categories, and indicates whether the organization specializes in: no expertise; light attacks; attacks targeting infrastructure; attacks targeting individuals; or some combination of those activities.

4. Financial independence. Although every VNA in this dataset has a central command that is independent of any other organization or entity, varying levels of independence are possible. One way in which independence can be attenuated is through the degree of influence that outsiders have over not just general decision-making, but the execution of everyday activities. Since all organizations need to finance their operations, the extent to which a VNA relies on outside support to carry out its own plans can be an important indicator of how much activity the VNA can generate. Financial independence is indicated by the degree to which a VNA generates its own funds for underwriting military operations (versus receiving outside support from some other party). Financial independence is coded as a nominal variable with two categories. In these data, a VNA can be dependent (0) or independent (1). Dependent organizations are primarily reliant on some combination of self-directed activities and external sources for financing their operations. External sources include state sponsors, support through cooperation with other VNAs and/or mercenary activities (including trafficking contraband that is not procured, cultivated or processed by
the organization itself). Independent VNAs are primarily reliant on only self-directed activities for generating funds for operations. Such activities include directing the fundraising done by affiliated front organizations, raids of military or police stations or other self-directed criminal activities (e.g. extortion, bank robberies, drug/arms/human trafficking).

**Part III: Dyadic version of the dataset**

**Collection strategy and coding procedures**

To construct a dyadic version of the data, I created a set of all possible pair-wise VNA combinations for each year of my study. This set represents all dyadic combinations of VNAs regardless of home territory. I constructed the dataset this way to avoid imposing any *ex ante* geographic restrictions on which VNAs could interact. Like the Monadic data, these data are organized in cross-section—time-series format, with each VNA dyad referenced to a particular year. These data contain measures of similarity and difference within each dyad on each of the power and influence characteristics recorded for individual VNAs in the Monadic data. The Dyadic data also include indicators of whether a cooperative agreement emerged among the dyad partners in any year of my study. Additionally, these data contain a series of identification and location variables, similar to those found in the Monadic data. The Dyadic data contain information corresponding to 31,430 total dyad-years. These VNA dyad-years themselves correspond to 5,722 non-directed dyads observed for the 1940-2005 time period.

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23 Descriptive statistics for the variables included in this version of the dataset are available in Appendix C.
Background information

I first assigned a unique ID code to each VNA-dyad in the unit list. This Dyad ID (DID) is an eight-digit string variable, created by concatenating the GIDs of the dyad members. For example, all pairings of the Chilean MIR and Uruguayan Tupamaros have the DID of ‘13172701’ – the first ‘1317’ represents the MIR GID, the second ‘2701’ represents the Tupamaros GID. Next, I used the available formation and termination years to generate the full set VNA dyad-years possible given these data. To do this, I created a separate observation for each year during which the dyad could have formed a cooperative arrangement (meaning that both VNAs were known to be alive and operational). Finally, I created a unique identifier for each VNA dyad-year (DYID) that appends the observation year of interest to each DID. The DYID is a twelve-digit string variable, derived by concatenating the dyad DID with the observation year. For example, the MIR (Chile) – Tupamaros (Uruguay) dyad has a DYID of ‘131727011974’ for observation year 1974 -- the first ‘1317’ represents the MIR GID, the second ‘2701’ represents the Tupamaros GID, and the ‘1974’ represents the observation year.

For most of the background identification variables, I simply retained the monadic identifying information for each of the two dyad members and differentiated between the two partners by just labeling them A and B.\(^\text{24}\) However, I did add a crude measure for proximity.

1. Neighbors. This variable is a dyadic version of the monadic subregion variable as a crude measure of proximity, and is coded as a nominal variable with two categories. In these data, a VNA dyad can have members that are: not neighbors (0), or from different subregions; or neighbors (1), from the same subregion. Within the ‘neighbors’ category, I further disaggregated the different shared subregions, resulting in a series of dummy

\(^{24}\)Since I only keep non-directed dyads in these data, after creating the full list of possible dyadic combinations (which resulted in directed dyads), I dropped all those where the GID for the Side A group was greater than the GID for the Side B group. That is the only way in which the decision of which group is A or B is not completely random.
variables noting shared East Central subregion, shared Southern Cone subregion, shared Andean subregion, shared Caribbean subregion and shared Central American subregion. These variables are equal to one when the dyad partners are from the stated subregion, and equal to zero otherwise.

My goal for coding the other substantive dyadic variables was to measure accurately key indicators of similarity or difference between the dyad members in terms of power and identity. To that end, I created dyadic indicators out of the individual-level power and identity variables recorded in the monadic version of the dataset.

**Cooperation Onset**

For each dyad, I recorded whether a cooperative arrangement emerged among the two partners in each year during which the two groups were paired.

1. **Ever formed a cooperative arrangement.** This variable is measured as a nominal variable with two categories. The variable is equal to one if the dyad had begun a cooperative arrangement in the year in question and equal to zero otherwise.

**Measures of identity similarity**

Generally speaking, these variables indicate similarity or difference among VNAs in terms of their reputations, as suggested by each of the identity labels.

1. **Violence type similarity.** Violence type similarity is coded as a nominal variable with two categories. In these data, a VNA dyad can be comprised of members that engage in different types of violence (0), or that engage in similar types of violence (1). In this variable, there are no distinctions made between ‘same violence’ dyads on the basis of what
type of activities they share. In order to acknowledge this variation in the ‘same violence’
category, I also created a version of the variable that references this information. This
alternative version is coded as an ordinal measure with four categories. Therefore, similarity
in violence type is alternatively expressed in a variable indicating whether the members of a
VNA dyad: engage in different types of violence (0); both carry out attacks against
infrastructure (1); both carry out attacks against individuals (2); both carry out a
combination of violence types (3).

2. Cooperation history similarity. This variable is coded as a nominal variable with two
categories, and indicates whether the members of a VNA dyad do not share the same
cooperation history (0) or do share the same cooperation history (1). In this variable, all
dyads with similar histories are lumped together in the ‘same history’ category, regardless of
what the history actually is. In order to account for variation within this category, I also
created a version of this variable that recognizes this. Therefore, similarity in cooperation
history is alternatively expressed in a series of nominal variables indicating whether the dyad
partners do not share the same cooperation history; both have neutral histories; are
both invested cooperators; are both costly cooperators; are both cheap cooperators;
are both cheap defectors; are both costly defectors; or are both invested defectors.
Each of these variables is equal to one if the dyad members share the given history, and
equal to zero otherwise.

3. Shared ideology. Shared ideology is coded as a nominal variable with two categories. In
these data, a VNA dyad could be comprised of VNAs that are of different ideologies (0),
or of the same ideology (1). I also created a version of this variable that references the
particular ideology to which each dyad member subscribes. This variable is based on the
version of the monadic ideology variable that groups VNAs into broad categories, rather than using their specific ideological orientations. This version of the shared ideology variable is coded as a nominal variable with six categories. Specifically, a VNA dyad could be alternatively classified as being comprised of two groups that are: of different ideologies (0); both right-wing (1); both conventionally left-wing (2); both unconventionally left-wing (3); both ethnically-motivated or racist (4); or both of an unknown or other ideology (5).

Measures of power similarity

1. **Size similarity.** This variable is measured as a nominal variable with two categories, and indicates whether the dyad members have similar membership sizes. In these data, a VNA dyad could be comprised of VNAs that are of: different size categories (0); or the same size category (1). I also created a version of this variable that references a ‘small/large’ dichotomy instead of the detailed five-point size scale. This alternative specification provides a measure of size similarity that references (blunted) variation within the ‘same size category’ set of VNA dyads; this variable is measured as an ordinal variable with three categories. Therefore, a VNA dyad in this data could be alternatively classified as being comprised of VNAs that are: of different size categories (0); both small (1), of either the ‘very small’ and ‘small’ size categories; or both large (2), or of either the ‘mid-sized’, ‘large’ or ‘very large’ size categories.

2. **Expertise similarity.** This variable indicates whether both dyad members have some specialized command of their military capabilities, and is measured as a nominal variable with two categories. In these data, a VNA dyad can be comprised of VNAs that: are not
both experts (0), with either only one or neither having a tactical expertise; or are both experts (1).

2a. Difference in nature of expertise. These data also include a version of the expertise similarity variable that references the particular nature of each dyad member’s specialty. This variable allows me to distinguish between ‘both expert’ dyads that reflect a redundancy in expertise from those that enjoy a diversity of tactical specialties. This variable is measured as an ordinal variable with three categories. Therefore, a VNA dyad in these data could be alternatively classified as being comprised of VNAs that: are not both experts (0); are both experts with the same specialty (1); or are both experts with different specialties (2).

3. Financial independence similarity. This variable is coded as a nominal variable with two categories, and indicates whether the dyad partners do not share the same level of financial self-sufficiency (0); or do share the same level of financial self-sufficiency (1). The data also include a version of this variable that references variation within the ‘same level of the individual self-sufficiency’ of each dyad member. This variable allows me to distinguish between dyads comprised of two dependent VNAs from dyads of two independent VNAs. This alternative independence similarity variable is coded as an ordinal variable with three categories. Specifically, a VNA dyad in this data could be alternatively classified as being comprised of VNAs that do not share the same level of financial self-sufficiency (0); are both dependent (1); are both independent (2).
Collection strategy and procedures

To construct the Arrangement dataset, I retained only the dyad-years that included the onset of a cooperative arrangement. From this subset, I re-organized the spreadsheet to make the cooperative arrangement itself the unit of analysis. These data are also organized as a cross-section—time-series, allowing me to track changes in the design of inter-VNA cooperation with changes in the characteristics of the participating groups.

I collected and corroborated information on the characteristics of each cooperative arrangement using a variety of sources. Many of these were the same sources that I used for gathering the information on VNA characteristics. Although in some instances I was able to identify cooperative arrangements through public statements made by the participants, charters and declarations, I identified most of the arrangements through secondary sources: i.e. histories of the participating VNAs, media accounts or declassified intelligence documents. As I collected the VNA characteristics information, I also recorded as much of the qualitative information as possible for every instance of cooperation mentioned for each VNA. For each instance of cooperation mentioned for an individual VNA, I corroborated that with a search for similar information with respect to the cooperation partners mentioned. For example, to corroborate the assertion that the Argentine ERP had cooperated with the Salvadoran FARN, I had to find mention of cooperation with the ERP in sources focused on the FARN and its behavior.

As I noted in the definitions section, I identified a cooperative arrangement by the apparent existence of some agreement among VNAs that resulted in the management or execution of some level of strategic coordination and/or tactical collaboration. Cooperation among VNAs is identified

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25 Descriptive statistics for some of the variables included in this version of the dataset are available in Appendix D.
through evidence of resource-sharing (i.e. sharing weapons or propaganda materials), strategic collaboration (i.e. intelligence sharing or joint planning) and/or tactical coordination (i.e. joint operations) among at least two VNAs.

During the initial collection stages, I made the key distinction between single, free-standing VNAs and ‘organizations’ that were themselves the product of a cooperative arrangement. I have found that many pre-existing datasets, as well as government and media sources, have been somewhat inconsistent with respect to distinguishing between free-standing VNAs and VNA cooperative arrangements. As one goal of the dissertation is to classify different forms of VNA cooperation, it was often necessary for me to disaggregate umbrella organizations and other multilateral partnerships into their component organization parts. For example, in the Memorial Institute for the Prevention of Terrorism’s Terrorism Knowledge Base the *Coordinadora Guerrillera Simón Bolívar* (CGSB) – an umbrella organization designed to manage cooperation among six South American VNAs in the late 1980s – is listed as both an umbrella organization (the product of cooperation) and an individual VNA (a party to cooperation).  

In my data, I recorded coordinating boards and/or strategic commands as individual VNAs only when the overall command formally replaced the organizations-parties. These cases most often represented scenarios in which the organizations-parties to the umbrella organization completely merged, and so a distinct VNA was created as a result of forming the umbrella. In most cases, however, this did not happen, and so many of the umbrella organizations, coordinating boards and multilateral partnerships are only discussed as types of cooperative arrangements, with their distinct organizational characters examined as design features of the arrangement. These arrangements were then transferred to a separate spreadsheet, forming the basis of the data subset that focuses on the characteristics of inter-

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26 This dataset has since been subsumed by the Global Terrorism Database. However, I find no indication that this ‘double counting’ of the CGSB (or any other umbrella organization) has been changed in any way.
VNA cooperative arrangements themselves. To continue with the above example, in my data each of the individual VNA cooperated under the CGSB – the ELN, EPL, FARC, M-19, Workers' Revolutionary Party (PRT) and Quintín Lame Command in Colombia – were recorded as individual VNA parties, while the CGSB was listed only as a cooperative arrangement to which those six VNA parties.

In sum, the Arrangement data contain information on the VNA parties, various design features (including the dimensions of cooperation governed by the arrangement) and identifying information. In sum, the Arrangement data contain information about 519 bilateral cooperative arrangements, and 31 multilateral arrangements.

Background information

Each bilateral arrangement is identified using the DID for each cooperating pair; each multilateral arrangement is identified with a numeric ID (ranging from 1 to 31). For both bilateral and multilateral arrangements, I also recorded the start year, end year and current age for each, as well as its ultimate fate/reason for termination. I also included indicators of the location/proximity of the participating VNA parties. For the bilateral arrangements, I simply used the neighbors variable (and the shared subregion variants) included in the Dyadic data. For the multilateral arrangements however, I coded an additional version of the neighbors variable:

1. **Neighbors_multi.** This variable is measured as a nominal variable with three categories, and indicates whether all of the participating VNA parties were from the same subregion. In these data, a multilateral arrangement could include no neighbors (0), where none of the participants share the same subregion, some neighbors (1), where some of the participants share the same subregion, and all neighbors (2), where all of the participants share the same subregion.

27 Current age is based on the observation year.
28 This variable is coded using the same rubric used for the ultimate fate variable included in the Monadic version.
share the same subregion, or all neighbors (2), where all of the participants share the same subregion. To identify which (if any) of the participants shared a subregion, I also created an indicator variable with this information (neighbors_multi_id). For each multilateral where this variable is not missing (or neighbors_multi ^= 0), it includes the GIDs of all participating VNAs that share the same subregion, separated by underscores (_).

Measures of collective strength and collective identity for participating VNAs

For the bilateral arrangements, information on the power and identities of the participating VNAs was also held over from the Dyadic dataset. For the multilateral arrangements, I coded additional variants of the similarity variables:

1-6. Power and/or identity similarity. On each dimension of power (size, expertise and financial independence) and each dimension of identity (violence type, cooperation history and ideology), I created an additional nominal variable indicating whether all of the participating VNAs shared the same value on each of the individual power variables. Each of these variables has three categories: none are similar (0), some are similar (1), or all are similar (2).

Indicators of arrangement design

I also include a series of variables indicating different design features of these arrangements. Particularly, these variables indicate whether the arrangement was institutionalized or informal, the degree of interdependence among the participant VNAs, the number of participating groups and the purpose/scope of the arrangement. Additionally, I also code variables noting whether or not the arrangement experienced any changes on any of these dimensions from year to year.
1. **Institutionalization.** I consider a cooperative arrangement to be institutionalized when the actual cooperation is accompanied by some set of explicit rules for governance, expectations about the behavior of the parties involved, guidelines for determining what constitutes a breach of agreement, or instruction as to how to identify the beginning and/or end of the arrangement. This variable is measured as a nominal variable with two categories, and indicates whether the arrangement (bilateral or multilateral) was **not institutionalized** (0), or having none of the aforementioned characteristics or **institutionalized** (1), having at least one of the characteristics listed above.

**1a. Type of institutionalization.** This is a string variable indicating which markers of institutionalization the arrangement exhibited.

While I relied heavily on some detailed case studies of individual arrangements to code these variables, I also collected a number of the statements, treaties, manifestos and communiqués that detailed such cooperation and were produced by the VNAs themselves. Through the data collection I also found that rules and regulations for cooperation were not always written down *per se*, in some instances, the terms of a cooperative arrangement were decided and communicated verbally instead. For example, the initial terms of cooperation creating the Guerrilla Block of the South in Colombia – a confederation of guerrilla and self-defense groups operating in southern Colombia in the early 1960s – were determined at an assembly facilitated by the Colombian Communist Party (Gott 1970, Radu and Tismaneanu 1990). The resolutions reached by the newly-cooperating groups were not codified in any written document, but could rather be identified through reading transcripts of the conference minutes.
2. Number of parties. I also collected data on the size of a cooperative arrangement’s membership. To show many VNAs were party to a given arrangement in a given year, I created an interval variable indicating the yearly number of VNAs participating. This variable is coded for both bilateral and multilateral arrangements, and provides a clear picture of how – numerically – these arrangements grow or shrink over time.\textsuperscript{29} For a more direct estimate of an arrangement’s ‘critical mass’ of participants, I also created a variable indicating the peak number of VNAs that have ever participated. Accordingly, while this number is adjusted upward as time goes on and (potentially) new members join, it is never adjusted downward if participants leave the arrangement.

2a. Accessions and/or splinter. For a more detailed look at how and why changes in the yearly number of participating VNAs may be observed, I coded two additional variables: one indicating whether the arrangement experienced an accession in a given year, and the other indicating whether the arrangement experienced a splinter in a given year. Both are measured as nominal variables with two categories each. The accession variable is equal to one if an additional VNA was added to the arrangement, and zero otherwise; the split variable is equal to one if a participating VNA left the arrangement, and zero otherwise.

2a.1. ID of accedent and/or splinter organization. This is a string variable indicating either the name of GID of the accedent or splinter organization.

\textsuperscript{29} This variable ranges from 2 to 20 participants. The largest multilateral arrangement in the dataset is the Colombian AUC, as observed in 2002 just before dissolution.
3. **Scope/Purpose.** This variable indicates the reason why the cooperation was begun, or the obligations of the participating VNAs. It is measured as a nominal variable with three categories. In these data, arrangements may have been formed for mainly military purposes (1), for mainly political/administrative purposes (2), or for a combination of purposes (3). An arrangement is observed as being for mainly military purposes when the primary goal of the cooperation is the sharing and/or amassing of military capabilities (i.e. impacting membership size, attack planning or execution, etc.). An arrangement is observed as being for mainly political or administrative purposes when the primary goal of the cooperation is the sharing and/or coordination of political capital (i.e. creating a unified bargaining unit to engage in negotiations with a shared enemy).
Chapter 3 Tables and Figures

Table 3.1. Inclusion rules for a Violent Non-State Actor (VNA).

<table>
<thead>
<tr>
<th>Inclusion rule</th>
<th>Rule excludes…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has a preference aggregation mechanism that provides strategic direction</td>
<td>Spontaneously violent mobs and crowds</td>
</tr>
<tr>
<td>Preference aggregation mechanism is independent of another organization</td>
<td>Organizations directed by political parties</td>
</tr>
<tr>
<td>Primary motivation is some political goal</td>
<td>Trafficking organizations, criminal gangs,</td>
</tr>
<tr>
<td></td>
<td>personal protection forces</td>
</tr>
<tr>
<td>Uses violence as primary bargaining tool</td>
<td>Most legal political parties</td>
</tr>
</tbody>
</table>
Chapter Four

EXPLAINING THE ONSET OF INTER-VNA COOPERATION

Introduction

In Chapter 2, I argued that the principal reason a VNA becomes involved in a cooperative arrangement is the group’s desire to increase its overall security. However, in order to determine which VNAs may contribute positively to others’ security, these organizations must also be assured that their potential partners can and will make credible commitments to the terms of any arrangement. Orientations that view VNAs as strictly weak actors offer generally dim prospects for inter-group cooperation, maintaining that these actors uniformly lack the material and reputational strength necessary for generating bargaining credibility. In the main theoretical section of this chapter, I argue that the desirability of an individual VNA likely varies within this class of actors, due to variation in their ability to credibly signal resolve and commitment to its strategic choices and constraints against pursuing unilateral defection or predatory behavior. Overall, I argue that by allowing for such variation, a clearer explanation of why some organizations are able to and do cooperate more often than others.

Extant literature on interstate cooperation often cites variation in ‘desirability’ of among potential partners as an important determinant of which states get involved in cooperation, and with which partners. In other words, this work has acknowledged that there may be significant differences in what states want from cooperation, as well as what they can offer to potential partners; to a large extent, these differences can be traced back to variation in certain state-level characteristics. For example, states that are better able to signal both an ability and commitment to
deter future threats and eliminate present threats for themselves and their allies have been found to
be more likely to form alliances in the first place (Fearon 1997; Morrow 1994). Additionally, power
differentials that separate great powers from mid- or minor-powers have been theorized to provide
different incentives for alliance formation, resulting in alliance patterns that differ for great powers
versus others in system-level realist arguments (see Levy 1981 or Walt 1985 on major power alliance
formation, and Handel 1981 on alliances involving weak states).

In this chapter I show how similar variation among VNAs in terms of their credibility – as
inferred from their power and/or social identity – impacts the likelihood of cooperation among
them. I examine this question can be examined in two related ways. In Part I, I ask: What
characteristics make individual organizations more or less likely to participate in a cooperative
arrangement? In Part II, I explore cooperation onset from the dyadic perspective, asking: What
combination of individual-level characteristics promotes cooperation for a given pair of VNAs? I
test the hypotheses presented in each part using versions of the VNA Characteristics and
Cooperation Dataset described in Chapter 3. The general findings of my statistical tests suggest that,
similar to states, both power and identity considerations impact VNAs’ decisions about whether and
with whom to cooperate. However, I find that identity-based indicators of credibility have a much
larger practical impact on the likelihood of cooperation onset for individual groups than do power-
based indicators.

**Part I: Predicting Cooperation Onset for Individual VNAs**

For a rational VNA, decisions about cooperation are governed by a desire to maximize the
benefits from collaboration while minimizing the associated costs. The first step in this process
involves identifying a cooperation partner that is likely both to make a valuable contribution to the
joint gains and to respect the terms of agreement such that both partners get to enjoy a mutually-acceptable division of those gains. An organization’s ‘desirability’ as a cooperation partner is likely to speak directly to the degree to which it can be expected to fulfill these criteria. Given this, a key part in the process of choosing a cooperation partner entails separating the desirables from the undesirables.

**Does credibility beget desirability?**

I argue that, from an individual VNA’s perspective, the most desirable partners are those other organizations that are able to send strong signals of credibility. These signals demonstrate and/or reinforce the organization’s commitment to being genuine in negotiations, constraints against pursuing the temptation to exploit partners, and/or both. Given that the process of cooperation can itself be costly, and that there does not exist any external mechanism that will either police the bargaining process or enforce any consolidated deals, the best defense against exploitation is to seek partners that, by their nature, are predisposed to play fairly.

Although these organizations likely have an interest in maximizing the size of the pot on the negotiating table, they also have to be concerned with how genuine others’ cooperative advances might be; as the size of the potential material benefit from cooperation grows, the potential material benefit from exploiting one’s partner in negotiations grows as well, since now there is simply more to be distributed between the partners. An additional concern regards the chances that each partner will follow through with its commitment: given the implications of cooperation under anarchy, trustworthiness – or at least signals of seriousness in negotiations – likely plays a large part in determining who even gets to sit at the negotiating table with others. All this suggests that, when evaluating others as potential cooperation partners, VNAs need to know not only what others have to offer to the joint gains, but also what each group’s incentives are to be insincere in negotiating
the terms of cooperation, or the relative strength of incentives to cooperate versus incentives to exploit. These two pieces of information allow VNAs to generate estimates about not only how worthwhile it may be to cooperate with a given organization, but also about how likely it is that the joint gains will actually be distributed as expected. In order to realize the joint gains from cooperation, a VNA must have some reasonable expectation that the terms of cooperation will be respected.

While credibility is not easily observable in itself, I argue that, as for states, it can be inferred given information about a VNA’s military power and social identity. In this way, if credibility begets desirability, desirability can be estimated from the same characteristics that imply credibility. Therefore, it is important to acknowledge variation among VNAs in terms of power and identity characteristics given that they can reveal critical information about 1) how much each VNA may need to realize the joint gains from respecting the negotiated terms of a cooperative arrangement, 2) how much each might be able to gain from exploiting others and reneging on promises made and 3) how likely each is to give in to the temptation to exploit.

**Determining desirability using power-based credibility**

Estimates of VNA power speak directly to concerns about how much an organization can contribute to the joint gains in terms of material capabilities. Conventional wisdom would suggest a monotonic and strictly increasing relationship between a VNA’s level of power and its desirability as a cooperation partner: given that cooperation is a strategic alternative that VNAs can choose for promoting and/or protecting their own security, these organizations should gravitate towards partners with lots of soldiers, money, materiel or other resources for fending off current threats and deterring future ones. However, power levels can also communicate information about the strength
of an organization’s incentives to try to get more than its fair share, or to exploit its partner instead of cooperating as planned. In other words, VNA power levels inform about not only a group’s need for cooperation, but also about its greed for getting as much as it can, however it can.

Contrary to the relationship between power and desirability suggested by conventional wisdom, I argue that there is likely an inverted U-shaped relationship between VNA power and an organization’s likelihood of participating in an inter-group cooperative arrangement. This is the case because VNAs at the power extremes – either of low or high power levels – are much more vulnerable to the temptation to exploit a partner than are VNAs with moderate levels of power. Another way to think of this dynamic is that VNAs with mid-levels of power are more constrained against actually exploiting another than are organizations with extreme levels of power. The ways in which variation in power levels might impact the desirability of an individual VNA are summarized in Table 4.1.

<INSERT FIGURE 4.1 ABOUT HERE>

<INSERT TABLE 4.1 ABOUT HERE>

**Power-based credibility for low-power VNAs.** The expectations that the naïve realist perspective (as discussed in Chapter 2) has for the likelihood of cooperation for all VNAs are actually quite appropriate for VNAs with low levels of power; see Row 4 of Table 4.1 for a summary. First, these organizations are likely to have very strong incentives for cooperating based on their lack of capabilities. Having few resources for deterring or defeating opponents through force, this organization is likely the first to be targeted by governments or other opponents seeking to eliminate threats. Inter-group cooperation would represent a prime opportunity for a low-power VNA to increase its capabilities without having to join sides with ‘enemy’ (i.e. state) actors. In sum,
because these organizations need power so much, any attempts that they make at cooperating with other VNAs should not generate immediate suspicion, based on power considerations alone. Therefore, such strong power-based incentives for cooperating should have a positive effect on the group’s desirability as a partner – since they need cooperation so much, they should also be likely to generally make only serious approaches. However, while low-power VNAs do have a lot to lose by not cooperating with others, they also have a lot to gain from exploiting others. Given that capabilities are so scarce for low-power VNAs, these organizations are likely to have an especially short shadow of the future. With such a low expectation for interacting with others in the future, these VNAs are especially vulnerable to the temptation for luring stronger organizations into cooperation, only to defect on the terms of the arrangement and make off with more than their share of the joint gains.

