



### New Research Directions

*Over the years, International Negotiation has published several articles concerning conflict resolution and negotiation efforts in Cyprus. Louise Diamond (Vol. 2, no. 3, 1997) described lessons learned from conflict resolution training in Cyprus. Benjamin Broome (Vol. 2, no. 3, 1997) recounted his experiences facilitating problem-solving workshops with the Greek and Turkish Cypriot communities. Raymond Saner and Lichia Yiu (Vol. 6, no. 3, 2001) examined a failed attempt at third party intervention in Cyprus. The following article by Birol Yesilada and Ahmet Sozen offers a game theoretic analysis of the current negotiation context concerning the Cyprus dispute.*

### Negotiating a Resolution to the Cyprus Problem: Is Potential European Union Membership a Blessing or a Curse?

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**Abstract.** This article provides a game theoretic analysis of how the candidacy of Cyprus for European Union (EU) membership presents an important challenge for both the Union's eastern enlargement plans and current international efforts aimed at resolving the Cyprus problem. The conclusions indicate that the Cypriot conflict has entered a very delicate period in its protracted and troublesome history characterized by a deadlock game. Strong domestic and international factors have created the conditions for each side to follow a non-cooperative strategy aimed at unilateral victory rather than a compromise. In this regard, the EU's promise to the Greek Cypriots of membership in the Union, regardless of the settlement of the Cyprus problem, serves as a side payment that enforces non-cooperative strategy. Likewise, Turkey's overwhelming military superiority in the region and its unconditional support for the Turkish Cypriots strengthens the Turkish side's rigid position in the Cyprus negotiations. Under these circumstances, it is argued that an influential third party like the United States is needed to coordinate the efforts of the UN and EU to move the two parties away from a deadlock game. This effort requires a package approach to the issues surrounding the Cyprus problem, the island's membership in the EU, and EU-Turkey relations.

**Keywords:** bargaining, Cyprus, European Union, EU enlargement, game theory, Greece, Greek Cypriot, international conflict, negotiation, Turkey, Turkish Cypriot

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## Introduction

The present candidacy of Cyprus for European Union (EU) membership presents an important challenge for both the Union's eastern enlargement plans and current international efforts aimed at resolving the Cyprus problem. It can be argued that if the Greek and Turkish communities agree to join the EU, the Cyprus problem could be resolved peacefully within the framework of EU legislation. Yet the opposite could be argued as well. As some in the Turkish Cypriot community point out, joint membership in the EU could result in domination of the Turkish Cypriots by the more numerous and richer Greek Cypriots and, thus, further destabilize the relationship between the two sides on the island. In this article, we attempt to shed light on the current impasse in Cyprus with a focus on future EU membership and the implications of accession on the two communities. The main issues dividing the Greek Cypriots from the Turkish Cypriots are: (i) the future political system; (ii) guarantorship; (iii) freedom; (iv) the military status of Cyprus; (v) displaced persons; (vi) Turkish settlers; (vii) territorial adjustment; and (viii) EU membership. Among these (ii), (iii), and (viii) have direct relevance to EU-Cyprus relations.

## European Union-Cyprus Relations

Cyprus has always maintained close relations with the EU economically, socially, and politically. A recent EU report states that its relationship with Cyprus is based on a 1973 Association Agreement as well as a new Accession Partnership (Council Decision No 248/2000) and relations are supported financially by a Council Regulation regarding the implementation of pre-accession operations (Council Regulation No. 555/2000). But the two parties had an earlier encounter when Cyprus applied to join the European Economic Community (EEC) in 1962. That decision came about with consent from both the Greek and Turkish Cypriot members of the House of Representatives, as required by the constitution of Cyprus. However, when the Greek Cypriot militia attacked Turkish Cypriot townships in December 1963, a civil war

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began. Cyprus's aspiration of becoming an EEC member came to an abrupt halt.

Despite the internal political divisions on the island, Cyprus and the EU (EC at that time) signed an Association Agreement in 1973 that provided for the establishment of a customs union. Even though the Turkish Cypriots did not participate in this decision, the EC indicated that "rules governing trade between the Contracting Parties may not give rise to any discrimination between the Member States, or between nationals or companies of these states, nor nationals or companies of Cyprus" (Commission of the EC 1972: 3). The Association Agreement, therefore, prohibited discrimination against the Turkish or Greek Cypriots by their EC trading partners. It also called for the elimination of all tariffs and quotas within five years. Following the end of the five-year period, the agreement was renewed annually until 1987, when the two sides signed a customs union (CU) agreement. This agreement outlined two phases of economic measures to be implemented by Cyprus prior to its entrance to the EEC (EEC 1987). During the customs union negotiations, the Turkish Cypriots, citing Article 5 of the Association Agreement, asked to participate. They only succeeded in obtaining informal meetings with the EC officials because the EU recognized only the Greek Cypriot administration as the official government of Cyprus.

Preparation of the Cypriot economy for accession was governed by financial protocols that contained provisions for extensive financial aid. The first protocol, signed on July 15, 1977, targeted projects that would benefit both communities. Accordingly, all ventures that were proposed were required to have a bi-communal component. The total amount of aid necessary was 30 million Ecus, which was distributed over the subsequent five years. The Greek Cypriot side received 24 million Ecus and the Turkish Cypriot side obtained 6 million Ecus. The projects that received funds were: (1) the Vassilikos-Pendaskinos irrigation project; (2) an electric power station project in Dhekelia; and (3) the Nicosia sewage project. Only the last project included investment on the Turkish Cypriot side. The second financial protocol (1984–1988) provided 44 million Ecus in aid. Not a single Turkish Cypriot proposal received favorable review by the EC officials; they lacked the "communality" component required by the Community. The third financial protocol, signed in January 1989, provided Cyprus with another 62 million Ecus in aid and again, covered only projects on the Greek Cypriot side of the island (EC Council Decision 1989: 1).

As bilateral EU-Cyprus relations improved, Greek Cypriots decided to apply for EU membership on July 4, 1990. The European Commission issued a favorable opinion on June 30, 1993, and the Council of Ministers endorsed its recommendation that October. In issuing its decision, the Council indi-

cated that the EC expected progress on the Island's political problem while the parties continued working to meet those conditions necessary for accession. In other words, while the Commission expressed positive sentiments regarding Cyprus' membership, it also indicated concern over the ongoing dispute between the Greeks and Turks. Simply stated, resolution of this problem prior to accession would benefit all parties.

