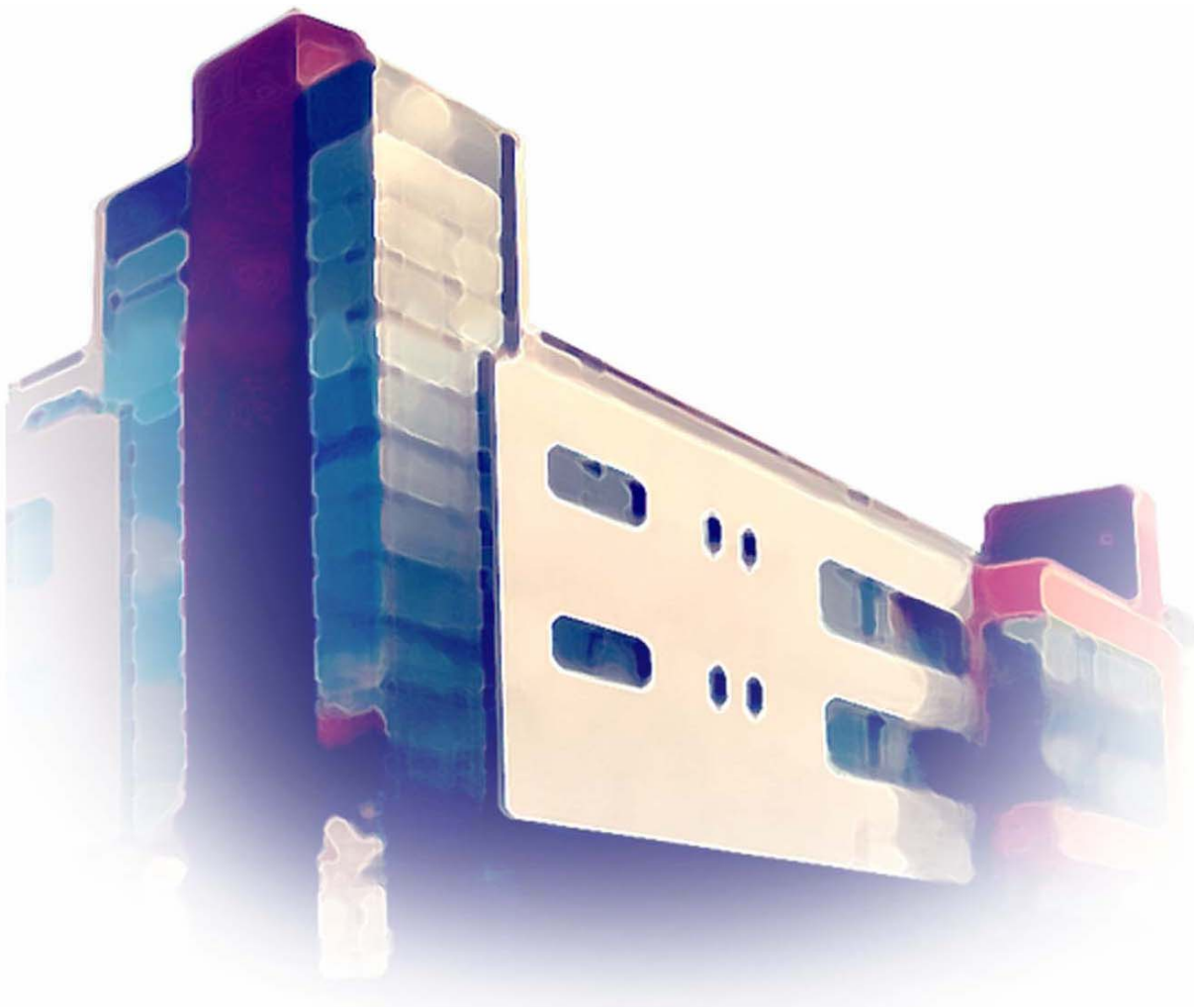


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*A Formal Model of International Mediation:  
Application and Prospects*

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# **A Formal Model of International Mediation: Application and Prospects**

by Christa Deiwiks

A Thesis Presented in Partial Fulfillment of the Requirements for the Degree Master of  
Science

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# 1 Introduction

## 1.1 Context and thesis goal

Conflict is one of the oldest and most enduring phenomena in the civilized and not so civilized world of humans and other beings. Different forms of societies always seem to be accompanied by numerous kinds of conflict; be it the conflict between two male mammals about a female of their kind, between rivaling clans about food, or between two governments about the sovereignty over a piece of territory. Facing such a diversity of conflicts, humans have invented a number of different conflict resolution facilities, among them most prominently but not exclusively any kind of judicial system. Yet, often enough this form of conflict resolution is not applicable especially when laws do not exist in a domain or when existing laws are difficult or impossible to enforce.

Consider, for example, conflicts between nations. Inter-national conflicts seem to be an omnipresent phenomenon if one only considers the daily news reports from all over the world. At the same time, there hardly seems to be any other form of conflict which may invoke as perilous consequences as this one; recall the Cold War between the U.S. and Soviet Union, which could have resulted in nuclear war. Since these conflicts unfold on an international or global level, alliances like the NATO have been formed, which aim at militarily supporting a member country in the case of an attack or military conflict. Most recently, this was demanded by the U.S. after the attacks on September 11, 2001. However, law enforcement by military means involves the danger of escalation and “lateral damage”, that is civilians in the line of fire. Therefore, especially with regard to military intervention it is controversial if it is the adequate measure to achieve peace. In contrast, there are other forms of conflict resolution that are often more appropriate and sometimes highly recommended to end a conflict.

One of these forms is mediation. What mediation is and what its tasks and goals are will be described in the main sections of this thesis; one point, however, should be mentioned here since it is one central issue, namely the question that comes up in the context of any conflict resolution technique or strategy – that is how to achieve the “best” results. How do we achieve that the conflict partners stop fighting in a way that the conflict can be considered settled? Conflict resolution institutes and peace centers all over the world deal with this question; political scientists like Bercovitch (1989, 1992, 1996, 2002) analyze mediation and

try to identify factors that are crucial to the success of mediation. Others like Zartman and Berman (1982) concentrate on the negotiation aspect of mediation and the mediator's personal qualities. Yet others like Hacke (1985), Sack (1988) or Rubin (1981), on the one hand, direct their attention to one particular mediator like the U.S., which intervened in several conflict situations. On the other hand, Touval (1982) focuses on a concrete conflict locale which was and is the stage for several mediation initiatives – the Arab-Israeli conflict.