**Power-based credibility for high-power VNAs.** Row 2 of Table 4.1 summarizes the relationship between high levels of power and desirability for individual VNAs; in short, VNAs at the high-power extreme endure different problems than the low-power groups, but to similar outcomes. High-power VNAs should be expected to have fairly weak need-based incentives for cooperating, seeing as these organizations already have (relatively) ample material capabilities for fending off threats on their own. While additional capabilities might be useful, high-power organizations do not have as great a need for joint gains from cooperation as do low-power VNAs. In other words, having a high level of power resources likely does not drastically change the ability of these groups to impact the status quo through force. The high-power VNA’s weak power-based incentives for cooperating should have a negative effect on its desirability as a partner: because this organization needs power so little, there is little indication that their attempts to cooperate will be serious. However, high-power groups too are vulnerable to strong incentives for exploitation. While these VNAs may have the best chances of being militarily successful due to their capabilities,
they are still not the strongest actors in the system and would suffer to some extent from losing power to predatory low-power VNAs. One way for high-power groups to avoid this outcome is by using inter-group cooperation as a type of preemptive strategy: stronger VNAs can incapacitate weaker groups through drawing them into cooperation and then absconding with the majority of the weaker’s resources. Such strong incentives to exploit only exacerbate the negative effect of their weak power-based incentives for cooperation. Therefore, like the low-power groups, high-power VNAs can be expected to be somewhat attractive as potential cooperation partners, but not overwhelmingly so. In fact, given that the high-power groups actually have the capabilities to force the exploitation outcome, it is likely that these VNAs have even less credibility than the low-power groups.

**Power-based credibility for mid-power VNAs.** Although VNAs with moderate levels of power still have incentives to renege on agreements, they also have greater constraints against exploiting others than the groups at the power extremes. In a sense, VNAs with mid-levels of power may benefit simply from being less extreme than the others; the reasons for this are summarized in Row 3 of Table 4.1. Given their ability to fend off some threats, mid-power VNAs do have a shadow of the future that is longer than that of the low-power groups. This suggests a reasonable prospect of encountering jilted cooperation partners again in their future, and provides mid-power groups strong(er) constraints against choosing to ‘take the money and run.’ Additionally, though this need for joint gains is likely higher than that of the high-power VNAs, it is not as high as the need that low-power groups have for inter-group cooperation. While mid-power groups do have more capabilities than the low-power organizations, they do not have so much that they could be convinced to avoid even the potential to be exploited and simply refuse cooperation in the first place (as high-power VNAs may). The mid-power groups also have less ability to eliminate potential exploiters preemptively than do the high-power VNAs, and these organizations do not have enough
military capabilities that they would be easily able to force weaker groups to submit once they have consolidated a bargain. However, like the low-power groups, mid-power VNAs still have enough capabilities that to be exploited would be significantly damaging to their security. In a sense, being at a moderate level of power constrains these VNAs against pursuing the ‘benefits’ from exploitation that can be sought by the low- or high-power groups. This combination of constraints on mid-power VNAs suggests that their desirability should be higher than that of the high- or low-power groups, based on power considerations alone.

Determining desirable partners using identity-based credibility

Information about various VNA reputations allows groups to estimate each other’s resolve and/or commitment to its strategic choices, as well as its preferences for cooperation as a particular means of ensuring its own security. With this information, groups can infer how much others value their actions being taken seriously; VNAs interested in cultivating and/or maintaining a particular level of respect among their peers (and opponents even) may be particularly disposed to being genuine in their negotiations, or at least steadfast in the choices that they make. While the relationship between power levels and partner desirability is less straightforward than may have been expected, I contend that the relationship between having a positive reputation and desirability does likely correspond to very intuitive expectations. I argue that, as one would expect, there is a monotonic and strictly increasing relationship between having a reputation for being committed to one’s strategic choices and being desirable as a cooperation partner; a similar relationship should be observed between a reputation for being a good cooperation partner in the past and being desirable as a cooperation partner today. In short, the more an organization is able to demonstrate a commitment to its decisions, the better able it will be to reassure others that it is likely to respect the terms of any cooperative arrangement into which it enters.
Relationship between power and identity in determining desirability

In the above discussion, I have laid out separate arguments for an effect of power levels or reputational quality on the desirability of an individual VNA. However, it is not inconceivable that the expected effects of power vary as identities vary, and vice versa, such that one amplifies or depresses the expected estimate of overall desirability for a given organization.

Extant scholarship on terrorism and political violence has been ambiguous as to the relationship between these factors for VNAs. For example, while Kydd and Walter (2006) argue that, in order to be successful, terrorist groups must be able to demonstrate that they can punish their enemies through force, positive social signals only enter their equation in so far as they may highlight an ability to form broad operational networks, which serve mostly to improve capabilities. On the other hand, while Dix (1984) suggests that revolutionary organizations are unlikely to thrive without generating reputations for fostering inter-group trust and engendering coalition-building, he makes no mention of how power could be used as a means for promoting certain cooperative behaviors. However, we can turn to the words of VNAs themselves to see that the accumulation of power and the development of a communitarian spirit may not be entirely separable goals. In some ways, the overall security of these organizations may be predicated on their ability to demonstrate optimal levels of both. For example, over time VNA group leaders, (former) members and their opponents have stressed in manifestoes and other public statements, as well as in writings and teachings about the optimal development of VNA organizations and campaigns, that neither political nor military objectives can be reached by individual organizations that are completely
isolated from others operating in the same environment.\textsuperscript{30} Some VNA leaders are often acutely aware that cohesiveness across organizations (not just within) is imperative not only to the success of broader objectives but to maximizing individual organizations’ potential for success.\textsuperscript{31}

If power and reputations do interact to determine a VNA’s desirability as a cooperation partner, intuition suggests that groups that are able to signal resistance to any incentives to exploit should be more likely to become involved in a cooperative arrangement. In other words, the more trustworthy a VNA looks, the more desirable it should be, regardless of its power level. Such an interactive effect would suggest that low-power groups could counter fears of their greed with credibility derived from their past behavior and/or social affinities, the high-power groups could dampen concerns about predation and mid-power groups can demonstrate even stronger constraints against exploitation.

This dynamic would reveal the fairly unsurprising expectation that the least attractive cooperation partners should be those VNAs that both have low power levels and weak or unpopular social identifications. However, what is interesting about this expectation is that it suggests that those VNAs that need cooperation the most – with few resources for engaging in direct or indirect coercion – they are also the least likely to be able to achieve it. Their overall lack of credibility (due in part to an overall lack of resources) only reinforces low power levels by cutting off opportunities for them to improve their conditions through cooperation. In contrast, VNAs with mid levels of both power and an ability to send strong signals of trustworthiness should be the most attractive potential partners for other groups, as they are not only plausibly constrained against giving in to

\textsuperscript{30} For example, when the FPL and RN in El Salvador (along with the Communist Party of El Salvador) introduced the first stages of explicit cooperation among the Salvadoran revolutionary organizations (the \textit{Coordinadora Politico-Militar} [CPM]) in 1980, they clearly and openly stated that such cooperation was “an urgent necessity” and “essential for the liberation of the [Salvadoran people]” (CPM 1980.)

\textsuperscript{31} For example, this was a clear sentiment expressed in the 1982 URNG Unity Statement, as well as by Carlos Marighella in the \textit{Minimanual of the Urban Guerrilla}. 


exploitative temptations, but also are able to make a reasonable contribution to the joint gains and reinforce their commitment to adhering to their promises.

**Hypotheses**

These relationships that I have described between VNA power, VNA reputations and the desirability of these organizations as cooperation partners can be restated in the form of testable hypotheses, logically relating these characteristics to a group’s likelihood of beginning a cooperative arrangement with another violent organization. Specifically, to allow testing for independent effects of power and reputation on the likelihood of cooperation for individual VNAs, I hypothesize that:

**H1:** A VNA with a mid-level of power is more likely to be involved in a cooperative arrangement than are VNAs with either low or high levels of power; and

**H2:** A VNA with a generally good reputation is more likely to be involved in a cooperative arrangement than are VNAs with a generally bad reputation.

Empirical evidence of contingent effects for mid-levels of power and good reputations can be discovered by testing the following hypotheses:

**H3:** A VNA with both a mid-level of power and a good reputation is more likely to be involved in a cooperative arrangement than are VNAs of any other power and reputation combination; and

**H4:** A VNA with both a low level of power and a bad reputation are less likely to be involved in a cooperative arrangement than are VNAs of any other power and reputation combination.
Research Design

Dependent Variable

In each model to follow, the dependent variable is coded as a binary variable equal to one for each VNA that had begun at least one cooperative arrangement with at least one other violent organization that appears in the data, for each given year. A cooperative arrangement among VNAs is defined in the Cooperation Data as any formal or informal arrangement that governs the management or execution of some level of strategic coordination and/or tactical collaboration between at least two VNAs, and has been collectively decided upon by the cooperating parties. Examples of strategic coordination include intelligence-sharing and the joint planning of attacks; examples of tactical collaboration include sharing weapons or propaganda materials and the joint execution of attacks.

While cooperative arrangements among VNAs do exist, they appear to be relatively rare: there are only 241 onset-years represented in these data. In other words, inter-group cooperation among Latin American VNAs only occurred about 15 percent of the time.

Independent Variables

The independent variables for these analyses represent the power levels and reputations available to each VNA, over time.

a. VNA power

As previously discussed, a VNA’s power characteristics indicate its ability to conduct military operations. I use active membership size to capture a VNA’s absolute military capabilities. Active

32 Descriptive statistics for the dependent, independent, and control variables are available in Appendix B; more detailed information about the data structure and coding rules is available in Chapter 3.
membership size is coded as a binary variable equal to zero if the VNA had 450 or fewer members in a given year (meaning that the organization was relatively small), and equal to one if the VNA has at least 451 members in a given year (meaning that the organization was relatively large). I use presence of a tactical specialty to capture a VNA’s relative power resources, or whether the organization has any comparative advantage among VNAs with respect to the use of force. Presence of a tactical specialty is coded as a binary variable equal to one if the VNA had demonstrated an aptitude for a particular type of violence in a given year, and equal to zero otherwise.

I measure each VNA’s overall power level by combining its values on the membership variable and the expertise variable for each observation year. Therefore, overall power is coded as an ordinal variable equal to two if the VNA has a high power level, meaning that it has both a large active membership and a tactical expertise; equal to one if the VNA has a mid power level, meaning that it has either a large active membership or a tactical expertise; and equal to zero if the VNA has a low power level, meaning that it has both a small active membership and no tactical expertise. From this ordinal variable I generated a set of three binary variables indicating a VNA’s placement in either the high power category, the mid-level power category, or the low power category.

b. VNA Reputation

A VNA’s reputation speaks to its ability to cultivate trust and/or demonstrate a commitment to keeping its promises. I measure the group’s overall reputation as a function of two types of specific reputations that organizations can cultivate. First, I operationalize the group’s reputation for resolve as the type of violence it employs. Different forms of violence can be used to signal how committed a VNA is to using violent means for achieving its aims; in particular, violence targeted

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33 The model results do not change significantly if I measure membership size using a more detailed, five-category variable – where size can vary among ‘very small’, ‘small’, ‘mid-sized’, ‘large’ or ‘very large’ – instead of the two-category ‘small-large’ variable.
against individuals seems to be an important tactic VNAs can use to make this point (see Pape 2003 or de la Calle and Sanchez-Cuenca 2006 for examples). An organization is considered to have a reputation for resolve if it exhibits a maximum commitment to violence, having employed violence targeted against individuals. Therefore, the reputation for resolve variable is coded as a binary variable equal to one if the VNA engaged in violence against individuals in a given year (indicating a positive reputation for resolve), and equal to zero otherwise.

I operationalize a VNA’s reputation for cooperation as a function of its prior history of participation in and/or support for inter-group cooperation. An organization have up to three behavioral histories: 1) as being heavily invested in favor of cooperation, having expressed support for cooperation among VNAs and having actually formed a cooperative arrangement with another VNA in the past; 2) as being somewhat invested in favor of cooperation, having only actually formed a cooperative arrangement with another VNA in the past; or 3) as being lightly invested in favor of cooperation, having only expressed support for cooperation among VNAs in the past. If a VNA either has no cooperation history or has exhibited some defection behavior, it is coded as having no investment in cooperation.\(^{34}\) An organization is considered to have a positive reputation for cooperation if it exhibits a heavy investment in cooperation. Therefore, the reputation for cooperation variable is coded as a binary variable equal to one if the VNA exhibited positive reputation for cooperation in a given year (through a heavy investment in cooperative strategies), and equal to zero otherwise.

I measure each VNA’s overall reputation by combining its values on the resolve, cooperation history and defection history variables for each observation year. Therefore, overall reputation is coded as an ordinal variable equal to two if the VNA has a good overall reputation, meaning that it

\[^{34}\text{Defection behaviors are those in which a VNA either actually reneges on the terms of a previously-consolidated agreement and/or publicly denounces inter-group cooperation as a strategy.}\]
has positive reputations for both resolve and cooperation (having both engaged in attacks against individuals and having been heavily invested in cooperation); equal to one if the VNA has a ‘fair’ overall reputation, meaning that it has either a positive reputation for resolve or cooperation; and equal to zero if the VNA has a bad overall reputation – neither having engaged in attacks against individuals nor been heavily invested in cooperation. From this variable I generated a set of three binary variables indicating a VNA’s placement in either the good reputation category, the fair reputation category, or the bad reputation category.\(^{35}\)

<INSERT TABLE 4.2 ABOUT HERE.>

**Controls**

The control variables included in these models represent the rival explanations for cooperation discussed in Chapter 2. *Financial independence* is a binary variable equal to one if the VNA relies primarily on self-directed activities to generate funds for operations in a given year, and equal to zero if the VNA relies primarily on some combination of self-directed activities and external sources. Self-directed activities include fundraising done by affiliated front organizations, extortion, and/or bank robberies. External sources include state sponsors, support through cooperation with other VNAs and/or mercenary activities. *Organization age* is a count variable indicating the number of consecutive years that a VNA existed, for a given year. I use variables indicating sub-regional neighborhoods to capture *location*. There are five sub-regional neighborhoods to which a VNA can belong, according to its home territory: East Central South America; Central America; the Caribbean Basin; the Andean region of South America; or the Southern Cone region of South America.\(^{36}\) Each

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\(^{35}\) I provide a detailed discussion of the relationship between the components of the power and reputation composite variables in Appendix E.

\(^{36}\) See Table B.1 for the distribution of VNAs and VNA-years across subregions, and a listing of which countries correspond to which subregion.
of these neighborhoods is coded as a binary variable equal to one if the VNA had its home territory in that region in a given year, and equal to zero otherwise.

**Testing strategy**

I use standard logit regression for testing my hypotheses, due the dependent variable being binary (0/1). While all of the variables included do vary over time, most are rather slow-moving. If these variables were completely fixed in repeated samples, then a fixed-effects logit would have been appropriate for ignoring any effects that are not the result of a random data generating process. However, since these variables are only slow-moving and not completely fixed, I simply cluster each model on the individual organization. This allows for any almost-fixed effects to be accounted for as coming from a known distribution specific to the individual organization. In other words, clustering on the organization allows each group to have the same intercept in repeated samples, but a different intercept than is estimated for any other VNA.

**Empirical Results**

In general, I find mixed empirical support for my hypotheses relating a VNA’s overall power and reputation to its likelihood of starting up a cooperative arrangement with another group in a given year. Before discussing the results of the logit models, a quick look at the distribution of onset-years among the VNAs in my sample suggests that my hypotheses about the independent effects of power and identity characteristics are reasonably supported by these data. Table 4.3 shows a summary of the percentage of onset-years that are attributable to each combination of power and

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37 I also ran all models using rare events logit in order to adjust the standard errors for the large number of zeroes observed on the dependent variable (given the relative rarity with which these organizations initiate cooperation with others). However, I found little or no difference among the estimates produced by a standard logit versus rare events logit estimation, and so I report only the results of the former.
reputation in these data. By comparing the column totals in this table, it is clear that, across reputations, VNAs with good overall reputations began cooperative arrangements with others more often than VNAs of any other reputation, and regardless of power level. Additionally, out of the good-reputation groups, those that cooperated with others most often also were of a mid-power level. Although across reputations VNAs with high levels of power began cooperation with others more often than did groups of other power levels, this is not a consistent pattern. In fact, cooperation onset was more frequent for high-power groups only given overall reputations that were neither good nor bad.

The results of a series of logit models provide consistent substantive support for all four of my hypotheses; however, only Hypothesis 2 receives statistical support in these data. Table 4.4 includes the results of models testing for independent, ceteris paribus effects of power and reputation on a VNA’s likelihood of beginning cooperation with another. The results of Models 1, 2 and 3 show that the good-reputation variable is consistently positive and statistically significant. This suggests that VNAs that have exhibited both resolve and an affinity for cooperative strategies are more likely to begin cooperation with another group than are organizations of any other reputation.

While the results of Models 1 and 3 seem to strongly support Hypothesis 1 – the coefficient on the power extreme variable is consistently negative and statistically significant –, the results of Model 2 show that, when the power extremes are considered separately, mid-power VNAs are not

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38 The percentage listed in each cell is the percent of onset years attributable to VNAs with that particular combination of power and identity characteristics.

39 Statistical significance is determined using robust standard errors; all models were clustered on the individual organization.
statistically distinguishable from high-power groups with respect to the likelihood of cooperation onset. However the results of Model 2 also show that the low-power variable is negative and highly statistically significant. Overall, these results do not support Hypothesis 1. They do, however, suggest that the negative effect of being at a power extreme (shown in Models 1 and 3) is driven by the strongly negative relationship between low levels of organizational power and the likelihood of cooperation onset. Hypothesis 2 receives clear and robust support from the results of Models 1, 2, and 3: the good-reputation variable is consistently positive and statistically significant. This suggests that VNAs that have exhibited both resolve and an affinity for cooperative strategies are more likely to begin cooperation with another group than are organizations with any other reputation.

Table 4.5 includes the results of models testing for a contingent relationship between power and reputation. Surprisingly, I find no statistical evidence of a contingent relationship between these two variables. The specification of Model 4 allows for an explicit test of Hypothesis 3 (that a VNA with a mid-level of power and a good overall reputation is more likely to form a cooperative arrangement with any other VNA). While the effect of an interaction between having a good overall reputation and a mid-level of power is in the expected direction (positive), the coefficient is not statistically significant; in fact, the standard error associated with this coefficient (0.347) is almost as large as the coefficient itself (0.384). This lack of statistical support for Hypothesis 3 suggests that the positive effects of good reputations and moderate power levels are as likely to be independent as they are to be conditional. Similarly, the results of Model 5 show that VNAs of both low power and bad reputation are substantively less likely to start cooperation with other violent organizations. However, a lack of statistical significance associated with that effect suggests that Hypothesis 4 is also unsupported by these data, and that low-power, low-repute VNAs are no more disadvantaged
than are other low-power VNAs when it comes to their chances of forming a cooperative arrangement with others.  

Finally, all of the control variables presented very stable relationships to the dependent variable. The results across models indicate that as VNAs age, they become less likely to be involved in a cooperative arrangement; financially-independent VNAs are less likely to cooperate with others than are dependent organizations; and there are some region-specific factors that impact the likelihood of cooperation onset for these groups.

<INSERT TABLE 4.4 ABOUT HERE.>

<INSERT TABLE 4.5 ABOUT HERE.>

**Implications and Discussion**

Since relative impact is difficult to infer from simply comparing the size of the logit coefficients, I report the substantive implications of these results by examining the odds ratios associated with the estimated effects; these are shown in Table 4.6. Odds ratios that are less than 1 suggest a lower odds of cooperation for the treatment group (or the VNAs in the ‘1’ category for each dummy variable) than for the control group (or the VNAs in the ‘0’ category for each dummy variable).

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40 In any model with a two-way interaction term, Stata 9 reports separate standard errors for the partial effects of the two constitutive terms and the interaction term to determine independent statistical significance. However, Brambor, Clark, and Golder (BCG) (2006) point out that, when estimating the statistical significance of a multiplicative interaction term, it is more appropriate to use the standard error of the marginal effect of X on Y given the interaction than the standard error of the partial effect of X on Y given the interaction. However, Brambor, Clark, and Golder (BCG) (2006) point out that, when estimating the statistical significance of a multiplicative interaction term, it is more appropriate to use the standard error of the marginal effect of X on Y given the interaction than the standard error of the partial effect of X on Y given the interaction. Given this, based on the results of Model 4 I calculated the standard error of dy/dx using the formula given by BCG: SE = \( \sqrt{\text{var}(\beta_{\text{midpower}}) + (1) \times \text{var}(\beta_{\text{midpower*goodrep}}) + [2 \times \text{cov}(\beta_{\text{midpower}}, \beta_{\text{midpower*goodrep}})]} \). The variance-covariance matrix associated with the results of Model 4 showed that the variance of \( \beta_{\text{midpower}} \) was 0.037, the variance of \( \beta_{\text{midpower*goodrep}} \) was 0.15 and the covariance between them was -0.076. Plugging these values into the SE formula provided a standard error of 0.333. Dividing the full effect of midpower*goodrep (0.239+0.384 = 0.623) by the new standard error produces a z-score of 1.87, indicating that the coefficient on the interaction term is (still) not statistically significant.
variable). Odds ratios that are greater than one suggest higher odds of cooperation for the treatment group than for the control group. I use them here to show how the odds of cooperation onset for VNAs with different combinations of power and reputation vary over or under the odds of cooperation onset for the most-desirable VNAs, or those with a moderate level of power or a good reputation.41

Based on the results from Model 2, the odds of cooperation onset for a low-power VNA are about 45% lower than the same odds for a mid-power group. Additionally, variation in reputation has an impact on VNA cooperation which dwarfs that of power levels. Based on the results from Model 1, we see that if a VNA were to move from having either a bad or fair reputation to having a good reputation, its odds of beginning cooperation with another organization would increase by a factor of about 2.8.

<INSERT TABLE 4.6 ABOUT HERE.>

This extremely large practical impact of reputation can also be easily seen by examining changes in in-sample predicted probabilities. Table 4.7 includes the predicted probabilities of cooperation onset for VNAs with different combinations of power and reputation. According to these statistics, a VNA with a bad reputation can increase its predicted probability of cooperation by 3.3 percentage points if it moves from having a low power level to a high power level; in contrast, a low-power VNA can increase its predicted probability of cooperation by 8.25 percentage points if it moves from having a bad reputation to a good reputation. These results of this table are presented graphically in Figure 4.3; here we see clearly that the VNA ‘types’ with the highest predicted probabilities of cooperation onset are those with good reputations.

41 Given that I found no statistically significant effect for either interaction between power and identity characteristics, I do not discuss the substantive effects of those variables here.
These findings corroborate my main argument that accounting for variation in the power and reputation of individual organizations allows us to understand better how and why some VNAs are able to consolidate cooperation under anarchy. The desirability of individual VNAs as cooperation partners comes both from being constrained in one’s ability to wantonly take out potential threats (i.e. through not having an abundance of military capabilities) and from exhibiting a commitment to go to extreme lengths to make the most of one’s strategic choices. Perhaps accordingly, it appears that for individual VNAs, a history of being committed to its strategic choices is rewarded with more opportunities to bolster such a reputation.

Although the lack of a contingent effect was surprising, there are some plausible explanations for this. On one hand, it is possible that reputations provide more reliable information about how likely an organization is to resist the temptation to exploit in negotiations simply because it is based on experience; this suggests that VNAs do not forget what others may have done in the past, and that reputations actually are as sticky as my concept assumes. Alternatively, it may be that since reputations for resolve and commitment are generally more readily observable than are the components of military power, VNAs tend to, on average, have more information about identities than about power. Information about reputations is designed for consumption, at least by other VNAs: joint statements, manifestos exalting inter-group cooperation and activities designed to communicate both commitment to communities of violent resisters and resolve against enemies are much easier to find often because they are meant to be found (again, at least by other VNAs).

I conclude that, generally speaking, identity characteristics have a much larger practical impact on the likelihood of cooperation onset for individual groups than a strictly power-based, or
realism-esque, orientation to understanding these organizations’ incentives to cooperate would have predicted. Though I find that variation in the power and reputation of individual VNAs does play a significant role in explaining and predicting which organizations are more likely to form inter-group cooperative arrangements than others, these findings do not tell us with which others they will cooperate. In other words, while I have demonstrated how these variables impact the likelihood of cooperation for an individual organization, with these findings alone I am not yet able to explain what accounts for variation in which groups come together to constitute a cooperating VNA pair.

Part II: Predicting Dyadic Cooperation Onset

While the discussion in Part I outlines why some VNAs are more likely to cooperate in general, it says nothing about the strategic interaction between two potential partners. In other words, the conclusions from Part I leave out important pair-wise dynamics that influence which groups are likely to cooperate with each other. It is possible that while individual power and identity profiles do impact the likelihood of cooperation with any other organization, the benefits of cooperation may vary across distinct pairings. If this is true, we should expect that a group’s chances of cooperation onset will be determined not just by what each individual VNA can offer to others in general, but rather what each can offer in the context of different partners. Therefore, I now turn to dyadic explanations for inter-VNA cooperation, again using extant arguments about the pair-based correlates of interstate cooperation to provide some theoretical guidance.