At the December 1997 Luxembourg summit, the European Council took the steps necessary to set the enlargement process in motion. It decided to convene bilateral intergovernmental conferences in the spring of 1998 with Cyprus and other select countries to negotiate conditions for their entry into the Union. In addition, the Luxembourg European Council stated that (European Council 1997):

the accession of Cyprus should benefit all communities and help to bring about civil peace and reconciliation. The accession negotiations will contribute positively to the search for a political solution to the Cyprus problem through the talks under the aegis of the United Nations that must continue with a view to creating a bi-communal, bi-zonal federation. In this context, the European Council requested that the willingness of the Government of Cyprus to include representatives of the Turkish Cypriot community in the accession negotiating delegation be acted upon.

Unfortunately, accession talks between Cyprus and the Union did not progress as hoped.

On March 12, 1998, President Glafkos Clerides attended the European Conference in London and presented a timetable outlining the Cypriot strategy for accession talks. The proposal included an invitation to the Turkish Cypriots to participate in the Cyprus negotiating team. The Turkish Cypriots rejected this invitation on the grounds that the Greek Cypriot government did not represent all of Cyprus and that the Turkish Cypriot side had been excluded from prior EU-Cyprus relations. They also raised legal objections based on the Republic's constitution. First, the Constitution requires that both communities support the decision to apply for EU membership and the Turkish Cypriots were clearly excluded in this process. Second, the Treaty of Guarantee proscribes relations that would unite Cyprus with another country. Article I (2) of this treaty states that "[Cyprus] is not to participate in whole, or in part, in any political or economic union with any state whatsoever" (Republic of Cyprus Treaty of Guarantee, 16 August, 1960). Article I (12) further elaborates on economic and political union by prohibiting "all activity likely to promote, directly or indirectly, union with any other state." Accordingly, Turkish Cypriots and Turkey were able to object to Cyprus's

membership in the EU or at the very least challenge it in the International Court of Justice. However, the Cypriot government and EU rejected this as a real problem. The Greek Cypriots' application for EU membership complicated efforts aimed at resolving the Cyprus problem because the Turkish side perceived this development as "an attempt by the Greeks and their EU allies to pressure them into a corner."<sup>1</sup>

### **The Cyprus Problem and Bicomunal Negotiations**

Over the years, intercommunal talks have taken a third-party approach under the auspices of the UN and orchestrated predominantly by the US and the UK. During talks between 1967–1974, the Greek Cypriots maintained that the 1960 constitutional order was unworkable and, therefore, the future political system had to be one of a unitary state with minority rights given to the Turkish Cypriots. The Turkish side strongly rejected this position: it denied their political equality as a founding member of the Republic of Cyprus, and depicted the Turkish Cypriots as the minority on the island – a position that petrified them. In response, the Turkish Cypriots called for a return to the 1960 constitutional order. When this fell on deaf ears, they proposed a federal system as the new regime. In each case, the Greek Cypriots rejected their proposals.

The Greek Cypriot bargaining position was quite simple; they cornered the Turkish Cypriots into small enclaves where they were at the mercy of the Greek Cypriot military (UK House of Commons 1987: xii). This caused Turkish Cypriots to flee the island in record numbers. Ultimately, if the Greek Cypriots maintained their hard-line position, the majority of Turkish Cypriots might leave.

This situation lasted until July 1974, when Turkey intervened militarily in Cyprus following an Athens-led coup against the Makarios government. At the time, Turkey was concerned about the safety of the Turkish Cypriots given the fact that ultranationalist Greek Cypriots had taken over the government. The UN Security Council passed Resolution 353 calling for Guarantor powers to enter into negotiations to restore peace. Two conferences were held in Geneva in 1974, the second including representatives from both communities. The talks were fruitless and resulted in the Turkish Cypriots declaring their "Turkish Federated State of Cyprus" in February 1975. The Turkish Cypriot justification of this decision was rather peculiar. They insisted that their action was aimed at persuading the Greek Cypriots to follow suit and subsequently enter into negotiation over a future federal system.<sup>2</sup>

Intercommunal talks resumed in the summer of 1975 under UN Secretary-General Kurt Waldheim. Three rounds of talks in Vienna failed to result in any breakthrough with the exception of an agreement by both sides to create two ethnically pure regions on the island: the Greek Cypriot south and the Turkish Cypriot north.

In 1977, Turkish Cypriot leader Rauf Denktas suggested direct talks with Greek Cypriot leader Archbishop Makarios to review previous negotiations. At the same time, the US administration launched a new initiative to bring the two sides together. The two leaders met in February and agreed on the "Four Guidelines" for future negotiations:

1. an independent, nonaligned, bicomunal federal republic,
2. the territory under the administration of each community should be discussed in the light of economic viability and productivity and land ownership,
3. questions of principles like freedom of movement, freedom of settlement, the right of property and other specific matters are open to discussion taking into consideration the fundamental basis of a bicomunal federal system and certain practical difficulties which arise for the Turkish community, and
4. the powers and the functions of the central federal government will be such as to safeguard the unity of the country, having regard to the bicomunal character of the state.<sup>3</sup>

The success of their agreement was frustrated when the Greek side proposed that the Turkish Cypriots control no more than 20 percent of the land on the Island. It was not until May 1979 that the two sides agreed to meet again, under the auspices of the UN. Denktas and Makarios's successor, Spyros Kyprianou, reaffirmed the Four Guidelines and signed the "Ten-Point Agreement" that included the following main points (Tamkoç 1988: 111–113):

1. priority should be given to the resettlement of Varosha [suburb of Famagusta and a tourist Mecca] by the Greek Cypriot refugees,
2. avoid any action prejudicial to the intercommunal talks,
3. the demilitarization of Cyprus, and
4. the independence, sovereignty, territorial integrity and nonalignment of the Republic be adequately guaranteed against union in whole or in part with any other state and against any form of partition or secession.

A year later, the UN Secretary-General proposed an Interim Agreement that was accepted by both communities as a basis for further negotiations.

However, from that point, no intercommunal talks took place until 1984 due mainly to Kyprianou's intransigence. In 1983, the Turkish Cypriot side declared their independent state, calling it the Turkish Republic of Northern

Cyprus (“TRNC”). They claimed that this would bring the Greek Cypriot side to the negotiation table.

In 1984, the new Secretary-General of the UN, Javier Perez de Cuellar, initiated a more comprehensive approach to the Cyprus problem and abandoned the mini-packages of the past. Cuellar wrote a “Draft Framework Agreement” which underwent various modifications by 1986 following proximity talks with the Greek and Turkish Cypriot leaders. The agreement called for a bizonal, bicomunal federal republic with a bicameral chamber (with a 70 Greek Cypriot – 30 Turkish Cypriot representation in the lower house and a 50–50 representation in the upper house), presidential political system with a Greek president and a Turkish vice president, a cabinet of 7 Greek and 3 Turkish ministers, and a constitutional court composed of one Greek, one Turkish, and one non-Cypriot voting member. (Tamkoç 1988: 123–124).

