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A Decision Modeling Perspective on U.S.–Cuba Relations

John Arquilla

National Defense Research Institute

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Prepared for the
Under Secretary of Defense for Policy

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PREFACE

This monograph forms part of a larger study of Cuba in the post-Cold War world. It focuses primarily on understanding and influencing Fidel Castro, although its findings should also have value for studies that examine transitional paths away from Castroism. The analytic framework employed in this study recognizes that an emphasis on capabilities rather than intentions will likely remain a predominant element in policy planning. Nevertheless, it suggests that understanding an opponent's reasoning can generate useful, often counterintuitive insights, allowing for the pursuit of optimal strategies under conditions of uncertainty.

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The author welcomes comments.

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SUMMARY

This study applies a framework for analyzing the possible reasoning of opponents in crisis and conflict to current U.S.-Cuba interactions. Based on previous RAND studies of Saddam Hussein's decisional processes and of Castro's mind-set, the key elements of this analysis consist of developing two alternative images of Fidel Castro and positing that both images exhibit substantially, if not purely, rational characteristics.

This study has two central objectives. The first is to model, in a semiformal manner, Fidel Castro's likely reasoning. Next, guided by insights derived from decision modeling, implications for U.S. policy are considered. The second objective of this endeavor is to test the decision theory developed at RAND during the Gulf crisis against a case whose critical elements are only now beginning to unfold.

Cuba's current situation, viewed from the perspectives of the alternative models, appears as either serious or grave. Both images employed in this analysis suggest that Castro will have to choose his predominant strategy from among three major "paths," or courses: conciliating, hunkering down, or confronting. In an effort to broaden the decision modeling effort, the next step in the research applies the same analytic framework to American decisionmaking. It results in the delineation of three plausible strategic approaches for the United States in its dealings with Cuba: easing up, staying the course, or increasing the pressure.

The inclusion of American decision models allows for further investigation into the various plausible courses that U.S.-Cuba strategic interaction might take. Based on this study's findings, the implications for policy suggest, from one perspective, that the United States can achieve good results by maintaining its pressure on Cuba, although such a course might drive Castro to adopt a dangerously confrontational strategy. An important part of the approach is identifying, by means of a game theoretic equation, the likelihood that Castro will shift, as his situation fails to improve, to an increasingly

risk-acceptant mode of behavior, including efforts to profit from the drug trade and to acquire weapons of mass destruction (WMDs).

An alternative strategy exists, however. It has a good chance of generating a favorable outcome and may forestall serious crisis or conflict. Instead of continuing the embargo, it suggests that selective, unilateral easing, coupled with clear warning about keeping out of drug or proliferation activities, provides a credible mix of "carrots and sticks." This course appears to have a better chance of fostering an evolution of cooperation, instead of a devolution to conflict.

MODELING REASONING PROCESSES

The decision model employed in this study implies that, despite the occasional presence of a variety of cognitive (seeing what is expected) and motivated (seeing what is desired) biases, decisionmakers reason in ways that consistently relate means to ends in a logical fashion. Furthermore, instead of viewing the probability of an outcome in a continuous way, humans adopt a "thresholding" heuristic; that is, they classify their assessments categorically. Thus, representations of judgmental assessments that employ discrete categories, such as "Good," "Bad," or "Very Bad," approximate reasoning processes more closely than do purely numerical representations, such as those derived from expected utility theory.

Thresholding also allows for discarding possible, but implausible, outcomes. For example, leaders of the Argentine junta that ordered the invasion of the Falklands/Malvinas in 1982 knew that Britain could have made nuclear threats against the aggressors, but no doubt "thresholded out" this possibility when weighing the decision to invade. More recently, Saddam Hussein likely made similar judgments about the remote risk that the United States would respond to the invasion of Kuwait with nuclear weapons. In this regard, the various thresholds adopted by a decisionmaker cluster around most-likely, worst-, and best-case outcome categories.

Finally, this theory of decision modeling posits that two broad images of any given actor will likely encompass the range of possible

behaviors. Instead of requiring detailed psychobiographical information, or a deep understanding of a particular culture or ideology, the theory holds that, in states with clear one-person rule, the classification of type falls into two categories: "incrementalists," those who prefer the *status quo* and who would alter it incrementally when necessary; and "visionaries," those willing to take large risks in pursuit of grand aims. A given national leader, however basically consistent with one category or the other, will likely have the ability to exhibit traits characteristic of both, depending on situational factors. Alternative models that consider either incrementalist (Model One) or visionary (Model Two) behavior should suffice for purposes of explaining and, often, predicting decisional outputs--strategic paths and policies. A given actor may exhibit traits predominantly associated with one or the other model; however, the likelihood that movement from one model to the other will occur requires that both models be employed in any analytic effort.

For Castro, incrementalist behavior consists of his having goals limited to remaining in power and thresholding out very high-risk options. A visionary Fidel, on the other hand, will remain concerned about Cuba's ability to act independently on the world stage, and about his own place in history. This latter model tends also to discount, rather than to weight heavily, very high risks. Castro's record exhibits many traits from both models, suggesting that this study's approach has particular applicability to him. The study is most concerned, however, with applying the approach to Castro's current situation.

CASTRO'S OPTIONS

Table S.1 depicts Castro's current set of policy options, and gives the net assessment value assigned to each by the two models.

The table indicates that, however deep his troubles, Castro does have many policy options available to him. A Model One Fidel, however, has only one "Good" choice, to ease his domestic pressure by siphoning

Table S.1

Decision Table of Castro's Current Situation

STRATEGY	POLICY	RISK	NET ASSESSMENTS	
			MODEL ONE	MODEL TWO
Conciliating	Economic Reforms	Low	Marginal	Marginal
	Liberalization	Moderate	Bad	Marginal
	Both	High	Very Bad	Bad
Hunkering Down	Belt Tightening	Low	Bad	Bad
	Diversification	Low	Bad	Bad
	Renewing Russian Ties	Low	Bad	Marginal
Confronting	Seeking New Allies	Low	Marginal	Good
	"People Siphoning"	Moderate	Good	Good
	Profiting from Drug Trade	High	Bad	Very Good
	Proliferation of WMDs	High	Bad	Good
	Intervening Militarily	Very High	Very Bad	Bad

off dissidents and others who now find it most difficult to make do under socialism. "Marginal" options consist of either economic reforms or establishing new alliance arrangements. The Model Two (visionary) Castro, on the other hand, has, out of the same 11 options, one assessed as "Very Good" (profiting from the drug trade), three "Good" (all of which fall in the confrontational category, including proliferation of WMDs), and three "Marginal" results.

Disturbingly, Table S.1 points out that the confrontational path offers the best hope for either image of Castro. Interestingly, the visionary (Model Two) Castro, in pursuit of grander aims, appears more willing to accept the risks attendant upon political and economic reform than is his incrementalist (Model One) alternative image, for whom such

steps could pose mortal threats to his only core value, remaining in power. When the assessment in Table S.1 is coupled later in the study with the American net assessment for a partial easing of the embargo, a potential area of cooperation becomes identified (as discussed below in "U.S.-Cuba Strategic Interactions").

AMERICAN OPTIONS

Table S.2 describes the various American policy options, and the net assessments derived by each of the two models. For the United States, Model One reasoning has as its goal the restriction of Castro's influence to the confines of Cuba itself. Model Two, however, has the goal of reforming Cuba and fostering Castro's downfall.

Table S.2

Decision Table of the Current U.S. Situation

STRATEGY	POLICY	RISK	NET ASSESSMENTS	
			MODEL ONE	MODEL TWO
Easing Up	Partial easing of embargo	Low	Marginal	Good
	Full termination of embargo	Moderate	Very Bad	Bad
Staying the course	Maintaining embargo as is	Moderate	Good	Very Good
Increasing the pressure	Tightening the embargo, and linking its lifting to democratization inside Cuba	Moderate	Bad	Marginal

The first contrast with the Cuban situation, presented in Table S.1, is that the United States has significantly fewer options from which to choose; all options are linked, one way or another, to its decades-long embargo strategy. Among the four choices, a Model One United States, which seeks only to limit Cuba's ability to threaten American interests, has one "Good" and one "Marginal" choice: either to stay the course on the embargo or to ease it partially, in try-and-see

fashion. A Model Two United States, which seeks, in addition to quiescence, the democratization of Cuba, has the same policy preferences and rates them even more acceptably than does Model One. Both models reject increasing the pressure on Castro.