Identifying Compatible Partners

Although some characteristics may make certain VNAs desirable as cooperation partners in a general sense, that desirability may be contingent upon the specific needs of distinct partner
alternatives. This suggests that not only does a VNA need to be overall desirable in order to become involved in a cooperative arrangement, but it also needs to be compatible with some other violent organization. Anessa Kimball (2006) makes a similar point when discussing the dynamics of partner choice with respect to interstate alliances. She notes that “not all states are compatible as potential partners since characteristics of each state determine which other states would make the most compatible potential partners” (2006: pp. 6-7). She further argues that “[T]he likelihood any one dyad is [sic] potential compatible alliance partners consequentially influences the chances an alliance is formed within a dyad. An important implication of this claim is states will have different sets of compatible alliance partners depending upon the factors motivating a state’s need for alliance” (2006: p. 7).\(^42\) This concept of compatibility quite aptly characterizes the relationship of two VNAs to each other.

Although I have argued that all cooperative arrangements are meant to promote and/or protect a VNA’s security, there are multiple ways by which that can be done. Particularly, VNAs can focus on maximizing the size of the joint gains from cooperation, on maximizing their chances of realizing the joint gains (or minimizing chances of being exploited) or some combination of the two. In extant international relations theory, all three of these alternatives have been advanced as explanations for alignment patterns among states in the international system. Like arguments about the monadic determinants of cooperation onset, these focus on explaining cooperation in terms of power considerations or identity considerations.

**Power-based arguments about compatibility**

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\(^{42}\) Kimball makes the additional observation that if leaders’ demand for particular benefits from alliances varies over time, the set of compatible partners a state might consider, and the definition of compatibility, will vary as well (2006: p. 10).
Power-based explanations of interstate alliance formation again ascribe overwhelming influence to difference and/or similarity among (potential) alliance partners, with respect to military capabilities. The most prevalent power-based explanations for alignment patterns in international relations come presumably from the balance of power tradition. Balance of power theory offers two competing arguments about how power distributions in the international system help to determine patterns of interstate alliance formation. On one hand, while some have argued that states are likely to ally with each other against threats to their security, or ‘balance’, others contend that ‘bandwagoning,’ or allying with the source of the threat, is more likely (Walt 1985, Snyder 1991). In the balance of power framework, a state’s optimal alliance partner is partly determined by a desire for “capability aggregation,” or gathering up as much power as possible for defending against enemy threats (Siverson and Tennefoss 1984, Morrow 1991, Morrow 1994).

When considering the alliance behaviors of weak states in particular, scholars have determined that alliances among weak powers should be relatively unlikely. This argument has both offensive and defensive justifications. For example, Rothstein (1968) explains that a weak state should prefer bandwagoning to balancing because cooperation with a stronger power is more likely to result in a larger pool of joint gains than would cooperation with a similarly weak power. From this perspective, the ‘mixed alliance’ is so attractive to weak powers because it offers the largest boon to their deficient offensive capabilities. On the other hand, Walt (1985) argues that weak powers should be especially likely to form alliances with stronger states “both because they are more vulnerable to pressure and because the capabilities they can add to [any potential partner] are unlikely to make much difference” (17). In this view, power-asymmetric alliances provide weak powers with an increase in defensive capabilities, or the ability to protect themselves against the undue influence of threatening powers. Such extant arguments about the power-based correlates of alliance formation for state dyads suggest that for weak powers to be able to form alliances amongst
themselves, all other opportunities for allying with stronger powers should have been exhausted first. Although the balance of power perspective expects that alliances among weak powers should be relatively unlikely, its proponents acknowledge that some alliance should be preferred to no alliance at all.

If we were to stick with the conventional perspective that treats VNAs as strictly weak powers, an extension of these capability aggregation arguments to violent organizations would suggest that VNAs should not make particularly compatible partners. This is because all VNAs should be expected to have the least to offer each other in terms of capabilities. State-based arguments anticipate that when cooperation does occur among weak states, it is among the weakest powers, or those least able to attract a stronger partner. In instances where cooperation does emerge among VNAs then, it should be only because there was little opportunity for these actors to align themselves with a stronger power in the international system (which would presumably be a state). However, if the universe of potential alliance partners is restricted to other VNAs only, and power differentials among them are allowed, a different pattern emerges.

If the realist capability aggregation model is applicable to the emergence of cooperation among VNAs as well, in general we should observe fewer cooperative arrangements among power-symmetric VNA dyads than among power-asymmetric pairs. However, I have argued that when evaluating potential alliance partners for their compatibility, VNAs will gravitate toward those others that not only are materially equipped to fulfill their alliance obligations but also are believed not to be motivated by a desire to respect the terms of the alliance agreement, rather than to overtake their partners. Given that both high-power and low-power organizations are quite vulnerable to predatory temptations, an extreme amount of risk has to be assumed for a power-asymmetric dyad to form a cooperative arrangement. This suggests that VNAs should prefer to cooperate with
others that have roughly similar capability levels, yielding a prediction opposite of what would be expected given extant state-based explanations for alignment patterns among weak actors.

We can also make predictions about which power-symmetric dyads are more likely to cooperate, given the relationship between power and identity characteristics discussed in Part I. Any rational cost-minimizing VNA should prefer to cooperate with an organization that is constrained against exploitation, making it more credible in negotiations. As I have argued that VNAs with moderate amounts of power are more likely to be viewed as credible partners than groups of other power levels, common sense suggests that most power-symmetric cooperating dyads should be composed of two mid-power groups. In the instances where power-asymmetric dyads form cooperative arrangements, this argument suggests that at least one member of the dyad should be from the mid-power category.

**Identity-based arguments about compatibility**

Discussions of cooperation that focus on identity tend to predict that symmetries, rather than asymmetries, are what underpin the emergence of cooperation under anarchy. For example, in his arguments highlighting the significance of ‘identification’ in promoting mutual cooperation, Axelrod (1984) notes that as two actors increase their information about each others’ intentions and likely bargaining strategies, they become more likely to consolidate cooperation among themselves. Intuitively, it seems that an actor wishing to maximize the information it has about how each potential partner may behave in negotiations would prefer to choose partners with characteristics similar to its own; two similar organizations likely expect to have more information about each other’s probable strategies or incentives for and against exploitation, simply because they are able to recognize those tendencies in themselves.
Elsewhere, others have extended this point to suggest that the sharing of characteristics does an especially good job of promoting mutual identification and so increases the likelihood of cooperative outcomes in interstate bargains. For example, cultural or normative explanations underlying the dyadic democratic peace proposition hold that the existence of shared norms among democracies reinforces each state’s perception that the other prefers non-violent conflict resolution (Maoz and Russett 1993). Another familiar explanation maintains that the institutional transparency shared by two democracies increases the likelihood both states will recognize each other’s constraints against conflict, and so increase the likelihood of peace between them (Bueno de Mesquita and Lalman 1992, Souva 2004). In general, explanations like these suggest that similarities in the information shared among and about actors increase the likelihood of cooperation for any given pair.

The sharing of an ideological orientation has been argued to impact the likelihood of cooperation among actors by scholars of not only interstate relations, but also of group sociology and administrative science (Schermerhorn 1975, Wendt 1992, Adler and Barnett 1996, Keck and Sikkink 1998). Shared ideologies point to shared attitudes and values about group behavior. To the extent that these shared values help to shape a conception of a common struggle or fate, they help to form a basis for agreement that might be overshadowed by more individualistic concerns (Benson 1975).

I argue that identity symmetries like these should have the same effect on the likelihood of cooperation for a given pair of VNAs. To the extent that behavioral reputations signal information related to the credibility of a group in negotiations, I expect that VNAs will more often cooperate with others whose intentions they can easily recognize. Additionally, given my argument that the better a VNA’s reputation gets, the more credible it becomes, it also seems likely that among those

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43 However, others have argued that ideological divisions can often mimic other, more important distinctions that determine alignment patterns (i.e. Lai and Reiter 2000 on ideology and power distributions during the Cold War).
VNAs with the same behavioral reputation, those with the best reputations should cooperate with each other more often than other pairs. Similarly, estimates of credibility are likely to be inflated among VNAs that share the same ideology, to the extent that it serves as a means for social identification. In other words, a shared sense of obligation and mutual understanding of motivating goals and principles should all also increase the chances that a given pair of VNAs will develop a cooperative arrangement between themselves.

**Relationship between power and identity (a)symmetries and compatibility**

The previous discussion has been presented with a *ceteris paribus* flavor; the arguments thus far have focused on the expected effects of power symmetry or asymmetry assuming that identity characteristics are held constant, and vice versa. However, it is possible that the mix of power and identity that individual organizations have plays some role in determining which groups cooperate with each other. Depending on the way in which these groups would prefer to preserve their security, VNAs may prefer to trade off between these two resources rather than to focus their energies on cultivating only one.

A prominent example of this type of trade-off behavior is highlighted by Morrow (1994), in his discussion of security-autonomy tradeoffs in interstate alliance formation. Morrow contends that states are fundamentally interested in some combination of autonomy—an ability to change elements of the status quo that it does not like—and security—an ability to preserve elements of the status quo that it does like (907-909). He argues that alliance-seeking states will generally choose partners on the basis of how much security or autonomy they can provide, and corresponding to which resource will provide the most utility to the seeking state (911-912).

While tradeoff arguments could lead to interesting predictions about which specific combinations of power and identity should lead to the emergence of cooperation within a given
VNA pair, the arguments are predicated on the two resources at stake being somewhat substitutable. For example, Morrow’s argument hinges on there being a one-to-one relationship between units of security and units of autonomy: an alliance configuration that reduces a state’s security will always increase its autonomy (and vice versa). In order to specify a true tradeoff model for VNAs, I would need some idea of how valuable material capital is relative to social capital for these organizations. However, the value of power characteristics relative to identity characteristics for VNAs is unclear. If power and identity characteristics displayed the same directional or substantive relationship to a VNA’s chances of cooperating, then it would be reasonable to explore the conditions under which one might be forgone for the other. However, as I have found no clear statistical evidence that power and identity work together as a ‘resource bundle’ in determining the likelihood of cooperation onset for individual VNAs, I hesitate to advance specific hypotheses about how substitutability or complementarity between power and identity characteristics might impact partner choice.

**Hypotheses**

These competing explanations can be restated as a series of testable hypotheses, relating the symmetry or asymmetry in VNA power or identity to the likelihood that a given pair of VNAs will form a cooperative arrangement.

Specifically, I hypothesize that:

H5: Power symmetries increase the likelihood of cooperation among VNAs; and

H6: Identity symmetries increase the likelihood of cooperation among two VNAs.

To test the expectation that there is a difference among power-symmetric dyads in terms of which pairs should cooperate more often, I hypothesize that:
H7: Pairs of mid-power VNAs should cooperate amongst themselves more often than other types of power-symmetric dyads.

To test the expectation that there is a difference among identity-symmetric dyads in terms of which pairs should cooperate more often, I hypothesis that:

H8: Pairs of good-reputation VNAs should cooperate amongst themselves more often than other reputation-symmetric dyads.

Research Design

To test these hypotheses, I use a version of the Cooperation Data in which the VNA dyad-year – rather than the organization-year – is the unit of analysis. The dyads in these data represent all possible dyadic pairings of the 177 individual VNAs recorded in the data used for the tests in Part I of this chapter. These data are also organized as a cross-sectional–time-series: all of the variables indicate similarity or difference among the two dyad partners for each year of the dyad’s existence. The process of pairing these organizations resulted in 31,430 non-directed dyad-years, which correspond to 5,775 individual dyads.

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44 Descriptive statistics for the dependent, independent and control variables, as well as more detailed information about the data structure and coding rules, are available in Chapter 3.
45 I use non-directed dyads because of a lack of information about initiation. Without data on which VNA proposed cooperation or opened negotiations, I am able only to explore what conditions make two organizations more or less likely to cooperate. Since there is no directionality implied in the hypothesized interaction between the two groups, a non-directed dyadic setup is commonly accepted as appropriate (see Bennett and Stam 2000 on research design and for testing monadic versus dyadic arguments).
46 I constructed the dyads without regard to home territory in order to avoid imposing any ex ante geographic restrictions on which VNAs could interact. This allows me greater leeway for explicitly testing for ‘neighborhood effects’, rather than assuming that they are present with the data organization.
Dependent variable

The dependent variable is a binary variable equal to one if the dyad members began a cooperative arrangement amongst themselves in a given year, and equal to zero otherwise. In these data, there are 519 documented onset-years; in other words, bilateral cooperative arrangements were begun among Latin American VNAs about 2 percent of the time. This unsurprisingly backs up the claim that cooperation among these actors should be a rare event in the international system.

Independent variables

The independent variables indicate the presence of power and/or identity symmetries for the two dyad members.

I created the power symmetry variable by comparing the individual, overall power levels of the two dyad partners. Power level symmetry is coded as a binary variable equal to one if the dyad partners are of the same power level (both high, both mid-level or both low), and equal to zero if the partners are of different power levels. Three types of symmetry are combined in the ‘one’ category for this variable: it includes dyads where both VNAs have a high power level, as well as dyads where both VNAs have a low power level. In order to separate these two types, I also created three binary variables indicating whether the dyad includes two high-power groups (high-power symmetry), two mid-power groups (mid-power symmetry), or two low-power groups (low-power symmetry). Each of these variables is equal to one when the dyad falls into that category, and equal to zero otherwise.

I created two identity symmetry variables, by comparing (1) the ideological affiliations of the two partners and (2) the individual reputations of the two dyad partners. Identity similarity with respect to ideology is measured using a nominal variable equal to one if both groups share the same stated ideology, and equal to zero otherwise. Identity symmetry with respect to reputation is coded
as a binary variable equal to one if the dyad partners share the same reputations (both good, both fair or both bad), and equal to zero if the partners have different reputations. Again, three types of symmetry are combined in the ‘one’ category for this variable: it includes dyads where both VNAs have a good reputation, dyads where both VNAs have a fair reputation, and dyads where both have bad reputations. In order to separate these three types, I also created three binary variables indicating whether the dyad is made of two good-reputation groups (good-reputation symmetry), two fair-reputation groups (fair-reputation symmetry), or two bad-reputation groups (bad-reputation symmetry). Each of these variables is equal to one when the dyad falls into that category, and equal to zero otherwise.

Controls

The controls in these models represent dyadic versions of the alternative explanations for cooperation onset included in the models of Part I. Similarity in financial independence is coded as an ordinal variable equal to two if the dyad partners both rely primarily on self-directed activities for generating funds for operations in a given year, equal to one if both rely primarily on some combination of self-directed activities and external sources, and equal to zero if the partners have different primary modes of generating funds.47 I use two controls for location in the dyadic analyses. First, proximity is coded as a binary variable equal to one if the dyad partners’ home territories are in the same sub-regional neighborhood in a given year, and equal to zero otherwise.48 Secondly, I use five binary variables indicating mutual residence in one of the five different sub-regions to capture specific location similarity. For example, if both VNAs in a dyad are located in the East Central South

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47 I code the variable this way in order to distinguish two types of similar dyads: 1) those in which both members are financially independent and 2) those dyads in which both members are financially dependent.

48 This variable is a reasonable substitute for others that would measure proximity by distance apart, since the exact coordinates of VNAs headquarters are both notoriously tricky to determine and often somewhat uninformative given the possibility of rapidly shifting battle fronts, soldiers, and leaders.
America neighborhood, the ‘East Central sub-region’ variable is equal to one (and equal to zero otherwise). *Average dyad age* is calculated as the simple mathematical average of the two VNAs’ ages, and is coded as an interval-ratio variable.

**Testing strategy**

The testing strategy used here is very similar to the one I used in Part I. Again, I use standard logit regression for testing my hypotheses, and cluster on the dyad to account for dyad-specific effects.\(^49\)

**Empirical Results**

In general, I find mixed empirical support for my hypotheses relating power and identity symmetries to the likelihood of cooperation onset for a given pair of VNAs, in a given year. Before turning to the results of the logit estimations, a brief look at the distribution of onset-years in the dyadic version of the Cooperation Data offers some corroboration of the arguments presented in this section. Table 4.8 shows a summary of the percentage of onset-years that are attributable to pairs of VNAs with different combinations of power and reputational symmetry in these data. These statistics show that, across power levels, cooperation onset happened more frequently among VNAs that shared the same reputation. Within the reputation-symmetric category, the majority of cooperating dyads were also power-symmetric. The distribution of cooperating dyads between the power-symmetric and –asymmetric categories is just about equal within the reputation-asymmetric class. These findings suggest preliminary support for the mutual identification approach to understanding inter-VNA cooperation, and some basic support for Hypotheses 5 and 6.

\(^{49}\)Although in this case the dependent variable is a much rarer event than in Part I (2% versus 15%), I again found little if any difference among the estimates produced by a standard logit versus a rare events logit estimation, and so I report only the results of the former here as well.
These descriptive statistics generally agree with the results from a series of logit models for testing the above hypotheses. Table 4.9 includes the results of models that include measures of power and identity symmetry separately. Although Model 5 shows a positive effect for power symmetry on the likelihood of cooperation for any two VNAs, this effect does not reach conventional levels of statistical significance. However, the coefficient on reputational symmetry is both positive and strongly statistically significant, as is the coefficient on ideological symmetry. Taken together, these findings suggest strong substantive support for Hypotheses 5 and 6, though statistical support only for Hypothesis 6. Next, I unpacked the ‘symmetric’ categories; these results are shown in Model 6. First, these results do not support Hypothesis 7, showing that pairs of high-power VNAs are in fact more likely to form a cooperative arrangement than are other power-symmetric pairs. Surprisingly, Hypothesis 8 is also unsupported in these data: the results of Model 6 point out that not only are pairs of good-reputation VNAs less likely to form cooperative arrangements than are other reputation-symmetric pairs, bad-reputation dyads are more likely to begin cooperation than any others. I find that the results presented in Table 4.9 present an interesting and unexpected puzzle. Remember that in the test results presented in Part I, individual VNAs that had mid-levels of power or good reputations were individually more likely to cooperate with another organization than other types of VNAs. However, these results suggest that two individually desirable organizations are not more likely to cooperate with each other than are other pairings. In other words, the relationship between individual desirability as a cooperation partner does not appear to translate directly to pair-wise compatibility.
Though I provided no specific hypotheses about an interaction effect between power symmetry and identity symmetry, I did also explore the possibility of some joint effect between the two. As I found no significant interaction effect between power and reputation when examining the probability of cooperation onset for individual VNAs, I find a similar lack of support for an interaction between power and reputation symmetry (see Table 4.9, Model 7 for results). The results of Model 5 show that while the coefficient on the variable indicating an interaction between power and reputation is positive – indicating that the positive impact of symmetry in power levels can be amplified by symmetry in reputational quality as well – it is nowhere near statistically significant.  

Finally, all of the control variables again behaved very consistently, displaying stable substantive and statistical relationships to the dependent variable. While the effects for similarity in financial independence and average dyad age did not reach conventional levels of statistical significance, sharing a subregion makes two VNAs more likely to cooperate with each other, and there are also significant regional distinctions that impact those chances.

Implications and Discussion

The relative impact that power and identity similarities have on the likelihood that a pair of VNAs will form a cooperative arrangement can be gleaned by calculating the odds ratios and some

---

50 I also evaluated the statistical significance of this interaction terms using the standard error formula provided by BCG (2006). Based on the results of Model 7 I calculated the standard error of dy/dx as: $SE = \sqrt{\text{var}(\beta_{\text{power symmetry}}) + (1)^2\text{var}(\beta_{\text{power symmetry*reputation symmetry}}) + [2^1\text{cov}(\beta_{\text{power symmetry}}, \beta_{\text{power symmetry*reputation symmetry}})]}$. The variance-covariance matrix associated with the results of Model 7 showed that the variance of $\beta_{\text{power symmetry}}$ was 0.019, the variance of $\beta_{\text{power symmetry*reputation symmetry}}$ was 0.238 and the covariance between them was -0.018. Plugging these values into the $SE$ formula provided a standard error of 0.471. Dividing the full effect of midpower*goodrep (0.036+0.195 = 0.231) by the new standard error produces a z-score of 0.490, indicating that the coefficient on this interaction term is (still) not statistically significant.

51 I also ran these models with alternative dyad age specifications. The results were unchanged regardless of if I measured dyad age as the age of the oldest partner, as the age of the youngest partner, or as the average age (as reported in the logit tables).
predicted probabilities associated with the logit results. Table 4.10 shows how the odds of cooperation onset for VNA dyads changes with variation in dyad-level power and identity symmetries. To start, the odds of cooperation onset do not change very much with variation in power symmetry: the odds of an onset event for a pair with similar power levels are only about 11% higher than the same odds for a pair with different power levels. Again, it appears that of the identity characteristics, ideological similarity is worth considerably more than reputation similarity for explaining cooperation onset. Specifically, the odds of cooperation for an ideologically similar dyad are about 7 times higher than the same odds for an ideologically dissimilar pair. The effect of reputation symmetry is not negligible however: moving from asymmetry to symmetry in terms of reputation affords a given dyad a 29% increase in its odds of cooperation onset.

<INSERT TABLE 4.10 ABOUT HERE.>

The difference in substantive effect between power symmetry and reputation symmetry is also evident when examining the predicted probabilities (see Table 4.11). For example, the predicted probability of cooperation onset for a reputation-symmetric dyad would drop by 10 percent if the pair was to move from power-symmetric to asymmetric. However, the predicted probability of cooperation onset for a power-symmetric dyad would fall by 20 percent if the pair were to go from being reputation-symmetric to asymmetric.

<INSERT TABLE 4.11 ABOUT HERE.>

It is clear from the findings of both Parts I and II that there are significant differences among VNAs in terms of what these actors bring to the negotiating table, both in terms of material and social capital. Furthermore, these differences play a part in determining the overall desirability of individual VNAs as cooperation partners, as well as in predicting how that desirability translates into pair-wise, partner-specific compatibility. From these results, the expectations derived from
state-centric balance of power perspectives on the correlates of bilateral cooperation onset does not appear to be most appropriate for explaining the cooperative behavior of VNAs. Also interesting is that none of the main predictions from a strictly power-based perspective are borne out in the data; when power has mattered, it has not been with a large substantive impact.

All told, it appears that although amassing material capabilities for fighting conflicts may be an important goal for VNAs, the development of reputations for resolve and revealed preferences in favor of cooperation as a strategic alternative is paramount for organizations interested in forming cooperative arrangements with others. This is a somewhat counterintuitive finding in that most explanations for VNA behavior focus on these actors’ lack of traditional power resources, whether their violence is viewed as a means of acting out of frustration or a means for gathering enough power to be able to rival the strength of state actors.
### Table 4.1. Summary of the relationship between power-based credibility and partner desirability.

<table>
<thead>
<tr>
<th>VNA power level</th>
<th>Incentives to cooperate</th>
<th>Effect on credibility</th>
<th>Incentives to exploit</th>
<th>Effect on credibility</th>
<th>Power-based desirability estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High</strong></td>
<td>Low: any gains are unlikely to drastically change performance</td>
<td>Negative: raw value of cooperation is fairly low</td>
<td>Could be high: May wish to eliminate predatory weaker groups</td>
<td>Negative: Resource strength make them able to take out challengers</td>
<td>Low</td>
</tr>
<tr>
<td><strong>Mid</strong></td>
<td>High: any gains are likely to affect performance</td>
<td>Positive: raw value of cooperation is higher than for low-resource groups, though lower than for high-resource groups</td>
<td>Higher than for low-resource groups, but lower than for high-resource groups</td>
<td>Positive: Groups are able to avoid seeming as desperate as the low-resource groups, or as threatening as the high-resource groups</td>
<td>High</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>High: any gains are likely to drastically change performance</td>
<td>Positive: raw value of cooperation is higher for these groups than any other</td>
<td>Could be high: have a lot to gain from suckering a stronger group</td>
<td>Negative: Lack of resources likely makes them desperate</td>
<td>Low, but higher than high-resource groups’</td>
</tr>
</tbody>
</table>
Table 4.2. Components of VNA overall power and overall reputation.

<table>
<thead>
<tr>
<th>Power</th>
<th>High</th>
<th>Mid</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active membership size</td>
<td>Large</td>
<td>Small/Large</td>
<td>Small</td>
</tr>
<tr>
<td></td>
<td>and</td>
<td>and</td>
<td>and</td>
</tr>
<tr>
<td>Tactical expertise</td>
<td>Yes</td>
<td>Yes/No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>and</td>
<td>and</td>
<td>and</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reputation</th>
<th>Good</th>
<th>Fair</th>
<th>Bad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reputation for resolve</td>
<td>Yes</td>
<td>Yes/No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>and</td>
<td>and</td>
<td>and</td>
</tr>
<tr>
<td>Reputation for trustworthiness</td>
<td>Yes</td>
<td>No/Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Table 4.3. Distribution of Onset-Years, by power levels and reputation.

<table>
<thead>
<tr>
<th>Power Level</th>
<th>Reputation</th>
<th>Bad</th>
<th>Fair</th>
<th>Good</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>8%</td>
<td>11%</td>
<td>20%</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(19/247)</td>
<td>(34/309)</td>
<td>(8/41)</td>
<td>(61/597)</td>
<td></td>
</tr>
<tr>
<td>Mid</td>
<td>24%</td>
<td>14%</td>
<td>28%</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(16/66)</td>
<td>(39/280)</td>
<td>(21/75)</td>
<td>(76/421)</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>18%</td>
<td>18%</td>
<td>26%</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(7/40)</td>
<td>(41/224)</td>
<td>(32/122)</td>
<td>(80/386)</td>
<td></td>
</tr>
<tr>
<td>Column Total</td>
<td>12%</td>
<td>14%</td>
<td>26%</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(42/353)</td>
<td>(114/813)</td>
<td>(61/238)</td>
<td>(217/1404)*</td>
<td></td>
</tr>
</tbody>
</table>

*Note: Cells reflect percent of total dyad-years attributable to each power and reputation combination; raw proportions are listed in parentheses. For example, the Column 1, Row 1 entry shows that 8% of the low-power, bad reputation VNA-years were characterized by an onset event. In other words, out of the 247 VNA-years attributable to organizations with low power and a bad reputation, 19 include an onset event. Percentages do not add to 100 because of rounding.

*24 cases of <everonset> dropped because of missing information on either power or reputation.
Table 4.4. Logit results: Relationship between individual power, individual identity, and the likelihood of cooperation onset.