Hardly any research is done on the formalization of mediation. Consider, for example, game theory. In contrast to the vast literature on game-theoretic models of war and peace (for a comprehensive overview see O'Neill, 1994), there is not much literature on game-theoretic models of the peace *progress* itself, for example, international mediation; with respect to this, in fact, I have found only a few papers (see Maoz & Terris, 2002, and Kydd, 2003). This is regrettable since mediation as one of the most versatile and flexible forms of intervention provides a way to resolve conflicts by peaceful means in contrast to escalation-prone military interventions. Formal models can be expected to clarify what mediation is all about and ideally contribute to an improvement of mediation.

Thomas C. Schelling states in his famous book “Strategy of conflict” (1980) that there are basically only two kinds of theories of conflict;

those that treat conflict as a pathological state and seek its causes and treatment, and those that take conflict for granted and study the behaviour associated with it. (p.3)

My ambition, however, is to study the behavior of parties and a mediator in conflict and to get an inside of what might be the essence of a conflict and (successful) mediation *in order to* identify factors that promote successful settlements and effective resolution strategies.

More precisely, I want to identify, formalize and evaluate factors that are considered to be crucial for successful mediation. In this sense, I will first draw a deliberately simple sketch of what mediation and the mediation progress is considered to be. Subsequently, I will introduce a game-theoretic model of mediation, analyze and alter it and bring forward the aspects of mediation as defined earlier. After that, we will see how much of these aspects can be detected in Kissinger's mediation attempt during the October War between Egypt and Israel in 1973<sup>1</sup>. Finally, I will analyze the notion of “successful mediation”, whether and to what

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<sup>1</sup> Also known as Yom Kippur War

degree this term applies to Kissinger's mediation attempt, and to which extent the game-theoretic model itself permits such a judgment. In the course of this, I want to find out in how far conflict situations and mediation initiatives can be understood and improved by having a formal model clarify what is actually happening in these situations.<sup>2</sup>

## 1.2 Conflict and mediation

### 1.2.1 Conflict

WordNet, a lexical database for the English language<sup>3</sup>, defines a conflict as a struggle or a – not necessarily military – battle, or in other words an open clash between two opposing groups or individuals. What is common to all kinds of conflict is the incompatibility of two conceptions of how a given situation is or how it should be. Since in this text the matter of particular interest will be conflict (and mediation) on the international level, we deal with struggles about territory or resources, security issues, ideological issues, independence or ethnicity etc., which take place within a context of power politics.

For example, one of the major political crises was the Cuban Missile Crisis in 1962 when almost ready-for-use Soviet nuclear missiles were detected in Cuba by U.S. American intelligence units. Since these missiles would have had a range covering several major American cities, the U.S. government could not tolerate this danger and demanded that the Soviet Union remove them. The Soviets, in contrast, claimed that the missiles were for “defensive purposes” only and refused to comply (Allison, 1971). Eventually, the conflict was resolved because Soviet leader Krushchev decided to dismantle and withdraw the missiles, and disaster had been averted. Since then, this event has become perhaps the most studied international confrontation of the twentieth century (see, e.g., Allison, 1971, Kennedy, 1968).

Since a large part of the international community is usually interested in the resolution of a conflict between two nations, which is predominantly due to security considerations – not only when nuclear war is looming –, the possibilities and conditions for a swift and sustainable settlement have to be investigated. Ideally, the investigation of circumstances that foster the settlement of a conflict helps to identify what can actually be *done* to solve

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<sup>2</sup> Please note: When I use the term “mediator” I mean both male and female negotiators even in the cases in which I refer to this person by using only a male pronoun for the sake of simplicity.



conflicts. In order to improve conflict resolution it is not sufficient, for example, to only correlate conflict characteristics such as duration, previous hostilities etc., which cannot be altered, with the conflict outcome. In contrast, the focus should be on active measures like mediation that can and should be taken to solve a conflict.

### **1.2.2 Mediation**

There are usually several ways to resolve a conflict. Bercovitch (1992) notes that

numerous devices, mechanisms and institutions have been invented to manage, deal or resolve disputes between antagonistic actors. These devices and mechanisms range from simple avoidance through stylized competition to verbal confrontations, duels and many other forms of direct violence. (p.1)

Mediation as one of these devices occupies a significant position since it does not involve any sort of physical force but adopts peaceful means. On the enterprise of finding a useful definition of mediation one comes up against plenty of more or less precise ones, which mostly take up different aspects of mediation. From now on I will use Bercovitch's definition as working definition since it comes closest to what I consider the essence of mediation as will be illustrated later:

[Mediation is] a process of conflict management, related to but distinct from the parties' own efforts, where the disputing parties or their representatives seek the assistance, or accept an offer of help, from an individual, group, state or organization to change, affect or influence their perceptions or behaviour, without resorting to physical force or invoking the authority of the law. (p.7)

Mediation occurs in different social contexts. Consider for example family and divorce mediation, victim - offender mediation, and mediation in organizational, educational and international conflicts to name a few. Mediation in international conflict will be the main concern in this text. Among the numberless mediation cases that are more or less well documented I am most interested in the Arab-Israeli conflict.

In the Arab-Israeli conflict<sup>4</sup>, numerous mediation attempts have been taken and still take place, initiated by governments, organizations, and private individuals; beginning with Count

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<sup>3</sup> Available from <http://www.cogsci.princeton.edu/~wn/> (retrieved 03/31/04)

<sup>4</sup> The Arab-Israeli conflict involves the core states of the Arab East: Egypt, Israel, Syria, Jordan and Lebanon (Tibi, 1991).

Folke Bernadotte of Sweden appointed by the United Nations in 1948, the United States official Robert Anderson, UN Special Representative Gunnar Jarring, U.S. Secretaries of State William Rogers and Henry Kissinger, whose initiative will be discussed thoroughly further down, and U.S. President Jimmy Carter, who led Egypt and Israel towards the Egyptian-Israeli peace treaty in 1979 (Touval, 1982).