The Turkish Cypriots showed interest in these points. However, Kyprianou informed the Secretary-General that before he would sign on to these ideas he needed agreements on: (1) the withdrawal of Turkish troops and settlers; (2) effective international guarantees; and (3) application of the three freedoms (movement, settlement, and the right to property). It is also noteworthy that before Kyprianou’s rejection, the Greek government in Athens ruled the Secretary-General’s proposals unacceptable.

In 1988, George Vassiliou, a self-made millionaire businessman, became President of Cyprus and began a campaign to solve the Cyprus problem.<sup>4</sup> However, he spoke of the problem as if it began in 1974 with the Turkish intervention; he failed to acknowledge that problems on the island existed before then. Meanwhile, Denktas added to the tension by introducing a new concept into the pictures: “sovereignty association.” Comparable to the French-Canadian view of sovereignty, this idea was inconsistent with UN Security Council Resolutions and the 1977 and 1979 summit agreements. According to the resolutions and agreements, separate “sovereignty” for each community was impermissible.

While the UN criticized Denktas for this new obstacle, the Secretary-General produced the famous “Set of Ideas” as food for thought. This was a 100-point document that expanded on the issues addressed in the previous “Draft Framework.” It envisioned bringing the two leaders together at an international summit if they showed interest. However they did not show much enthusiasm for the proposal.

The UN Security Council attempted to induce negotiations and improve the pre-negotiation environment by passing an important resolution, No. 649, in which the two communities were treated as equals. The resolution did not make references to “the Government of Cyprus” or “the Turkish Cypriot community.” Rather, it talked about the two communities and “the leaders

of the communities” (UNSC 1990). In view of these developments, the two leaders met with the Secretary-General in New York in October 1992 but failed to come to an agreement. Denktas raised concerns over separate sovereignties and each community’s right to self-determination. Vassiliou, on the other hand, suggested that these ideas could be improved in the future.

The Secretary-General failed to make any progress and blamed Denktas’ discussion of “separate sovereignties” for the ensuing impasse. The irony of these talks was that Vassiliou’s lukewarm endorsement of the “Set of Ideas” cost him the subsequent presidential elections in the south.<sup>5</sup> His successor, Glafkos Clerides, adamantly opposed the Ideas as being insensitive to the Greek Cypriot cause. Faced with such deadlock, the Secretary-General stated in his report to the Security Council that (UNSG 1992: para. 63):

It appears from the joint meeting that there is a deep crisis of confidence between the two sides. It is difficult to envisage any successful outcome to the talks for as long as this situation prevails. There can be no doubt but that the prospects for progress would be greatly enhanced if a number of confidence building measures were adopted by each side.

It was clear to the Secretary-General that future negotiations were impossible without some kind of pre-negotiation confidence building efforts. It was not until November 24, 1992, that the new Secretary-General, Boutros Boutros-Ghali, proposed 15 wide-ranging confidence building measures that showed great promise in bringing the two sides towards an agreement (UNSG 1993). The proposal covered potential cooperation in areas of water supply, energy, education, cultural activities, transportation and commerce, health, the environment, and continuous political dialogue.

Despite the leaders’ mixed initial reactions, the Secretary-General indicated that the two leaders were leaning towards a compromise that would have moved them away from years of status quo position. Yet, the Secretary-General did not seize the moment and push the two leaders hard enough to sign an understanding for cooperation. Instead, he let them return to Cyprus and “sleep on it.” The result was disastrous. Clerides asserted a tough position by showing some interest in these ideas while, at the same time, pursuing hard-line policies with Greece. He increasingly emphasized the Hellenic character of Cyprus in his public speeches, called for demilitarization of the Mesaoria Plain, and asked for military cooperation with Greece, which resulted in the signing of a joint defense agreement between the two countries. Denktas, on the other hand, called for a lifting of economic sanctions against the “TRNC” as a precondition for accepting the confidence building measures.<sup>6</sup> As the UN attempted to persuade the two sides to come to the negotiation table, the European Court of Justice issued a decision effectively

banning “TRNC” exports to the UK markets (ECJ 1994).<sup>7</sup> While the Greek Cypriots hailed this decision, the Turkish Cypriots viewed it as a stab in the back and rejected any idea of talks with the other side.

The next contact between the two community leaders took place nearly four years later, in 1997. The new UN Secretary-General, Kofi Annan, tried to bring a new dynamic to negotiations and convinced Clerides and Denktas to meet face-to-face in New York. That August, the two leaders came together for another round of talks in Geneva. Shortly thereafter, in 1998, the US administration appointed Richard Holbrooke, with Thomas Miller as his assistant, as the new American mediator in the Cyprus talks. Their task was to help resolve the Cyprus problem within the parameters of the UN.

Neither effort proved successful. Unfortunately, these talks took place at a time when the EU decided to open accession negotiations with the Greek Cypriot Republic of Cyprus on behalf of the whole island and excluded Turkey from the list of candidates at the Luxembourg summit of 1997. Further complications arose when the Greek Cypriots decided to sign a “Joint Defense Doctrine” with Greece, to establish a military air base in Paphos, and to purchase Russian S-300 missiles. In response to these developments, the Turkish Cypriots signed a wide-ranging declaration with Turkey that called for cooperation in foreign affairs, defense, and economic development. This joint declaration was designed to establish a “partial integration” between Turkey and the “TRNC”. From that point forward, the Turkish Cypriot side argued that if the “intercommunal negotiations” continued, they should be conducted on the basis of “two states” with confederation as the only viable solution for the Cyprus problem.

The next round of negotiations between the Greek and Turkish Cypriots occurred in the form of proximity talks under the auspices of the UN in 2000. These talks followed the EU’s decision to grant candidacy status to Turkey at the Helsinki summit of the European Council in December 1999. Despite international pressures to move forward toward direct talks, the Turkish side announced in November 2000 that it would no longer attend talks as long as the “TRNC” was not recognized as a separate state and the EU continued its accession talks with the Greek Cypriots. The lack of progress has continued. Clerides and Denktas have been meeting on a weekly basis (with periodic recesses) in an attempt to prepare the ground for a comprehensive settlement. At the time of writing no real breakthrough has occurred. What is truly tragic about the current impasse is that EU membership holds a real promise for resolving Greek and Turkish Cypriot differences, at least in the long run. Yet, the current candidacy of Cyprus seems to have caused more obstacles than assistance for third-party resolution of the crisis.

### **Game Theoretic Analysis of the Current Impasse**

The following game theoretic evaluation of the 1990s bargaining process provides important background to the current impasse in Cyprus and yields insight into changing strategies and tactics of the two sides that have resulted in the present deadlock game.