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power at high or low extreme</td>
<td>-0.333**</td>
<td>----</td>
<td>-0.317**</td>
</tr>
<tr>
<td></td>
<td>(0.267)</td>
<td>(0.154)</td>
<td></td>
</tr>
<tr>
<td>High power</td>
<td>----</td>
<td>-0.069***</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>(0.203)</td>
<td>(0.154)</td>
<td></td>
</tr>
<tr>
<td>Low power</td>
<td>----</td>
<td>-0.600***</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>(0.211)</td>
<td>(0.154)</td>
<td></td>
</tr>
<tr>
<td>Good reputation</td>
<td>1.041***</td>
<td>0.940***</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>(0.178)</td>
<td>(0.181)</td>
<td></td>
</tr>
<tr>
<td>Fair reputation</td>
<td>----</td>
<td>----</td>
<td>-1.004***</td>
</tr>
<tr>
<td></td>
<td>(0.211)</td>
<td>(0.154)</td>
<td>(0.186)</td>
</tr>
<tr>
<td>Bad reputation</td>
<td>----</td>
<td>----</td>
<td>-1.194***</td>
</tr>
<tr>
<td></td>
<td>(0.245)</td>
<td>(0.151)</td>
<td></td>
</tr>
<tr>
<td>Strategic independence</td>
<td>-0.299**</td>
<td>-0.253*</td>
<td>-0.283*</td>
</tr>
<tr>
<td></td>
<td>(0.150)</td>
<td>(0.148)</td>
<td>(0.151)</td>
</tr>
<tr>
<td>Organization age</td>
<td>-0.071***</td>
<td>-0.070***</td>
<td>-0.072***</td>
</tr>
<tr>
<td></td>
<td>(0.016)</td>
<td>(0.016)</td>
<td>(0.016)</td>
</tr>
<tr>
<td>East Central subregion</td>
<td>0.928***</td>
<td>1.116***</td>
<td>0.910***</td>
</tr>
<tr>
<td></td>
<td>(0.279)</td>
<td>(0.284)</td>
<td>(0.264)</td>
</tr>
<tr>
<td>Southern Cone subregion</td>
<td>0.517*</td>
<td>0.559*</td>
<td>0.513*</td>
</tr>
<tr>
<td></td>
<td>(0.312)</td>
<td>(0.308)</td>
<td>(0.318)</td>
</tr>
<tr>
<td>Andean subregion</td>
<td>0.831***</td>
<td>0.684***</td>
<td>0.819***</td>
</tr>
<tr>
<td></td>
<td>(0.194)</td>
<td>(0.227)</td>
<td>(0.197)</td>
</tr>
<tr>
<td>Caribbean subregion</td>
<td>0.051</td>
<td>0.044</td>
<td>0.120</td>
</tr>
<tr>
<td></td>
<td>(0.445)</td>
<td>(0.432)</td>
<td>(0.423)</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.362***</td>
<td>-1.304***</td>
<td>-0.309</td>
</tr>
<tr>
<td></td>
<td>(0.240)</td>
<td>(0.249)</td>
<td>(0.309)</td>
</tr>
<tr>
<td>N</td>
<td>1325</td>
<td>1325</td>
<td>1325</td>
</tr>
<tr>
<td>Wald Chi^2</td>
<td>64.34</td>
<td>84.38</td>
<td>70.23</td>
</tr>
<tr>
<td>P &gt; chi^2</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>
Table 4.5. Logit results: tests of a contingent effect for power and identity.

<table>
<thead>
<tr>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mid-power</strong></td>
<td><strong>Low power</strong></td>
</tr>
<tr>
<td>0.239 (0.192)</td>
<td>----</td>
</tr>
<tr>
<td><strong>Low power</strong></td>
<td><strong>Bad reputation</strong></td>
</tr>
<tr>
<td>---- (-0.495**)</td>
<td>-0.012 (0.314)</td>
</tr>
<tr>
<td><strong>Good reputation</strong></td>
<td><strong>Low power*Bad reputation</strong></td>
</tr>
<tr>
<td>0.918*** (0.226)</td>
<td>---- (-0.543 (0.458)</td>
</tr>
<tr>
<td><strong>Bad reputation</strong></td>
<td><strong>Mid-power*Good reputation</strong></td>
</tr>
<tr>
<td>----</td>
<td>0.384 (0.347)</td>
</tr>
<tr>
<td><strong>Strategic independence</strong></td>
<td><strong>Organization age</strong></td>
</tr>
<tr>
<td>-0.299** (0.150)</td>
<td>-0.071*** (0.016)</td>
</tr>
<tr>
<td><strong>Organization age</strong></td>
<td><strong>East Central subregion</strong></td>
</tr>
<tr>
<td>-0.071*** (0.016)</td>
<td>0.941*** (0.278)</td>
</tr>
<tr>
<td><strong>East Central subregion</strong></td>
<td><strong>Southern Cone subregion</strong></td>
</tr>
<tr>
<td>0.941*** (0.278)</td>
<td>0.553* (0.326)</td>
</tr>
<tr>
<td><strong>Southern Cone subregion</strong></td>
<td><strong>Andean subregion</strong></td>
</tr>
<tr>
<td>0.553* (0.326)</td>
<td>0.873*** (0.202)</td>
</tr>
<tr>
<td><strong>Andean subregion</strong></td>
<td><strong>Caribbean subregion</strong></td>
</tr>
<tr>
<td>0.873*** (0.202)</td>
<td>0.113 (0.461)</td>
</tr>
<tr>
<td><strong>Caribbean subregion</strong></td>
<td><strong>Constant</strong></td>
</tr>
<tr>
<td>0.113 (0.461)</td>
<td>-1.688*** (0.228)</td>
</tr>
<tr>
<td><strong>Constant</strong></td>
<td></td>
</tr>
<tr>
<td>-1.688*** (0.228)</td>
<td>-1.261*** (0.303)</td>
</tr>
</tbody>
</table>

N: 1325
Wald Chi$^2$: 70.19
P > chi$^2$: <0.001
Table 4.6. Odds Ratios.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds Ratio (95% CI)</th>
<th>Of all VNAs…</th>
</tr>
</thead>
<tbody>
<tr>
<td>High power†</td>
<td>0.933 (0.622, 1.400)</td>
<td>the odds of inter-group cooperation for a high-power VNA are about 10% lower than the same odds for a mid-power VNA.</td>
</tr>
<tr>
<td>Low power†</td>
<td>0.549 (0.367, 0.820)</td>
<td>the odds of inter-group cooperation for a low-power VNA are about 45% lower than the same odds for a mid-power VNA.</td>
</tr>
<tr>
<td>Good reputationα</td>
<td>2.833 (1.925, 4.171)</td>
<td>the odds of inter-group cooperation for a good-reputation VNA are about 183% higher than the same odds for a fair- or bad-reputation VNA.</td>
</tr>
</tbody>
</table>

α Based on Model 1; † Based on Model 2.
Table 4.7. Predicted Probabilities of Cooperation Onset for VNAs with combinations of power and reputation.\(^{\text{v}}\)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Predicted Pr(cooperation onset)</th>
<th>Percentage Point Change over Baseline Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low power, bad reputation</td>
<td>0.0539</td>
<td>------</td>
</tr>
<tr>
<td>Low power, fair reputation</td>
<td>0.0590</td>
<td>0.51</td>
</tr>
<tr>
<td>Low power, good reputation</td>
<td>0.1364</td>
<td>8.25</td>
</tr>
<tr>
<td>Mid power, bad reputation</td>
<td>0.0926</td>
<td>3.87</td>
</tr>
<tr>
<td>Mid power, fair reputation</td>
<td>0.1009</td>
<td>4.70</td>
</tr>
<tr>
<td>Mid power, good reputation</td>
<td>0.2205</td>
<td>16.67</td>
</tr>
<tr>
<td>High power, bad reputation</td>
<td>0.0868</td>
<td>3.29</td>
</tr>
<tr>
<td>High power, fair reputation</td>
<td>0.0946</td>
<td>4.07</td>
</tr>
<tr>
<td>High power, good reputation</td>
<td>0.2084</td>
<td>15.45</td>
</tr>
</tbody>
</table>

\(^{\text{v}}\) Probabilities based on results from the following model specification: \(\text{Pr(onset)} = \alpha + b(\text{high power}) + b(\text{mid power}) + b(\text{good reputation}) + b(\text{bad reputation}) + b(\text{fin. independent}) + b(\text{age}) + b(\text{eastcentral}) + b(\text{southerncone}) + b(\text{andean}) + b(\text{caribbean})\). Except for the power and reputation variables, all were held constant at their modal values.
Table 4.8. Distribution of VNA Dyad-Years including a cooperative arrangement, by power and reputation symmetry

<table>
<thead>
<tr>
<th></th>
<th>Reputation-Symmetric</th>
<th>Reputation-Asymmetric</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power-Symmetric</td>
<td>4.4% (183/4095)</td>
<td>2.1% (89/4281)</td>
<td>3.2% (272/8376)</td>
</tr>
<tr>
<td>Power-Asymmetric</td>
<td>2.0% (123/6283)</td>
<td>1.1% (90/7839)</td>
<td>1.5% (213/14122)</td>
</tr>
<tr>
<td>Column Total</td>
<td>2.9% (306/10378)</td>
<td>1.5% (179/12120)</td>
<td>2.2% (485/22498)#</td>
</tr>
</tbody>
</table>

# 6997 cases dropped because of missing information on either power or reputation symmetry. This includes 34 cases where <dyadalliance> = 1.
Table 4.9. Logit results: Relationship between power symmetry, identity symmetry and the likelihood of dyadic cooperation onset.

<table>
<thead>
<tr>
<th></th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power symmetry</td>
<td>0.104</td>
<td>----</td>
<td>0.036</td>
</tr>
<tr>
<td></td>
<td>(0.079)</td>
<td>(0.139)</td>
<td></td>
</tr>
<tr>
<td>Both high power</td>
<td>----</td>
<td>0.373***</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>(0.092)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both low power</td>
<td>----</td>
<td>-1.446***</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>(0.336)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reputation symmetry</td>
<td>0.254***</td>
<td>----</td>
<td>0.195</td>
</tr>
<tr>
<td></td>
<td>(0.084)</td>
<td>(0.131)</td>
<td></td>
</tr>
<tr>
<td>Both fair reputations</td>
<td>----</td>
<td>0.300***</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>(0.089)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both bad reputations</td>
<td>----</td>
<td>0.952***</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>(0.309)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ideological symmetry</td>
<td>2.091***</td>
<td>2.078***</td>
<td>2.095***</td>
</tr>
<tr>
<td></td>
<td>(0.152)</td>
<td>(0.156)</td>
<td>(0.152)</td>
</tr>
<tr>
<td>Power symmetry*Reputation symmetry</td>
<td>----</td>
<td>----</td>
<td>0.111</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.154)</td>
<td></td>
</tr>
<tr>
<td>Similarity in strategic independence</td>
<td>0.020</td>
<td>0.088</td>
<td>0.018</td>
</tr>
<tr>
<td></td>
<td>(0.080)</td>
<td>(0.082)</td>
<td>(0.080)</td>
</tr>
<tr>
<td>Average age of dyad partners</td>
<td>0.005</td>
<td>0.011</td>
<td>0.005</td>
</tr>
<tr>
<td></td>
<td>(0.009)</td>
<td>(0.011)</td>
<td>(0.010)</td>
</tr>
<tr>
<td>Shared subregion</td>
<td>2.165***</td>
<td>2.218***</td>
<td>2.165***</td>
</tr>
<tr>
<td></td>
<td>(0.312)</td>
<td>(0.311)</td>
<td>(0.312)</td>
</tr>
<tr>
<td>East Central</td>
<td>0.866**</td>
<td>2.208***</td>
<td>0.880**</td>
</tr>
<tr>
<td></td>
<td>(0.397)</td>
<td>(0.499)</td>
<td>(0.392)</td>
</tr>
<tr>
<td>Southern Cone</td>
<td>1.050***</td>
<td>1.182***</td>
<td>1.055***</td>
</tr>
<tr>
<td></td>
<td>(0.346)</td>
<td>(0.337)</td>
<td>(0.346)</td>
</tr>
<tr>
<td>Andean</td>
<td>0.912***</td>
<td>0.589***</td>
<td>0.911***</td>
</tr>
<tr>
<td></td>
<td>(0.168)</td>
<td>(0.185)</td>
<td>(0.168)</td>
</tr>
<tr>
<td>Caribbean</td>
<td>1.573***</td>
<td>1.013***</td>
<td>1.559***</td>
</tr>
<tr>
<td></td>
<td>(0.272)</td>
<td>(0.277)</td>
<td>(0.274)</td>
</tr>
<tr>
<td>Constant</td>
<td>-7.291***</td>
<td>-7.288**</td>
<td>-7.258***</td>
</tr>
<tr>
<td></td>
<td>(0.357)</td>
<td>(0.372)</td>
<td>(0.365)</td>
</tr>
<tr>
<td>N</td>
<td>20188</td>
<td>20188</td>
<td>20188</td>
</tr>
<tr>
<td>Wald Chi²</td>
<td>431.76</td>
<td>464.21</td>
<td>443.43</td>
</tr>
<tr>
<td>P &gt; chi²</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>
Table 4.10. Odds Ratios.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds Ratio (95% CI)</th>
<th>Of all cooperating dyads…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power symmetry∞</td>
<td>1.110 (0.950, 1.296)</td>
<td>the odds of cooperation onset for a pair with similar power levels are about 11% higher than the same odds for a pair with different power levels.</td>
</tr>
<tr>
<td>Power symmetric – high†</td>
<td>1.452 (1.215, 1.736)</td>
<td>the odds of cooperation onset for a pair of high-power VNAs are about 45% higher than the same odds for a pair of mid-power VNAs.</td>
</tr>
<tr>
<td>Power symmetric – low†</td>
<td>0.236 (0.122, 0.455)</td>
<td>the odds of cooperation onset for a pair of low-power VNAs are about 76% lower than the same odds for a pair of mid-power VNAs.</td>
</tr>
<tr>
<td>Reputation symmetry∞</td>
<td>1.289 (1.092, 1.521)</td>
<td>the odds of cooperation onset for a pair of with similar reputations are about 29% higher than the same odds for a pair with dissimilar reputations.</td>
</tr>
<tr>
<td>Fair reputation††</td>
<td>1.350 (1.133, 1.608)</td>
<td>the odds of cooperation onset for a pair with fair reputations are about 35% higher than the same odds for a pair with good reputations.</td>
</tr>
<tr>
<td>Bad reputation††</td>
<td>2.590 (1.414, 4.745)</td>
<td>the odds of cooperation for a pair with bad reputations are about 159% higher than the same odds for a pair with bad reputations.</td>
</tr>
<tr>
<td>Ideological symmetry∞</td>
<td>8.096 (6.011, 10.904)</td>
<td>the odds of cooperation for an ideologically similar pair are about 700% higher than the same odds for an ideologically asymmetric pair.</td>
</tr>
</tbody>
</table>

∞ Based on Model 1; † Based on Model 6
Table 4.11. Predicted Probabilities.

<table>
<thead>
<tr>
<th>Dyad Partners are:</th>
<th>Predicted Pr(cooperation onset)</th>
<th>Change over Baseline Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power symmetric and reputation symmetric</td>
<td>0.0010</td>
<td>-----</td>
</tr>
<tr>
<td>Power asymmetric and reputation symmetric</td>
<td>0.0009</td>
<td>-0.0001 percentage points (10 percent decrease)</td>
</tr>
<tr>
<td>Power symmetric and reputation asymmetric</td>
<td>0.0008</td>
<td>-0.0002 percentage points (20 percent decrease)</td>
</tr>
<tr>
<td>Power asymmetric and reputation asymmetric</td>
<td>0.0007</td>
<td>-0.0003 percentage points (33.3 percent decrease)</td>
</tr>
</tbody>
</table>

Based on Model 5, with all other variables held constant at their modal values.
Figure 4.1. Expected Relationship between Power Levels and Desirability as a Cooperation Partner. 

Ω Figure drawn using hypothetical data.
Figure 4.2. Expected Relationship between Reputational Quality and Desirability as a Cooperation Partner. ♯

♯ Figure drawn using hypothetical data.
Figure 4.3. Plot of Predicted Probabilities of Cooperation Onset for VNAs with different power and reputation combinations.
Chapter Five
EXPLAINING THE DESIGN OF INTER-VNA COOPERATION

Introduction

In Chapter 4, I argued that variation among VNAs in terms of their credibility – estimated as a function of organizations power and/or social identity – impacts the likelihood of cooperation among them. While choosing among potential partners is one of the central tasks for a VNA seeking to consolidate a cooperative arrangement, of perhaps as much importance is identifying the institutional design best suited to the characteristics of the cooperators. Numerous scholars of international security, political economy and international organizations have concluded that the design of cooperation under anarchy is fundamentally linked to its onset and durability (e.g., Downs, Rocke, and Barsoom 1998; Fearon 1998; Gruber 1999; Leeds 2000; Koremenos 2001; Leeds et al. 2002).

The central consideration in rational institutional design concerns how best to mediate uncertainty among cooperation partners (Koremenos 2005); in fact, some would argue that the ability to communicate commitment in the face of incentives to misrepresent is fundamental to all international relations (Gaubatz 1996). Considering that cooperation among VNAs is rarely monitored or guaranteed by any outside power with substantial enforcement capabilities, it is likely that these actors have a heightened interest in designing cooperative arrangements that are “incentive-compatible;” when the terms of cooperation are in line with individual self-interest, the participants increase not only the chances that the arrangement will be beneficial but also the likelihood that it will be self-enforcing (Koremenos, Lipson, and Snidal 2001: 6). As noted in earlier chapters, the primary interest of a VNA is survival – the value of any political, social and material
benefits from cooperation are in some ways discounted by the likelihood that the group will remain alive for long enough to claim and/or enjoy them. Just as is the case for state actors, in order for cooperation to emerge, the VNA partners must be satisfied that the rules and terms of agreement will address both immediate and long-term goals. In other words, when designing their cooperation, VNAs will likely be thinking both of how best to promote the accrual of material and/or social benefits and of how best to minimize the risk of predation or abandonment by their partners.

Anecdotally, there appears to be significant variation in the institutional design of inter-VNA arrangements. With respect to the number of participants, over time there have emerged strictly bilateral arrangements – like the 1970s-era joint training, strategic planning and attack collaborations undertaken by the Japanese Red Army and the Popular Front for the Liberation of Palestine – and multilateral relationships – like the Alliance of Revolutionary Forces of Western Sudan, formed in 2006 and includes at least 3 separate rebel organizations, or the Sudanese United Front for Liberation and Development, formed in 2007 and reportedly including 5 organizations excluded from the Alliance of Revolutionary Forces. With respect to enforcement, these arrangements have ranged from being governed by no central authority (for an example, consider the intelligence sharing between the Irish Republican Army (IRA) in Northern Ireland and Spain’s Euskadi ta

Askatasuna (ETA) in the late 1990s-early 2000s) to being facilitated by a coordinating board or umbrella organization like the Frente Farabundo Martí de Liberación Nacional (FMLN) in El Salvador.\(^{53}\)

It is important to acknowledge that these and other design features often interact and overlap in ways that appear to incorporate general tendencies among VNAs with situation-specific imperatives. However, the research in this chapter focuses on only one aspect of institutional design. Specifically, research question to asking specifically: What explains the institutionalization of an inter-VNA cooperative arrangement? In short, the institutionalization of an inter-VNA cooperative arrangement entails somehow formalizing the terms of agreement, and making the rules and/or policies governing participation explicit to the participants. In this chapter I argue that once a cooperation partner has been chosen, VNAs further use their observations of others’ power and identity characteristics to estimate the chances that a given arrangement will be self-enforcing. In other words, as information about group credibility is communicated by these characteristics, I contend that cooperating VNAs will use it to make rational, deliberate comparisons of the costs and benefits of institutionalized versus informal cooperation with a given partner.

I test my hypotheses in this chapter using a version of the VNA Characteristics and Cooperation Data (described in Chapter 3) in which the unit of analysis is the cooperating dyad-year. Within this subset of dyad-years, I also restrict the sample to include only the first year of cooperation for any given cooperating pair. I do this to focus more concertedly on decisions about initial design, rather than on how arrangement design changes over time. The general statistical findings presented in this chapter suggest that both power and identity play a role in determining the design of inter-VNA cooperation, and as with cooperation onset, indicators of credibility based in

social identity have a much larger practical impact on design outcomes for cooperating dyads than do power-based indicators.

**Uncertainty and Rational Institutional Design**

Extant IR literature on interstate cooperation suggests that to the extent that arrangements can be designed to minimize the costs associated with cooperation, they will be. However, scholars have made differing arguments about how actors will go about reducing them. On one hand, some argue that rational states will (in most cases) prefer to avoid cooperation altogether when the likelihood of unilateral defection is 1) uncomfortably high and 2) anticipated. For example, in arguing that interstate treaties are completely “endogenous strategies,” Downs, Rocke, and Barsoom (1996: 383) maintain that interstate cooperation should emerge only when enforcement problems can be or have been effectively managed.54

On the other hand however, others maintain that even given substantial uncertainty, enforcement issues and/or distributional concerns, cooperation is still possible if the participants choose terms of agreement that will, by design, mitigate either the risk of unilateral defection, the amount of material benefit that is lost as a result of defection, or both (i.e., Koremenos, Lipson, and Snidal 2001), these design choices are specifically meant to deal with questions about the likely distribution of resources and/or how the terms of agreement will be (or should be) be enforced. In other words, given rational participants, the design of an international organization is heavily influenced by the participants’ desire to manage uncertainty about preferences, likely strategies and

54 Specifically, they contend not only that states will refuse to sign a treaty when enforcement problems are anticipated, but also that when unanticipated enforcement problems arise, states will choose to terminate the cooperation almost immediately upon recognizing the problem (383).
the ‘true’ state of the world. In another prominent example, Fearon (1998) contends that there is a direct link between the preferences of the cooperators for serious/intense bargaining and the depth of any arrangement that they are likely to consolidate.

As is the case with state actors, uncertainty can be a serious impediment to cooperation among VNAs. It may even be more stultifying for VNA than for states. For example, the potential costs associated with being wrong about a partner’s preferences and/or intentions are considerably higher for VNAs than they are for states. While states may have much in resources or influence to lose by being suckered in a cooperative arrangement, rarely would this make a difference to whether the state lives into the future. In general, VNAs are at a much greater risk of being completely overtaken by (state or non-state) enemies than are state actors. For the VNA, overestimating a partner’s cooperative intentions can directly jeopardize survival, especially given the relative paucity of resources that they already have. This may render incentives to misrepresent one’s preferences and strategic intentions in an anarchic environment much stronger for VNAs, thus increasing the importance of being able to consolidate cooperative arrangements that have the best chance of being self-enforcing.

Conventional wisdom from IR about the nature of VNAs and their cooperative potential tends to suggest that the first orientation should be expected to apply to VNAs: given the severe enforcement problems that likely accompany these actors in cooperation, those that are able to correctly identify the problems will simply prefer not to cooperate. This suggests that the only inter-VNA cooperative arrangements to emerge will be, essentially, mistakes. However, we nonetheless observe cooperative arrangements among VNAs with some frequency; furthermore, the apparent complexity of these arrangements suggests that, largely, they are unlikely to be accidents. Instead, it appears that VNAs are able to create (and sustain) cooperative arrangements among themselves
partly because the participants were able to design the cooperation in a rational, cost-minimizing and benefit-maximizing way.

In this chapter, I further develop this argument, offering and testing various hypotheses about the ways in which VNAs can use information about each others’ credibility – again, inferred from each others’ power and identity characteristics – to choose an institutional design that also minimizes the potential for losses from unilateral defection while maximizing the benefit from costly collaboration.

**Institutionalization as a Design Choice**

Functionally, the design elements available to both state and non-state actors for incentivizing, maintaining and/or adjusting the depth and breadth of their cooperative arrangements are myriad. For instance, with respect to interstate cooperation, scholars have focused on the development of independent central commands for regulating the strategic choices made by parties (see Keefer and Stasavage 2002 on international monetary commitments). In another example, others highlight the use of ‘escape clauses’ for increasing agreement flexibility and providing participants with greater latitude in their fulfillment of the terms of cooperation (see Rosendorff and Milner 2001), among other flexibility provisions. As important as these independent features are, they nonetheless come somewhat secondary to the question of whether or not to make these features permanent. Therefore, they key design question for any set of actors interested in consolidating cooperation is whether or not to institutionalize the terms and expectations associated with their arrangement.\(^\text{55}\) Weber (1997) argues that the degree of institutionalization, or

\(^{55}\) For example, Snyder (1997) notes that while formal alliances do “introduce a sense of obligation not present in tacit alignments,” they gain their intrinsic simply from being “one of the behavioral means to create or strengthen
“bindingness,” impacts the core of a cooperative arrangement, in that it suggests that the degree to which unilateral defections may be “costly in terms of reputation and security for cheaters” or inconvenient for “defectors [who must] find a replacement for a structurally sophisticated security apparatus” (322).

Definition and general relationship to uncertainty

Institutionalization is a means of formalizing cooperation among actors, and involves the development of mechanisms for administering, monitoring, and/or enforcing the terms of cooperation among the participants. An inter-VNA cooperative arrangement is institutionalized when the terms of cooperation are somehow formalized, and explicit rules and/or policies governing participation in an arrangement are articulated to the participants. These rules often lay out explicitly what constitutes cooperation among the participants, as well as the policies and regulations to be used for policing those behaviors. In most cases these will be found in a written text, but an arrangement’s rules and policies do not have to be written down in order for it to be institutionalized; whether an arrangement is institutionalized depends only on whether the rules and policies are stated clearly and publicly to the participants. Apart from written statements, this can be done through (verbal) public announcements, private meetings or other means; what matters most is that there has been some formal articulation of the rules and policies to decision-makers within the participating organizations.56

alignments” (6). Among others, such a discussion further suggests that the main distinction between institutionalized and non-institutionalized cooperation is difference in degree, rather than a difference in kind.