U.S.-CUBA STRATEGIC INTERACTIONS

Table S.3 provides a framework for analyzing U.S.-Cuba interactions. It reflects the *relative* gains for one side or the other. The amounts derive from the various assessments of most-likely outcomes (prospects), worst-case (risks) outcomes, and best-case (opportunities) outcomes developed in this study.

Table S.3

U.S.-Cuba Strategic Interactions, Viewed Relatively

		CUBA		
	Strategies	Conciliating	Hunkering Down	Confronting
UNITED STATES	Easing	U.S. (5,3)	Even (3,3)	Cuba (1,4)
	Staying the course	U.S. (5,2)	U.S. (4,1)	U.S. (2,1)
	Increasing the pressure	U.S. (4,1)	U.S. (2,1)	Even (1,1)

NOTE: ( ) are values derived from decision tables, U.S. score first.

Modeling both Cuban and American reasoning allowed for the development of a game theoretic-type analytic tool that displayed the interactions of the various strategies on each side. Payoff values, derived from the various most-likely, best-, and worst-case assessments from the decisions, quantified the probable results at the intersection of American and Cuban choices. Analysis of the various absolute numerical scores points out the lack of a dominant strategy (one that scores highest) for either side. However, for Cuba, a confrontational strategy does as well as or better than its other paths, against U.S. strategic approaches that either ease or increase pressure. Similarly,

a strategy of staying the course on the embargo provides the United States with results as good as or better than any derived from the other strategies, whichever course Cuba follows.

The situation described by Table S.3 reflects the inherent instability of current U.S.-Cuba relations. Indeed, if interaction appears as only a one-time occurrence, then each side will likely avoid cooperation. This framework for analysis also furnishes the means for understanding the outcomes of repeated interactions over time, and may be used to demonstrate the value of partial easing for both sides.

IMPLICATIONS FOR U.S. POLICY

From the preceding discussion, one can see that the United States, although it should reject increasing the pressure on Cuba, may achieve reasonable results from either of the following policies:

1. Partially and selectively easing the embargo, unilaterally, or
2. Maintaining the embargo in its current form.

The first policy seeks to foster the evolution of U.S.-Cuba cooperation over time. In the near term, it might allow Castro to shore up his regime, but it will most likely encourage economic reforms and other liberalizing activities short of full-fledged democratization. The second policy hedges against the regime-stabilizing risks of the first but might drive Castro to confrontational behavior, spurring a devolution to conflict.

The latter possibility makes it appropriate for the United States to consider sending an unambiguously clear signal to Castro regarding the grave risks for Cuba in general, and for his regime in particular, if Cuba were to undertake an effort either to profit from the drug trade or to pursue the acquisition of weapons of mass destruction. Indeed, even an American policy of partial easing will not, by itself, make these activities substantially less appealing to Castro (see Table S.1). Therefore, regardless of the strategic path chosen by the United States, a clear warning should be issued to Castro that he stay away from the

drug business and refrain from efforts to develop or purchase unconventional weapons.

Both policies, partial easing and staying the course, have the same net assessments. Note, however, that under both models of American reasoning, the modest initial gains from easing will likely develop in a relationship much less conflictual than the one that will emerge from confrontation on both sides. Whereas the models suggest that the United States can prevail against Cuban confrontation, the chance to avoid the onset of increased conflict should be tried first, because, even after three decades of confrontation, Castro remains a formidable adversary, replete with options of his own. It is in the American national interest to keep him from choosing among the most invidious of those options.

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1. INTRODUCTION

BACKGROUND AND OBJECTIVES

In the latter stages of many coalitional conflicts, allies of the primary state on the losing side have tended to fall away, or even to switch sides, leaving their erstwhile leader to work out his or her own salvation. Thus, almost all Napoleon's allies in his disastrous invasion of Russia in 1812 opposed him in the next season's campaigning. In the latter stages of World War II, Italy, Hungary, Romania, and Finland abrogated their agreements with Germany and joined the Allies. The end of the Cold War provides counterexamples; a number of the minor states that had allied with the Soviet Union remained "at their posts" until its dissolution. Indeed, even in the absence of a protector, one small nation continues to serve as a bastion of resistance to American ideological preeminence: Cuba.

Despite towering economic setbacks, whose proximate cause is Russian unwillingness to continue purchasing its sugar at prices well above market levels while selling the islanders heavily discounted oil, Cuba, under the staunch leadership of Fidel Castro, remains loyal to Marxist ideals. Given Castro's uncanny staying power and continued opposition to Western-style liberalization, the United States faces a persistent set of questions. First, at the level where the United States would take the initiative, the merits of either maintaining, increasing, or easing economic pressure on Cuba, and the likely consequences of each course of action, must be considered. Next, reactive policies in response to a variety of potential Cuban-originated crises should be considered now, so that the United States is not caught completely off guard by unfolding events.

At the heart of all of these issues lies the need to understand Castro's decisionmaking processes. If such an understanding can be accomplished, then perhaps he can be influenced.

This study has two central objectives. The first is to model, in a semiformal manner, Fidel Castro's likely reasoning. Next, guided by

insights derived from decision modeling, implications for U.S. policy are considered. The second objective of this endeavor is to test the decision theory developed at RAND during the Gulf crisis[1] against a case whose critical elements are only now beginning to unfold.

APPROACH

The methodology employed in this study relies on two key assumptions. First, leaders of nation-states behave in substantially, although not purely, rational ways. Earlier RAND work developed the concept of *limited rationality,* which posits the procedural consistency of individuals but also the vitiating effects of time pressure, imperfect information, and a variety of cognitive impedimenta. These limitations cause the decisionmaker to evaluate choice options qualitatively, rather than by means of precise calculations, leading to a "thresholding effect." That is, a policy option deemed highly unlikely may simply be dropped from the decision menu. For example, in the recent Gulf crisis, the United States had the capability to employ nuclear weapons instead of a field army against Iraq. Saddam, however, likely thresholded out the former possibility.

The second assumption holds that the great diversity of personality types among leaders may be usefully distilled into two broad categories. In states with clear one-person rule, the classification of type falls into two categories: "incrementalists," those who prefer the *status quo* and who would alter it incrementally when necessary; and "visionaries," those willing to take large risks in pursuit of grand aims. A given national leader, however basically consistent with one category or the other, will likely have the ability to exhibit traits characteristic of both, depending on situational factors.

Positing the substantial, if limited, rationality of potential adversaries permits some degree of explanation and prediction of their behavior without the need for a psychoanalytic investigation. Providing a range for an opponent's behavioral responses, keyed to broadly defined personality types, allows the U.S. decisionmaker to define better the realm of possible responses and to develop the means to hedge against

[1]See Davis and Arquilla (1991a and 1991b).

unlikely but potentially powerful actions by an adversary in a given crisis. Together, these assumptions allow the creation of an analytic framework that should mitigate the difficulties associated with assuming that one's adversary is either crazy or the reverse, that he will pursue courses of action deemed most likely. This approach, therefore, critiques the notion that opponents may often be undeterrable.[2] It is well suited to improving analysis of a potentially wide variety of regional foes whose challenges to American interests may not resemble at all those confronted during the Cold War.

STRUCTURE OF THE STUDY

The next section, Section 2, applies this decision modeling approach, in a general way, to Fidel Castro. It relies substantially on the historical record of his behavior during the Cold War. Rather than seeking to categorize him as either an incrementalist or a visionary, the modeling allows for a more nuanced picture to emerge, one in which Castro may make hard-headed choices based on furthering Cuba's self-interests, or may pursue courses more consistent with the rhetoric of "socialism or death."

Section 3 considers Castro's current situation, hypothesizing about his likely frame of mind and the set of options that he may muster to confront Cuba's "deepening crisis."[3] Section 4 takes the insights derived from this exercise and goes on to incorporate them in its analysis of the plausible courses of strategic interaction between Cuba and the United States. In addition to the crucial question of whether a "moderating" American strategy may improve relations between the adversaries, attention is also given to such issues as the possible Cuban drive to acquire weapons of mass destruction (WMDs) or to become more deeply involved in the drug trade.