Since the Palestinian question had not been solved at that point of time – and still has not –, mediators had been further needed in the Middle East. The United States of America as a superpower and an old friend of Israel took and takes a prominent position with respect to the number and extent of mediation initiatives. U.S. President Ronald Reagan proposed Palestinian autonomy in 1982; in 1991, U.S. President George Bush Sr. organized a peace conference in Washington – participants were Egypt, Israel, Jordan, Lebanon, Syria and the Palestinians, who met all together for the first time in history (Watzal, 2001) –; U.S. President Bill Clinton met Israel's prime minister Ehud Barak and Palestinian leader Yassir Arafat in Camp David again in 2000 for talks on central problems like the Jerusalem question and the right of return of Palestinian exiles.

Some of the mediation attempts achieved their goal, others even ended tragically – Bernadotte was assassinated by a Jewish extremist. The question arises how one can explain the success of some and the failure of others, and what qualities and techniques on the part of mediators – were beneficial to success – and what other influences there might have been. In order to approach this question, we should have a look what a mediator actually does.

#### **1.2.2.1 Strategy of mediation**

The task of a mediator is one of high complexity and versatility. The demands which arise from different international conflict constellations have to be met by a large pool of tactics, strategies and approaches so that it seems to be a gross simplification if one tries to sum them up in a few sentences. Nevertheless, in order to formalize the mediation process, simplification to a certain degree is necessary. This is why the following analysis of the mediator's roles and actions may appear shallow. In any case, however, this is the material I will later use to model the mediation process before evaluating this approach.

Touval and Zartman (1989) identify three different roles a mediator can play: the role of a communicator, who makes contact with the parties (who are often locked in a situation where they do not dare to contact each other directly) and serves as connection between them;

further, the role of a formulator, who suggests procedures and generally controls the procedure of meetings; and the role of a manipulator, who changes expectations, makes substantive suggestions and promises rewards or threatens with sanctions or withdrawal. In this order, the level of activeness increases: Merely delivering messages from one side to the other is less active than thinking about and proposing solutions that meet the needs of both sides, which again requires less effort than additionally getting the parties to implement this solution.

Which of these strategies should be employed then? Of course, one would reply, the most effective one considering the actual situation. Having the question about the effectiveness of strategies in mind, Bercovitch (1989) investigated a data set of mediation events in the 1945-1995 period in order to test several hypotheses about the conditions of successful outcomes. The results – although they were not all statistically significant – showed the following trend: The manipulative strategy was most successful, and the more active the mediator's strategy was, the more effective he was in moving the disputants toward a settlement.

The approach of Maoz and Terris (2002) is closely related since they use the term of a strategy's "intrusiveness"; yet, they propose a somewhat different typology of strategies: First, a mediator can provide the parties with information regarding each other's preferences and/or with assessments regarding the future progression of the conflict beyond the disputants' horizon. This does not quite correspond to but is certainly included in the role of a communicator as outlined above. Second, he can make attractive agreement offers to the parties. That means that the mediator formulates possible solutions to the dispute and "decorates" them with additional incentives. Third, by employing carrot-and-stick mediation, the mediator also sanctions continued conflict ("stick") in addition to rewarding concessions made by the parties ("carrot"), which makes fight less attractive and ideally motivates both parties to settle the conflict. This strategy corresponds to the role of a manipulator. The tasks the mediator fulfills as a formulator are not considered in Maoz' and Terris' approach – most likely because these measures cannot influence the opponents' positions regarding settlement directly; they rather provide the frame for conflict resolution from the very beginning of mediation on. Since the model of mediation to be discussed and extended later is the one of Maoz and Terris, it is also their typology that will be used in it.

The more active the strategy, the more costs the mediator or the government obviously has to bear. Consequently, the mediator is well advised to do a cost-benefit analysis before he enters

mediation. In this sense, the mediator, like the parties themselves, is best regarded as a rational actor, who – as will become clear – has some interest in the outcome of the conflict. The motives behind mediation, which are linked to the issue of rationality, will be dealt with in Section 2.3. However, the reasoning of the mediator whether or not start a mediation attempt is not in the focus of interest and will, though referred to in the analysis of the case study, not be part of the formal model.

### **1.2.2.2 Credibility of mediator**

A group of diplomats and students of negotiation from North America considered *empathy*, the ability to comprehend the other party's point of view, and *integrity*, the characteristic of being trustworthy, as the negotiator's most important personal skills (Zartman & Berman, 1982). Especially trustworthiness or credibility is an important characteristic of the mediator since a trustful working relationship is a valuable if not necessary tool to steer the course that he wants the opponents to take. No matter whether the mediator is about to deceive one or both parties in one or the other way, or whether he follows a sincere path, most crucial for being able to influence and convince is being regarded credible. Therefore, a mediator must evaluate in how far he is believed to possess this characteristic.

It must be noted that the mediator can be regarded credible to varying degrees by different parties. Hence, the mediator has to evaluate his relationship with either party. If this evaluation yields an unsatisfying result, he might, for example, try to increase his credibility by arranging face to face meetings with each party to create a personal working relationship. In the case study further down we will see in how far that was necessary and indeed the case.

The notion of credibility will be quite central in this model to be discussed since with the credibility of the mediator the perceived value of anything he does or promises raises and falls. Credibility can be regarded as a factor that can be influenced by other factors like the previous relationship with the parties, reputation or the financial or military power of the government or the organization in the background. All these factors affect the mediator's credibility in some way but will not be explicitly included in the model for the sake of simplicity.

To sum up, the strategy the mediator chooses and his credibility are two central components of the game-theoretic model to be analyzed and extended. Depending on which strategy the

mediator employs the parties are expected to be more or less inclined towards a settlement of the conflict, and the mediator's credibility is clearly a factor that determines the success of the mediator's manipulative measures. But before actually presenting the model, its more formal building blocks borrowed from game theory have to be introduced.

### 1.3 Game Theory

#### 1.3.1 General game-theoretic assumptions

What is game theory? In short: It is the mathematical study of strategies and decision-making. For the reader who is not familiar with this formalism I will highlight its essential features. A more detailed definition of game theory is given by Osborne and Rubinstein (1994):

Game theory is a bag of analytical tools designed to help us understand the phenomena that we observe when decision-makers interact. The basic assumptions that underlie the theory are that decision-makers pursue well-defined exogenous objectives (they are *rational*) and take into account their knowledge or expectations of *other* decision-makers' behavior (they reason *strategically*). (p.1, italics by authors)

In game theory, the decision-makers are called *players*. The behavior of each player comprises a number of *actions* (also called *moves* or *strategies*). Particularly, the notion of rational choice, which is a basic assumption in many game-theoretic models, is important. This assumption implies that the action chosen by a player is at least as good, according to his or her preferences, as every other available action.