The game theoretic model conceives of the Cyprus conflict as a sustained series of events and opportunities in bargaining where the disputants are confronted with choices of cooperative and non-cooperative behavior. The Cyprus conflict is a dynamic non-cooperative game with incomplete information. The analysis draws from earlier works presented by the authors (Yesilada and Hewitt 1998; Sozen and Yesilada 2001) and is rooted in Azar's conceptualization of the *protracted conflict* (1985).<sup>8</sup> The reader is advised to refer to endnotes on game theory in order to keep track of the strategies of the parties and games that result thereof.

In game theory, the advantage of the prisoners' dilemma game over deadlock or other strategies is found in binding agreements and side payments through which a skillful mediator can bring about a compromise (C,c) outcome especially when the game is repeated n-times and if the Folk Theorem conditions hold.<sup>9</sup> It is at this point that the role of the third-party mediator becomes crucial (e.g., the US or the EU that can offer a side payment to induce cooperation).<sup>10</sup>

### **Stages of Conflict, 1992–1998**

The last decade of the 1990s is chosen as the reference point for our analysis for three important reasons. First, the 15-point confidence building measures represented a major breakthrough in the Cyprus problem and held out the prospect for resolving the crisis. Second, the subsequent misperceptions and strategy choices of the two adversaries turned the problem into a more rigid environment. And third, the emergence of the EU side payments for the Greek Cypriots in the form of accession talks coupled with the ECJ decisions on TRNC exports and Turkey's solid support for Denktas' bargaining position further eroded relations between the two communities.

#### *Boutros-Ghali Confidence-Building Proposal, 1992: A Chicken Game*

We begin our explanation of the enduring conflict between Greek and Turkish Cypriots with the confidence-building measures of Boutros-Ghali. At this point in the conflict, the preference structure for the players can best be represented by a Chicken strategy where each party's preference ordering

was  $T > R > S > P$  ( $T$  = temptation to win unilaterally;  $R$  = reward for mutual compromise;  $P$  = punishment against mutual defection; and  $S$  = sucker). In a Chicken game, the players prefer all other outcomes over the punishment outcome, so one might have expected acceptance (at least by one of the actors) in order to shift the outcome away from mutual punishment. Sustained non-cooperative behavior during 1976–1990 had created a setting where the actors were prepared to make a move from status quo (mutual defection with payoff  $[P, P]$ ) which was seen as increasingly undesirable. The Greek side wanted to unite Cyprus and to see Turkish troops leave. The status quo had become a psychologically unbearable situation. For the Turkish Cypriots, the status quo meant continued economic hardship, an uncertain future, and growing international isolation. Boutros-Ghali's proposal was an opportunity for the disputants to make mutual concessions and shift behavior from defection to cooperation. In addition, the timing of the confidence-building measures coincided with an increase in the U.S. administration's multi-track diplomacy aimed at resolving the Cyprus problem. Yet, in the process of considering the Secretary General's proposal, a set of events unfolded which permitted the actors to readjust their valuation of the status quo.

First, the Secretary General failed to place a high cost to further iterations of the game. In other words, the discount rate for future expected payoffs was not significantly lower than the expected present payoff. The costs of iterated defection were not high enough to induce cooperation. Second, the Secretary General allowed the two leaders to return to Cyprus before signing the confidence building measures. As explained earlier, once in Cyprus, the two leaders took steps that led to the rejection of the confidence-building measures. Thus, due in part to this evolution of circumstances, the incentives available to the adversaries for cooperation or defection changed. The new circumstances represented a Prisoners' Dilemma game with an increase in the value of mutual defection and concomitant decline in the value of the ( $S$ ) payoff, transforming actors' preferences to  $T > R > P > S$ .

#### *The Situation Until the Luxembourg Summit of the EU*

By treating this phase of the conflict between Greek and Turkish Cypriots as a Prisoners' Dilemma, we explicitly assume the disputants can achieve Pareto improvements through cooperation. In particular, Pareto improvements are possible only when both sides make concessions (e.g., play cooperation). The iterated PD has been analyzed by a number of scholars, so we simply restate the conditions necessary to sustain cooperative behavior and refer the reader to more detailed discussions of this topic (Axelrod 1984; Taylor 1987; Morrow 1994; Gates and Humes 1997). Under certain conditions, Tit-for-Tat strategies will produce long-term cooperation in an iterated PD. As

such, our description of this phase of the conflict presumes that opportunities for cooperation could be available to the adversaries, especially if the actors maintained a sufficiently high valuation for future cooperative relations.

In a Tit-for-Tat strategy, a player begins the iterated game by choosing C (cooperation). Thereafter, the player's choice depends on the choice of the opponent in the previous round. If the opponent chose D (defection) in the opening round, then the player chooses D in the second round. When both players adopt Tit-for-Tat strategies in the iterated PD, long-term cooperation can be sustained provided that the players do not discount the value of future payoffs too heavily against the short-term gains derived from defection. If the discount rate on future payoffs is substantial, a player may be tempted to switch from a Tit-for-Tat strategy to one that called for continued defection when the short-term gains from defection offset the losses from failed cooperation. Let us denote  $\delta_i$  as the discount factor on future payoffs for the players, where  $i \in \{g, t\}$  and  $0 < \delta < 1$ . It can be shown that a Tit-for-Tat strategy is an equilibrium strategy when (Taylor 1987: 64–69):

$$\delta_i \geq \frac{T - R}{T - P}$$

The condition suggests the importance of strategies to be adopted by third-parties that could be useful in facilitating cooperative behavior in the relationship between Greek and Turkish Cypriots. This condition defines a threshold that must be exceeded by the actors' discount factor to sustain cooperative behavior via Tit-for-Tat strategies. If the actors' discount factor falls below this threshold, the discounted value of future cooperative payoffs are valued less than the value of defecting from Tit-for-Tat and achieving the temptation to defect (T) in the short term and then the punishment outcome (P,P) for the indeterminate future. With this in mind, note that some of the parameters of the condition are potentially manipulable by a third party. That is, to the extent that a third-party can punish the disputants for non-cooperative behavior and reward them for cooperative behavior, the value of the condition can be modified.

It can be seen from this condition that increases in the value of R, such that the difference between T and R declines, will serve to reduce the overall value of the condition. That is, additional inducements for cooperation will serve to ease the conditions necessary for cooperative behavior. In a similar manner, if the value of the punishment outcome can be worsened by an additional cost imposed for non-cooperative behavior, the overall value of the condition will decline. In short, even when the ordinal ranking of the payoffs is retained such that the game remains a PD, modifications to the payoffs such that the differences between R and P are increased will lead to an increased likelihood for sustained cooperative behavior.