The study concludes by developing a set of policy implications deducible from the analyses performed in Sections 3 and 4. In particular, an effort is made to identify policies that, when coupled

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[2]Stein (1992) provides the basic argument regarding the difficulties in making deterrence work in the post-Cold War world.

[3]A phrase employed by Gonzalez and Ronfeldt (1992).

with ongoing efforts to foster the rise of a "civic culture" in Cuba, will encourage positive, synergistic effects. Finally, the new insights into the theory of decision modeling generated by this study are considered within the context of an ongoing U.S.-Cuba relationship. They enable a framework to be formed for analyzing even a post-Castro Cuba, and may also serve to guide American policymaking toward other nations that may want, or be induced, to "come in from the Cold War."

2. ALTERNATIVE MODELS OF FIDEL CASTRO

ELEMENTS OF THE MODELS

The decision modeling framework employed in this study comprises four related processes. First, Castro's values and likely objectives are described. Second, the strategic paths by which he might strive to achieve his ends are identified. Third, the various factors that weight decisional options are categorized. Fourth, the manner in which the preceding weighting is influenced by the dominance of either pragmatic or visionary leadership characteristics is considered. The scope of this section is limited to Castro's behavior during the Cold War. In Section 3, however, the models will be applied to his current situation.

CASTRO'S VALUES AND OBJECTIVES

In the broadest terms, a national leader's values will fall into one of three related categories: power, prosperity, or sovereignty. For Fidel Castro, the historical record clearly demonstrates that he has consistently emphasized the achievement of Cuban sovereignty and power, over and above the pursuit of prosperity.[1] From the time he took power in 1959, he has sought to diminish American influence, which was substantial after 1898, when Cuba had become a virtual colony of the United States in the wake of the Spanish-American War. Instead of vainly striving to develop enough Cuban military power to win freedom from American influence, Castro balanced externally, aligning his small country with the Soviet Union. Instead of maximizing national wealth through the free market, he planned his own economy centrally, and linked it to an international system of planned economies.

Sovereignty, or political independence, has been a core value for Castro, even with regard to relations with the Soviets, especially in

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[1]Thomas (1971) points out that the roots of Cuban nationalism can be traced well back into the Spanish colonial period of rule. Gonzalez and Ronfeldt (1986) describe Castro's pursuit of both sovereignty and power, characterized by his strategic "vision" and tactical "pragmatism."

the economic sphere. For example, Cuba has traded with capitalist countries whenever market conditions allowed the attainment of higher prices than those available from its planned-economy partners. Enjoying preferential terms for the purchase of Soviet oil, Castro has, when market conditions permitted, resold some of his oil imports at higher world prices to improve his balance of payments. However, there can be no doubt that a certain amount of dependency on the Soviets existed; Cuban sovereignty was not unalloyed. Yet, the type of hegemony[2] exercised by Moscow, which mirrored his own ideology, was far easier for Castro to accept than the American version, against which he rebelled.

Castro has not been blind to the need for prosperity, as is evident from Cuba's opportunism in the trade sphere. Also, with regard to his "internationalist duty" to spread socialism, he has consistently exercised a prudent balance between provocation and circumspection. If, for example, a nation was willing to trade with Cuba, it was unlikely that Castro would support efforts to undermine its government, however repugnant he might find it. Prosperity came ahead of pure ideology (socialist othodoxy), perhaps because economic success was one of the necessary foundations of continued sovereignty. Internationalism, if carried too far, might undermine Cuban independence. Thus, efforts to expand power and influence have also been self-limited. After all, Cuba is a small state making its way in a world in which its principal adversary is a superpower.

Despite his emphasis on maintaining Cuba's independence, his devotion to economic over ideological gains, and Cuba's inherent weakness when counterpoised with the United States, Castro has been able to pursue a world-class foreign policy for 30 years. He has sought international influence, despite his many constraints, because he does indeed value the spread of socialism. However, he has not allowed these broad secondary goals to overshadow the need to consolidate Cuban security. In a very real sense, then, Castro combines the disparate elements of personal leadership style into a hybrid: He is a "pragmatic

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[2]See Dominguez (1989) for a discussion of the nature of the Soviet Union's hegemonic relations with Cuba from the 1960s to the 1980s.

visionary." This combination makes understanding not only what he wants but also how he pursues his aims of paramount importance.

STRATEGIC PATHS

Like all states pursuing global economic and foreign policies over time, Cuba has experienced a wide range of results. During the past 30 years under Castro's leadership, Cuba has, alternately, brought the world to the brink of nuclear war, fostered the rise of revolutionary movements in Latin America and Africa, and intervened militarily, far from home, when interests and circumstances have permitted. Its missile crisis of 1962 resulted in a stalemate: Cuban soil would not host Soviet nuclear arms, but the United States agreed to refrain from invading Cuba. With regard to revolutionary movements, some have prospered over the years, but many have sputtered out. Militarily, Cuban forces have acquitted themselves with distinction in triumphs won in Angola and Ethiopia, and have fought with tenacity and courage in defeat, as when they faced insuperable odds in Grenada.

On balance, the Cuban record reflects remarkable success for a small nation operating in the global arena. Two factors explain this unlikely degree of clout wielded by Fidel Castro for so long. First, the American non-invasion pledge, itself a function of the Soviet Union's willingness to act as patron during the Cold War, has given Cuba if not a "blank check," at least "overdraft protection." The down-side, or worst-case, risks of even the most far-flung ventures have thus been limited to the increasing of American economic pressure and the worsening of relations with a variety of nations.

The safety net against invasion, however, provides only the *necessary* conditions for adventurism. The *sufficient* condition for allowing global engagement is Castro's own skill as a strategist. Throughout his tenure in power, he has known when to advance boldly, hold firmly, or cut his losses.

Castro's strategic repertoire falls into three broad categories. The first consists of policies and actions that confront, as exhibited by his behavior during the missile crisis. The second reflects his tendency to hunker down when under pressure. This strategy differs from

confrontation in that it is hardly proactive. For example, when faced with the loss of his forces on Grenada, Castro opted to let them fight it out but shunned any effort to bolster his defenses with additional troops. The third strategy is to opt for conciliation when appropriate. His agreement to a brokered peace in Namibia, and later in Angola, after years of fighting is an excellent example of strategic flexibility. Important here, however, is less what the strategic paths consist of and more how Castro blends those paths skillfully to achieve his aims.

A review of the past 30 years of Cuban economic and security policies suggests that Castro has tended to allow one of the three paths to dominate at a given time, although traces of the others often persist, allowing for rapid "gear shifting." For example, a confrontational policy toward other Latin American countries predominated during most of the 1960s, as revolutionary movements enjoyed great Cuban support. When many of those endeavors faltered and target states grew hostile, Castro switched to a conciliatory posture. During the period of confrontation, however, he kept his diplomatic lines of communication open, allowing for a timely reversal of strategic direction. Although he has been flexible, Castro does appear consistently to have begun his interactions confrontationally, switching to other strategies as circumstances have demanded.

KEY FACTORS

What matters to Fidel Castro? In the broadest sense, he seeks the continued sovereignty of Cuba, including the stability of his regime, and the maintenance of robust power capabilities that will enable him to continue to act on the world stage, if now in more prudent ways than in the past. Without continued sovereignty, he no doubt believes that maintaining a prominent place in the world is unattainable. Therefore, the factors that take precedence in his mind must relate first to preserving his country and his rule. In strategic terms, those factors fall into political, economic, and military categories, each of which has internal and external components.

The Political Situation

Because of the substantial opacity of Cuban domestic politics, at least as viewed from the United States, conjectures about the level of popular support for Castro must necessarily remain suspect. However, based on what limited information is available and on an analysis of Cuban political structure, his regime does not show signs of imminent collapse.[3] First, for every indication of popular disaffection, counterexamples exist, reflecting substantial continuing support. Next, Castro commands and controls the only functional institutional actors on the Cuban political scene. Any opposition must necessarily remain diffused, therefore, because it lacks a cohering agent. Finally, the external (American) pressure exerted upon Castro may well result in disincentives for the rise of an indigenous opposition movement, providing instead a rationale for repression.