56 Over time, various state and non-state actors have provided space for VNA leaders to discuss not only the potential for collaboration but also, in some cases, the actual terms of cooperation; surprisingly perhaps, VNAs and their sympathizers have been rather adept at organizing conferences, roundtables and other opportunities for open communication. For example, the Colombian FARC’s ‘Guerrilla Conferences are interesting examples of VNA-led efforts to promote communication among (and within) VNAs. In another, more historical, example, the terms of reunification for the three independent Sandinista organizations – the Tendencia Proletaria (TP), Tendencia Guerra
Boehmer, Gartzke, and Nordstrom (2004) note that IO institutionalization can take a number of functional forms, ranging from creating a simple administrative secretariat to maintaining a network of administrative, adjudicative and coercive mechanisms for promoting order and consistency within the organization (17-18). Similarly, inter-VNA cooperation can be realized to varying degrees of institutionalization, requiring different levels of commitment, obedience or coordination. For example, consider the differences between the Dirección Revolucionaria Unificada Political Militar (DRU-PM) and the Farabundo Martí Front for National Liberation (FMLN) in El Salvador. Beginning in December 1979, the DRU-PM – a coordinating board composed of delegates from the Communist Party of El Salvador, the Farabundo Martí Popular Liberation Forces, and the (Salvadoran) People’s Revolutionary Army – was simply a collection of high-ranking officials and delegates from the participating organizations that pledged to share information and coordinate activities. However, by 1980 the arrangement had undergone a number of advances in the cohesion, structure and function of the coordinating board, including the adoption of the Democratic Centralism as the locus of strategic collaboration and the adoption of majority-rule as the mode of decision-making among the collective (DRU-PM 2008a, 2008b). Of particular importance was the introduction of the FMLN as the official politico-military complex of allied revolutionary organizations in El Salvador. This announcement also laid out the rules for participation in the collective: constituent organizations must accept the “one name, one flag, one insignia, [and] one central propaganda publication” of the FMLN as superior to their own, all political and military action should be carried out in the name of the FMLN and the unity of the collective should be always respected and pushed forward (DRU-PM 2008c, translation mine).57

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57 This move transformed the DRU-PM into just an organ of the FMLN (though a very influential one).
These rules were substantially more stringent than those of the DRU-PM, yet in both cases the terms of participation were formalized and made public to the members in some way.

In this study, I consider a cooperative arrangement to be institutionalized when the actual cooperation is accompanied by some set of explicit rules for governance, expectations about the behavior of the parties involved, guidelines for determining what constitutes a breach of agreement or instruction as to how to identify the beginning and/or end of the arrangement. I use these characteristics as the markers of institutionalized cooperation because they imply the recognition of some supra-organizational authority and/or constraints on the behavior of individual participants. As I am less concerned with the level of authority that is imposed, I do not require these characteristics to be very specific (i.e. a certain number of governance rules, or particular obligations). Given the relative volatility of the inter-VNA subsystem, I contend that even generalized attempts at hierarchy should be significant enough to warrant examination.

Institutionalization can play an important role in mediating the uncertainty that cooperating parties may have about the durability of the agreement, or more importantly, their partner’s strategic positions and likely courses of action into the future. Also, it impacts the practical management of the cooperation, having an influence not just on what can be expected to get done, but also on what actually happens and how. While in some cases cooperation among VNAs has been begun with the (explicit) expectation of longstanding commitment to the terms of the agreement, in others it appears that inter-group cooperation has a more ad hoc, short-term value for the groups involved. In examining the benefits of informal agreements among state actors, Lipson (1991) writes that while “[W]ritten agreements allow greater attention to detail and more explicit consideration of the contingencies that might arise,” with an agreement of lesser formality, “[I]f disputes later arise, it is often difficult to specify what was intended ex ante” (498).
In general, Lipson’s (1991: 501) observation that “speed, simplicity, flexibility and privacy” are key considerations for any state actor contemplating (the design of) a cooperative arrangement easily extends to violent non-state actors in a similar position as well. For VNAs, this tension between the benefits of clarity versus the benefits of ambiguity is central to the decision of whether or not to institutionalize their cooperative arrangements.

Why institutionalize?

Among states, institutionalization is generally expected to make cooperative relationships more stable, rendering the parties more reliable and the arrangement itself more effective at producing the intended gains for the participants. These benefits come from the credibility imparted by the formality; by writing the rules down, creating administrative bodies or regularizing the rules of engagement the parties impose costs on themselves, specifying clearly the degree and nature of shared interests; and clarifying signals about credibility and commitment for the participants as well as onlookers (Fearon 1997; Morrow 1994; Morrow 2000; Niou and Ordeshook 1994).

Many of the benefits from institutionalization for VNAs are quite similar to the benefits of pursuing inter-group cooperation in the first place, including enhanced monitoring capabilities, efficiency improvements and credibility gains. To return to Lipson’s four considerations, institutionalization can significantly simplify the terms of cooperation and the interactions among the participants, as well as decreasing the length of time between the start of cooperation and the realization of the joint gains. Additionally, institutionalization can provide increased clarity and specificity to the arrangement through making expectations and obligations explicit. In turn, this

bolsters the credibility of any signals to be transmitted between the cooperating parties, or from the cooperating collective to outside parties.

**Stronger signals:** Institutionalization may be used to impart a gravitas to the arrangement that may not have been recognized by the cooperators’ opponents otherwise. If the formation of a cooperative arrangement signals a willingness to assume and absorb costs in the pursuit of some goal, then purposefully creating provisions to that arrangement that limit one’s freedom to pursue individual self-interests should signal even more serious levels of commitment. This is especially evident when we consider that institutionalization almost always implies some degree of costs for the participants, particularly if it is expected to be useful. Specifically, the development of monitoring and/or enforcement structures means nothing without some indication that parties’ behavior is somehow altered by their existence. To the extent that talk is cheap in anarchic international relations, the process of investing time and energy into formalizing the terms of any co-action communicates a signal of commitment among all parties involved. For example, the process of signing treaties, joint declarations and other codifications of inter-group cooperation often involves significant travel for the signatories, as written agreements are often signed (and written) in a neutral location, outside of the direct jurisdiction of any one signing party. Although whether or not the institutionalization actually increases the probability of successful deterrence is a separate (empirically testable) question, it is nonetheless plausible that the potential benefits from transmitting such a signal may well outweigh the costs associated with institutionalization for VNAs.

**More enforcement and efficiency:** Issues of control over the behavior of the cooperating parties are central problems to be managed by parties seeking cooperation. Leeds and Anac (2005: 1) note that when “benefits [from cooperation] may be jeopardized by fears of opportunism, [states] may be willing to incur more substantial governance costs to institutionalize their policy.
coordination.” More specifically, Lake (1996: 14) argues that, for interstate arrangements, the expected costs of opportunism likely decline as the tightness of an agreement – or hierarchy among the participants – increases (and an individual’s “residual rights of control” are restricted). Further, in their study of the tightness of networks of covert organizations, Morselli, Giguere, and Petit (2007) argue that when “consistent action is a priority and time-to-task is shorter,” efficiency in generating the benefits from cooperation is paramount (151). Institutionalization also routinizes points of communication and modes of co-action. To the extent that this clearly defines the schedule of and limits to cooperation, this result simply makes it easier for the participants to get things done more quickly.

**Reasons for avoiding institutionalization**

Just as the DRU-PM and FMLN exemplify institutionalization in an inter-VNA arrangement, there are also numerous examples in which cooperating organizations opted for informality instead. For example, the multiple coordinated efforts among the Brazilian *Ala Roja*, *Ação Libertadora Nacional* (ALN), and *Movimento Revolucionário 8 de Outubro* (MR-8) in the late 1960s were never accompanied by any statement of the terms of their relationships. Nonetheless, in varying combinations these actors carried out a series of jointly-executing kidnappings, bombings and raids, including the high-profile kidnapping of United States Ambassador Charles Elbrick by the ALN and MR-8 in 1969.59

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Despite the benefits from institutionalization, the governance costs that Leeds and Anac (2005) mention may be large enough to discourage the practice anyway, especially if it is true that as agreement tightness increases, so do the costs of maintaining it.\(^{60}\) Alternatively, VNAs may choose against institutionalizing their cooperation not because of the size of the costs from institutionalization, but because of the benefits of informality.\(^{61}\) To the extent that informality offers greater flexibility in not only setting the terms of agreement but also in adherence to its terms, by choosing not to institutionalize their cooperative arrangements VNAs can avoid the costs of formalization while potentially still enjoying the benefits of co-action. By keeping agreements informal, VNAs may be able to enjoy not only the joint gains from successful cooperation, but also greater autonomy and fewer enforcement, compliance and transaction costs. In terms of Lipson’s four considerations, informality provides the important benefits of privacy and flexibility, along with having a potential impact on speed and simplicity as well.

Keeping arrangements informal can be a straightforwardly rational option for actors interested in minimizing the costs associated with consolidating cooperation while still enjoying the benefits of co-action and coordination. Various authors have concluded that in many cases informal arrangements can be as effective as formal agreements at sustaining interstate cooperation and producing the intended effects. For example, while Morrow (2000: 64) notes that informal statements about collective security “may be sufficient to convince prospective attackers of the credible intention to intervene against an attack,” others posit that the decision to design a cooperative arrangement with low levels of formality and institutionalization may represent the best

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\(^{60}\) Lake (1996) makes an argument rather similar to this, though specifically states that maintenance costs increase with relational hierarchy.

\(^{61}\) This argument has been made for state actors by, among others, Kann 1976 (in discussing alliances versus ententes and other pacts), Lipson 1991 (on the benefits of informality in general), Morrow 2000 (through discussion of the benefits of formalizing military alliances) and Ritter 2001 (in discussion of secret alliances).
rational response to uncertainty, especially given the real possibility of “betrayal and regret” (Lipson 1991: 500; see also Koremenos, Lipson, and Snidal 2001).

**Privacy:** VNAs can derive significant privacy-related benefits from keeping commitments vague and maximizing agreement flexibility. While VNAs can derive some benefits by making their cooperative arrangements public, alternatively these groups may benefit from maintaining a lower public profile. Although forming the arrangement is meant to serve as a signal to opponents, timing is critical and there may be some advantage to not making the arrangement public until they are sure that it is going to work for what they want. This is not an implausible benefit, considering that many individual organizations do the same: for example, while the Honduran Partido Revolucionario de Trabajadores de Centroamérica (Central American Workers' Revolutionary Party, or PRTCH) was officially formed in 1977, the group remained ‘underground' for six years before launching its first major operation (Radu and Tismaneanu 1990). Additionally, in most cases, VNAs must also be willing to give up a significant amount of cover such that communications for hashing out the terms of agreement could be regularized. For example, the process of forming the South American Junta Coordinadora Revolucionaria (Revolutionary Coordinating Committee, or JCR) involved multiple rounds of negotiation -- carried out in roundtable format -- over four years, requiring the leadership of at least three major guerrilla organizations to travel over 50 miles each, each time, in the early 1970s (Riefe 1991). As for any dark actor, the regularization of any behavior can become an important point of weakness, providing predictable ‘down-time’ and opportunities for interdiction or interception upon which enemies can capitalize. For these reasons, among others, informal agreements would allow VNAs to avoid the type of publicity that decreases security and jeopardizes survival while still providing access to important collaborators.

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62 Incidentally, this mission – dubbed the “Olancho operation” – was a resounding failure. This is to note that while keeping one’s operations secret until conditions seem ripe and the plan of attack is finalized may provide some comfort to the attackers, it does not guarantee success.
**Protection:** Although inter-group cooperation should communicate a respect for the autonomy of others, the uncertainty that clouds the decisions about with whom and how to cooperate never completely goes away. It is entirely possible that some VNAs might actually be as predatory as others expect; if this is true, then agreeing to rules for being punished doesn’t make any sense if they have no intention of following them anyway. Although some argue that only those willing to bear the costs of participation/enforcement will join in (see Fearon 1998), we know that reputations are dynamic and incentives to lie abound, regardless of the information communicated by characteristics that are not easily manipulated (Sartori 2005; Svolik 2006). Additionally, though the gains from cooperation – even with liars and cheats – may be appealing, “[rational] states will rarely spend a great deal of time and effort negotiating agreements that will continually be violated” (Downs, Rocke, and Baroom 1996: 383). In order to mediate this issue, Lipson (1991) explains that the flexibility associated with informality “also means that [agreements] are more easily abandoned,” and that when commitments are kept vague “[N]egotiators need not try to predict all future states and comprehensively contract for them” (500-501). On a similar note, Morselli, Giguere, and Petit (2007: 144) argues that “within the efficiency/security trade-off, security appears to be the predominant concern in criminal networks.”\(^63\) This suggests that when constructing the terms of a cooperative arrangement, dark actors – like VNAs – may be more likely to choose design features that allow them to keep collaborators at arm’s length. Such a strategy would both allow a VNA to protect itself against the costs of being suckered by one’s partners and to maintain the latitude necessary to be the defector if it proves lucrative enough.

**Speed:** Informal arrangements are also thought to preserve flexibility in ways that institutionalized cooperation cannot. Formal arrangements are designed, in part, to make it difficult for participants to deviate from the terms of agreement as they stand, regardless of the surrounding  

\(^{63}\) On the importance of security among actors in dark networks, see also Baker and Faulkner (2004).
circumstances. However, Lipson (1991) points out that part of the attractiveness of informality is the fact that “[I]n complex, rapidly changing environments, speed is a particular advantage” (500). Part of the uncertainty that plagues VNAs comes from how rapidly their operating environments can change; individual groups can go from hundreds to tens of members in just a few days (as happened to the Montoneros of Argentina in 1976) and organizations can join and defect on a cooperative arrangement within a matter of months (as did the Movimiento Revolucionario del Pueblo [MRP] with respect to the anti-Castro Frente Revolucionario Democrático [FRD] umbrella in 1961).

Additionally, while VNAs have incentives to keep their activities secret until the environment is ripe for them to become public, their opponents share those incentives as well. Many counter-violence campaigns mimic the strategy used by their opponents, and in many instances the offensives that severely weaken VNAs are at best discovered a few days before the intended strike, and at worst take the organizations completely by surprise. The formality and publicity of an institutionalized arrangement can make it rather difficult to change the terms of cooperation when conditions change rapidly (Lipson 1991).

However, strict informality is not the only solution to these concerns. Even given the gravity of these concerns, agreements can be designed in such a way that uncertainty about preferences can be accommodated and mediated. For example, VNAs concerned about being able to protect themselves from defectors can propose institutionalizing the cooperation in such a way that maximizes flexibility. For example, Rosendorff and Milner (2001) show that escape clauses are a design feature that can be built into a cooperative arrangement for helping states to manage uncertainty about the future, concluding that “the greater the uncertainty that political leaders face…the more likely agreements are to contain escape clauses” (831). Additionally, strategic renegotiation periods can be also built in for much the same reason and purposes (Koremenos 2001; Koremenos, Lipson and Snidal 2001). VNAs troubled by the prospects that institutionalization
could prematurely advertise the post-cooperation characteristics of the parties could opt to keep their arrangement a secret, which allows them to keep all of the details (and benefits) to themselves (see Morrow 2000 or Ritter 2001). One concern that is unlikely to be avoided however is the existence of maintenance costs that will always be associated with institutionalization (see Lake 1996 on the relationship between governance costs and movement from less- to more-structured forms of interstate cooperation). However, given that VNAs can choose a level of institutionalization that is commensurate with their tolerance for paying these costs, this simply suggests that in instances where no group is willing to take on the costs of maintaining an agreement even with multiple points of flexibility and ambiguity, no agreement should emerge.

The Impact of VNA Credibility on the Decision to Institutionalize

A general comparison of the two options available to VNAs reveals that while institutionalization offers cooperation partners improved signaling and enforcement capacity and reductions in the time-to-realization of the joint gains, informality provides precious flexibility and greater discretion over individual behaviors/decisions. However, comparing the benefits from institutionalization versus informality does not tell us definitively which choice a given VNA will make when faced with the opportunity. However, it may be possible to infer something about how much a dyad of VNAs may benefit from (and so prefer) institutionalization versus formality by looking at the power and identity characteristics of the participating groups. To the extent that these characteristics are used to identify which partners may be best, they should also give some indication as to what type of design would be most likely to result in a successful realization of the joint gains.

I argue that the degree to which any of these benefits would appeal to a given partner can be inferred, in part, from the organization’s power and identity characteristics. I argue that this is the
case because of the information about an actor’s incentives to exploit (and/or its vulnerability to exploitation) that these characteristics communicate. Such logic echoes a number of arguments and findings about correlates of security cooperation (and unilateral defection) among state actors. For example, in asking what makes states abrogate formal alliance commitments, Leeds and Savun (2007) find that the likelihood of unilateral defection from formal interstate alliance commitments is directly related not just to the level of threat facing the allies, but also to the features of individual member states. Among the most relevant individual characteristics are each partner’s military capabilities and the existence of shared goals (1118). Furthermore, others have noted that decisions about the onset and design of inter-state security cooperation are driven in large part by four main considerations: the resources with which each party approaches the cooperation, the costs (and benefits) of opportunism (Lake 1996), the reputations of the parties involved (Leeds 2000; Lipson 1991) and each party’s preference for cooperation in the first place (Fearon 1998).

In other words, a fundamentally important piece of information for a VNA contemplating cooperation illuminates as to the chances that any arrangement struck with a given partner is likely to be self-enforcing. As I have argued in previous chapters, I contend that power and social identity characteristics are important because of the information they communicate about an organization’s credibility, or the degree to which the actors really are uncertain about their partner’s truthfulness, trustworthiness and expected strategy once cooperation has been consolidated. Again, such logic echoes a number of arguments and findings about correlates of security cooperation (and unilateral defection) among state actors. In asking what makes states abrogate formal alliance commitments, Leeds and Savun (2007) find that the likelihood of unilateral defection from formal interstate alliance commitments is directly related not just to the level of threat facing the allies, but also to the features of individual member states. Among the most relevant individual characteristics are each partner’s military capabilities and the existence of shared goals (1118). Additionally, Leeds (2000)
notes that the relationship between state allies is based in part on the expectation of some benefit, and that the decision of who to ally with is based, at least in part, on reputation.

**Power-based:** As I described in Chapter 2, the material capabilities of a VNA offer two crucial pieces of information to others. On one hand, each actor’s individual ability to protect its survival without the cooperation suggests its incentives for abrogating the terms of any agreement struck, and making off with more than its fair share of the joint gains. Additionally, each group’s individual capabilities give its partner(s) a preview of how large the joint gains can be expected to grow, suggesting its incentives for the genuine pursuit of cooperation as well. I have argued that a VNA located at one of the power extremes – high or low – is more vulnerable to the temptation to exploit a partner than are VNAs with moderate levels of power. While low-power VNAs do have a lot to lose by not cooperating with others, they also have an intense need to secure as large a share of the joint gains as possible due to their capabilities handicap. This suggests that low-power VNAs are likely to prize institutionalized cooperation for its positive effects on a group’s signaling credibility and its efficiency, even given the autonomy that could be provided by keeping an arrangement informal. On the other hand, high-power VNAs have a weak need for cooperation as a means for protecting themselves against enemy threats, as well as incentives and abilities to force cooperation partners into submission (and a reduced share of the joint gains). Taken together, this suggests that not only are they in no rush to accumulate joint gains, but high-power VNAs would also prefer to have an agreement that allows them enough flexibility to be able to protect themselves from predatory partners, if necessary. VNAs with moderate levels of power, however, are both enticed by the potential of benefits from reneging on agreements and more constrained against exploiting others than are the organizations at the power extremes. Given their ability to fend off some threats, mid-power VNAs do have a shadow of the future that is longer than that of the low-power groups. This suggests a reasonable prospect of encountering jilted cooperation partners again.
in their future, and places extra pressure on mid-power groups against choosing an institutional
design that makes it easier for them to renege on their commitments.

Given this, and while it is unclear which of the benefits from institutionalization or
informality these groups would prize the most, I would argue that a mid-power VNA’s position vis-
à-vis its partner will determine which design it prefers (i.e. a partnership with a high-power group
would make it the weaker of the two, leading it to choose the option more desirable to weak groups;
when paired with a low-power group, it would instead choose the option more favorable to a high-
power organization).

Given what we might expect the preferences to be for VNAs of different power levels, I
offer some preliminary guesses as to the type of agreement that is most likely for different dyadic
combinations. In order to successfully consolidate a cooperative arrangement, potential partners
must be somehow compelled to trust that, for a VNA at one of the power extremes, incentives to
exploit can and will be suppressed; without this, there would be no joint gains to speak of for the
group to pillage. Generally speaking, institutionalization seems more reasonably justified for power-
asymmetric dyads. To the extent that shared power characteristics can reduce uncertainty about
each group’s incentives to defect, this information should entice the VNAs in a power-symmetric
dyad to avoid paying the costs of maintaining and enforcing an institutionalized arrangement. For
power-asymmetric dyads however, the uncertainty about likely strategies engendered by the power
difference should promote institutional designs that increase the costs of defection. This should
render power-asymmetric dyads more likely to institutionalize their cooperation than to keep it loose
and informal.

Therefore, I expect power-symmetry to have a generally negative relationship to agreement
institutionalization. However, given that I also expect VNAs of different power levels to differ also
in their preferences for institutionalized versus informal cooperation, there may be significant variation in the strength of that negative relationship among types of power-symmetric dyads. Overall, I expect the design of inter-group cooperation to follow the expected preferences of the groups when considered alone. Specifically, I expect not only pairs of low-power VNAs will be more likely to institutionalize their cooperation than to cooperate informally, but also that pairs of high-power VNAs will be more likely to cooperate informally than to institutionalize their cooperation. With respect to dyads of mid-power organizations, I expect only they will be more likely to institutionalize their cooperation than high-power dyads, but less likely to cooperate informally than low-power dyads.

For mixed dyads however, I expect that the design of cooperation will reflect the preferences of the stronger of the two groups. That the design of cooperation often reflects more of the preferences of the stronger parties is a fairly common argument in studies of interstate cooperation. For example, Gately (1974) shows that the terms of agreement are often set by the preferences of those states with the greatest “propensity to disrupt,” or ability to determine the upper limit on gains for other participants. The main benefit from having a high propensity to disrupt is that these states are able to reduce the set of mutually acceptable distributions of gains to only those that they favor (Gately 1974: 200-202). Moravscik and Vachudova (2003) further highlight this dynamic in their discussion of European Union (EU) enlargement, noting not only that “In [the EU enlargement rounds], applicant countries have consistently found themselves in a weak negotiating position vis-à-vis their EU partners and accordingly have conceded much in exchange for membership,” but also that “those countries that gain the most by engaging in more intense interstate cooperation – more precisely, those for whom cooperation is most attractive relative to unilateral (or mini-lateral) policymaking – have the most intense preferences for agreement…[and are] thus willing to compromise the most on the margin to further it” (44).
Identity-based: Most work that examines the relationship between reputations and/or social identities and the design of interstate cooperation has focused on the importance of these characteristics for reducing uncertainty about preferences among the participants. For example, Williams and Neumann (2000) suggest that the longevity of the North Atlantic Treaty Organization (NATO) and its “enduring and institutionalised patterns of co-operation” are due in large part to “the existence of common ‘regulative’ and ‘constitutive’ norms and values within the organisation, and the continuing impact of shared democratic identities upon which the Alliance is based” (358). Additionally, social identity characteristics have been argued to be important for their impact on actors’ willingness to exploit others and/or to bear the costs of cooperation (Wendt 1994).

To the extent that behavioral reputations can serve as direct signals of how interested a VNA is in (1) cooperation in general and (2) respecting the terms of cooperation once consolidated, these characteristics provide a clear picture of how trustworthy a given VNA may be expected to be as a cooperation partner. Vulnerability to incentives to exploit one’s partner is then especially clear, and should straightforwardly impact an organization’s preference for institutionalization versus informality in a cooperative arrangement. Given that one of the main benefits of institutionalization is that it helps to reduce uncertainty about actor preferences, it should be less likely in instances where there is already a fairly low level of uncertainty among the participants. It is likely that this can be achieved by having a reputation that signals strong commitment to one’s strategic choices (whether they be positive or negative). On the other hand, organizations with reputations that communicate a less-than-robust commitment to their decisions should be more likely targets for institutionalization.

Mimicking my expectation for power-asymmetric dyads, the benefits of institutionalization seem to outweigh the benefits of informality for reputation-asymmetric pairs. Mutual identification
of reputations should increase each group’s confidence that its partner will behave as it says it will. This should reduce the need for (costly) institutionalizing to prevent bluffing or reneging. On the other hand, reputation-asymmetric dyads can use the constraining powers of institutionalization to neutralize the less-credible partner’s incentives to defect. Given this, I expect that institutionalized cooperation will be more likely in reputation-asymmetric dyads than in reputation-symmetric dyads overall.

Again, the different preferences for informality versus institutionalization associated with different types of reputations suggest that, among reputation-symmetric dyads, there may be significant variation in their preferred institutional design. Specifically, while I expect that pairs of VNAs that have reputations communicating credibility will be more likely to engage in informal rather than institutionalized cooperation, pairs of VNAs with other reputations should be more likely to institutionalize their arrangements than not. Credibility can be communicated by either good or bad reputations: just as groups that attempt cooperation having cooperated in the past are probably credible cooperators, groups that attempt cooperation having defected on a partner in the past are probably just as credible defectors. With respect to the latter, it seems counterproductive for two groups with reputations for defection to pay the governance costs associated with institutionalization when neither has any expectation that the other will not renege on its promises. With respect to good-reputation dyads however, it similarly may be inefficient to pay governance costs to constrain a partner unlikely to defect against defection. These two dynamics suggest the rather counterintuitive prediction that both good-reputation and bad-reputation dyads should be more likely to cooperate informally than dyads of VNAs with reputations that are just ‘fair’. For the mixed dyads however, I expect that institutionalization will be more likely than informality. While VNAs with better reputations may want to avoid entering into a costly relationship with a less reliable partner, they are also likely invested in keeping their positive reputations. Again, these
organizations can use the constraints on their partners implied by institutionalization as insurance against being suckered.

Finally, the impact of shared ideological affiliations can plausibly run in two directions, incentivizing either agreement institutionalization or informality. On one hand, the existence of shared attitudes, values and expectations may serve to reduce uncertainty for the participants, leading them to feel confident in each other’s commitment to avoid the maintenance costs of formalizing their arrangements while still enjoying the benefits of collaboration. On the other hand however, such strong mutual identification may lead ideologically similar VNAs to pursue institutionalized cooperation as a means for reinforcing their shared values. Concerns about in-group policing may make groups of different ideological affiliations less likely to want to institutionalize their cooperation. To the extent that a VNA may be somehow punished by members of its ideological grouping for working with a partner that shares different values, concerns about remorse- or guilt-driven defection are likely to push others to prefer strict and clear terms of cooperation.