Despite such a reality, the third-party intervention in Cyprus took a turn for the worse with the emergence of the EU factor. Just when the UN and the U.S. were formulating various initiatives to bring the two sides back to the bargaining table within the framework of the Confidence-Building measures, the decision of the ECJ on TRNC exports to the UK and the decision of the European Council to include Cyprus among the first group of countries for the next membership expansion (in complete disregard of the Cyprus Treaties of 1960 and the Constitution of the island republic) worked against the conditions outlined above. In this non-cooperative game, the EU factor became an incentive for the Greek Cypriots to defect (choose D) in the hope that the Turkish side would eventually cave in if Turkey was ever to join the list of potential members of the EU. However, the outcome was far more disastrous than anyone had expected in Washington, London, or Brussels. The Turkish side broke off all contact with the Greek Cypriots and began a process of economic integration with Turkey (a Tit-for-Tat strategy in the direction of non-cooperative behavior). At this point, the Turkish Cypriot position reflected a bully strategy of  $T > P > R > S$  whereas the Greek Cypriots maintained a prisoner's dilemma strategy  $T > R > P > S$ . The result was a deadlock game that continued with no hope for a breakthrough until the decision of the parties to restart face-to-face negotiations in December 1999. In summary, the nature of the Cyprus game progressively worsened during the 1990s as it moved from a Chicken to a Deadlock game.

#### *The Current Phase of the Problem*

In this section, major players' preferences on eight main issues that comprise the Cyprus problem are presented. Unlike other studies on Cyprus that consider the two sides as separate actors represented by Clerides and Denktas (or whomever happens to be the top level political representative of each community), we present positions of all the major political parties and interest groups on both sides of Cyprus, as well as in Greece and Turkey. Our information is based on field research and surveys of interest-group representatives, supplemented by analysis of declared positions of the relevant officials. The initial data were collected during 1997–1998 and updated periodically in June 1999, June 2000, and throughout 2001.<sup>11</sup> The Cypriot participants interviewed were:

#### *Greek Cypriots*

Church

Clerides (President of the Cyprus Republic)

EOKA/EOKA-B (National Organization of Cypriot Fighters)

AKEL (Progressive party former Communists – Demetris Christofias)

DIKO (Right wing – Tassos Papadopoulos and previously Spiros Kyprianou)  
 DISY (Right wing – Ioannis Matsis)  
 KISOS (formerly EDEK Socialists – Vassos Lyssarides)  
 EDI (formerly KED or United Democrats or Free Democrats – George Vassiliou)

*Turkish Cypriots*

Denktas (President of the “TRNC”)  
 TMT (Turkish Resistance Movement)  
 CTP (Republican Turkish Party, reformed party, former Communists – M. Ali Talat)  
 DP (Democratic Party, moderate right, Salih Cosar for Serdar Denktas)  
 TKP (Communal Liberation Party, Social Democratic, Mustafa Akinci)  
 UBP (National Unity Party, moderate right, Dervis Eroglu)  
 MAP (Nationalist Justice Party, ultra right wing, Zorlu Tore)

The parties were asked to specify their preferences on the following issues:

1. The future political system of Cyprus – (unitary state, consociational unitary state, strong federation, federation, confederation, two independent states).
2. Guarantorship of Cyprus’s independence and protection of its two ethnic peoples – (US guarantorship, NATO, UN, and the 1960 Agreement).
3. Three freedoms (movement of people, settlement, and property ownership) – (none, freedom of movement, UN set of ideas, movement and settlement, and full freedoms).
4. Territorial adjustment – (80–20 percent based on the 1960 population ratio of the two communities, 75–25 percent, 71–29 percent, and present status quo).
5. The future of displaced individuals – (All displaced persons have the right to return to their properties; most displaced persons have the right to return to their properties; the issue should be negotiated between the two sides; few displaced persons have the right to return to their properties; and no displaced persons have the right to return to their properties).
6. The future status of the Turkish settlers/immigrants – (All Turkish settlers/immigrants leave Cyprus; most Turkish settlers/immigrants leave Cyprus; the issue should be negotiated between the two sides; most Turkish settlers/immigrants stay in Cyprus; and all Turkish settlers/immigrants stay in Cyprus).
7. Status of military buildup in Cyprus – (Complete de-militarization with only a small police force carrying light arms; partial reduction, small

Table 1. Positions of the Greek and Turkish Cypriots on eight key issues\*

ISSUE	Position of Greek Cypriots and Greece	Position of Turkish Cypriots and Turkey
Future Political System	Strong Federation that requires minimal changes of the 1960 system	Confederation between two states
Guarantorship	Multinational	The 1960 Arrangement
Three Freedoms	Absolute	Restricted
Territorial Adjustment	Based on the 70–30 Greek Cypriot to Turkish Cypriot population ratio	29+% for the Turkish Cypriot State
Displaced Persons	Right to return	Highly restricted on right to return
Future of the Turkish mainland settlers	Must return to Turkey	No forced return to Turkey
Military Status of Cyprus	Demilitarized	Reduced military forces for both states
EU Membership	Cyprus joins the EU with or without Turkish Cypriots	Settlement of the Cyprus problem prior to membership in the EU

\*Raw data for the information in these tables is available from the authors by sending an e-mail to Yesilada@pdx.edu.

unified army; two sides reduce their armed forces but maintain separate armies; and escalated arms race).

8. EU membership – (Greek Cypriots in EU, Turkish Cypriots integrated with Turkey; Greek Cypriots in EU, Turkish Cypriots in EU *if* Turkey is in EU; United Cyprus in EU with explicit political equality; and United Cyprus in EU with no explicit political equality).

Table 1 provides a summary of the positions of the Greek and Turkish Cypriots on the eight issues.

The data in this table clearly confirms the growing polarization of Greek and Turkish Cypriots, as well as Greece and Turkey, on all issues that are salient to the Cyprus problem. Based on this information, a simple game theoretic analysis of the current impasse in Cyprus negotiations was conducted. The subsequent payoff matrix for the current positions of the two sides is presented in Figure 1.