A player might prefer certain strategies over other strategies. Hence, this preference ranking is represented by a *utility function*, which assigns values to the outcomes of the strategies. These outcomes are then represented by payoffs. However, the preferences are usually ordinal preferences, meaning that the only information available is that a player prefers one outcome to the other, and not *how much* he prefers it to the other.

What are game-theoretic models? Models in game theory are called *games*. A game formally consists of a number of players, certain moves each player can make, outcomes, and associated payoffs which the players receive when arriving at these outcomes. Let us consider the following *Prisoners' Dilemma* and its *payoff matrix*.

		<b>B</b>	
		<b>Deny</b>	<b>Confess</b>
<b>A</b>	<b>Deny</b>	2                  2	10                 0
	<b>Confess</b>	0                  10	6                    6

The Prisoners' Dilemma is an example of a social situation in which each agent's maximization of self-utility leads to an inefficient outcome. The story behind was first published by Tucker (1980): The police has caught two criminals highly suspected to have

**Figure 1 Prisoners' Dilemma game in normal form, ordinal payoffs (high is bad, low is good)**

committed a crime jointly. After their arrest, they are separately interrogated and left to choose among two alternatives: confess the crime or deny it. If both "cooperate", that is keep quiet about their crime, each of them gets only 2 years in prison. If both "fight" (against each other) by confessing the crime, each of them gets 6 years. However, if one of them talks and the other remains silent, then the one who talks will be released whereas the other one gets the maximum penalty – for denying the crime – of, let's say, 10 years.

In Figure 1, this situation is modeled. It can be seen that each player has two actions to choose from resulting in four different outcomes; for example, the Deny-Deny outcome would be the best outcome with regard to the total payoff and the second best with regard to individual payoffs, whereas the Confess-Confess outcome would be the worst with regard to total payoff and the second worst with regard to individual payoffs. The dilemma arises from the fact that both players have a dominant strategy of fighting (see below), that is confessing the crime, because no matter what the opponent does this strategy leaves each one of them with less years in prison and hence higher payoffs than when cooperating by denying the crime.

Game theory classifies games into many categories that determine which particular method can be applied to solve them, that is, find their equilibrium or equilibria. Some common categories are:

- Zero-Sum games: Games with payoffs that all add up to zero

- Non Zero-Sum game: Games with payoffs that do not add up to zero
- Non-Cooperative Games: Games in which the sets of possible actions of individual players are primitives.
- Cooperative Games: Games in which the sets of possible joint actions of *groups* of players are primitives.

The Prisoners' Dilemma, for example, is a non zero-sum non-cooperative game.

Games are more or less abstract representations of real-life situations. As indicated above, this simplification raises the question about the significance of conclusions drawn from game-theoretic models. Unfortunately, there is always a trade-off between the complexity of a model and its manageability as well as between the simplicity of the model and its significance for the "real world". That means, for example, the more complex a model gets, the more difficult it is to handle, and the simpler it gets, the less interesting it is with respect to concrete problems. Yet, an abstract version of the real world which ideally excludes those variables and factors that are mostly irrelevant to the modeled situation should be designated to lead to a better understanding of that situation. I will not discuss this problem any further here since it belongs to a meta-level of game theory.

### 1.3.2 Solution concepts

There are two solution concepts in game theory that are of importance here: Nash Equilibrium and Dominant Strategy Equilibrium. Formal definitions of these can be found in any basic text book on game theory, which is why I will stick to more colloquial wordings starting with *Nash Equilibrium*: If there is a set of strategies with the property that no player can benefit by changing his strategy while the other player(s) keep(s) their strategies unchanged, then that set of strategies and the corresponding payoffs constitute the Nash Equilibrium.<sup>5</sup> A game does not necessarily have a Nash Equilibrium; also, it sometimes has more than one.

Another solution of a game can be found by identifying the *Dominant Strategy Equilibrium*: If the payoffs of a certain strategy are strictly greater than the payoffs of all other strategies regardless of the strategy played by the opponent(s), this strategy is called the Dominant

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<sup>5</sup> see, e.g., Buck (1999).

Strategy. If all players have a dominant strategy, then the set of these strategies and the corresponding payoffs constitute the dominant strategy equilibrium.

Nash and dominant strategy equilibrium are related to each other in the following way: A dominant strategy equilibrium is always a Nash equilibrium but not vice versa, meaning that the set of games with a dominant strategy equilibrium is a subset of games with a Nash equilibrium. This is obvious since the dominant strategy is defined as yielding higher payoffs than all other strategies no matter whether or not the opponents change their strategies, implying that – assuming the opponents do not change their strategies – this payoff cannot be increased by changing strategy. Exactly these are the conditions for a Nash equilibrium.

What does “solution” of a game actually mean? If a certain outcome is *the* or *a* solution of the game this does not mean that it automatically predicts the *actual* outcome of the game when played. This is only the case if all game-theoretic assumptions are fulfilled, that is if the players act rationally, are self-interested etc., which, of course, humans hardly happen to be. Consequently, game theory was criticized by experimental economists, who showed that humans under particular circumstances systematically deviate from the solutions predicted by game theory. However, if whole nations are considered to be the players, the game is being “played” on such a high level of abstraction that the objections regarding the rationality or “cognition” of the players hardly seem applicable. Yet again, a discussion of this topic would lead too far away from the central question of this thesis.

### **1.3.3 Modeling international behavior**

The model of conflict and mediation to be analyzed is based on game-theoretic assumptions as stated above, extended by the following, more specific statements:

- Nations are considered to be unitary actors.

As expected, the players of a game are whole nations or governments. Although it is obviously quite a simplification to compare nations to one individual which makes decisions, governments cannot afford to appear internally torn up and, hence, make an effort to maintain the impression of consensus, especially during intricate diplomatic or military situations. In this respect, Brams and Kilgour (1988), stress the adequacy of considering nations as unitary actors particularly on the international level. Therefore, the necessity of the players to appear



united and the indispensability of acting uniformly on the international level, justifies the assumption of unity.

Another assumption is:

- Each player knows his own payoffs but does not know the opponents' payoff.