American opposition to his regime remains the fundamental characteristic of the international system that Castro surveys. What has changed dramatically in recent years is the diminishing Soviet and/or Russian resolve to serve as a counterweight to U.S. coercive measures. For nearly 30 years, Fidel could balance externally against the Americans. Now, as Russian security guaranties grow ever more questionable, Castro may either (1) re-establish close security ties with Moscow, (2) find a new protector (China comes to mind), (3) improve Cuba's own defensive capabilities, or (4) make political concessions (domestically liberalizing) to the United States.

With regard to other nations, Castro has opened up relations with a wider variety of Western democratic states than in any previous period. At the same time, his ties with members of the former Soviet Bloc have diminished and, in some cases, have ceased (for example, with Poland and the now-defunct East Germany and Czechoslovakia). On balance, however, Cuba's international *political* situation, excluding Russo-Cuban relations, shows a net improvement as new linkages to the West have formed. Indeed, when the United States attempted to increase pressure on Castro by implementing some of the more severe aspects of the Cuban

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[3]This study thus agrees with Gonzalez and Ronfeldt (1992) and tends to take issue with Oppenheimer (1992).

Democracy Act of 1992, its own allies delivered a sharp rebuke in the United Nations General Assembly.

The Economy

Ever reliant on exports, even in pre-Castro days, the Cuban economy has, over the past three years, experienced something akin to a state of free fall. Total exports have decreased by one-third since 1989. More alarmingly, imports have been reduced by more than half over the same period.[4] Although this development has substantially eliminated Cuba's structural trade deficit, economic suffering has increased proportionately, leading Castro to implement an austere "special period in time of peace" to keep his economy going during this crisis. At this writing, a new sugar agreement has been reached with Russia that should, at least, stop Cuba's economic hemorrhaging. In the meantime, new sugar markets must be developed if the void created by the dissolution of the Soviet Bloc is to be filled.

At the financial level, the economic picture grows somewhat darker. Cuba's $6.7 billion hard-currency debt, although substantially restructured, cannot be easily serviced at present.[5] This situation portends an inability to obtain credit for future purchases, restricting Cuba to bartering with other cash-starved nations, such as Russia. On the other hand, approximately $25 billion is owed to non-OECD (Organization for Economic Cooperation and Development) (i.e., "soft-currency" liabilities) states; of that amount, little requires near-term servicing, and less may ever need to be repaid.[6] Another ameliorating effect on Cuba's financial difficulties is the small size, in absolute terms, of the debt. If the economy can be stabilized over the coming year (1994), there should be little difficulty in resuming debt-service

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[4]See Central Intelligence Agency (1992:9), which shows exports declining from $5.4 billion to $3.6 billion. Imports show a steeper drop, from $8.1 billion to $3.7 billion.

[5]In theory, however, Cuba could begin to service its hard-currency debt through the sale of sugar or nickel, or other exports. Practically, there may be little incentive to do so unless further hard-currency credits are extended.

[6]For example, the devaluation of the Russian ruble brings the ostensible multibillion-dollar size of the "soft" Cuban debt down to the vicinity of $100 million in hard currency.

payments. The situation improves further when loan-restructuring agreements are considered. Even before the latest Cuban efforts to manage their debts, they showed considerable perspicacity in relations with creditors.[7]

At the structural level, Castro has sought to advance key industrial sectors, particularly biotechnologies, and has continued to pursue both belt-tightening and crop-diversification measures. Another key enterprise consists of efforts to reduce Cuba's dependence on foreign oil by developing its own offshore petroleum resources and acquiring nuclear energy production capabilities.

Despite these many efforts, for the near-term future, Cuba will remain energy dependent and its ability to generate meaningful amounts of foreign exchange (legally) will vary with the vicissitudes of the global sugar market. In this regard, the creation of a North American Free-Trade Area may be viewed with some concern, because such an agreement, which enables and encourages American exports of non-sugar sweeteners to Mexico's large soft-drink market, might seriously hurt Cuba's sugar sales to Mexico.[8]

On balance, the Cuban economic picture is very dark[9] but certainly not hopeless. With careful debt management, industrial diversification, and the rehabilitation of the sugar sector, Castro can hope first to achieve stabilization, then to generate modest growth. The small size of Cuba's hard-currency, or dollar debt, in absolute terms, suggests that the situation is not one of insurmountable difficulty. Indeed, Cuba has undergone similar, if not as severe, periods in the preceding 30 years. It has always managed tough times well. As Dominguez has pointed out, only when the economic situation was good did Castro overextend Cuba financially.[10] Nevertheless, it is important to bear in mind Ritter's analysis, which points starkly to Cuba's problems.

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[7]OECD (1991:115) data show that total debt service payments averaged just over $500 million annually, with small variance and a declining trend.

[8]The author thanks David Ronfeldt for this insight.

[9]See Ritter (forthcoming).

[10]See Dominguez (1989), especially Chapter Seven.

Finally, the economic effects of the continued American economic embargo must be considered. For over 30 years, Cuba has dealt creatively with this coercive effort, although success has been in large part due to Soviet support. In the absence of preferential treatment from such a sponsor, will the embargo finally bring Cuba to its knees? The preceding analysis suggests that it will not, despite the undoubted pain it inflicts. One need only look at the persistence of other current targets of American economic coercive efforts, such as Iraq, Serbia, and Haiti, to find strong support for Adam Smith's observation, from *The Wealth of Nations,* that "there is much ruin in a nation."

The Cuban Military Situation

The Cuban armed forces constitute the strongest institutional component of the island's domestic politics.[11] If Castro maintains their support, his position will remain unassailable. At this writing, the army is downsizing only marginally, and some troops are even assisting in sugar harvesting. One may assume that Castro will show continued sensitivity to the institutional interests of the military, thereby improving his security against domestic insurrection. Of course, the Cuban armed forces would no doubt play a large, if not praetorian, role in a succession crisis sparked by Castro's passing. With this in mind, it should be unsurprising that Castro has kept his brother Raul, his designated successor, as armed forces minister for so long.

Whereas the military provides a bulwark against revolt and assistance on the domestic-labor front, its role in the international sphere appears to have diminished. In the wake of the end of the Cold War, and of Desert Storm, it is hard to think of Castro sending his troops forth as a tool of intervention. The restored American willingness to commit its own forces overseas, in such "just causes" as Panama, must disconcert him greatly. Actually, Castro may have been the first to suffer, in Grenada, from the resurgence of U.S. interventionism.

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[11]Ed Gonzalez provided this observation.

In addition to retaining robust military capabilities of its own, Cuba has, for 30 years, maintained close security ties with Moscow. In the wake of the end of the Cold War, however, the constancy of a Russian security umbrella must be subjected to growing doubt and concern. In terms of formal diplomatic relations, the Soviet Union never undertook to declare an obligation. Even before Gorbachev's rise to power, Moscow took the line that Cuba should defend itself.[12] Nevertheless, the dissolution of the Soviet Union signals an era of even more tenuous Russo-Cuban security relations. To be sure, Russia's military attraction to Cuba's geostrategic position will continue, as evidenced by the retention of intelligence facilities at Lourdes, Cuba. This is, however, only a shadowy remnant of a once-close military relationship.

On balance, the Cuban military situation remains strong at the domestic level, but it has weakened internationally. Castro can likely still count on his armed forces to shore up his regime, but he is much constrained from employing them overseas. Finally, the weakening of security ties with Russia vitiates Cuba's position as an actor in the international system. What has been described as a "spectacularly generous" Russian posture toward Cuba[13] has devolved to something more like grudging, limited cooperation.

MULTIPLE MODELING

The notion that more than one image, but not many, of an opponent is required when trying to explain, predict, or influence his behavior lies at the heart of the decision modeling theory developed at RAND over the past few years. Emerging during the Kuwait crisis, the approach is now employed in research into such areas as counterproliferation and regional deterrence, or "influence" strategies. Also, historical research into American (and British, in one case) crisis decisionmaking has substantiated the hypothesis that U.S. leaders and their key advisers have tended to avoid multiple modeling, because of its inherent uncertainties, in favor of a "best-estimate" approach to analyzing

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[12]The Soviets made this line official in 1984. See Shulman (1986:52).