Based on our interviews, it can be stated that the preference ordering of the two parties is:

Turkish Cypriots :  $T > P > R > S$

Greek Cypriots :  $T > P > R > S$

		COMPROMISE	STAND FIRM
TURKISH CYPRIOTS	COMPRO- MISE	<p><i>Possible target zones:</i></p> <ul style="list-style-type: none"> <li>▪ Bizonal, bicomunal federal Cyprus.</li> <li>▪ The three freedoms regulated (more than the Turks want but less than the Greeks demand)</li> <li>▪ EU membership for the whole of Cyprus.</li> <li>▪ NATO/EU guarantorship with sizable troop presence by Greece and Turkey</li> <li>▪ Economic cooperation between the two communities and creation of free trade zones</li> <li>▪ Demilitarized island.</li> <li>▪ Single sovereignty</li> <li>▪ Land distribution of 29 plus percent for the Turkish side</li> <li>▪ Limited return of refugees to their homes and payments for those who remain in their present location(s)</li> <li>▪ Sizable economic and technical assistance from the EU, the UN, and the World Bank for regional development (esp. in the North)</li> </ul> <p><math>(C,c) = (R,R)</math></p>	<ul style="list-style-type: none"> <li>▪ The Turkish side wins recognition of the TRNC</li> <li>▪ Loss of face for the Greek Cypriots and Greece</li> <li>▪ End of any hope for future Enosis</li> <li>▪ Turkey maintains a strong foothold in Cyprus</li> <li>▪ Turkish Cypriots reassert their political equality in Cyprus and convince the world powers to accept it.</li> <li>▪ Greece rejects and blocks Turkey's membership to EU</li> <li>▪ Turkey counter reacts and blocks ESDI-NATO partnership.</li> <li>▪ EU-Turkey relations worsen</li> </ul> <p><math>(C,d) = (S,T)</math></p>
	STAND FIRM	<ul style="list-style-type: none"> <li>▪ The Greek Cypriots win. TRNC not recognized and Cyprus united under a strong federation.</li> <li>▪ United Cyprus joins the EU.</li> <li>▪ Multilateral guarantorship under the EU.</li> <li>▪ <i>Acquis</i> fully implemented.</li> <li>▪ Loss of face for the Turkish Cypriots and Turkey.</li> <li>▪ Turkish Cypriots loose political equality and become minority in Cyprus similar to Turks in Western Thrace in Greece.</li> <li>▪ Turkey's membership prospects in the EU improves.</li> </ul> <p><math>(D,c) = (T,S)</math></p>	<ul style="list-style-type: none"> <li>▪ Deadlock</li> <li>▪ Intensified arms race.</li> <li>▪ Intensified nationalistic rhetoric on both sides</li> <li>▪ Intensified border clashes in Cyprus.</li> <li>▪ Increased military maneuvers by Greece and Turkey that involve Cyprus territory.</li> <li>▪ Greek Cypriot efforts join the EU without the Turkish side and to further isolate the Turkish Cypriots from the international community</li> <li>▪ TRNC integrates with Turkey</li> <li>▪ Greece blocks Turkey's EU membership</li> <li>▪ Turkey blocks ESDI-NATO partnership.</li> <li>▪ US regional interests are threatened</li> </ul> <p><math>(D,d) = (P,P)</math></p>

Figure 1. Strategic matrix of the current Cyprus impasse.

The result is a deadlock game – a noncooperative, conflictual game. It is far more dangerous than if the two sides were locked in a Prisoners' Dilemma (PD) game of  $T > R > P > S$ . Unless the game is returned to a Prisoners' Dilemma, the likelihood of achieving a compromise via sequential bargaining is very slim. In a PD game, one can use the tit-for-tat strategy to attain the best outcome possible (as in the works of Anatol Rapoport). A third party mediator can bring about a cooperative game with binding threats and with a loss function attached to the payoffs (e.g., the works of Robert Axelrod and John Nash).

The current deadlock game is a result of both sides receiving side-payments that unfortunately allow them to pursue a self-interested strategy of standing firm. Unless the side payment is aimed at promoting cooperation

and compromise, there is little chance of moving the parties away from a deadlock game with all of its inherent dangers. The side payments the two sides received that made their positions rigid are quite serious.

Why is the Cyprus bargaining situation in such a critical deadlock impasse? To understand this we need to consider each party's decision calculus:

*Turkish Cypriots.* The changes that took place since the Luxembourg summit decreased the Turkish Cypriots' evaluation for cooperation with respect to continued defection. Since EU membership was no longer expected as a reward for Turkish cooperation, the value of making concessions to the Greek Cypriots declined after December 1997. For a brief time following the Helsinki summit when Turkey attained candidacy status, there seemed to be some hope of bringing the two Cypriots sides to the negotiation table. However, the Turkish Cypriot leadership refused to enter into direct talks and opted for proximity talks under the Secretary General's good offices. Yet, these talks failed to produce any tangible result. Under these circumstances Deadlock-type preferences (bully strategy) are a better characterization of Turkish Cypriot preferences to  $(T > P > R > S)$ . For the hardliners in the TRNC and Ankara, it is no longer clear that the mutual cooperation outcome (R,R) is a Pareto improvement. For their part, the Turkish Cypriots led by Denktas can afford a deadlock strategy given Turkey's military superiority and the upper hand the hawks presently have in Ankara. In a Tit-for-Tat move, Ankara began matching EU-Cyprus moves with similar moves with the "TRNC". Given Turkey's military superiority and willingness to defend them against outside threats, the Turkish Cypriots assume that the Greeks will ultimately compromise.

*Greek Cypriots.* Until the EU stated its position for Cyprus' accession in 2004, the Greek Cypriots were less rigid on their bargaining position than the Turkish Cypriots and followed a Prisoner's Dilemma  $(T > R > P > S)$  strategy. They had, after all, changed their position on the political system from a unitary state to a federal alternative. However, with the EU accession secured, the Greek side has become far less willing to meet the Turkish Cypriots in a compromise today. This revised position of the Greek Cypriots is best presented by a deadlock preference  $(T > P > R > S)$  of a bully strategy.

In addition to these immediate challenges, there are larger issues that link the Cyprus problem to domestic political forces in Greece and Turkey and these parties' respective priorities over expansion of EU membership, regional foreign policy miscalculations (especially over US interests), and reforms (in Turkey). Accession of the Greek part of Cyprus to the

EU prior to a settlement would risk a serious crisis on the island, strain EU-Turkey relations (membership and security), cause a setback in Greek-Turkish rapprochement and destabilize the region, and potentially derail any hope for a NATO-ESDI (European Security Defense Identity) agreement. Here we see frightening scenarios being contemplated by influential policy advisors on both sides. For example, Greek nationalists believe that they can manipulate the EU to position the entire Union against the Turks in matters pertaining to Greek-Turkish problems. They still view the world in terms of the days immediately following the end of the Cold War and refuse to recognize that the West's security interests and policies toward Afghanistan and Iraq are indexed to Turkey's position on these matters. Moreover, the new geopolitics of the greater Eastern Mediterranean/Black Sea/Caucuses/Central Asia/Northern Middle East magnify Turkey's importance for the Atlantic Alliance.