In game theory, it is sometimes assumed that each player knows his payoffs and those of his opponents. These games are called *games of complete information*. However, this does hardly apply to conflicts on the international stage where discretion and secrecy prevail, so we deal with *games of incomplete information*.

## 2 A Rational Model of Mediation: The Theory

In the following, I will present and discuss a game-theoretic approach to mediation by Zeev Maoz and Lesley G. Terris (2002), who put forward a model of the dynamic processes that take place in a conflict between two parties before and during mediation. This model was designed to appropriately represent the conflict constellation and the considerations of the two opponent parties as well as those of the mediator, and it will be shown to what extent it succeeds in that enterprise.

First, I will introduce the basic conflict game, which is almost completely taken from Maoz and Terris although I made a few specifications and corrections to make the model more comprehensible. Second, I will present the mediation game with its payoff formulas, which include variables according to the different strategies the mediator can employ. Finally, the focus of interest is on the mediator's view, that is, his task seen from his own perspective. All three points will be discussed thoroughly to allow a clear evaluation of this approach.

### 2.1 The basic conflict game

Two actors or agents, A and B, have two strategies to choose from when having a conflict over an issue. They may cooperate, that is settle the dispute and find an accord that both parties accept, or fight verbally or militarily. With each of the four possibilities resulting from the options each player has, certain payoffs for agent A and agent B are associated. These circumstances are modeled in Figure 2.

In the CC (Cooperate-Cooperate) outcome, both agents receive what they consider the utility of their share of the agreement. If one of the agents fights whereas the other cooperates, one can assume that the agent who fights “gets the whole cake”, that is, wins completely because he does not experience any resistance and does not have to dispense with anything. In the case of bilateral fight, it is not sure which one of the agents will win. This is why the utilities for winning and losing in  $EU_F$  are weighted by the subjective probability of winning and losing respectively. These might be quite different for the two agents. Also, the costs for fighting have to be subtracted since they clearly constrain the overall payoff.

		<b>B</b>		
		<b>Cooperate</b>	<b>Fight</b>	
<b>A</b>	<b>Cooperate</b>	$U_{ag}$	$U_w$	$U_{ag}$ : utility of agreement $U_w$ : utility of winning a fight $U_l$ : utility of losing a fight $EU_F$ : expected utility of fighting $p_w$ : probability of winning a fight $p_l$ : probability of losing a fight $c_F$ : cost for fighting
	<b>Fight</b>	$U_l$	$EU_F$	
		$U_{ag}$	$U_l$	$EU_F = p_w \cdot U_w + p_l \cdot U_l - c_F$  $p_l = 1 - p_w$
		$U_w$	$EU_F$	

**Figure 2 Preliminary conflict game with the payoffs for players A (bottom left in each cell) and B (top right in each cell). For the value of  $EU_F$  see the formula on the right. N.B.: For each cell it holds that the utilities for player A (bottom left of each cell) might be different from the utilities for player B (top right of each cell) although the variables are named equally.**

Since I am interested in international conflict situations, this so far somewhat simple model has to be extended by several assumptions, which I will explain in detail in the next sections:

1. The conflict is structured like a Prisoners' Dilemma
2. The conflict is sequential
3. At each point in time  $t$ , each player incurs certain costs ( $t \in \{0, 1, 2, \dots, n\}$ )
4. The costs accumulate over time
5. Players can see a certain amount of time into the future

### 2.1.1 Further assumptions

#### 2.1.1.1 The conflict is structured like a Prisoners' Dilemma

If we recall the Prisoners' Dilemma from the beginning (Section 1.3.1), we also recall each player's dominant strategy of fighting or confessing no matter whether or not the other denies or confesses; hence the dominant strategy equilibrium. Why is this an appropriate model for international conflict? Simply, a conflict would not exist if one of the parties did not prefer fighting to cooperating. Therefore, a Prisoners' Dilemma with a Fight-Fight equilibrium seems to be a good model for international as well as any sort of social conflict. Moreover, here I consider only conflicts in which the parties are assumed to struggle so hard that trust is not possible. This means one player does not know what the other will really choose to do,

just like in the classical Prisoners' Dilemma, in which the criminals cannot communicate with one another.

There still might be a difference. In the classical Prisoners' Dilemma, the players choose their strategy simultaneously whereas in international conflicts and in any other real-life situation, simultaneous as well as sequential moves of the opponents can be observed. However, as we just have seen, the choice of strategy by one other player does not affect the choice of the other since each one has a dominant strategy of fighting.

Also, international conflict situations might better be compared to a Prisoners' Dilemma played several times, which is the case in the Iterated Prisoners' Dilemma. For this reason, it is not one sole Prisoners' Dilemma that finally represents the conflict progression, but an iterated and nested version of it.

One might argue that the Prisoners' Dilemma is not the only game with a FF equilibrium. Other games like the Assurance Game in Figure 3, also known under the name "Stag Hunt", do have one as well. The story behind has originally been told by Jean Jacques Rousseau, the French philosopher: Two hunters can either jointly hunt a stag (an adult deer and rather large meal) or individually hunt a rabbit (not as preferable as the stag). Hunting stags is a quite challenging task and requires mutual cooperation of two or more hunters. If one of the hunters, however, goes after the stag alone, the chance of hunting it down is minimal. This means that both hunters have an incentive to avoid cooperation because they fear that the other might let them down, and rather go for the rabbit, which results in the less optimal Rabbit-Rabbit outcome.

		<b>B</b>	
		<b>Stag</b>	<b>Rabbit</b>
<b>A</b>	<b>Stag</b>	<i><b>10</b></i> <i><b>10</b></i>	<i><b>0</b></i> <i><b>8</b></i>
	<b>Rabbit</b>	<i><b>8</b></i> <i><b>0</b></i>	<i><b>7</b></i> <i><b>7</b></i>

**Figure 3 Assurance Game. See text for details.**

As can be seen in the game matrix above, the Assurance Game has two Nash equilibria, one is the Rabbit-Rabbit outcome, the other is Stag-Stag. Like in a Prisoners' Dilemma, the "cooperative" outcome (Stag-Stag) is more beneficial to the players. However, what is missing here are dominant strategies. In the conflicts I want to model we find the characteristic that winning completely – in the Prisoners' Dilemma this would be confessing whereas the other would deny and be punished hard – is always better than any agreement or compromise. We do not find anything like that in the Assurance Game, of which the solution depends on the risk averseness of the players. In contrast, the dominant strategy in the Prisoners' Dilemma adequately represents these calculations of the players.