[13]Ibid., p. 61.

opponents. It seems clear from this analysis that, in retrospect, a multiple modeling approach would have improved deterrence and coercive diplomacy in crises ranging from Panama at the turn of the century to Korea and Quemoy during the 1950s.[14]

In this study, the key modeling alternatives allow Castro to be depicted as either a pragmatic incrementalist (Model One) or as a visionary with lofty goals and the strong desire to act in their pursuit (Model Two). He may, in reality, fall neatly within the confines of one model, exhibit traits drawn from both, or alternate between them. The main point is that the models effectively cover a broad range of individual reasoning, allowing the observer or opponent to develop a substantially complete list of possible courses of action and to select the strategy best fitted to hedging against unlikely but plausible contingencies.

The models imply, in general, differing goals, which will lead to variance in the assessment of the *status quo* and, likely, in the weights given to future prospects, risks, and opportunities. A Model One leader is more likely to have modest aims and to avoid high risks. His Model Two counterpart will, on the other hand, seek intrinsically more expansive goals and undertake substantial enterprises, often at enormous risk. The two models will tend to converge around estimates of best-, worst-, and most-likely case outcomes of interactions.[15] After all, both models, to a large extent, are rational actors. However, because of different weights for the varying types of outcomes, the two models are likely to generate diverging net assessments despite having nearly identical inputs.

How does this construct apply to Fidel Castro? In terms of his goals, it suggests that a Model One Fidel will strive primarily to shore up his own regime, sacrificing ideological preferences for narrower gains. An example of this type of behavior is found in Castro's doctrine of precedence, which has

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[14]See Arquilla and Davis (1992), who recognize explicitly the tension between the nuances of multiple modeling and the perceived need of decisionmakers to converge around a common understanding of a given problem and of the optimal response to it.

[15]Hereinafter referred to in the decision tables (Sections 3 and 4) as opportunities, down-side risks, and prospects, respectively.

led to a foreign policy in which "Cuba will not initiate support for revolutionary movements fighting against a government that has good political relations with Cuba."[16] A Model Two Fidel, on the other hand, will pursue some vision of internationalist duty and strive to consolidate his historical standing. Perhaps the best example of behavior driven by this model, if true, is given in Castro's explanation for why he wanted nuclear missiles in Cuba in 1962: "because the missiles would have shifted the global correlation of forces in favor of socialism."[17] In short, Castro's record is replete with examples supporting *both* images.[18]

With regard to explaining his risk propensity, previous history is less illuminating. On the one hand, Castro has engaged in large overseas military adventures in Angola and Ethiopia, despite clearly signaled American displeasure. However, these examples are contaminated by two factors. First, the Cubans were operating under *de facto* Soviet sponsorship or support. Second, the United States was self-constrained by its non-invasion pledge. Both factors served to sharply curtail Cuba's down-side risks, a condition under which even a Model One might grow bolder.

Having delineated the alternative images of Fidel, and having highlighted why they have particular applicability in his case, this study next models Castro's reasoning in his current situation, as well as in his likely interactions with the United States.

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[16]Dominguez (1989:117).

[17]Quoted in Allyn, Blight, and Welch (1990).

[18]Draper (1965:6) points out that "Fidel Castro has said so many different things at different times that it is no longer possible to think of him in terms of anything he may have said at any one time."

3. APPLYING THE MODELS TO THE CURRENT SITUATION

Because a Model One Castro has only opportunistic interest in pursuing the international exportation of socialism, his current situation is only "Bad": The economy falters and Russian support is inconstant, but the regime appears capable of continuing to hold power. The strength of the armed forces is largely undiminished, and there is every sign that the Cuban military remains a reliable foundation of the regime's support. A Model Two Castro, however, must view the situation as "Very Bad": It is not enough for him simply to hold on to power; he must continue to act meaningfully on the global stage. Economic and international political travails have sharply diminished the potential for activism, making the *status quo* less bearable for him.

Despite these differing perspectives on the current situation, both models have a similar set of strategies and policy options to consider. They break down into three strategic paths, summarized in Table 3.1. Two of the paths have a number of specific outputs.

With regard to conciliation, liberalization may include, but is not limited to, democratization. It refers also to improvements in civil rights and allowing of public dissent. It may also refer to economic reforms, in lieu of or precedent to political reform.

The policies associated with hunkering down appear self-explanatory. Note that the third policy, an effort to maintain or renew Cuba's special relationship with Russia, is not *inherently* confrontational, since the United States also currently seeks closer ties with Russia. However, if Castro were to go beyond rebuilding trade and other economic ties, to attempt to foment "re-sovietization," then the policy would evolve into one of foreign intervention, which could also include support for terrorist activities aimed at the United States.

Of his confrontational policy options, profit from drug trade hypothesizes a transshipping or toll-taking role as being preferable to the development of a production capability. Also, proliferation of WMDs explicitly includes biological and chemical weapons in addition to

Table 3.1

Castro's Policy Options

STRATEGY	POLICY
Conciliating	Economic Reforms Liberalization Both
Hunkering Down	Belt Tightening Diversification Renewing Russian Ties
Confronting	Seeking New Allies "People Siphoning" Profiting from Drug Trade Proliferation of WMDs Intervening Militarily

nuclear devices. Finally, "people siphoning" refers to allowing, if not creating, more emigration, as happened over a decade ago with the Marielitos.

ASSESSING CASTRO'S OPTIONS

Table 3.2 reflects an analysis of how Castro, operating from a "Very Bad" current situation, views his alternatives. It also provides net assessments from the perspectives of both Models One and Two. The coding format reflects the "thresholding effect," or propensity to categorize, that the decision modeling theory hypothesizes is characteristic of human reasoning, as opposed to the sort of "continuum effect" posited by, say, expected utility theory. Two favorable categories are employed and are matched by two unfavorable ones; one category for value-neutral assessments ("Marginal") is also included. Their numerical values run evenly as follows: +2 for Very Good, +1 for Good, 0 for Marginal, -1 for Bad, and -2 for Very Bad. Net assessments

Table 3.2

Decision Table for Assessing Castro's Reasoning

STRATEGY	POLICY	RISK	*a* PROSPECTS (MOST-LIKELY CASE)	*b* DOWN-SIDE RISKS (WORST-CASE)	*c* OPPORTUNITIES (BEST-CASE)	NET ASSESSMENT	
						Model One	Model Two
Conciliating	Economic Reforms	Low	Bad	Very Bad	Good	Marginal	Marginal
	Liberalization	Moderate	Bad	Very Bad	Marginal	Bad	Marginal
	Both	High	Very Bad	Very Bad	Good	Very Bad	Bad
Hunkering Down	Belt Tightening	Low	Bad	Very Bad	Good	Bad	Bad
	Diversification	Low	Very Bad	Very Bad	Marginal	Bad	Bad
	Renewing Russian Ties	Low	Very Bad	Very Bad	Good	Bad	Marginal
Confronting	Seeking New Allies	Low	Marginal	Bad	Good	Marginal	Good
	"People Siphoning"	Moderate	Marginal	Very Bad	Good	Good	Good
	Profiting from Drug Trade	High	Good	Very Bad	Very Good	Marginal	Good
	Proliferation of WMDs	High	Marginal	Very Bad	Very Good	Bad	Good
	Intervening Militarily	Very High	Bad	Very Bad	Marginal	Very Bad	Bad

derive from the following equation, which incorporates weighting and rounding coefficients:

$$N = Rf\,(aP + bR + cO)/(a + b + c)\,, \qquad (3.1)$$

where N = net assessment, Rf is a rounding function, and a, b, and c act as weighting factors for prospects (P), risks (R), and opportunities (O), respectively. The Appendix describes the specific weights that attach to the two models and provides a sample calculation.