Turkish hardliners, on the other hand, view the world in terms of a post-Cold War international system and assume that the US would be satisfied in keeping this country in its sphere of influence, accepting a Greek/Cyprus alliance with the EU. They believe that the US and EU are engaged in a bitter power struggle and that they will be more than happy to take separate shares of the Eastern Mediterranean. In this environment, the anti-reformist political forces in Turkey plan to use Cyprus as their scapegoat to cause a rift in EU-Turkey relations.

### **Conclusion and Prospects**

The analysis in this study demonstrates that the Cyprus conflict has entered a very delicate period in its protracted and troublesome history. There are strong domestic and international factors that create conditions for each side to follow a non-cooperative strategy aimed at unilateral victory. The resulting deadlock game carries with it a serious danger of distancing Turkey from the EU that, in turn, could weaken the position of democratic reformers in this country. It is against this background that the current negotiations are being held. The challenge for international mediators is to move the two parties away from deadlock and engage them in an iterated bargaining within a Prisoners' Dilemma framework (as the worst acceptable game option). In this regard, mediators could benefit from combining game theoretic analysis with multi-track diplomacy.

Under these conditions, the ability of international mediators to move the two sides away from deadlock strategy and engage them in a Prisoners' Dilemma game will not be easy. As noted above, certain conditions must be present to promote a mutual cooperation (C,c) strategy that provides

mutual reward (R,R) . First, the mediation process can benefit from the “Contingency Model of Third-Party Intervention” (Keashly and Fisher 1996). The model combines prenegotiation and negotiation phases of mediation based on a rationale that assumes both an objective and subjective mix of views. The model has four stages: destruction; segregation; polarization; and discussion. Each stage has a series of third-party intervention sequences aimed at reducing tensions and improving communication between the parties. The final outcome is a negotiated settlement of differences (Keashly and Fisher 1996: 245). The Cyprus problem is currently in the discussion stage. Furthermore, a highly influential mediator must get involved in the negotiation/bargaining process. At present, the only such mediator that has substantial influence over Greece and Turkey, and therefore on the Cypriot parties as well, is the United States.

While the US might not have placed such high priority to resolving the Cyprus issue before, the current impasse and its implications demand immediate American diplomatic intervention. This American intervention should be on multiple fronts involving the two Cypriot communities, Greece, Turkey, the UN, and the EU. Moreover, it must involve several issues simultaneously. The Secretary General can provide his good offices to set the stage for US participation. The US, in turn, should consider solving the Cyprus problem as a “high priority issue” on its own agenda and invite the leaders of the two sides to meet in the US in a summit retreat like the Dayton Agreement project. Several points must be satisfied before this is acceptable to the parties.

First, the US must do all it can to promote deepening of good relations between Greece and Turkey. It can facilitate regional economic integration, social interaction, and political cooperation in the Balkans, the Black Sea, and the Caucasus. Everyone should consider the Franco-German example of the early days of the European Economic Community/EU and remember the dream of Jean Monnet of integrating the economies of these two countries to such an extent that war between them would not only be unthinkable but economically impossible.

Second, the US must discourage Turkey from annexing the TRNC if the Greek side joins the EU before the Cyprus problem is settled. A restrained Turkish reaction would make it easier for Washington to mend fences between the two sides and minimize the damage caused to transatlantic relations.

Third, the US must take over the mediation role in the Cyprus negotiations and bring all concerned parties together for a summit meeting in Camp David or at a similar place. In this regard, assurances on the political equality of the two Cypriot communities must be emphasized. The UN Secretary Generals repeatedly made it clear that the relationship between the Greek Cypriots

and Turkish Cypriots is not one of majority-minority relations but between political equals. Somewhere during the last year, this point has become vague in the minds of the two parties and it needs to be readdressed if for no other reason than to set aside the fear of the Turkish Cypriots of being placed under a future Greek majority government.

Fourth, the renewed bargaining process needs to be a *cooperative game with binding threats* (see John Harsanyi and James Marrow) so that the two sides know the consequences of derailing the negotiation process. In the sequential bargaining that follows, there should be an effective loss function attached to the expected utility each side desires to obtain. This loss function guarantees the sides' adherence to the rules of bargaining and prevents them from dragging out the talks. This scenario follows Ariel Rubinstein's model and is quite effective. The side payments that the mediator brings to the table must be real and positive to induce compromise.

Certainly, the various possible target zones presented in Figure 1 (box C,c) allow ample room for negotiated compromises on a number of crucial points. For example, Turkey can get a clear timetable from the EU for membership; in other words, starting the accession talks as the Cyprus issue is settled. Similarly, if Greece receives assurances from the EU-NATO similar to the one Turkey received in the Ankara Agreement on the ESDI, they will be more inclined to pressure their kin on the island to reach a compromise. Issues specific to a US summit can focus on attaining the following compromises:

1. At present, the two leaders are talking past each other. Moreover, their statements signal a worsening of the positions held earlier by each side. Clerides talks about fine-tuning the existing constitutional order that is less than a partnership of two federal states. Denktas, on the other hand, insists on two sovereign states coming together in a partnership. However, not everyone on either side of the island agrees with these positions. A middle ground can be formulated where two Cypriot federal states are announced simultaneously while abolishing the 1960 constitutional order. This would be a new partnership based on political equality – an equality that existed under the 1960 agreements.
2. The new federal state can have a president and a vice president. The Greeks and Turks can alternate in holding each post for a five-year term. This compromise solution can create a vice presidency without veto power. The senate and lower house of the federal legislature can have checks and balances on the executive branch (see below).
3. There can be a federal legislature, preferably bicameral. The lower house can be based on population ratio and revised as each states' populations change. The senate can be formulated based on equal representation.

4. There can be a federal supreme court with equal representation of the judges appointed by the president and the senate.
5. Each state can have its own government with a governor, state legislature, and local administrations.
6. EU law can apply for the freedoms of movement, settlement, and property rights, but population ratios must be maintained to guarantee a majority for Turks and Greeks in their respective states. This is crucial for the initial phase of state building since there is very little trust between the two communities. Initial return of refugees to their former homes can be kept to a minimum to prevent disturbances between the two sides.
7. Territorial adjustment can be approximately 29 percent for the Turkish state and 71 percent for the Greek state.
8. Federal trade zones can be established to facilitate joint economic activities between the two business communities.
9. Property rights can be addressed with appropriate compensation to those who left their possessions in the other state.
10. As for foreign policy, the senate can ratify the agreements signed by the president. International treaties (e.g., EU treaties) can be ratified by each state legislature as well.
11. Cyprus and Greece can agree to support, and not block, Turkey's membership in the EU.
12. The new federal republic of Cyprus cannot have an army of its own.
13. NGOs of the two communities can work together and interaction between them can start immediately.
14. Security and defense of Cyprus can be guaranteed by a EU-Turkey agreement. A joint ESDI-NATO presence on the island (commanded by the US) that includes a Turkish contingent could serve as a good vehicle for promoting collaboration that meets more than one objective: Security for the Turkish Cypriots, security for the Greek Cypriots, collaboration between the EU and NATO, and a model for the future ESDI-NATO partnership.
15. Simultaneous signing of the Cyprus agreements (federal republic, two separate federal states, security agreements, etc.) can be coupled with the EU starting accession talks with Turkey. This will place Turkey at the same level with all the other candidate countries that are required to meet the Copenhagen criteria for membership. Turkey is the only candidate that has been told to meet the criteria prior to the start of the accession talks.