#### **2.1.1.2 The conflict is sequential**

Conflicts between nations are usually not a matter of, for example, one day but last a couple of days like the Cuban Missile crisis, or weeks, years or decades, like the Israeli-Palestine conflict. Therefore, a sequential model<sup>6</sup> of conflict seems appropriate. The sequential nature of the conflict implies that at each point in time the opponents make a decision between cooperation and fight. Since I already illustrated that a Prisoners' Dilemma-like game is an appropriate model for conflict, it can be concluded that a conflict situation can best be described by an Iterated Prisoners' Dilemma; a sequence of games which continues if both players choose to fight – which is the case if the payoffs do not change essentially – and stop if both players choose to cooperate or when there is nothing left to fight about.

#### **2.1.1.3 At each point in time t, each player incurs certain costs**

Fighting is costly. Everyone who chooses to fight has to spend energy and money on the fight and may lose soldiers and civilians in a military encounter. These costs must be incorporated in the player's payoff in the case of bilateral fighting. If the opponent, however, chooses to cooperate, the player may be considered not having encountered resistance and not having spent any energy at all so that no costs occur.

#### **2.1.1.4 The costs accumulate over time**

As should be quite intuitive, the costs incurred by the parties at one point in time do not vanish at the next point in time but add to the current costs. This assumption must also be incorporated in the payoffs of the parties.

### 2.1.1.5 Players can see a certain amount of time into the future

The opponents may be considered having foresight to a certain degree (=their horizon) regarding the progression of the conflict. This means they can estimate their future payoffs, should the iterated game continue for  $s$  steps in the future. Since they know that they risk bilateral fighting until their “time horizon” of  $s$  steps, this information must be integrated in the formulas of the Fight-Fight outcome. Again, the horizon of player A might be different from the horizon of player B. Further, as Maoz and Terris indicate,

at each point in time, the game has a probability [...] of terminating at this point in time, and a complementary probability of moving to stage. (p.31)

Therefore, the costs for continued conflicts must be weighted by the probability that the conflict in fact moves on.

### 2.1.2 The extended model

These assumptions justify formal extensions of the model and constitute the foundations of the conflict model that will later be applied to the analysis of the Arab-Israel conflict. In

Figure 4 it can be seen how I modified the model by building in the assumptions just presented to arrive at a schema of the dynamics of the conflict progression.

It is obvious that the model is interwoven: The Fight strategy at  $t - 1$  becomes the Cooperate strategy at  $t$  since at each point in time the players can both decide to settle the conflict; if they do not, the game enters another round. There are now a few more variables included, which need explanation. Since we regard specific points in time one after another, all the variables have an additional time index, for example,  $U_{ag}$  becomes  $U_{ag,t}$ .  $U_{ag,t}$  can be defined as the sum of  $U_{pos}$  ( $\geq 0$ ) and  $U_{neg}$  ( $\leq 0$ ) denoting the positive and negative aspects of the agreement. Also,  $U_{ag,t}$  is assumed to be equal or larger than  $EU_{F,t+s-1}$  for any  $t$ , since the payoff for CC at  $t+1$  is reasonably assumed to be as high as the payoff for FF at  $t$  since with conflict settlement there are no costs associated.

Additionally, in all the cases of no bilateral fighting we assume that the players do not incur any costs as mentioned above. However, in order to arrive at point in time  $t$  of the conflict,

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<sup>6</sup> In the sense of consisting of iterations

both parties must have been fighting until point in time  $t - 1$ , that is why these costs must enter the payoffs for the players, respectively, at  $t$ .

**B**

		<b>Fight (t - 1) / Cooperate (t)</b>	<b>Fight (t) / Cooperate (t+1)</b>	<b>Fight (t+1) / Cooperate (t+2)</b>	<b>point in time</b>
<b>A</b>	<b>Fight (t - 1) / Cooperate (t)</b>	$EU_{F,t+s-1} / U_{ag,t}$	$U_{w,t} - C_{t-1}$		<b>t</b>
	<b>Fight (t) / Cooperate (t+1)</b>	$U_{l,t} - C_{t-1}$	$EU_{F,t+s} / U_{ag,t+1}$	$U_{w,t+1} - C_t$	<b>t+1</b>
	<b>Fight (t+1) / Cooperate (t+2)</b>		$U_{l,t+1} - C_t$	$EU_{F,t+s+1} / U_{ag,t+2}$	<b>t+2</b>

$U_{ag,t}$  : utility of agreement at  $t$

$U_{w,t}$  : utility of winning a fight at  $t$

$U_{l,t}$  : utility of losing a fight at  $t$

$EU_{F,t+s}$  : expected utility of fighting until  $t+s$

$C_t$  : accumulated costs at  $t$

$c_t$  : costs at  $t$

$p_c$  : probability of continuation of conflict

$EU_{F,t+s} = p_w \cdot U_w + p_l \cdot U_l - C_t - p_c \cdot C_{t+s}$

$p_l = 1 - p_w$

$C_t = \sum_i^t c_i$

**Figure 4 Conflict game.** Gray: The game at point in time  $t$ . See text for details.

The expected utility of fighting ( $EU_F$ ) also gets a time index  $t+s$  meaning that at  $t$  the costs for fighting until  $t+s$  are considered though weighted by a probability  $p_c$ , that is the estimation of the players of how likely it is that the conflict continues until  $t+s$ .

### 2.1.3 Discussion

So far, I did not deviate much from Maoz' and Terris' original model as outlined in their paper. Nevertheless, the version of the model that I just presented includes a few minor modifications and endorsements compared to the original one.

First, Maoz and Terris illustrate their idea of conflict by using the metaphor of a fight about an ice-cream cake that melts by and by. What the opponent parties are looking for is a division of that cake everybody is satisfied with. Since they are in conflict with each other, this specific division of the cake has obviously not been found yet. But the search continues with each party at each point in time making suggestions regarding the division of the cake.