Hypotheses

These expected relationships that I have described between VNA power characteristics, VNA identity characteristics and the likelihood that a given cooperative arrangement will be institutionalized can be restated in the form of testable hypotheses. Specifically, to allow testing for *ceteris paribus* effects of VNA power characteristics, I hypothesize that, among all cooperating dyads:

H1: Institutionalization is more likely for power-asymmetric dyads that for power-symmetric dyads.
Within the power-symmetric category however, I also hypothesize that:

H2: A pair of low-power VNAs will be more likely than other power-symmetric pairs to institutionalize their cooperation than to cooperate informally;

H3: A pair of high-power VNAs will be more likely than other power-symmetric pairs to cooperate informally than to institutionalize their cooperation; and

H4: A pair of mid-power VNAs will be more likely to institutionalize their cooperation than high-power pairs, but less likely to institutionalize than low-power pairs.

To allow testing for ceteris paribus effects of VNA identity characteristics, I hypothesize that, among all cooperating dyads:

H5: Shared ideological affiliation is associated with the likelihood of institutionalized cooperation; and

H6: Institutionalized cooperation is more likely for reputation-asymmetric dyads than for reputation-symmetric dyads.

To test my expectations about variation within the reputation-symmetric category, I also hypothesize that:

H7: Institutionalized cooperation is more likely for a pair of VNAs with good reputations than for a pair with fair reputations; and

H8: Institutionalized cooperation is more likely for a pair of VNAs with bad reputations than for a pair with fair reputations.
Research Design

Again, I define a cooperative arrangement as a formal or informal arrangement that has been collectively decided upon by the cooperating parties and governs the management or execution of some level of resource-sharing, strategic coordination and/or tactical collaboration. For the tests that follow, I use a version of the Cooperation Data in which the bilateral arrangement onset-year is the primary unit of analysis. These data contain information about 519 bilateral cooperative arrangements and the VNA dyads that are associated with each, and are organized in cross-sectional format: all of the variables indicate the characteristics of the arrangement and the participating VNAs during the first year of cooperation.

I focus on bilateral arrangements specifically for one main reason: in many instances multilateral cooperation can itself be thought of as a conscious linking of different two-way relationships. For example, while Gamson (1961: 382) “envisions the process of [n-player] coalition formation as a step-by-step process until by successive pairing, the decision point has been reached” (382), others have argued that not only multilateral arrangements composed of linked bilaterals, but that the nature of those pair-wise relationships likely differs as well (Gilligan 2004). I also restrict my attention to the initial design of an inter-group arrangement both for simplicity and to not stray too far from the original aims of this chapter. While interesting, answering the question of whether to adjust the terms of cooperation over time requires different information about preferences, incentives and changes in those characteristics over time than is necessary to investigate what may cause a VNA dyad to choose institutionalized versus informal cooperation at the start of an arrangement. Furthermore, the process of changing other features of a cooperative arrangement – i.e. the number of actors involved, the scope and depth of the cooperation, or the adoption of new

64 Descriptive statistics for the dependent, independent and control variables, as well as more detailed information about the data structure and coding rules, are available in Appendices C and D.
enforcement/monitoring provisions, among others – is inevitably more complicated, if not specifically due to the increased number of actors and preferences/expectations to be managed.

**Dependent Variable**

The dependent variable – *institutionalized cooperation* – is coded as a binary variable equal to one if the cooperative arrangement is accompanied by some set of explicit rules for governance, expectations about the behavior of the parties involved, guidelines for determining what constitutes a breach of agreement or instruction as to how to identify the beginning and/or end of the arrangement, and equal to zero otherwise.

**Independent Variables**

The independent variables indicate the power and/or identity characteristics of the two dyad members. All of these variables were also used in the tests included in Part II of Chapter 4, in which I examined the dyad-level correlates of cooperation onset.

The *power symmetry* variable compares the individual, overall power levels of the two dyad partners. This is coded as a dummy variable equal to one if the dyad partners are of the same power level (both high, both mid-level, or both low), and equal to zero if the partners are of different power levels. Three types of symmetry are combined in the ‘one’ category for this variable: it includes pairs of high-power groups, pairs of mid-power groups and pairs of low-power groups. In order to separate these three types, I also created three binary variables indicating whether the dyad is made of two high-power groups (*high-power symmetry*), two mid-power groups (*mid-power symmetry*), or two low-power groups (*low-power symmetry*). Each of these variables is equal to one when the dyad falls into that category, and equal to zero otherwise.
The reputation symmetry and shared ideology variables both compare the social identity characteristics of two dyad partners, in terms of the individual cooperative reputations of the two dyad partners and the ideological affiliations of the two partners, respectively. Identity similarity with respect to ideology is measured using a binary variable equal to one if both groups share the same stated ideology, and equal to zero otherwise. Identity symmetry with respect to reputation is coded as a binary variable equal to one if the dyad partners share the same reputations (both good, both fair or both bad), and equal to zero if the partners have different reputations. Again, three types of symmetry are combined in the ‘one’ category for this variable: it includes dyads where both VNAs have a good reputation, dyads where both VNAs have a fair reputation, and dyads where both have bad reputations. In order to separate these three types, I also created three binary variables indicating whether the dyad is made of two good-reputation groups (good-reputation symmetry), two fair-reputation groups (fair-reputation symmetry), or two bad-reputation groups (bad-reputation symmetry). Each of these variables is equal to one when the dyad falls into that category, and equal to zero otherwise.

Controls

I also include a number of control variables, in order to account for other sources of uncertainty or information about an organization’s incentives to defect from cooperation. Similarity in financial independence is coded as an ordinal variable equal to two if the dyad partners both rely primarily on self-directed activities for generating funds for operations in a given year, equal to one if both rely primarily on some combination of self-directed activities and external sources, and equal to zero if the partners have different primary modes of generating funds. Additionally, I use two controls for location. First, proximity is coded as a binary variable equal to one if the dyad partners’

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65 I code the variable this way in order to distinguish two types of similar dyads: 1) those in which both members are strategically independent and 2) those dyads in which both members are strategically dependent.
home territories are in the same sub-regional neighborhood in a given year, and equal to zero otherwise.\footnote{This variable is a reasonable substitute for others that would measure proximity by distance apart, since the exact coordinates of VNAs headquarters are both notoriously tricky to determine and often somewhat uninformative given the possibility of rapidly shifting battle fronts, soldiers, and leaders.} Secondly, I use five binary variables indicating mutual residence in one of the five different sub-regions to capture specific location similarity. For example, if both VNAs in a dyad are located in the East Central South America neighborhood, the ‘East Central sub-region’ variable is equal to one (and equal to zero otherwise). Average dyad age is calculated as the mathematical average of the two VNAs’ ages, and is coded as an interval-ratio variable.

**Empirical Results**

There are 306 unique dyadic combinations reflected in these data, suggesting that for the most part these organizations did not successfully consolidate cooperation with a given partner more than once. Of those dyads that experienced multiple onsets, only about 3 percent started up cooperation with each other more than twice; these dyads are listed in Table 5.1. About 59 percent (308/519) of the cooperative arrangements in these data have been institutionalized to some degree.

<INSERT TABLE 5.1 ABOUT HERE>

A quick look at the variation in arrangement design among the dyads in my sample suggests that my hypotheses about the independent effects of dyad-level power and identity characteristics are mostly unsupported given these data. Tables 5.2, 5.3 and 5.4 show summaries of the number of institutionalized arrangements that appear for different dyadic power, reputation and ideology configurations. Offering preliminary support for the power symmetry hypothesis, we see that institutionalized arrangements emerged more often for cooperating pairs in which both VNAs had
the same power levels than for power-asymmetric pairs (see Table 5.2). However I also observe that, of the power-symmetric dyads, institutionalized arrangements appeared more often for the high-power dyads than for any other.\textsuperscript{67} Furthermore, reputation-symmetric dyads chose institutionalized cooperation more often than informality (see Table 5.3); generally, ideologically symmetric dyads also chose institutionalization over informality while asymmetric dyads preferred informal arrangements (see Table 5.4).

\textless\text{INSERT TABLE 5.2 ABOUT HERE}\textgreater

\textless\text{INSERT TABLE 5.3 ABOUT HERE}\textgreater

\textless\text{INSERT TABLE 5.4 ABOUT HERE}\textgreater

The logit model results presented in Table 5.5 further show mixed substantive and statistical support for my hypotheses about power symmetry.\textsuperscript{68} Model 1 represents the baseline model that I use to determine the \textit{ceteris paribus} effects of dyad-level power and identity characteristics on the chances that a given cooperative arrangement will be institutionalized. The results of Model 1 provide strong support for Hypothesis 5 but contradict Hypotheses 1 and 6.\textsuperscript{69} Supporting Hypothesis 5, the negative and statistically significant coefficient on the ideological symmetry variable suggests that there is a strong association between shared ideology and the likelihood of arrangement institutionalization. Specifically, shared ideology reduces the chances of institutionalization for a given cooperating dyad. Although Hypothesis 1 anticipated a negative relationship between power symmetry and arrangement institutionalization, the coefficient on the

\textsuperscript{67} Out of all 208 power-symmetric cooperating-dyad years, 168 involved a high-power pair, 37 involved a mid-power pair, and 2 involved a low-power pair.

\textsuperscript{68} Statistical significance is determined using robust standard errors; all models were clustered on the individual dyad.

\textsuperscript{69} These results are consistent across model specifications; although they vary in the size of the logit coefficient, direction and statistical significance remain constant.
The logit model results presented in Table 5.6 show mixed support for my hypotheses about reputation symmetry.\(^{71}\) The positive and highly statistically significant coefficient on the ‘good-reputation symmetric’ variable in Models 3a and 3c suggests that when a cooperating dyad is

\(^{70}\) This conclusion is based on the statistically insignificant coefficients on the ‘both mid power’ variables in Models 2b and 2c.

\(^{71}\) Statistical significance is determined using robust standard errors; all models were clustered on the individual dyad.
composed of two VNAs with reputations for being resolved in their strategic decisions and committed to cooperation in particular, any associated arrangement is more likely to be institutionalized than informal. Such a finding is directly in line with Hypothesis 7. On the other hand, the coefficient on the 'bad reputation symmetric' variable in Models 3a and 3b is not only negative but also statistically insignificant. The substantive implication of this finding is that, contrary to Hypothesis 8, pairs of cooperating bad-reputation VNAs are less likely to choose institutionalization than are pairs of fair- or good-reputation VNAs. However, the statistical insignificance of this effect makes it difficult to draw such a conclusion with certainty.

<INSERT TABLE 5.6 ABOUT HERE.>

Finally, all of the control variables presented very stable relationships to the dependent variable, in terms of both statistical and practical significance. Across model specifications, the results indicate that while sharing same geographic region promotes arrangement institutionalization, there is notable variation across regions in this effect. The effect of shared levels of financial independence is both substantively small and statistically insignificant; this finding suggests that this characteristic is likely a non-consideration. Finally, increases in the average age of the VNAs in question appear to depress the likelihood of institutionalization for a given cooperating dyad.

Discussion and Implications

It is clear from the results of these models that both power and identity characteristics matter, in the dyadic context, for explaining which inter-VNA cooperative arrangements are likely to be institutionalized. However, while the logit coefficients are useful for determining the direction and statistical significance of the effects of these variables on the likelihood of arrangement
institutionalization, they do not tell us anything about the relative impact of power versus identity. I look further into these substantive implications by examining the odds ratios associated with the estimated effects; these are presented in Table 5.7.

Based on the results from Model 1, symmetry with respect to reputations seems to have the largest impact on whether a cooperating dyad chooses to institutionalize their arrangement: if we were to move a cooperating dyad from a state of reputation asymmetry to reputation symmetry, we would observe an 8-fold increase in the odds of the associated arrangement being institutionalized. In contrast, movement from a state of power asymmetry to power symmetry would be associated with only a 4-fold increase in the same likelihood. While the substantive impact of shared ideology on the onset of a cooperative arrangement among two VNAs was impressively large, ideological symmetry has a surprisingly small practical impact on the design of an arrangement. Generally, reputation symmetry appears to be the component of a VNA’s identity that has the greatest impact on arrangement design: while shared reputation impacts the likelihood of institutionalized cooperation (positively) by a factor of 8, shared ideology impacts the same likelihood (negatively) by only a factor of only 0.2. Furthermore, the effect of sharing a good reputation is also practically larger than the effect of sharing reputations that are simply fair: while fair-reputation dyads are about 9 times more likely to institutionalize cooperation than bad-reputation dyads, good-reputation dyads are almost 14 times more likely to do so.

<INSERT TABLE 5.7 ABOUT HERE.>

**Special note about multilateralism**

An interesting complication to the data used for these tests has to do with the distribution of bilateral arrangements among the instances of multilateral cooperation that I identified for this
region. This is of particular empirical interest because, save one, all of the bilateral arrangements reflected in these data are also part of some larger multilateral arrangement as well. Although there are only 13 cases of multilateral cooperation reflected in the data used here, I have actually identified 30 instances of this; the remaining 17 multilaterals are not reflected due to a lack of detailed information about each of the individual participating VNAs.²²,²³ (A complete list of the multilateral arrangements that were identified in these data is included in Appendix D.)

Of the 13 cases, the bilateral arrangements included as part of the broader Colombian Autodefensas Unidas de Colombia (United Self-Defense Forces of Colombia, AUC) umbrella account for the lion’s share of the bilateral arrangements to be examined (229 out of 308 unique dyad combinations, or about 75 percent of the sample). Given that participation in this single multilateral is related to so many of the bilateral arrangements, I compared the baseline model estimated on the full sample (as shown in Table 5.6, Model 1) to the same model estimated using a version of the data that excludes all bilateral arrangements institutionalized as part of the AUC. The results of this estimation and the results from Model 1 are presented in Table 5.8. In comparing these two sets of results, we see that only ideological symmetry and the proximity and region-specific variables retain their statistical significance. This is relatively surprising given the small substantive impact of ideological symmetry on the likelihood of arrangement institutionalization, but suggests that much

²²Although this could have led some biased estimates in the logit models, based on the qualitative information that I have gathered on the location and purpose of the cooperation, as well as the types of groups that were likely party to these arrangements, I am reasonably confident that there is enough variation on these dimension that the missingness is not systematic. Nonetheless, further research into these arrangements would be essential for making a more concrete assessment.

²³In every case however, the bilateral arrangement onset dates reflect the year in which cooperation among two given VNAs began, not the year in which the multilateral arrangement began. With this, I am able to identify when an organization may have joined a particular multilateral arrangement. Whether the multilateral was started under a seriatim versus cluster regime is not differentiable in these data, however (see Pahre 2001 on the difference between seriatim and cluster models of forming a multilateral arrangement).
of the observed impact of power and reputation on institutional design may be due to the dynamics of one particular case.

<INSERT TABLE 5.8 ABOUT HERE>

While currently I do not have any direct arguments about why the distribution of bilateral arrangements among the multilateral arrangements is as such, this observation does suggest an interesting area for additional research. As described at the start of this chapter, the decision of whether or not to institutionalize an inter-VNA arrangement is only one of many design options available to these organizations. Another important decision involves determining the optimal number of participants. In other words, the question of whether to cooperate only bilaterally versus cooperating multilaterally may be an equally important consideration, and may have some influence over the decision of whether to institutionalize that cooperation as well.

All of the hypotheses that I rejected pursuant to the empirical tests were based on the premise that institutionalization would be used to mediate uncertainty about the likely strategies and incentives that each participant has for unilateral defection. However, such uncertainty is not confined to the bilateral context however; in the context of multilateralism, there may be different incentives to choose other institutional designs for consolidating and incentivizing inter-group cooperation. For example, while on the surface it looks like the decision of whether or not to institutionalize is the same as the decision of whether or not to be multilateral in these data, there is considerable enough variation among the multilateral arrangements to suggest that there may be a separate logic underlying why we see multilateralism among VNAs. Future research into the decision-making process underlying multilateralism (both in the context of institutionalization and as an alternative design option) would be necessary to not only shed light on this question, but also to provide more context to the argument and results presented in this chapter.
Chapter 5 Tables and Figures

Table 5.1. List of VNA dyads that began cooperation more than twice.

<table>
<thead>
<tr>
<th>Dyad ID</th>
<th>Name of cooperating VNAs</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Three arrangements</td>
</tr>
<tr>
<td>14191436</td>
<td>Movimiento de April 19(Colombia)-Comando Quintin Lame (Colombia)</td>
<td>1985, 1986, 1987</td>
</tr>
<tr>
<td>14191811</td>
<td>Movimiento de April 19 (Colombia)-Alfaro Vive, Carajo! (Ecuador)</td>
<td>1983, 1986, 1987</td>
</tr>
<tr>
<td>14311436</td>
<td>Ejercito de Liberacion Nacional (Colombia)-Comando Quintin Lame (Colombia)</td>
<td>1985, 1986, 1987</td>
</tr>
<tr>
<td>18112401</td>
<td>Comando Quintin Lame (Colombia)- Movimiento Revolucionario Tupac Amaru (Peru)</td>
<td>1983, 1985, 1986</td>
</tr>
<tr>
<td>19041906</td>
<td>Revolutionary Army of the People (El Salvador)-Farabundo Marti Popular Liberation Forces (El Salvador)</td>
<td>1975, 1980, 1983</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Four arrangements</td>
</tr>
<tr>
<td>14191431</td>
<td>Movimiento de April 19 (Colombia)- Ejercito Popular de Liberacion (Colombia)</td>
<td>1984, 1985, 1986, 1987</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Six arrangements</td>
</tr>
</tbody>
</table>
Table 5.2. Distribution of Dyad-Years by arrangement design and power symmetry.

<table>
<thead>
<tr>
<th></th>
<th>Power-symmetric</th>
<th>Power-asymmetric</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informal arrangement</td>
<td>0.8% (73/8990)</td>
<td>0.8% (123/15442)</td>
<td>0.8% (196/24432)</td>
</tr>
<tr>
<td>Institutionalized</td>
<td>2.3% (207/8990)</td>
<td>0.6% (94/15442)</td>
<td>0.12% (301/24432)</td>
</tr>
<tr>
<td>arrtangement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No arrangement</td>
<td>97% (8710/8990)</td>
<td>99% (15225/15442)</td>
<td>98% (23935/24432)</td>
</tr>
<tr>
<td>Column Total</td>
<td>37% (8990/24432)</td>
<td>63% (15442/24432)</td>
<td>100% (24432/24432)*</td>
</tr>
</tbody>
</table>

*6998 cases were excluded from the total number of dyad-years for missing information on power symmetry. 1 case was excluded for missing information on the institutionalization of an arrangement.

Note: The interior cells reflect percent of total dyad-years attributable to each power and design combination; raw proportions are listed in parentheses. For example, the Column1, Row 1 entry shows that 0.8% of the power-symmetric dyad-years were characterized by the onset of an informal arrangement. In other words, out of the 8990 dyad-years where the partners were of the same power level, 73 included an informal arrangement among them. The column totals reflect the total number of power-(a)symmetric dyad-years out of all dyad-years; the row totals reflect the total number of dyad-years attributable to each design choice out of all dyad-years.
Table 5.3. Distribution of Dyad-Years by arrangement design and reputation symmetry.

<table>
<thead>
<tr>
<th></th>
<th>Reputation-symmetric</th>
<th>Reputation-asymmetric</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informal arrangement</td>
<td>0.7% (74/10985)</td>
<td>0.9% (127/13480)</td>
<td>0.8% (201/24465)</td>
</tr>
<tr>
<td>Institutionalized arrangement</td>
<td>2.1% (233/10985)</td>
<td>0.4% (57/13480)</td>
<td>1.2% (290/24465)</td>
</tr>
<tr>
<td>No arrangement</td>
<td>97% (10678/10985)</td>
<td>99% (13299/13480)</td>
<td>98% (23977/24465)</td>
</tr>
<tr>
<td>Column Total</td>
<td>45% (10985/24465)</td>
<td>55% (13480/24465)</td>
<td>100% (24465/24465)*</td>
</tr>
</tbody>
</table>

*6965 cases were excluded for missing information on reputation symmetry.

**Note:** The interior cells reflect percent of total dyad-years attributable to each reputation and design combination; raw proportions are listed in parentheses. For example, the Column1, Row 1 entry shows that 0.7% of the reputation-symmetric dyad-years were characterized by the onset of an informal arrangement. In other words, out of the 10985 dyad-years where the partners were of the same reputation, 74 included an informal arrangement among them. The column totals reflect the total number of reputation-(a)symmetric dyad-years out of all dyad-years; the row totals reflect the total number of dyad-years attributable to each design choice out of all dyad-years.
Table 5.4. Distribution of Dyad-Years by arrangement design and ideological symmetry.

<table>
<thead>
<tr>
<th></th>
<th>Ideologically symmetric</th>
<th>Ideologically asymmetric</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Informal arrangement</strong></td>
<td>2.0% (146/6855)</td>
<td>0.3% (64/23939)</td>
<td>0.7% (210/30686)</td>
</tr>
<tr>
<td><strong>Institutionalized arrangement</strong></td>
<td>3.7% (252/6855)</td>
<td>0.2% (56/23939)</td>
<td>1.0% (308/30686)</td>
</tr>
<tr>
<td><strong>No arrangement</strong></td>
<td>94% (6426/6855)</td>
<td>99% (23741/23939)</td>
<td>98% (30167/30686)</td>
</tr>
<tr>
<td><strong>Column Total</strong></td>
<td>22% (6855/30686)</td>
<td>78% (23939/30686)</td>
<td>100% (30686/30686)*</td>
</tr>
</tbody>
</table>

*636 cases were excluded for missing information on ideology. 1 case was excluded for missing information on the institutionalization of the arrangement.

**Note:** The interior cells reflect percent of total dyad-years attributable to each ideology and design combination; raw proportions are listed in parentheses. For example, the Column1, Row 1 entry shows that 2.0% of the ideologically symmetric dyad-years were characterized by the onset of an informal arrangement. In other words, out of the 6855 dyad-years where the partners were of the same ideology, 146 included an informal arrangement among them. The column totals reflect the total number of ideologically (a)symmetric dyad-years out of all dyad-years; the row totals reflect the total number of dyad-years attributable to each design choice out of all dyad-years.
Table 5.5. Relationship between variations on power symmetry, identity symmetry and the likelihood of institutionalized cooperation.

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2a</th>
<th>Model 2b</th>
<th>Model 2c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power symmetry</td>
<td>1.449*** (0.267)</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Both high power</td>
<td>----</td>
<td>1.085*** (0.215)</td>
<td>----</td>
<td>1.936*** (0.289)</td>
</tr>
<tr>
<td>Both mid power</td>
<td>----</td>
<td>----</td>
<td>0.437 (0.704)</td>
<td>1.006</td>
</tr>
<tr>
<td>Both low power</td>
<td>----</td>
<td>-1.813* (1.056)</td>
<td>-2.379** (1.205)</td>
<td>----</td>
</tr>
<tr>
<td>Reputation symmetry</td>
<td>2.132*** (0.281)</td>
<td>2.336*** (0.321)</td>
<td>2.003*** (0.264)</td>
<td>2.301*** (0.317)</td>
</tr>
<tr>
<td>Ideological symmetry</td>
<td>-1.456*** (0.485)</td>
<td>-1.607*** (0.523)</td>
<td>-0.939*** (0.459)</td>
<td>-1.602*** (0.517)</td>
</tr>
<tr>
<td>Similarity in financial independence</td>
<td>0.077 (0.122)</td>
<td>0.106 (0.125)</td>
<td>0.009 (0.116)</td>
<td>0.098 (0.125)</td>
</tr>
<tr>
<td>Average age of dyad partners</td>
<td>-0.194*** (0.040)</td>
<td>-0.199*** (0.045)</td>
<td>-0.243*** (0.044)</td>
<td>-0.197*** (0.042)</td>
</tr>
<tr>
<td>Shared subregion</td>
<td>2.469** (1.160)</td>
<td>2.557** (1.135)</td>
<td>2.122*** (0.854)</td>
<td>2.549** (1.138)</td>
</tr>
<tr>
<td>East Central*</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Southern Cone</td>
<td>-1.868** (0.765)</td>
<td>-2.194*** (0.747)</td>
<td>-2.101*** (0.816)</td>
<td>-2.013*** (0.739)</td>
</tr>
<tr>
<td>Andean</td>
<td>1.432*** (0.560)</td>
<td>1.043** (0.510)</td>
<td>1.574*** (0.510)</td>
<td>1.173** (0.517)</td>
</tr>
<tr>
<td>Caribbean</td>
<td>1.139*** (0.833)</td>
<td>1.668* (0.903)</td>
<td>1.010 (1.010)</td>
<td>1.334</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.125** (1.080)</td>
<td>-1.804* (0.775)</td>
<td>0.977 (0.770)</td>
<td>-2.075** (1.035)</td>
</tr>
</tbody>
</table>

N 477 477 477 477

Wald Chi² 92.77 88.93 87.58 97.75

P > chi² <0.001 <0.001 <0.001 <0.001

* East Central predicts failure perfectly, 6 observations dropped.

* significant at .10 confidence level; ** significant at .05 confidence level; *** significant at .01 confidence level
Table 5.6. Relationship between power symmetry, variations on identity symmetry and the likelihood of institutionalized cooperation.