The author has coded the various options in Table 3.2 according to discussions with experts in the field of Cuban affairs and on the basis of his readings and reflections. Other analyses may differ with specific items, and are encouraged to do so. The value of this process lies, to a great extent, in its ability to provide a framework for analysis that will stimulate further insights and help identify the unlikely but plausible courses of action available to an adversary.

PREFERENCES OF MODELS ONE AND TWO

In terms of strategic paths, both models of Castro reflect mixed net assessments for conciliating. It is interesting, however, to note the counterintuitive finding that a Model Two (e.g., a visionary, globalist) Castro finds liberalization less threatening than a Model One incrementalist. It suggests that Model One, whose overarching interest lies in remaining in power, will show great reluctance to embark upon a course that may foster the rise of a viable domestic political opposition. Model Two, whose aims are broader, may be willing to undertake such risks, if accepting them leads to a rehabilitation of his overall capabilities to act internationally.

Hunkering down has little appeal for either of the models, despite the low risks attached to all the options. A Model Two Castro, however, is marginally most attracted to the notion of restoring Cuba's special relationship with Russia. This seems intuitively obvious, because such a development would enable Castro to return to a policy agenda that would extend well beyond the confines of shoring up his own regime.

The first substantial divergences between the models' net assessments arise in the realm of confronting strategies. Whereas Model

One sees little opportunity in confronting the United States, save in the matter of "siphoning off" its domestic discontent, seeking new allies, or possibly getting involved in drug trafficking, for Model Two confrontation proves uniformly beneficial, except in the case of military interventionism. The reason for the sharp differences between the models on this strategic path is that Model Two puts less weight on worst-case outcomes, except where the risk of a policy is very high (as in the case of interventions). Of course, the positive net assessments for drug trafficking and proliferating rest, ultimately, on the validity of the best-case estimates of "Very Good" for each option.

With regard to drug trafficking, the results would be very good indeed from the hard-currency profits to be gained, which could be employed to service Cuba's external debts and reopen lines of credit. In this way, illicit drug profits could have a substantial multiplier effect because every dollar earned could eventually support four or five times that amount in new loans. As to proliferation, the successful acquisition of weapons of mass destruction would also be Very Good, because Cuba would have developed its own security guaranty. In some respects, this capability would provide better for Cuba's continued sovereignty than the increasingly inconstant and vague Soviet security support during the latter part of the Cold War.

In summary, both models converge on the confrontational strategic path as the one that offers Castro the best chances for success in his current situation. In the case of Model One's net assessments, two policy options are indicated: opening up new alliances and siphoning off domestic discontent. For Model Two, however, easing Cuba's financial woes by profiting from the drug trade is the most attractive single option. On the security front, balancing both internally, by developing a defense capability that includes weapons of mass destruction, and externally, by obtaining new allies, appears attractive. The drug involvement and proliferation policy options are potentially alarming because they presage pressures on, and incentives for, Cuba that could threaten a return to the harshest Cold War period of U.S.-Cuba relations.

4. ANALYSIS OF U.S.-CUBA STRATEGIC INTERACTIONS

This section considers first the current set of American strategies and policy options in bilateral relations with Cuba. It then endeavors to model U.S. decisionmaking by an approach similar to that applied to Castro. The possible courses of interaction are then depicted, employing a game theoretic framework whose results are derived from the decision modeling analyses of both sides.

MODELING U.S. DECISIONMAKING

If the general theory of decision modeling is correct, then U.S. decisional processes may be modeled, too. Indeed they *should* be, to identify the appropriate set of policy options in current bilateral relations with Cuba. Briefly, the United States, like Cuba, has three strategic paths that it may pursue.[1] First, it could ease up on Cuba by either totally or partially ending the economic embargo. Or, the United States could stay the course by simply keeping the pressure on Cuba as it has for the past 30 years. Finally, pressure could be increased by such actions as tightly enforcing (that is, to the letter) the Cuban Democracy Act of 1992.[2]

In terms of alternative models of American decisionmaking, a Model One, or incrementalist, U.S. leader would strive only to keep Cuba quiescent on the international scene. A visionary, Model Two approach would seek the same goal as Model One but would, in addition, call for the democratization of Cuba, with or without the actual ouster of Fidel Castro.

Table 4.1 depicts the prospects, risks, opportunities, and net assessments for the two American models (overall situation assumed Good).

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[1]Gonzalez and Ronfeldt (1992) employ this approach to understanding Cuba's options and add a fourth option, a subvariant of staying the course, coupling it with information-communication initiatives.

[2]This study presumes that American decisionmakers will threshold out any notions about employing military force *first* against Cuba.

Table 4.1

Decision Table of the Current U.S. Situation

STRATEGY	POLICY	RISK	*a* Prospects (most-likely case) (most-likely case)	*b* Down-Side (worst-case) (worst-case)	*c* Oppor-tunities (best-case) (best-case)	NET ASSESSMENT Model One	NET ASSESSMENT Model Two
Easing Up	Partial easing of embargo	Low	Good	Bad	Very Good	Marginal	Good
	Full termination of embargo	Moderate	Marginal	Very Bad	Very Good	Very Bad	Bad
Staying the Course	Maintaining embargo as is	Moderate	Good	Bad	Very Good	Good	Very Good
Increasing the Pressure	Full enforcement of Cuban Democracy Act of 1992	Moderate	Bad	Very Bad	Good	Bad	Marginal

The results of this analysis reflect a consistency of policy preference across the models. For cautious Model One, who does not seek Castro's ouster or even a shift to democracy, keeping the pressure on is the preferred strategy. Easing up runs some risk of renewed Cuban internationalism, dragging down the net assessment. Similarly with increasing the pressure, the incrementalist model is intimidated by the potential backlash effects of this strategy.

Model Two's best options are the same as those for Model One, although he rates them more favorably. Whereas staying the course seems intuitively consistent with the aim of pressuring Cuba to democratize, backlash effects also keep down the net assessment of the increased-pressure option. However, this assessment indicates that, instead of keeping the embargo as is, a Good result could be achieved by partially ending it. The mathematical reason for this last result is that Model Two gives the lightest weight to down-side risks. This insight can be

articulated practically, too: A Model Two could well see this form of easing as fostering a "crisis of rising expectations" that might bring Castro down. He would also discount the risks of Cuban recidivism, a return to its behavior at the height of the Cold War.

The decision table assessments (see Table 3.2) of Cuban prospects, risks, and opportunities can now be joined to American assessments (from Table 4.1)[3] to derive a set of payoffs for each strategy, against each of the opponent's possible responses. Table 4.2 summarizes the various outcomes of strategic interaction when specific paths are pursued.

Table 4.2

U.S.-Cuba Strategic Interactions

CUBA

UNITED STATES Strategies	Conciliating	Hunkering Down	Confronting
Easing	(5,3)	(3,3)	(1,4)
Staying the Course	(5,2)	(4,1)	(2,1)
Increasing the Pressure	(4,1)	(2,1)	(1,1)

NOTE: A score of "5" equates to Very Good; a "1" equates to Very Bad. Cuban scores are weighted averages of options.

In game theoretic terms, the first saliency is that neither side has a dominant strategy. For example, an American policy of easing yields as high a payoff as any other U.S. path, if Cuba conciliates. If Castro confronts, however, then staying the course offers the best result. Staying the course comes close to being a purely dominant strategy, because it performs as well as or better than the other

[3]For example, Table 4.1 shows that, under staying the course, the best-case result for the United States (which would arise if Cuba conciliated) would be Very Good (a score of 5). The worst-case result, which would arise if Cuba confronted, would be Bad (scored as a 2). The process is repeated from the Cuban perspective developed in Table 3.2 to fill out the Cuban portion of the scoring in each cell.

options. Increasing the pressure always does worse than other strategies, regardless of the Cuban response, which implies that greater confrontation should be avoided. From the Cuban perspective, conciliating and hunkering down yield almost identical results, results that are better than those achieved by confrontation against the two "tough" American strategies. However, Cuba's own tough policy does best if the United States opts for easing its pressure.

Another way of analyzing this interaction consists of comparing the relative scores for *both* sides on a given strategic path, instead of looking at one side's values across a range of strategies when the opponent's choice is held constant. Thus, if the United States eases and Cuba conciliates, the Americans have a greater relative payoff. If, on the other hand, U.S. easing fosters Cuban confrontation, then the latter achieves strong relative gains. Table 4.3 depicts the relative results across the whole range of interactions.