Let us turn to the game-theoretic representation: While at the beginning of the conflict the ice-cream cake is still “intact”, the utility of winning ( $U_w$ ) is 1, and the utility of losing ( $U_l$ ) is 0, which makes, for example,  $EU_F = p_w - c_F$ . Having pointed to this assumption, the authors leave both utilities outside the “expected utility” formulas, and they do it for the rest of the model and not only for the starting point. However, since the cake is melting,  $U_w$  does not stay 1 but decreases. Winning the cake – or all that is still left of the cake – does not remain as attractive as at the beginning of the conflict but becomes less and less tempting. This means,  $U_w$  has to reoccur in the formulas for the expected utilities, but it does not. This is a clear contradiction to the authors’ conception of the conflict.

Second, whereas in the mathematical appendix of the paper Maoz and Terris do include the probabilities for conflict termination and conflict continuation in some far more complicated – and due to formal inaccuracies quite incomprehensible – recursive formulas for expected utility of fighting, they leave them out in their model pointing out that these probabilities must be such that the FF equilibrium is preserved. If this is the case, then it does not seem necessary to include them in the payoffs. However, my goal is to model a conflict situation by highlighting the essential components of it. Therefore, I included a cost weight  $p_c$  denoting the probability that the conflict will continue until the player’s horizon  $t+s$  in the expected utility formula for bilateral fight. It does not make sense for the players to assume that the costs will definitely arise if they do not believe to a certain degree that the conflict will reach that stage.

Furthermore, it has to be noted that “for simplification” (p.34), Maoz and Terris assume that the opponents are certain that the conflict will proceed until their horizon  $t+s$ . Therefore, the players must know that the equilibrium is in the Fight-Fight outcome since this is the necessary condition for continued conflict. In order to know this, they must, however, know each other’s preferences and payoffs. But this has already been excluded in the beginning. In this sense, my assumption that both parties *risk* the continuation of conflict until  $t+s$  rather seems to be compatible with the assumption of incomplete knowledge.



## 2.2 The mediation game

The structure of the situation requires external intervention for conflict settlement since the players will not deviate from their dominant strategy of fighting by themselves if the payoffs are like those in a Prisoners' Dilemma. This is the reason why external intervention like a mediator is necessary. The mediator may propose an agreement offer to the opponents. This could be a division of the territory the parties are fighting over or a draft of a peace contract etc. In the scenario that will be modeled later, one can see that the mediator may also merely make promises with regard to what will be done later. In any case, the intervention of a mediator has to find its way into the outcomes of the games.

Consequently, the payoff variables of the players drastically change (see Figure 5). Now, cooperation means agreement to the mediator's proposal, whereas the fighting strategy remains similar to the conflict game. The main difference between the conflict game at one point in time and the mediation game is that it makes sense to only distinguish between two different outcomes: conflict settlement together with the mediator (Cooperate-Cooperate outcome, gray) and conflict continuation subsequent to the mediator's intervention (all other outcomes). Since both parties know that they will go on fighting for a certain amount of time if both or one of them reject(s) the mediator's proposal,  $EU_{F,m}$  is the expected payoff when returning to the conflict game (see below).  $EU_{F,m}$  needs not be the same as  $EU_{F,t+s}$  since the mediator might have threatened with sanctions in case of continued fighting.

		<b>B</b>		
		<b>Cooperate</b>	<b>Fight</b>	
<b>A</b>	<b>Cooperate</b>	$EU_{ag,m}$	$EU_{F,m}$	$EU_{ag,m}$ : expected utility of the mediator's agreement $EU_{F,m}$ : expected utility of fighting facing the mediator's intervention
	<b>Fight</b>	$EU_{F,m}$	$EU_{F,m}$	

**Figure 5** Mediation game. See text for details. Gray: Conflict settlement

Second, it has to be taken into account that that the mediator's credibility varies in the view of the parties. Therefore, the credibility score  $p_m$  has to be introduced, which can be different for player A and for player B since the mediator can appear trustworthy to one party but deceitful to the other.

Third, the specification of the payoffs in the mediation game differs depending on the different strategies the mediator employs as indicated in the introduction: information provision, positive inducement, threat, and carrot-and-stick are measures the mediator may choose from (see below).

### 2.2.1 Information provision

As stated above, the mediator can provide information about the future progression of the conflict, that is, information about costs the parties will incur in the case of continued fighting for  $n$  steps. If this is the case, the payoffs for the players, respectively, look like the following:

$$EU_{ag,m} = p_m U_{ag,in} - (1 - p_m) c_{ag} - C_{t-1}$$

$$EU_{F,m} = p_w U_w + p_l U_l - p_c C_{t+s} - p_m C_{(n-s)}$$

$p_m$  : credibility score of mediator

$U_{ag,in}$  : utility of agreement + utility of information provided by mediator

$c_{ag}$  : cost (risk) for trusting the mediator

$C_{(n-s)}$  : costs that will occur according to the mediator from point in time  $t+s$  (horizon of player) to  $t+n$  (horizon of mediator)

Maoz and Terris note that the mediator can additionally provide the players with information about the other player's preferences. However, they do not specify in what way the provided information would influence the players' expected utilities, preferences or actions.

### 2.2.2 Positive inducement

If the mediator chooses to apply the positive inducement strategy, the information about the future progression of the conflict beyond their horizon is not available to the players. Since some kind of reward for cooperative behavior will be provided by the mediator by employing this strategy, the payoffs in this case, that is settlement by mediated agreement, must include the players' evaluation of the bonus,  $U_{ag,pi}$ :

$$EU_{ag,m} = p_m U_{ag,pi} - (1 - p_m) c_{ag} - C_{t-1}$$

$$EU_{F,m} = p_w U_w + p_l U_l - p_c C_{t+s}$$

$p_m$  : credibility score of mediator  
 $U_{ag,pi}$  : utility of agreement + utility of positive inducements  
 $c_{ag}$  : cost (risk) for trusting the mediator

### 2.2.3 Threat

In contrast, the mediator can threaten with whatever he considers appropriate in the current situation in case of non-cooperative behavior, that is, continued fighting: reduction of financial or military support, even the threat to leave negotiations might prove successful. Hence the formulas:

$$EU_{ag,m} = p_m U_{ag} - (1 - p_m) c_{ag} - C_{t-1}$$

$$EU_{F,m} = p_w U_w + p_l U_l - p_c C_{t+s} + p_m U_s$$

$p_m$  : credibility score of mediator  
 $U_s$  : utility of threats ( $\leq 0$ )  
 $c_{ag}$  : cost (risk) for trusting the mediator