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 3a</th>
<th>Model 3b</th>
<th>Model 3c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power symmetry</td>
<td>1.449***</td>
<td>1.076***</td>
<td>1.616***</td>
<td>1.480***</td>
</tr>
<tr>
<td></td>
<td>(0.267)</td>
<td>(0.215)</td>
<td>(0.262)</td>
<td>(0.291)</td>
</tr>
<tr>
<td>Reputation symmetry</td>
<td>2.132***</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>(0.281)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both good reputations</td>
<td>----</td>
<td>1.683***</td>
<td>----</td>
<td>2.619***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.416)</td>
<td></td>
<td>(0.404)</td>
</tr>
<tr>
<td>Both fair reputations</td>
<td>----</td>
<td>----</td>
<td>1.579***</td>
<td>2.162***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.265)</td>
<td>(0.319)</td>
</tr>
<tr>
<td>Both bad reputations</td>
<td>----</td>
<td>-1.602</td>
<td>-1.074</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.388)</td>
<td>(1.336)</td>
<td></td>
</tr>
<tr>
<td>Ideological symmetry</td>
<td>-1.436***</td>
<td>-1.013**</td>
<td>-1.082***</td>
<td>-1.459***</td>
</tr>
<tr>
<td></td>
<td>(0.485)</td>
<td>(0.434)</td>
<td>(0.421)</td>
<td>(0.495)</td>
</tr>
<tr>
<td>Similarity in financial independence</td>
<td>0.077</td>
<td>0.009</td>
<td>0.173</td>
<td>0.091</td>
</tr>
<tr>
<td></td>
<td>(0.122)</td>
<td>(0.112)</td>
<td>(0.123)</td>
<td>(0.123)</td>
</tr>
<tr>
<td>Average age of dyad partners</td>
<td>-0.194***</td>
<td>-0.251***</td>
<td>-0.157***</td>
<td>-0.213***</td>
</tr>
<tr>
<td></td>
<td>(0.040)</td>
<td>(0.043)</td>
<td>(0.039)</td>
<td>(0.041)</td>
</tr>
<tr>
<td>Shared subregion</td>
<td>2.460**</td>
<td>1.999**</td>
<td>2.080***</td>
<td>2.252**</td>
</tr>
<tr>
<td></td>
<td>(1.160)</td>
<td>(0.867)</td>
<td>(1.068)</td>
<td>(1.172)</td>
</tr>
<tr>
<td>East Central&lt;sup&gt;*&lt;/sup&gt;</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Southern Cone</td>
<td>-1.868**</td>
<td>-2.035**</td>
<td>-1.601**</td>
<td>-1.802***</td>
</tr>
<tr>
<td></td>
<td>(0.765)</td>
<td>(0.907)</td>
<td>(0.813)</td>
<td>(0.830)</td>
</tr>
<tr>
<td>Andean</td>
<td>1.432***</td>
<td>1.473***</td>
<td>1.354***</td>
<td>1.375**</td>
</tr>
<tr>
<td></td>
<td>(0.560)</td>
<td>(0.517)</td>
<td>(0.502)</td>
<td>(0.565)</td>
</tr>
<tr>
<td>Caribbean</td>
<td>1.139***</td>
<td>2.391</td>
<td>2.892*</td>
<td>2.390**</td>
</tr>
<tr>
<td></td>
<td>(0.833)</td>
<td>(2.061)</td>
<td>(1.771)</td>
<td>(0.994)</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.125**</td>
<td>-0.143</td>
<td>-1.903*</td>
<td>-1.733</td>
</tr>
<tr>
<td></td>
<td>(1.080)</td>
<td>(0.799)</td>
<td>(1.003)</td>
<td>(1.084)</td>
</tr>
<tr>
<td>N</td>
<td>477</td>
<td>477</td>
<td>477</td>
<td>477</td>
</tr>
<tr>
<td>Wald Chi²</td>
<td>92.77</td>
<td>95.34</td>
<td>90.42</td>
<td>104.82</td>
</tr>
<tr>
<td>P &gt; chi²</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

<sup>*</sup> East Central predicts failure perfectly, 6 observations dropped.

* significant at .10 confidence level; ** significant at .05 confidence level; *** significant at .01 confidence level
Table 5.7. Odds Ratios.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds Ratio</th>
<th>Of all cooperating dyads…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power symmetry^x</td>
<td>4.260***</td>
<td>a pair with similar power levels has odds of institutionalizing cooperation that are about 3 times higher than the same odds for a pair with different power levels.</td>
</tr>
<tr>
<td>Power symmetric – high†</td>
<td>5.941***</td>
<td>a pair of high-power VNAs has odds of institutionalizing cooperation that are about 5 times higher than the same odds for a pair of mid-power VNAs.</td>
</tr>
<tr>
<td>Power symmetric – low†</td>
<td>0.163*</td>
<td>a pair of low-power VNAs has odds of institutionalizing cooperation that are about 0.9 times lower than the same odds for a pair of mid-power VNAs.</td>
</tr>
<tr>
<td>Reputation symmetry^x</td>
<td>8.433***</td>
<td>a pair of with similar reputations has odds of institutionalizing cooperation that are about 7 times higher than the same odds for a pair with dissimilar reputations.</td>
</tr>
<tr>
<td>Good reputation‡</td>
<td>13.693***</td>
<td>a pair with good reputations has odds of institutionalizing cooperation that are about 12 times higher than the same odds for a pair with bad reputations.</td>
</tr>
<tr>
<td>Fair reputation‡‡</td>
<td>8.687***</td>
<td>a pair with fair reputations has odds of institutionalizing cooperation that are about 8 times higher than the same odds for a pair with bad reputations.</td>
</tr>
<tr>
<td>Ideological symmetry^x</td>
<td>0.238***</td>
<td>an ideologically similar pair has odds of institutionalizing cooperation that are 0.8 times lower than the same odds for an ideologically asymmetric pair.</td>
</tr>
</tbody>
</table>

^x Based on Model 1; † Based on Model 2a; ‡ Based on Model 3c

* significant at .10 confidence level; ** significant at .05 confidence level; *** significant at .01 confidence level
Table 5.8. Comparison of results: Full sample versus Sample excluding Colombian AUC-related dyads.

<table>
<thead>
<tr>
<th></th>
<th>Model 1: Full Sample</th>
<th>Model 1: Sample excluding AUC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power symmetry</td>
<td>1.449*** (0.267)</td>
<td>0.474 (0.491)</td>
</tr>
<tr>
<td>Reputation symmetry</td>
<td>2.132*** (0.281)</td>
<td>-0.003 (0.411)</td>
</tr>
<tr>
<td>Ideological symmetry</td>
<td>-1.436*** (0.485)</td>
<td>-2.352** (0.559)</td>
</tr>
<tr>
<td>Similarity in financial independence</td>
<td>0.077 (0.122)</td>
<td>-0.115 (0.233)</td>
</tr>
<tr>
<td>Average age of dyad partners</td>
<td>-0.194*** (0.040)</td>
<td>0.068 (0.057)</td>
</tr>
<tr>
<td>Shared subregion</td>
<td>2.469** (1.160)</td>
<td>1.586*** (0.719)</td>
</tr>
<tr>
<td>East Central&lt;sup&gt;a&lt;/sup&gt;</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Southern Cone</td>
<td>-1.868** (0.765)</td>
<td>-1.279** (0.631)</td>
</tr>
<tr>
<td>Andean</td>
<td>1.432*** (0.560)</td>
<td>-1.455*** (0.664)</td>
</tr>
<tr>
<td>Caribbean</td>
<td>1.139*** (0.833)</td>
<td>4.254*** (1.392)</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.125** (1.080)</td>
<td>1.630** (0.799)</td>
</tr>
<tr>
<td>N</td>
<td>477</td>
<td>248</td>
</tr>
<tr>
<td>Wald Chi²</td>
<td>92.77</td>
<td>54.08</td>
</tr>
<tr>
<td>P &gt; chi²</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

<sup>a</sup>In each model East Central predicts failure perfectly, 6 observations dropped.
Chapter Six

CONCLUSION, IMPLICATIONS, AND AREAS FOR FUTURE RESEARCH

In this dissertation, I investigated why some violent non-state actors (VNAs) enter into cooperative arrangements with others while others do not, and what explains variation in the design of those arrangements. To my knowledge, this is the first comprehensive large-N study that examines the relationship between VNA credibility and the onset and design of inter-group cooperation. Additionally, this study is unique in that it advances VNA power and identity characteristics as sources of VNA credibility, and provides hypotheses about and empirical tests of the relative impact of both on inter-group cooperation. In this chapter I review the main theoretical, empirical and substantive contributions from my study, and offer avenues for future research on this topic.

A new approach to studying the politics of cooperation for VNAs

This study makes three broad contributions to the development of a research agenda focused violent non-state actors and cooperation. First, while most studies of the politics of cooperation for non-state actors focus on cooperation simply involving a VNA (i.e., bargaining and negotiation between VNAs and state actors), I focus on cooperation among VNAs themselves. In Chapter 2, I argue that an emphasis on state-VNA cooperation has led researchers to overlook important variation in the factors influencing the credibility of these actors. In contrast to previous work, I advocate an approach that allows VNAs to have more agency in determining each others' characteristics and so conceptualizes VNA credibility from the perspective of other violent
organizations. Specifically, I argue that VNAs can make useful inferences about each others’
credibility based on observable power and identity characteristics; namely, while the membership
size and development of tactical specialties provide insight into an organization’s level of power,
behavioral reputations and ideological affiliations highlight the group’s socio-political identity. I
argue that, together, these characteristics directly impact expectations about VNA credibility; I show
empirically that they have significant relationships to both the onset and design of an inter-VNA
cooperative arrangement.

Second, the original dataset that I have gathered allows for the testing of more nuanced
hypotheses about the relationship between VNA characteristics and different facets of inter-group
cooperation over time; I describe the collection methodology and specific variable coding in Chapter
3. Specifically, these data provide not only time-varying information about group size, location,
activities and ideological affiliation, but also information on each VNA’s cooperative and non-
cooperative behaviors vis-à-vis other violent organizations. Additionally, this dataset is the first to
include systematic and detailed information about the institutional design characteristics of both
bilateral and multilateral inter-VNA cooperative arrangements. The data correspond to a spatially
and temporally large empirical domain, including a large sample of organizations based in Latin
America from 1940 to 2005. This provides a much more comprehensive study sample than has been
used in any other quantitative analysis of inter-VNA cooperation.

Third, throughout the theoretical and empirical portions of the dissertation, I focus on
organization-level correlates of cooperation rather than individual-level variables. Of the little recent
work on inter-VNA cooperation, there tends to be a sharper focus on the importance of individual-
level social networks for generating affinities among organizations (i.e., Arquilla and Ronfeldt 2001,
Carley 2003). However, this study helps to increase the body of current systematic research on how
organization-level characteristics impact the relationships among VNAs. Moving forward however, it will be important to investigate how individual and group level characteristics interact (if at all) to determine inter-VNA cooperation.

**Review of empirical conclusions and implications**

In Chapters 4 and 5, I tested a series of hypotheses about the relationship between VNA power, VNA identity and cooperation onset (Chapter 4) and the relationship between VNA power, VNA identity and the design of an inter-group cooperative arrangement (Chapter 5). The main findings of these tests are as follows:

**VNA power and identity characteristics are both important for explaining different aspects of the development of inter-VNA cooperation.** While both types of group characteristics have been advanced separately as explanations for the onset of cooperation in previous qualitative (see Dix 1984) and quantitative studies (see Karmon 2005), this study further specifies the details of a role for both characteristics, both by including measures of both in unified models and by constructing composite indicators that take into account the multidimensionality of these two concepts.

All of the empirical results point to significant differences among VNAs in terms of what these actors bring to the negotiating table, both in terms of material and social capital. With respect to cooperation onset, I find that these differences play a part in determining the overall desirability of individual VNAs as cooperation partners, as well as in predicting how that desirability translates into pair-wise, partner-specific compatibility. With respect to cooperation design, I find again that
both power and identity characteristics play important roles in determining the utility of institutionalized versus informal cooperation.

Specifically, I found that the individual VNAs that cooperate with others most often are those that either have a moderate level of power-based constraints against pursuing unilateral defection or have exhibited a commitment to go to extreme lengths to make the most of their strategic choices. At the dyadic level, I find that symmetry in individual characteristics is also important, though in differing ways.

**VNA power and identity characteristics do not have uniform effects on inter-group cooperation onset or design.** I found significant differences in the substantive impact that power and identity characteristics have on both the onset and design of an inter-group arrangement. I find this to be the case whether VNAs were analyzed as individuals or in dyadic combinations. Most surprisingly, power characteristics had a relatively small practical impact, as compared to the effect of identity characteristics, not only on the likelihood of involvement in a cooperative arrangement for an individual VNA and the likelihood of cooperation onset for a given VNA dyad, but also on the likelihood that a given cooperative arrangement would be institutionalized rather than kept informal. Comparatively however, power characteristics mattered much more for explaining variation in arrangement design than variation in cooperation onset.

On the other hand, identity characteristics play a consistently large role in explaining the variation in which VNAs cooperate, with whom and in what fashion. Such findings suggest that, when considered at the organization level, the expectations derived from power-based perspectives on the correlates of cooperation onset among states do not appear to be most appropriate for explaining cooperation among VNAs. Further research is necessary for drawing more detailed conclusions about the role of identity characteristics for these groups; an interesting extension might
compare the incentives for and process of norm diffusion and regime-building for states versus VNA.

**Specifically, different aspects of a VNA's identity become important at different stages in the development of a cooperative arrangement.** While identity characteristics consistently outperform power characteristics as explanatory variables, I also found significant variation among the identity characteristics themselves. Of particular interest is the way that the substantive effect symmetry in reputations and/or ideological affiliation varies, depending on which stage is being examined in the development of a cooperative arrangement. Specifically, while the substantive impact of shared ideology on the onset of a cooperative arrangement among two VNAs was impressively large, reputational symmetry has a much larger impact than shared ideology on the chances that any arrangement will be institutionalized. This suggests that while VNAs may choose their partners in large part based on socio-political affinity, they more often choose modes of cooperation in direct response to patterns of past cooperative (or non-cooperative) behavior.\(^\text{74}\)

**With respect to the dyad-level analyses, symmetry of characteristics has a stronger impact on the likelihood of onset and variation in design than does asymmetry.** This provides interesting support for information-centric arguments that would prioritize mutual identification among potential partners as a determinant of inter-group cooperation.

**While individual VNAs are less likely to be involved in inter-group cooperation as they get older, organization age does not have discernable effects on pair-wise behavior.** This is highlighted by the fact that average dyad age exhibits no consistent effect on either the likelihood of cooperation onset or variation in arrangement design.

\(^\text{74}\) In his study of coalitions among European and Middle Eastern terrorist groups, Karmon (2005) similarly concluded that while shared ideological affinities do not explain all of the variation in which groups cooperate with each other, ideology does play a significant role.
There are significant ‘neighborhood’ effects on the cooperative behavior of both individual VNAs and distinct VNA dyads. This is evidenced by the consistent statistical significance on the sub-region control variables across all model specifications, regardless of dependent variable.

Limitations and areas for future research

Even though these conclusions represent an important advance in the quantitative study of inter-VNA cooperation, there are some limitations on the conclusions that can be drawn with this dissertation. Fortunately, they all suggest interesting areas for future research.

Explaining network structure. One area for future research involves applying alternative research methodologies. For example, while there have been many studies of the operational advantages provided by different network structures and descriptions of the shape of VNA networks, there are comparatively fewer explanations of the causal processes that underlie these outcomes. To the extent that my findings provide insight into the origin of power- and identity-based ties between ‘networked’ VNAs, they can be used as a platform for further examining of the process by which dark networks ‘grow’ over time and in space.

‘Distant dyads’. In trying to determine the optimal operationalization of political relevance for dyadic studies, Bennett (2006) argues that “[F]iguring out what makes some distant dyads likely to fight is a key to further progress here” (259). It would be similarly useful to figure out what promotes ‘distant cooperating dyads.’ I am aware of a number of instances where the VNAs in my dataset formed cooperative arrangements with other organizations outside of the present region of study. For example, these data do not reference the almost 10 years’ worth of information-sharing
arrangements between Puerto Rican separatist organizations and Black Nationalist groups in the
U.S., nor the tactical coordination among Spanish, Italian and Argentine right-wing groups during
the 1970s. Overall, many Latin American VNAs have exhibited close ties to organizations based in
the United States, Southern Europe and the Middle East that are beyond the spatial domain of my
current studies. However, the groups in my data are only allowed to cooperate within Latin America
(although across country borders within the region). Given this, I would wager that this additional
restriction on partner choice also impacts any statistical predictions about the likelihood of
cooperation for any given VNA. Again, additional data collection on VNAs in other world regions
would allow me to examine more thoroughly the correlates of inter-group cooperation in general
and long-distance relationships among these actors in particular.

**System-level correlates of inter-group cooperation.** Another area for future research
involves taking a more in-depth look at the nature of the threat against which inter-VNA
coopera tion is supposed to protect. For example, there may be significant variation among
cooperative arrangements – and the type of VNAs that pursue them – when the partners are facing
state-based versus non-state—based threats, or facing domestic versus foreign adversaries.
Additionally, the specific nature of the conflict environment may be important; for example,
cooperation against a backdrop of civil war may be different than cooperation in the context of
generalized low intensity conflict or even interstate conflict. While I have shown that certain
organization-level characteristics are important for explaining the development of inter-VNA
coopera tion, system-level explanations for alignment patterns among these actors and a focus on
aggregate power and identity distributions may provide important context to my present
conclusions.
Special notes about selection bias

Sample selection bias related to truncation. While there is great practical importance to understanding the growth of cooperation among VNAs themselves, restricting a VNA’s partner options to only other violent groups prevents me from speaking directly to the utility of cooperation with other non-state actors as a strategy for them. Already there have been a number of influential studies in both political science and sociology that suggest important benefits to VNAs from forming collaborative links with non-violent political actors like parties, popular protest organizations and advocacy groups. In addition to further theorizing about the relative benefits and costs of cooperating with violent versus non-violent partners, testing hypotheses about the relative likelihoods of cooperation with both non-violent and violent organizations would require me to collect additional data to identify and code comparable power and identity information for the non-violent groups. Such a study would allow me to draw more generalized conclusions about what influences a VNA to work with any other actor at all, rather than to work with other violent groups specifically.

Sample selection bias related to interdependence among outcomes. The hypotheses and empirical tests in this dissertation have treated cooperation onset and design as discrete outcomes arising from independent decision-making processes. As I have done, many empirical studies of international institutions focus on explaining the design of the arrangements that actually did form. Due to this, these studies do not consider the possibility that the characteristics of the participants that promoted a particular design are directly related to the emergence of any institution at all. However, it seems reasonable to think that the factors that impact the decision to begin

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75 In political science, these works tend to focus on the relationship between violent organizations and political parties; for a good example of this, see Weinberg and Eubank (1990). Most of the directly comparable work in sociology comes from social movement (SM) studies, particularly with respect to polarization and fragmentation within movements. For classic examples, see Haines (1984), Haines (1987), or McAdam (1982).
cooperation would also have an effect on how these actors choose among institutional designs. In fact, the results from the tests in this dissertation show that at various points in the development of an inter-group arrangement, the same variables matter, but to different degrees. Given this potential relationship between the correlates of cooperation onset and the correlates of institutional design, it may also be useful to examine them as theoretically and empirically linked.\textsuperscript{76} One way of doing this is by using a unified (statistical) model that allows and controls for interdependence among the various stages in the development of inter-group cooperation.

Depending on how the outcomes are associated, different techniques would be best suited to determine the statistical relationship both among my independent and dependent variables, and between the dependent variables themselves. In this study, there are three possible outcomes for a VNA dyad: dyad, does not start cooperation, dyad, starts institutionalized cooperation, dyad, starts informal cooperation.\textsuperscript{77} In order to choose the most appropriate model for uncovering the true relationship among onset and design outcomes, I would have to determine first whether onset and design decisions are more likely to be made simultaneously versus sequentially. Secondly, if the two decisions are made sequentially, I would have to formulate a study design that accounts for their ordering.

On one hand, it could be the case that onset and design decisions are made simultaneously. In this case, we might disaggregate the ‘onset/no onset’ dichotomy to allow VNA dyads to consider ‘onsets of different types’ (i.e., institutionalized arrangements and informal arrangements) along with

\textsuperscript{76} In the literature on interstate cooperation, there have been some prominent arguments about linkages between the onset and design (or ‘bargaining’ and ‘enforcement’) stages in the development of an arrangement. For example, Fearon (1998) argues that the development of an interstate agreement involves identifying both the set of mutually-acceptable terms of cooperation and the feasibility of enforcement. From a different perspective, Putnam (1988) argues that the development of international agreements involves (almost) simultaneous bargaining in both international and domestic political arenas (given that there are interests at both levels to be satisfied in order for the agreement to be acceptable). For the most part however, such arguments have not been empirically tested.

\textsuperscript{77} Generally speaking, any VNA dyad could experience no onset or an onset with varying combinations of design features.
‘no onset’ as design options in themselves. In this sense, decisions about whether to begin cooperation appear within the same set of possible outcomes as decisions about how to cooperate. In other words, each of the outcomes is conceptualized as a discrete point on some continuous distribution of institutional design. In this view there seems to be a clear ordering among them: no cooperation is certainly shallower, more flexible and less constraining than informal cooperation, and among the arrangements that do form, informal cooperation shares the same relationship to institutionalized arrangements. If I were to assume that onset and design decisions are made simultaneously, an ordered logit model could account for the interdependence among the outcomes: this model would tell us the relative likelihood of a dyad being higher or lower on the depth/flexibility/constraints scale, given the three discrete outcome possibilities (Wooldridge 2002).\footnote{These models also assume that the directional effects of the predictor variables are constant across outcomes (Reed 2000b: 88).}

On the other hand, it is possible that cooperation onset and design decisions are made in some sequence. For example, we might consider that there can be no institutional design without an institution to be designed, or an onset event. In other words, dyads self-select themselves into the sample of dyads making a design decision by first choosing to go through with an onset. If this is true, only those dyads that decided to begin cooperation could be analyzed for differences in the design of cooperation. Therefore, instead of being comprised of unrelated and discrete decision points, the development of cooperation for a given VNA dyad could be modeled as a two-part process: first, among the potential and willing cooperators, pairs form or do not form; second, all of the pairs that do form choose an institutional design. At each decision point, the relevant subset of cases is selected based on the outcome at the previous point, making them each sequentially linked. Methodologically, an ordered logit model would not be appropriate here because ordinal regression
models give only the individual likelihood of a particular outcome relative to others, given some set of discrete (though ordered) possibilities. In the case of sequential outcomes, more important – and interesting – is the joint likelihood of both onset and a particular design happening, and in particular order. By estimating a joint likelihood, we can account for any bias in our predictions about the later outcome by accounting for the fact that it was chosen from the earlier outcome (see Heckman 1979 for bias due to selecting on the dependent variable). In order to do this, a model that can account for such a ‘selection effect’ would be more appropriate.

Selection models have been widely used for correcting bias associated with studies in which the dependent variable is observed only for some restricted, non-random sample (Heckman 1976; Heckman 1979; Goldberger 1981; Wooldridge 2002). This is a common issue in international relations, particularly since many of our research questions involve sequentially-related outcomes (Reed 2000a; Signorino 2002). Prominent examples of their use include unified models of interstate dispute initiation and escalation (Smith 1996; Reed 2000b), of the development of rivalries and conflict onset (Lemke and Reed 2001), or of the results of strategic interactions (Signorino 1999; Signorino 2002). Specifically, a censored probit model would allow me to explicitly consider a link between the onset and design stages of cooperation (Greene 1996; Wooldridge 2002).79

In order to test for a selection effect, one needs the universe of all cases such that there is variation on the dependent variables in both stages. Given that I already have the universe of all possible cooperating dyads, implementing the censored probit would be relatively straightforward if the onset stage precedes the design stage. If the design stage precedes the onset stage however,

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79 Reed (2000b) uses a likelihood function that is maximized in full information (FIML) rather than the standard Heckman two-step estimator, which instead maximizes in limited information (by not considering all equations and parameters jointly). Although FIML is more efficient when there are no collinearity problems in the data, the Heckman model can still perform reasonably well (Puhani 2000); for example, Reed (2000b) finds that his results are robust to both specifications. To check the robustness of results, the researcher should conduct both types of tests when implementing corrections for selection bias with the censored probit.
much more additional data collection would be necessary. If VNA dyads first choose an institutional design and then decide whether or not to start cooperating, the relevant universe of cases has to include all possible designs that could have been chosen. The selection equation would highlight the variables that influence dyads to pick institutionalization as a specific design, while the outcome equation would highlight what causes these dyads to start implementing that design through consolidating the arrangement. One way of determining this universe would be to gather information on the outcomes of all inter-VNA negotiations over cooperation.

Such alternative specifications of the relationship between onset and design decisions would be especially useful given that I have argued that the same variables influence both stages in the development of an inter-VNA arrangement. For example, if the decision to start cooperation is conditional on the range of possible design options, it would be more appropriate to use a modeling technique that allows for such contingencies. Additionally, when traditional selection effects are present and unaccounted for, researchers can under- or over-estimate both the directional and magnitudinal effects of the independent variables of interest. However, it is difficult to know whether these effects are present – and what their impact is – without performing tests to detect them. By considering onset and design outcomes separately in this dissertation, I have generated baseline models that can be compared to the alternatives for figuring out whether selection effects or other sources of sampling-related bias are a serious issue.

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80 This may help to clarify some of the empirical puzzles generated by unexpected changes in a coefficient's statistical significance, direction or strength, depending on whether the associated variable was used to explain onset or design.
Concluding Remarks

To conclude, it appears that although amassing material capabilities for fighting conflicts may be an important goal for VNAs, the development of reputations for resolve and revealed preferences in favor of cooperation as a strategic alternative is paramount for organizations interested in forming cooperative arrangements with others. This is a somewhat counterintuitive finding in that most explanations for VNA behavior in IR focus on these actors’ power resources (or lack thereof). In general, I contend that knowing more about what draws VNAs to working with each other can provide important information that scholars and policy practitioners can use to understand better the ways in which these actors substitute among strategies for promoting their own security and protecting their survival. Most importantly, it can highlight important opportunities for redirecting their collaborative potential away from partners that encourage the production of additional violence.
REFERENCES


## APPENDIX A.

List of VNAs included in VNA Characteristics and Cooperation Dataset.

### Table A.1. List of VNAs.

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APPENDIX B.

Descriptive Statistics for Monadic version of dataset

Table B.1. Distribution of VNAs and VNA-years by subregion.

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<th>Countries Included</th>
<th># of VNAs</th>
<th># of VNA-years</th>
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<td>Bolivia, Colombia, Ecuador, Peru, Venezuela</td>
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<td>110</td>
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<td>Costa Rica, El Salvador, Honduras, Mexico, Nicaragua, Panama, Guatemala</td>
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<td>568</td>
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<td><strong>Total</strong></td>
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<td><strong>176</strong></td>
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Table B.2. Distribution of VNAs and VNA-years by cooperation onset.