Table 4.3

U.S.-Cuba Strategic Interactions, Viewed Relatively

CUBA

UNITED STATES Strategies	Conciliating	Hunkering Down	Confronting
Easing	U.S. ++	Even	Cuba +++
Staying the Course	U.S. +++	U.S. +++	U.S. +
Increasing the Pressure	U.S. +++	U.S. +	Even

NOTE: Scores are based on payoffs from Table 4.2 and are reflected relatively.

Like the analysis of the absolute numerical scores in Table 4.2, this relative perspective reflects a nearly dominant strategy for the United States: staying the course, which does as well or better than its other choices. For Cuba, however, confronting is a dominant strategy, either achieving solid gains (against U.S. conciliation) or

minimizing down-side effects. This difference in emphasis implies that the United States and Cuba may be on a collision course. However, this analysis of strategic choices reflects more than just a static, one-time event. It is intended as a framework for understanding both an enduring interaction and specific events fixed in time.

With this framework in mind, it is possible to envision conditions under which a less conflictual environment will evolve. First, U.S.-Cuba relations should be seen as having countless iterations over time. The payoffs in the above example could then be applied to each interaction, with a summing of their aggregate numbers denoting gains or losses. If the outcome derives from the scores of many iterations, then the importance of optimizing and hedging from the outset diminishes. For example, the United States could begin by easing, and continuing that approach, but only if Cuba responds in a conciliatory fashion. This strategy involves beginning by easing, but backing it up with retaliatory noncooperation. In theory, this "tit-for-tat" approach should foster the "evolution of cooperation."[4]

APPLICATION OF FRAMEWORK

Given the understanding of Castro's likely reasoning developed in Section 3, is it possible to move him away from confrontation? Using the framework developed in this study, two measures can be identified that might succeed. One consists of increasing his perceived risks in adopting such policies as involvement in the drug business or proliferation of WMDs. If, for example, the United States were to adopt a declaratory policy demonstrating its intent to employ forceful means to curtail drug trafficking or WMD development, then Castro would have to view these options as engendering very high risks. The most likely prospects for these policies would also decline, to Bad or Very Bad. Thus, their net assessments would fall to Bad.

At the same time that Castro's confrontational options are being diminished in value, the United States should improve the attractiveness of conciliation. The simplest way to do so would be to disconnect the

[4]Axelrod (1984) developed this theory and has tested it successfully over thousands of iterations.

ending of the embargo from the requirement that Cuba hold free and fair elections. Such a position would lessen Castro's down-side risks in moving to conciliation, improving the net assessment to Good or Very Good, depending on which model of Fidel is considered. According to both models, however, this combination of carrots and sticks would move either image of Castro away from confrontation. This two-tiered approach of economic easing and power-politics toughness sufficiently hedges against Castro's recidivism, particularly since easing is a reversible policy. But it should be recognized that this approach implicitly allows, and does not punish Castro, for shoring up his authoritarian regime.

5. CONCLUSIONS

In addition to summarizing the findings of this study, this section develops the policy implications derived from them. It concludes by identifying areas for further research.

SUMMARY

Employing the multiple-model methodology first developed to understand the reasoning of Saddam Hussein during the Gulf crisis, and building upon previous research into Fidel Castro's mind-set, this study has sought both to explain his reasoning and to outline the manner in which the United States might influence his decisional outputs--strategic paths and policies. This endeavor has somewhat enlarged the scope of the decision modeling theory. U.S.-Cuba relations lack the immediacy and gravity of interactions with Iraq; therefore, the theory's usefulness in guiding strained international relations that fall short of war and range over a longer period of time may now be gauged.

After a delineation of the plausible strategic paths and policies that Castro might pursue, alternative models of Fidel introduced images of him as pursuing either simple retention of power and historical standing or active continuation to influence events on the world stage. His menu of strategies ranges from conciliating to confronting, with hunkering down being the middle course. Applying alternative images to him resulted in the finding that, given the current situation, both models will tend toward confrontational policy options, including, for the visionary Castro, increasing involvement in the drug trade and pursuing acquisition of weapons of mass destruction.

Important differences do arise between the models. A counterintuitive example appears in the area of conciliating options, in which Castro the visionary seems more likely to adopt liberalizing (especially economic reform) policies than his incrementalist alter ego. Also, in the realm of confrontation, the incrementalist Castro shows a much lesser attraction to the most provocative options (e.g., proliferation or drug trafficking) than does his counterpart, although

"people siphoning" and the pursuit of new allies from among the world's remaining authoritarian states appear to offer this Fidel good chances for improving his situation.

The next step in this study consisted of developing alternative models of U.S. reasoning, enlarging further the scope of decision modeling to enable the creation of a new framework for analyzing U.S.-Cuba decisionmaking and strategic interaction. Model One incrementalism hypothesized U.S. aims to strive simply for Cuban quiescence on the international scene. An American Model Two, however, seeks also the end of the Castro regime and the democratization of Cuban society. The strategic paths available to the United States somewhat mirror Cuba's choices. They range, at one end, from easing up on the embargo, either partially or fully, to applying increasing economic pressure at the other extreme. The middle-course strategy consists of maintaining the current level of pressure on Cuba.

The findings derived from this analysis of U.S. options reflect the incrementalist model's preference for maintaining the embargo. The more ambitious U.S. model develops a Very Good net assessment for the middle strategic path, but, surprisingly, it rejects increasing the pressure and views ending the embargo as having salutary effects, although not quite equal to those that ensue from keeping up the pressure on Cuba.

Modeling both Cuban and American reasoning allowed for the development of a game theoretic-type analytic tool that displayed the interactions of the various strategies on each side. Payoff values, derived from the various most-likely, best-, and worst-case assessments from the decisions, quantified the probable results at the intersection of American and Cuban choices. Analysis of the various absolute numerical scores points out the lack of a dominant strategy (one that scores highest) for either side, although pressures to minimize losses would likely drive Cuba toward confrontation and the United States toward continuing its pressure. This finding, however, grows out of the framework's inherently static view of the interaction as simultaneous and single-play. Employing another analogy from game theory that suggests an iterative interaction and that "play" follows a sequential

pattern (one side goes first), we see the possibility that a more conciliatory, cooperative interaction might evolve.

This study also points out that, despite his difficulties, Castro continues to have a substantial variety of policy options. Alhough he does appear impelled to move toward confrontation, the framework employed here suggests that a reasonable possibility for inducing him to enter into a more cooperative relationship does exist. Finally, if Castro falls from power, the policy options and strategic paths identified should prove useful for thinking about interactions with lesser-known successors.

IMPLICATIONS FOR U.S. POLICY

This study's insights into Castro's reasoning and findings in the area of strategic interaction suggest that the United States can pursue either of two paths with reasonable expectation of achieving acceptably good results. The first consists of keeping up the pressure; the second path suggests a predominant strategy of easing. The first accompanies its "stick" with another stick. The second employs a "carrot," as well. Increasing the pressure performs less well than either of the other two strategies, implying that it should be rejected as a useful strategic path. Its application would spur Castro's indicated (by both models) predilection for confrontation, and would undermine what alliance support the United States currently enjoys in its efforts to reform Cuba. Descriptions of the more viable policy options follow below.

Staying the Course

This option keeps the economic and political pressure on Cuba until democratization occurs. The analysis performed in this study concludes that this strategy will likely yield good results and hedges best against continued Cuban intransigence. However, its adoption also strongly increases the likelihood that Castro will pursue a confrontational strategy in his interactions with the United States. The more troubling Cuban options, increased activity in the drug trade and proliferation of weapons of mass destruction, will decrease in attractiveness to Fidel only if the United States commits itself to a

declaratory policy that raises his risks in these areas to very high levels.