Finally, a Truth and Reconciliation Committee can be established to examine each side's grievances and propose "just" resolutions, similar to the one in South Africa. Finger pointing by each side must come to an end and each side must be willing to accept their part in the Cyprus problem.

## Notes

1. From statements made by Rauf Denktas, president of the self-declared Turkish Republic of Northern Cyprus (TRNC). Only Turkey recognizes the TRNC. The United Nations refuses to accept its legitimacy.
2. From interviews with President Rauf R. Denktas of the "TRNC" in Nicosia Cyprus, July 1994.
3. *Ibid.*
4. Vassiliou discussed his proposals for the intercommunal negotiations in the parliamentary Assembly of the Council of Europe in Strasbourg on January 31, 1990 and also during his visit to the United States in 1990 when he spoke to the National Press Club.
5. Vassiliou was successful in getting the international community to identify Denktas as the reason for deadlock in negotiations (e.g., the Commonwealth and the Non-aligned movement). Also he successfully rearmed the Greek Cypriot National Guard. When asked about his views on these matters in an interview with Hasan Ali Biçak, Vassiliou joked about his actions and blamed Denktas for the failure of the "Set of Ideas." He never accepted the fact that he also opposed the "Set of Ideas."
6. Denktas did not believe that Clerides or the other Greek Cypriot leaders accepted the confidence building measures. Hasan Ali Biçak confirmed this later when he interviewed the representatives of the Greek Cypriot political parties during March 9–11, 1994. All of the representatives, except that of ADISOK (having a potential voter support base of 3 percent in the Greek Cypriot community), voiced their opposition to the measures. Thus, despite Clerides' public statement that he would accept the confidence building measures if Denktas went along, the initiative was a well-calculated plan to put Denktas in an awkward position. Denktas, knowing the Greek Cypriot leader's position, would oppose the measures and Clerides would look to the rest of the world as the sincere player.
7. For the effects of this decision on TRNC exports see, Birol A. Yesilada and Hasan Ali Biçak, "The European Court of Justice Decision on Trade with Northern Cyprus: Implications for the Cyprus Conflict," paper presented at the 1995 Annual Conference of the American Political Science Association, in Chicago, IL, August 31–September 3, 1995.
8. As Azar states, "protracted conflicts are hostile interactions that extend over long periods of time with sporadic outbreaks of open warfare fluctuating in frequency and intensity. These are conflict situations in which there is a cessation of overt violence, they linger on in time and have no distinguishable point of termination . . . *Protracted conflicts, that is to say, are not specific events or even clusters of events at a point in time, they are processes* (emphasis added)." For a detailed discussion, see Edward E. Azar, "Protracted International Conflicts Ten Propositions," *International Interactions* 12, 1(1985), 59–70, and Birol Yesilada and Joseph Hewitt, "Conflict, Negotiation, and Third-Party Intervention In Cyprus." For conceptual understanding, it is helpful to consider the basic terminology used in a game theoretic analysis. The following figure and terminology can assist in operationalizing the Cyprus conflict:

		Turkish Cypriots	
		c	d
Greek Cypriots	C	(R,R)	(S,T)
	D	(T,S)	(P,P)

where strategies C, for cooperation or compromise, and D, for defections or standing firm with one's own position.

The payoffs are, T, for temptation to win unilaterally; R, for reward for mutual compromise; P, for punishment against mutual defection; and S, for sucker. It is commonly assumed that  $R > (S+T)/2$ .

When the preference ordering of the game becomes  $T > R > P > S$  for both parties, the game is called a Prisoners Dilemma game (where both sides choose D as their dominant strategies). If the preference ordering of both parties becomes  $T > P > R > S$  it is called a deadlock game (where, again, D is the dominant strategy for each player). A variant of these games is the Chicken game where the preference ordering of the parties is  $T > R > S > P$ . In a prisoners' dilemma game, the (D,d) or (P,P) cell represents a Nash equilibrium which is Pareto inferior to the (C,c) or (R,R) option. Here, individual rationality drives players to defect and win unilaterally even when cooperation can be a viable option (see James Morrow, *Game Theory for Political Scientists*. Princeton: Princeton University Press, 1994, p. 263). These variants can be viewed in the following game theoretic matrices:

DEADLOCK

		c	d			c	d
C	R,R	S,T	C	2,2	1,4		
D	T,S	P,P*	D	4,1	3,3*		

\*Dominant strategy equilibrium.

PRISONERS DILEMMA

		c	d			c	d
C	R,R	S,T	C	3,3	1,4		
D	T,S	P,P**	D	4,1	2,2**		

\*Nash equilibrium.

CHICKEN GAME

		c	d			c	d
C	R,R	S,T	C	2,2	2,4		
D	T,S	P,P	D	4,2	1,1		

9. For a detailed discussion of how this is possible, see Robert Axelrod, *The Evolution of Cooperation* (New York, NY: Basic Books, 1984); Robert Axelrod and Doug Dion, "The Further Evolution of Cooperation," *Science* 242 (1988): 1385–1390; Scott Gates and Brian D. Humes, *Games, Information, and Politics: Applying Game Theoretic Models to Political Science* (Ann Arbor, MI: University of Michigan Press, 1997; ch. 4; James Morrow, *Game Theory*, pp. 263–268; Michael Nicholson, *Formal Theories in International Relations* (Cambridge: Cambridge University Press, 1990), pp. 30–35; and Glenn H. Snyder and Paul Diesing, *Conflict Among Nations: Bargaining, Decision Making, and System Structure in International Crises* (Princeton, NJ: Princeton University Press, 1977), pp. 88–106.
10. However, as Scott Gates and David Humes warn, contrary to the argument of many political scientists, mutual cooperation is just one of many possible equilibrium points in an infinitely repeated game, for details see *Ibid.*, pp. 94–95.
11. We are grateful to the Rotary International Foundation for providing Ahmet Sozen a Paul Harris Ambassadorial Fellowship in 1997 that enabled him to complete the first phase of the surveys in Cyprus, Greece, and Turkey.

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