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<th># of VNAs</th>
<th>Percent of Total</th>
<th># of VNA-years</th>
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Table B.3. Distribution of VNA-years by violence type.

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<th>Examples</th>
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<th>Percent of total</th>
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<td>Light attacks</td>
<td>Armed protest, armed propaganda, inciting riots</td>
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<td>Attacks targeting infrastructure</td>
<td>Arson, bombings, bank robberies</td>
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<td>14.52</td>
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<tr>
<td>Attacks targeting individuals</td>
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</tr>
<tr>
<td>Combination</td>
<td>Ambushes and general homicide</td>
<td>1099</td>
<td>65.65</td>
</tr>
<tr>
<td>Latent</td>
<td>Suspended activities for strategic purposes (less than 2 years)</td>
<td>63</td>
<td>3.76</td>
</tr>
<tr>
<td>Missing</td>
<td></td>
<td>129</td>
<td>7.71</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>1674</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>
Table B.4. Distribution of VNA-years by cooperation history.

<table>
<thead>
<tr>
<th>Cooperation history</th>
<th>Frequency</th>
<th>Percent of total*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheap cooperator</td>
<td>105</td>
<td>6.39</td>
</tr>
<tr>
<td>Costly cooperator</td>
<td>583</td>
<td>35.51</td>
</tr>
<tr>
<td>Invested cooperator</td>
<td>279</td>
<td>16.99</td>
</tr>
<tr>
<td>Cheap defector</td>
<td>169</td>
<td>10.29</td>
</tr>
<tr>
<td>Costly defector</td>
<td>125</td>
<td>7.61</td>
</tr>
<tr>
<td>Invested defector</td>
<td>93</td>
<td>5.66</td>
</tr>
<tr>
<td>Neutral</td>
<td>1274</td>
<td>77.59</td>
</tr>
</tbody>
</table>

*32 observations excluded from total for missing information.
Table B.5. Distribution of VNAs and VNA-years by ideology.

<table>
<thead>
<tr>
<th>Broad Ideology Category</th>
<th>Specific constitutive codes</th>
<th># of VNAs</th>
<th># of VNA-years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right-wing</td>
<td>Right-wing conservative, Right-wing reactionary</td>
<td>31</td>
<td>326</td>
</tr>
<tr>
<td>Conventionally left-wing</td>
<td>Orthodox Communist, Marxist-Leninist, Bolivarian, Castroite</td>
<td>90</td>
<td>847</td>
</tr>
<tr>
<td>Unconventionally left-wing</td>
<td>Anarchist, Maoist, Trotskyite</td>
<td>17</td>
<td>218</td>
</tr>
<tr>
<td>Ethnically- or racially-motivated</td>
<td>Separatist, Racist</td>
<td>18</td>
<td>113</td>
</tr>
<tr>
<td>Other</td>
<td>None, unknown, not elsewhere coded</td>
<td>40</td>
<td>170</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>193</strong></td>
<td><strong>1674</strong></td>
</tr>
</tbody>
</table>

*Total adds to more than 176 due to some organizations having changed their ideologies over time.*
Table B.6. Distribution of VNA-years by membership size.

<table>
<thead>
<tr>
<th>Size category</th>
<th># of VNA-years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relatively small</td>
<td>979</td>
</tr>
<tr>
<td>very small (&lt;100)</td>
<td>254</td>
</tr>
<tr>
<td>small (101-450)</td>
<td>725</td>
</tr>
<tr>
<td>Relatively large</td>
<td>636</td>
</tr>
<tr>
<td>mid-sized (451-1000)</td>
<td>333</td>
</tr>
<tr>
<td>large (1001-5000)</td>
<td>276</td>
</tr>
<tr>
<td>very large (&gt;5000)</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>1674</td>
</tr>
</tbody>
</table>
Table B.7. Distribution of VNA-years by presence of tactical expertise.

<table>
<thead>
<tr>
<th>VNA has expertise?</th>
<th>Frequency</th>
<th>Percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>874</td>
<td>52.21</td>
</tr>
<tr>
<td>Yes</td>
<td>608</td>
<td>36.32</td>
</tr>
<tr>
<td>Missing</td>
<td>192</td>
<td>11.47</td>
</tr>
<tr>
<td>Total</td>
<td>1674</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Table B.8. Distribution of VNA-years by financial independence.

<table>
<thead>
<tr>
<th>Is VNA financially independent?</th>
<th>Frequency</th>
<th>Percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>514</td>
<td>30.70</td>
</tr>
<tr>
<td>Yes</td>
<td>1032</td>
<td>61.65</td>
</tr>
<tr>
<td>Missing</td>
<td>128</td>
<td>7.65</td>
</tr>
<tr>
<td>Total</td>
<td>1674</td>
<td>100.00</td>
</tr>
</tbody>
</table>
APPENDIX C

Descriptive Statistics for Dyadic version of dataset

Table C.1. Distribution of VNA dyad-years by general location similarity.

<table>
<thead>
<tr>
<th>Shared subregion?</th>
<th>Frequency</th>
<th>Percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>18,690</td>
<td>59.47</td>
</tr>
<tr>
<td>Yes</td>
<td>12,740</td>
<td>40.53</td>
</tr>
<tr>
<td>Total</td>
<td>31,430</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Table C.2. Distribution of VNA dyad-years by specific location similarity.

<table>
<thead>
<tr>
<th>Shared subregion</th>
<th>Frequency</th>
<th>Percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Central region of South America</td>
<td>86</td>
<td>0.68</td>
</tr>
<tr>
<td>Southern Cone region of South America</td>
<td>570</td>
<td>4.47</td>
</tr>
<tr>
<td>Andean region of South America</td>
<td>7883</td>
<td>61.88</td>
</tr>
<tr>
<td>Caribbean Basin</td>
<td>157</td>
<td>1.23</td>
</tr>
<tr>
<td>Central America</td>
<td>4004</td>
<td>31.43</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12740</strong></td>
<td><strong>99.69</strong></td>
</tr>
</tbody>
</table>

*Percentages do not add to 100 due to rounding.
Table C.3. Distribution of violence type similarity.

<table>
<thead>
<tr>
<th>Same violent activities?</th>
<th>Frequency</th>
<th>Percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>11932</td>
<td>37.96</td>
</tr>
<tr>
<td>Yes</td>
<td>15369</td>
<td>48.90</td>
</tr>
<tr>
<td>Missing</td>
<td>4129</td>
<td>13.14</td>
</tr>
<tr>
<td>Total</td>
<td>31430</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Table C.4. Distribution of cooperation history similarity, by history.

<table>
<thead>
<tr>
<th>Shared cooperation history</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheap cooperator</td>
<td>152</td>
</tr>
<tr>
<td>Costly cooperator</td>
<td>4031</td>
</tr>
<tr>
<td>Invested cooperator</td>
<td>1078</td>
</tr>
<tr>
<td>Cheap defector</td>
<td>309</td>
</tr>
<tr>
<td>Costly defector</td>
<td>158</td>
</tr>
<tr>
<td>Invested defector</td>
<td>88</td>
</tr>
<tr>
<td>Neutral</td>
<td>23599</td>
</tr>
</tbody>
</table>
Table C.5. Distribution of VNA dyad-years by general size similarity.

<table>
<thead>
<tr>
<th>Same size category?</th>
<th>Frequency</th>
<th>Percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>20949</td>
<td>66.65</td>
</tr>
<tr>
<td>Yes</td>
<td>8569</td>
<td>27.26</td>
</tr>
<tr>
<td>Missing</td>
<td>1912</td>
<td>6.08</td>
</tr>
<tr>
<td>Total</td>
<td>31,430</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Table C.6. Distribution of VNA dyad-years by specific size similarity.

<table>
<thead>
<tr>
<th>Size Category</th>
<th>Frequency</th>
<th>Percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relatively large</td>
<td>2164</td>
<td>25.25</td>
</tr>
<tr>
<td>Relatively small</td>
<td>6405</td>
<td>74.75</td>
</tr>
<tr>
<td>Total</td>
<td>8569</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Table C.7. Distribution VNA dyad-years of expertise similarity.

<table>
<thead>
<tr>
<th>Are both partners experts?</th>
<th>Frequency</th>
<th>Percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>11405</td>
<td>36.29</td>
</tr>
<tr>
<td>Yes</td>
<td>13607</td>
<td>43.29</td>
</tr>
<tr>
<td>Missing</td>
<td>6418</td>
<td>20.42</td>
</tr>
<tr>
<td>Total</td>
<td>31430</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Table C.8. Distribution of VNA dyad-years by difference in nature of expertise.

<table>
<thead>
<tr>
<th>Are both partners experts at the same activities?</th>
<th>Frequency</th>
<th>Percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>3512</td>
<td>11.17</td>
</tr>
<tr>
<td>Yes</td>
<td>1434</td>
<td>4.56</td>
</tr>
<tr>
<td>Missing</td>
<td>26484</td>
<td>84.26</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>31430</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>
Table C.9. Distribution of VNA dyad-years by general financial independence similarity.

<table>
<thead>
<tr>
<th>Same level of financial independence?</th>
<th>Frequency</th>
<th>Percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>11616</td>
<td>39.96</td>
</tr>
<tr>
<td>Yes</td>
<td>15574</td>
<td>49.55</td>
</tr>
<tr>
<td>Missing</td>
<td>4240</td>
<td>13.49</td>
</tr>
<tr>
<td>Total</td>
<td>31430</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Figure C.1. Distribution of dyad-years by year.
**APPENDIX D**

Descriptive Statistics for Arrangements version of dataset

Table D.1. Distribution of institutionalized arrangements.

<table>
<thead>
<tr>
<th>Is the arrangement institutionalized?</th>
<th>Frequency</th>
<th>Percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>210</td>
<td>40.46</td>
</tr>
<tr>
<td>Yes</td>
<td>308</td>
<td>59.34</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>0.19</td>
</tr>
<tr>
<td>Total</td>
<td>519</td>
<td>99.99&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a</sup>Percentages do not add to 100 due to rounding.
### Table D.2. List of multilateral arrangements.

<table>
<thead>
<tr>
<th>Name of Multilateral</th>
<th>Acronym/Translation/AKAs</th>
<th>Start Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caribbean Pact</td>
<td>Caribbean Legion</td>
<td>1947</td>
</tr>
<tr>
<td>Cuban Liberation Junta</td>
<td>-----</td>
<td>1957</td>
</tr>
<tr>
<td>Coordinadora Guerrillera Simón Bolívar</td>
<td>CGSB; Simon Bolivar Coordinating Board</td>
<td>1987</td>
</tr>
<tr>
<td>Uruguayan Anarchist Movement</td>
<td>Uruguayan Anarchist Federation</td>
<td>unk.</td>
</tr>
<tr>
<td>Autodefensas Unidas de Colombia</td>
<td>AUC; United Self-Defense Forces of Colombia</td>
<td>1997</td>
</tr>
<tr>
<td>Autodefensas Campesinas de Córdoba y Urabá</td>
<td>ACCU; Peasant Self-Defense Forces of Cordoba and Uraba</td>
<td>unk.</td>
</tr>
<tr>
<td>Coordinadora Nacional Guerrillera</td>
<td>CNG; National Guerrilla Coordinating Board</td>
<td>1985</td>
</tr>
<tr>
<td>People’s Vanguard Organization</td>
<td>-----</td>
<td>1981</td>
</tr>
<tr>
<td>Frente Farabundo Martí de Liberación Nacional</td>
<td>FMLN; Farabundo Marti National Liberation Front; Farabundo Marti National Liberation Front – Democratic Revolutionary Front (FMLN-FDR)</td>
<td>1980</td>
</tr>
<tr>
<td>Unidad Revolucionaria Nacional Guatemalteca</td>
<td>URNG; Guatemalan National Revolutionary Unity</td>
<td>1982</td>
</tr>
<tr>
<td>Resistencia Nicaragüense</td>
<td>RN; Nicaraguan Resistance</td>
<td>1987</td>
</tr>
<tr>
<td>Unified Nicaraguan Opposition</td>
<td>UNO; United Nicaraguan Opposition</td>
<td>1985</td>
</tr>
<tr>
<td>Movimiento Nacional por la Defensa de la Soberanía</td>
<td>MONADESO; National Movement for the Defense of Sovereignty</td>
<td>1998</td>
</tr>
<tr>
<td>Liga Comunista 23 de Septiembre</td>
<td>LC-23S; 23rd of September Communist League; La Liga</td>
<td>1973</td>
</tr>
<tr>
<td>Coordinadora Guerrillera Nacional Jose María Morelos y Pavón</td>
<td>CGNJMMP; Group of Guerrilla Combatants of Jose Maria Morelos y Pavon; Jose Maria Morelos y Pavon National Guerrilla Council</td>
<td>2000</td>
</tr>
<tr>
<td>Ernesto Che Guevara Guerrilla Coordinating Board</td>
<td>-----</td>
<td>unk.</td>
</tr>
<tr>
<td>Consejo Revolucionario Cubano</td>
<td>CRC; Cuban Revolutionary Council</td>
<td>1961</td>
</tr>
<tr>
<td>Frente Revolucionario Democratico</td>
<td>FDR; Democratic Revolutionary Front</td>
<td>1960</td>
</tr>
<tr>
<td>People’s Democratic Revolutionary Party</td>
<td>-----</td>
<td>unk.</td>
</tr>
<tr>
<td>Junta Coordinadora Revolucionaria</td>
<td>JCR; Revolutionary Coordinating Committee</td>
<td>1974</td>
</tr>
<tr>
<td>Unnamed ‘Colombian army’</td>
<td>-----</td>
<td>1985</td>
</tr>
<tr>
<td>Batallón de las Americas</td>
<td>BA; Americas’ Battalion</td>
<td>1985</td>
</tr>
<tr>
<td>Name</td>
<td>Description</td>
<td>Year</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Unnamed regional coalition</td>
<td>-----</td>
<td>2003</td>
</tr>
<tr>
<td>Dirección Nacional Unitaria de Movimiento</td>
<td>DNU-MRH; National Unity Revolutionary Movement of Honduras</td>
<td>1983</td>
</tr>
<tr>
<td>Revolucionario de Honduras</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frente Sandinista de Liberación Nacional</td>
<td>FSLN</td>
<td>1978</td>
</tr>
<tr>
<td>Southern Tolima Bloc</td>
<td>Guerrilla Block of the South</td>
<td>1964</td>
</tr>
<tr>
<td>Armed Peronist Organizations</td>
<td>OAP</td>
<td>unk.</td>
</tr>
<tr>
<td>Alianza Revolucionaria Democrática</td>
<td>ARDE; Democratic Revolutionary Alliance</td>
<td>1982</td>
</tr>
<tr>
<td>Committee for Revolutionary Integration</td>
<td>-----</td>
<td>1969</td>
</tr>
</tbody>
</table>
Figure D.1. Distribution of arrangement onset-years.
APPENDIX E

Determining relative effect of power and reputation sub-components

When constructing the composite power and reputation indicators, I made the crucial assumption that both components of each carried equal weight in determining overall power levels and/or reputations. Why did I create the variables this way? As I read through various types of materials about these actors, I found that while both components were discussed as important, there was little discussion of their relative importance. Since I had no a priori expectation about which component would matter most, by creating an additive index where both components are equally weighted, I was able to apply the minimally restrictive assumption that both exert equal pressures on the overall power or reputation construct.

Despite these theoretical and empirical reasons for using composite indicators for power and reputation, I nonetheless ran a series of diagnostic tests (after using the composite indicators) to determine whether my approach was indeed appropriate. I conducted these tests for both composites, testing whether both membership size and expertise should be included in my power construct and whether a reputation for resolve and a reputation for commitment should be included in my reputation construct. In the following sections I detail the tests used to evaluate the propriety of my decision.

I based the diagnostics on a variation of the baseline logit specification presented in Table 4.4 (Model 1). In the new logit, I included the individual power and reputation component variables – size category, presence of expertise, history of violence targeted toward individuals and history of

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81 All of these tests were conducted using Intercooled Stata 9.
being invested in cooperation as a strategy – rather than transformations of the composites; additionally, I retained the control variables. Results based on the new model specification are shown in Table E1.

<INSERT TABLE E1 ABOUT HERE>

Note that not all of the variables report statistically significant relationships to the dependent variable (individual involvement in a cooperative arrangement, DV). However, both the power variables and the reputation variables display the same directional effects.

**Linear hypothesis tests to check for equal but opposite statistical effects.** First I ran two Wald tests to see whether the two variables included in each composite were canceling out each other’s effects. For these tests, the null hypothesis is that the two variables do not have statistically differentiable and inverse effects on the DV (i.e., \( X_1 + -X_2 = 0 \)). As shown in Table E2, the results of these tests indicate that the power components and the reputation components do not exert from each other. On the basis of these tests, I conclude that the composite variables do not contain redundant components.

<INSERT TABLE E2 ABOUT HERE>

**Review of variation in substantive effects.** While the component variables did not exhibit redundant statistical effects, the Wald tests could not have said anything about the relative importance of each component in determining the relationship between the composite indicator and the DV. To look into this, I also examined some predicted probabilities; these are reported in Table E3. While the substantive impact of changes in the two power components were relatively similar, the results do suggest that within the reputation composite variable, the reputation for cooperation
variable does the heavy lifting. Given this, I conducted an additional test to determine whether both reputation components were even necessary.

<INSERT TABLE E3 ABOUT HERE>

**Chi-squared tests for association.** I used chi-squared tests to determine the degree of association between the power and reputation components. These results are reported in Table E4. In both cases, the statistically significant $\chi^2$ statistic suggests that the two components are significantly associated with each other (for size and expertise, $\chi^2 = 194.18$ (p<0.001); for resolve and commitment, $\chi^2 = 44.73$ (p<0.001)). The Cramer’s V statistic gives more information on the strength of that association, in that it reports the association between variables as a percentage of their maximum possible variation. Cramer’s V varies between 0 and 1, with higher values indicating stronger association. Also in Table E.4, note that there is a stronger association between the power components than the reputation components (although neither is very high).

<INSERT TABLE E4 ABOUT HERE>

**Review of variance inflation factors (VIF).** As a final check, I also examined the VIF associated with these variables to be sure that there was no overwhelming collinearity to correct. These statistics are reported in Table E5. The VIF indicates by how much the standard error of a given variable may be inflated because of collinearity; high collinearity causes the VIF to get very large, while a complete lack of correlation is indicated by a VIF of 1. Given that no component variables exhibited a VIF of over 1.15, I conclude from these results that collinearity among these variables is also not a problem.

<INSERT TABLE E5 ABOUT HERE>
### Table E1. Logit results.

<table>
<thead>
<tr>
<th>Model E1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Relatively large size</td>
<td>0.219 (0.182)</td>
</tr>
<tr>
<td>Has some tactical expertise</td>
<td>0.404** (0.195)</td>
</tr>
<tr>
<td>Financially independent</td>
<td>-0.163 (0.171)</td>
</tr>
<tr>
<td>Conducts light attacks</td>
<td>1.115 (0.205)</td>
</tr>
<tr>
<td>Conducts attacks against infrastructure</td>
<td>0.179 (0.296)</td>
</tr>
<tr>
<td>Conducts attacks against individuals</td>
<td>0.172 (0.232)</td>
</tr>
<tr>
<td>Cheap cooperator</td>
<td>-0.131 (0.530)</td>
</tr>
<tr>
<td>Costly cooperator</td>
<td>0.404*** (0.205)</td>
</tr>
<tr>
<td>Invested cooperator</td>
<td>1.084*** (0.233)</td>
</tr>
<tr>
<td>Cheap defector</td>
<td>0.061 (0.320)</td>
</tr>
<tr>
<td>Costly defector</td>
<td>0.359 (0.330)</td>
</tr>
<tr>
<td>Invested defector</td>
<td>-0.724* (0.411)</td>
</tr>
<tr>
<td>Organization age</td>
<td>-0.086*** (0.015)</td>
</tr>
<tr>
<td>East Central subregion</td>
<td>0.792* (0.442)</td>
</tr>
<tr>
<td>Southern Cone subregion</td>
<td>0.543** (0.280)</td>
</tr>
<tr>
<td>Andean subregion</td>
<td>0.603*** (0.224)</td>
</tr>
<tr>
<td>Caribbean subregion</td>
<td>0.025 (0.424)</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.269*** (0.350)</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>1325</td>
</tr>
<tr>
<td>Wald Chi$^2$</td>
<td>95.67</td>
</tr>
<tr>
<td><em>P &gt; chi$^2$</em></td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>
Table E2. Wald Test Results.

<table>
<thead>
<tr>
<th>Null hypothesis</th>
<th>chi$^2$</th>
<th>Prob &gt; chi$^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;size category&gt; + &lt;expertise&gt; = 0</td>
<td>6.62</td>
<td>0.0101</td>
</tr>
<tr>
<td>&lt;targets individuals&gt; +</td>
<td>14.33</td>
<td>0.0002</td>
</tr>
<tr>
<td>&lt;invested in cooperation&gt; = 0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table E3. Change in Predicted Probabilities for power and reputation components.\textsuperscript{82}

<table>
<thead>
<tr>
<th>Variable</th>
<th>Min → Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relatively large size</td>
<td>0.0258</td>
</tr>
<tr>
<td>Has some tactical expertise</td>
<td>0.0481</td>
</tr>
<tr>
<td>Conducts attacks against individuals</td>
<td>0.0194</td>
</tr>
<tr>
<td>Invested cooperator</td>
<td>0.1589</td>
</tr>
</tbody>
</table>

\textsuperscript{82} Probabilities were calculated with all variables held at their means.
Table E4. Results of Chi$^2$ Tests of Association between the power components and the reputation components.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pearson’s Chi$^2$ (p-value)</th>
<th>Cramer’s V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size category, has expertise</td>
<td>194.179 (&lt;0.0001)</td>
<td>0.3646</td>
</tr>
<tr>
<td>Attacks target individuals, invested cooperator</td>
<td>44.731 (&lt;0.0001)</td>
<td>0.1747</td>
</tr>
</tbody>
</table>
Table E.5. Collinearity Diagnostics.

<table>
<thead>
<tr>
<th>Variables</th>
<th>VIF(^{83})</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size category, has expertise</td>
<td>1.15</td>
<td>0.8671</td>
</tr>
<tr>
<td>Attacks target individuals, invested cooperator</td>
<td>1.03</td>
<td>0.9695</td>
</tr>
</tbody>
</table>

\(^{83}\) I report only one VIF because it was the same for both variables.
APPENDIX F

Sources Used for VNA Characteristics and Cooperation (1940-2005) Dataset

Books


**Journal articles and manuscripts**


Newspaper articles


No author listed. 2007. “Mexico tightening security after rebel threat.” Reuters Newswire, 10 July.


**Magazine articles**


**News Transcripts**


MIPT-TKB. 2005. “Key Leader Profile: Briceño Suárez, Jorge.”

MIPT-TKB. 2005. “Key Leader Profile: Granda, Rodrigo.”

MIPT-TKB. 2005. “Key Leader Profile: Guzmán, Noel Matta Matta.”

MIPT-TKB. 2005. “Key Leader Profile: Jiménez, Rodrigo Londoño Echeverry.”


MIPT-TKB. 2005. “Key Leader Profile: Vargas, Guillermo Leon Saenz.”


MIPT-TKB. 2005. “Incident Profile: Movement of the Revolutionary Left Attacked Business Target (Sept. 9, 1993, Chile).”


MIPT-TKB. 2005. “Incident Profile: Movement of the Revolutionary Left Attacked Diplomatic Target (Feb. 27, 1979, Chile).”


Datasets, Compilations and Codebooks


The Colombia Documentation Project. Michael Evans (dir.).

UCDP Armed Conflict Dataset and Codebook, Version 4-2008. Uppsala Conflict Data Program,
Department of Peace and Conflict Research, Uppsala University.

**Government, Military, NGO and IGO sources**

Comisión Nacional de los Derechos Humanos de México. “Caso del Señor Martínez Arrelola Fidel,
Asociación Cívica Nacional Revolucionaria y Asociación Cívica Guerrerense.”

Fuerza Aerea Colombiana, Ministerio de Defensa, Republica de Colombia. “Jefe del frente Capital
de las Auc, que opera en Bogotá, ofrece su desmovilización.”
http://www.fac.mil.co/index.php?idcategoria=5118&PHPSESSID=...67bc89b67fbff609069ace1db,
accessed June 2010.


accessed May 2010.

Goal?” ICG Latin America Report, No 8.


RAND Corporation report prepared for U.S. Department of State and Defense Advanced Research
Projects Agency. Santa Monica, CA: RAND.

Terrorist and Other Extremist Groups: A Report Prepared under an Interagency Agreement with
accessed June 2010.


U.S. Central Intelligence Agency. [ind.] 2003. Western Hemisphere Brief 133-75.Y.


U.S. Central Intelligence Agency. 1976. Intelligence Information Cable (July 7).


U.S. Department of State. 1991. “Subject: GOC-CGSA Caracas Meeting/Gov apparently optimistic that a major agreement could be signed this week.” Confidential memo from American Embassy in Caracas to U.S. Secretary of State.


VNA Statements, Manifestos, Interviews, Communiqués and Other Writings


Movimiento de Izquierda Revolucionaria (MIR, Chile). 1975. “Contra la represión gorila: Concretar la unidad de la izquierda y activar la solidaridad internacional.”
Correo de la Resistencia, Órgano del Movimiento de Izquierda Revolucionaria de Chile en el Exterior 6 (December-January 1975).


Radio address


Treaties, Pacts and Joint Statements


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Assistant Professor of Government and Politics. University of Maryland, College Park. 2010--.  
Faculty Affiliate, Center for International Development and Conflict Management. University of Maryland, College Park. 2010--.  
Graduate Lecturer. The Pennsylvania State University. 2009-2010.  

EDUCATION  
Ph.D., Political Science. The Pennsylvania State University. 2010.  

PUBLICATIONS  

AWARDS AND HONORS  
Program in Empirical International Relations Pre-Doctoral Research Fellowship, Penn State University. 2008-2009.  
Jesse M. MacKnight Memorial Graduate Scholarship, Penn State University. 2008.  
Graduate School Merit Scholarship, Georgetown University. 2002-2004.  
William T. Grier University Award for Excellence in Latin, Bucknell University. 1999.