Partial Easing

Under this strategy, the United States would unilaterally lift some portion of the embargo on Cuba in try-and-see fashion. If Cuba reciprocates by conciliating, via economic or political reforms, then further easing could occur. Actions take place sequentially instead of simultaneously, creating an environment that has the best chance to foster the evolution of cooperation. To hedge against the possibility of Cuban recidivism, this strategy must include the above-mentioned declaration of U.S. opposition to, and willingness to act preventively against, Cuban moves into either drugs or non-conventional weapons. This strategy offers two important "carrots" in addition to its "stick": Castro's ouster does not become a condition of improved relations, and Cuba may adopt economic reforms in lieu of democratization. Both lower his down-side risks in conciliating.

With regard to this last point, the strategy resembles long-standing U.S. policy toward authoritarian states, which has encouraged economic reform and hoped-for political reform. By and large, this approach has proved successful, considering that both prosperity and democracy have come to many countries that have followed this path, from South Korea to Chile. For Cuba, this prospect must look much superior to the likely outcome of early political reform. Indeed, the sobering results of this latter approach in much of the former Soviet Bloc, where economic reform has come *after* democratization, should give Fidel reason to resist pressure to engage in political reform first.

The common thread that unites both options, the need to make two of the more dangerous aspects of confrontation less attractive, suggests that U.S.-Cuba relations have entered a period of substantial risk as well as opportunity. Hedging against the risks posed by the possibility that Cuba might move more deeply into the drug trade or acquire weapons capable of doing grave damage to the United States should thus become a high priority.

SUGGESTIONS FOR FURTHER RESEARCH

Two issue areas would benefit substantially from research viewed through the prism provided by this study.

Identifying Specific Easing Options

In pursuit of a partial easing strategy that begins with unilateral actions, the United States must identify options that have reversible properties. They must also have beneficial results that require some time to take effect, thereby hedging against the possibility that Castro might simply try to make some economic gains that would bolster the long-term prospects for authoritarian rule in Cuba. Examples of the type of easing move that might apply would include humanitarian initiatives and, possibly, some forms of assistance in the rebuilding of parts of Cuba's infrastructure. The benefits derived from these policies would have indirect effects. Importantly, in the infrastructure area, Cuba would be required to pay for the work in hard currency, perhaps by selling sugar. No doubt various such initiatives exist. Previous RAND work (Gonzalez and Ronfeldt, 1992) has emphasized expanding communication links, both to foster the rise of viable domestic political institutions and to prepare Cuba for entry into world markets. This issue area merits further investigation, because communication initiatives take on the form of easing policies, although they have few near-term economic benefits and remain reversible.

Using the Decision Modeling Framework for Instructional and/or Analytic Purposes

The findings of this study, particularly those derived from the section on strategic interaction, should provide an ideal opportunity for structured gaming to assist policymakers. Furthermore, the framework itself, presented without including assessments, could foster useful debate in policy circles. Such debate could result in developing new insights.

Such applied research would encourage a shift in long-standing patterns of U.S. decisionmaking behavior. For a world that is likely to

be as fraught with peril as it is full of opportunity for peaceful progress, improved decisional processes will encourage the evolution of international cooperation instead of fostering a devolution to conflict.

Appendix

WEIGHTING FACTORS AND CALCULATIONS FOR MODELS ONE AND TWO

Table A.1

Weighting Factors for Model One

Current Situation	Risks	*a*	*b*	*c*
>Very Bad (i.e., Bad, Marginal, Good, or Very Good)	Very High	0	1	0
Very Bad	High	1	2	0
>Very Bad	>High (i.e., Marginal Low, or Very Low)	2	1	1
Very Bad	--	2	1	1

Example: Net assessment of the Cuban proliferation option

Current situation: Very Bad

Risks: High

Applicable weights: $a = 1$, $b = 2$, $c = 0$

Calculation: $N = Rf[1(0)+2(-2)+0(2)]/\ 1+2+0$

$= Rf(0-4)/3)$

$= -1.33$,or -1, or Bad,

when rounded.

Table A.2

Weighting Factors for Model Two

Current Situation	Risks	*a*	*b*	*c*
>Bad (i.e., Marginal, Good or Very Good)	Very High	2	1	1
Very Bad	Very High	2	1	1
Very Bad	≥High (i.e., no worse than High)	1	0	1
Bad	Very High	2	1	1
Bad	>Very High (i.e., no worse than High)	3	1	2

Proliferation example for Model Two: Very Bad situation, High risks

Weighting factors: $a = 1$, $b = 0$, $c = 1$

Equation: $N = Rf[1(0)+0(-2)+1(2)]/1+0+1$

$= Rf(0+0+2)/2$

$= 1$, or Good.

NOTE: In this example, the rounding function was superfluous, because the score hit an integer level.

REFERENCES

Allyn, Bruce, James Blight, and Robert Welch, "Essence of Revision: Moscow, Havana and the Cuban Missile Crisis," *International Security,* 14:136-172 (1990).

Arquilla, John, and Paul K. Davis, *Extended Deterrence, Compellence, and the "Old World Order"* (Santa Monica, Calif.: RAND, 1992). N-3482-JS.

Axelrod, Robert, *The Evolution of Cooperation* (New York: Basic Books, 1984).

Capablanca, Jose Raul, *My Career* (New York: Macmillan, 1920).

Central Intelligence Agency, *Cuba: Handbook of Trade Statistics* (Washington, D.C.: U.S. Government Printing Office, 1992).

Clerc, Jean-Pierre, *Fidel de Cuba* (Paris: Ramsay, 1988).

Davis, Paul K., and John Arquilla, *Thinking About Opponent Behavior in Crisis and Conflict: A Generic Model for Group Analysis and Discussion* (Santa Monica, Calif.: RAND, 1991a). N-3322-JS.

———, *Deterring or Coercing Opponents in Crisis: Lessons from the War with Saddam Hussein* (Santa Monica, Calif.: RAND, 1991b). R-4111-JS.

Dominguez, Jorge I., "Secrets of Castro's Staying Power," *Foreign Affairs,* 72(2):97-107 (1993).

———, *To Make a World Safe for Revolution* (Cambridge: Harvard University Press, 1989).

———, *Cuba: Order and Revolution* (Cambridge: Harvard University Press, 1978).

Draper, Theodore, *Castroism: Theory and Practice* (New York: Praeger, 1965).

Geyer, Georgie Anne, *Guerrilla Prince* (Boston: Little, Brown, 1991).

Gonzalez, Edward, and David Ronfeldt, *Cuba Adrift in a Postcommunist World* (Santa Monica, Calif.: RAND, 1992). R-4231-USDP.

———, *Castro, Cuba, and the World* (Santa Monica, Calif.: RAND, 1986). R-3420.

Habel, Janette, *Cuba: The Revolution in Peril* (London: Verso, 1989).

Kanwisher, Nancy, "Cognitive Heuristics and American Security Policy," *Journal of Conflict Resolution,* 33:652-675 (1989).

Mesa-Lago, Carmelo, *The Economy of Socialist Cuba* (Albuquerque: University of New Mexico Press, 1981).

Monreal, Pedro, "To Market, to Market . . .," *Hemisfile,* 4(3):10-11 (May/June 1993).

Organization for Economic Cooperation and Development (OECD), *Statistics on External Indebtedness* (Paris:OECD, 1992).

Oppenheimer, Andres, *Castro's Final Hour* (New York: Simon and Schuster, 1992).

Pastor, Robert A., *Whirlpool: U.S. Foreign Policy Toward Latin America and the Caribbean* (Princeton: Princeton University Press, 1992).

Ritter, A.R.M., "Exploring Cuba's Alternate Economic Futures," in *Cuban Studies* (forthcoming 1993).

Rudolph, James D., ed., *Cuba: A Country Study* (Washington, D.C.: U.S. Government Printing Office, 1987).

Schwenk, Charles R., "Effects of Devil's Advocacy and Dialectical Inquiry on Decision Making," *Organizational Behavior and Human Decision Processes,* 47:161-176 (1990).

Shulman, Marshall D., ed., *East-West Tensions in the Third World* (New York: W.W. Norton & Company, 1986).

Stein, Janice Gross, "Deterrence and Compellence in the Gulf, 1990-91: A Failed or Impossible Task?" *International Security,* 17:147-179 (1992).

Thomas, Hugh, *Cuba: The Pursuit of Freedom* (New York: Harper and Row, Publishers, 1971).