### 2.2.4 Carrot-and-stick

The mediator can combine rewarding and threatening, which is also called a “carrot-and-stick” strategy. Again, both parties will consider the “carrots” ( $U_{ag,c}$ ) and the “sticks” ( $U_{ag,s}$ ) of the proposal, which enter their payoffs:

$$EU_{ag,m} = p_m U_{ag,c} - (1 - p_m) c_{ag} - C_{t-1}$$

$$EU_{F,m} = p_w U_w + p_l U_l - p_c C_{t+s} + p_m U_s$$

$p_m$  : credibility score of mediator  
 $U_{ag,c}$  : utility of agreement + utility of “carrots” ( $\geq 0$ )  
 $U_{ag,s}$  : utility of “sticks” ( $\leq 0$ )  
 $U_s$  : cost (risk) for trusting the mediator  
 $c_{ag}$

In principle, each of the first three strategies may be combined as will be explained further down. The reason I listed carrot-and-stick – beside the fact that Maoz and Terris list it – is that it is a (combined) strategy that seems to be employed quite frequently on the international stage.

### 2.2.5 Explanatory remarks

The utility of the agreement  $U_{ag,x}$  (with  $x$  being the information provision or positive inducement (or carrot) strategy) includes the appreciation of positive aspects as well as negative aspects of the agreement, in other words a cost-benefit calculation of the advantages and disadvantages associated with cooperation. Additionally, this utility contains the appreciation of the measure that had been introduced by the mediator's strategy, for example a reward for cooperation.

$c_{ag}$ , the cost for trusting the mediator, denotes the costs which a party incurs if the mediator does not deliver what he has promised. This value grows proportionally with the utility of the agreement.

All strategies may be applied one after another rendering the specification of the payoffs different than noted here. For example if, first, specific information about the future progression of the conflict is given to the parties, but those do not settle the conflict, and, subsequently, an asset is thrown in by the mediator for cooperative behavior in addition, then the information given by the mediator before is most likely still considered by the parties and must therefore occur in  $EU_{F,m}$ . In which order the strategies are employed is chosen by the mediator after having taken into account his credibility score as well as his (or the government's) budget. Since this is an aspect of the mediator's assessment of the situation, this will be illustrated in detail in Section 2.3.

### 2.2.6 Discussion

In this part of the model, my approach is more distinct from the one of Maoz and Terris. First, I left out the concept of an *invitation game* proposed by the authors, who state that at a certain point in time a mediator offers to mediate, and both parties have to accept or reject mediation leaving three alternatives to each party; Cooperate, Fight or Invite mediator.<sup>7</sup> If both choose to invite a mediator, the mediation game is played with two strategies, Fight and Cooperate, but only two different outcomes: "agreement with mediator" in case both parties cooperate with each other and the mediator, and "back to conflict game" in case one or both parties choose to fight. The authors state that

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<sup>7</sup> Actually, since Fight is the dominant strategy and Cooperate, therefore, is never under consideration, the authors state that the game can be regarded as a 2x2 matrix with the actions Fight and Invite Mediator.

the answer to the question of when, and under what conditions, two disputing parties would invite a mediator is deceptively simple: when both believe that – through the use of the above strategies [like information provision etc.] – the mediator can render the mutually cooperative outcome a stable equilibrium.

This means, the choice of the parties whether to accept or reject mediation depends on the payoffs they get through strategies employed by the mediator; in other words, actions taken by him. Maoz and Terris illustrate this with an inclusion of the mediation game in the respective cell – both parties invite/accept the mediator – of the invitation game.

However, the parties cannot foresee which strategy or strategies the mediator will employ. If they knew this, the mediator would already have communicated and probably bargained with the parties, and we would already be in the middle of the mediation game. Hence, the payoffs associated with a specific strategy cannot influence the decision on inviting a mediator as it is suggested by Maoz and Terris. In contrast, a mediator might be invited because of his reputation or earlier experiences with him, which make the parties believe that he can bring about terms more favorable to them than continued conflict or direct negotiations with the opponent without any third party.

In this case I suggest the following: If an invitation of a mediator is an option at all, the parties compare two values,  $EU_F$  and  $EU_{ag,m}^*$ . The second value I define as the expected utility of the (expected) agreement by the mediator and is not the same as  $EU_{ag,m}$  as defined above since the strategies must be left out of the formula but  $EU_{ag,m}^* = p_m U_{ag} + (1-p_m) c_{ag}$ . As can be seen, the formula only includes the utility of the (expected) agreement, not any assets the mediator might throw in later. If  $EU_F < EU_{ag,m}^*$ , the parties will choose to invite and cooperate with the mediator.

This is, however, only one way how the mediator can enter negotiations, which is why I left this concept out of the overall model. There might be external pressure, from trade partners or the international community and its “world opinion” for example, forcing the parties to the negotiation table under the auspices of a third party. What is important to the modeling of this part of a mediated conflict is that a mediator intervenes by proposing an agreement. *This*, in turn, can be rejected or accepted. This is why in my approach the mediation game, which includes the strategies of the mediator, is strictly separated from the bilateral conflict game.

Second, in Maoz' and Terris' mediation game the parties choose to reject or accept the offer by the mediator. If both accept it, they receive payoffs that are derived from their respective utility of the agreement. In all the other cases, they receive the same payoffs, namely  $EU_{F,m}$ , which are calculated from – among other things – the costs for fighting in the time period between the parties' horizons (point in time  $t+s$ ) and the mediator's horizon ( $t+n$ ).

If we assume, however, that the parties can not see beyond their horizon by themselves – that is actually what the term “horizon” should be used for – they have access to this particular information only if it is given to them by the mediator. But this is only the case if the mediator chose to employ the information provision strategy before. On no account, though, this information should be incorporated in such a general variable. For this reason, I distinguish between the four strategies and their influence on the payoffs in the mediation game. Depending on which strategy is employed, the payoffs look different but represent more adequately what is assumed to be happening.

Third, Maoz and Terris state that a mediator must start his intervention by providing information. This is not clear to me since a mediator who rates his credibility score quite low should not start with this strategy but rather offer the parties, for example, a reward, which remains valuable enough to them to be an incentive for cooperation even after being discounted by the low credibility score.

Fourth, the variable  $c_{ag}$  evolved from Maoz' and Terris' idea that not only the utility of the agreement should be weighted by the mediator's credibility score but also the potential costs in case one party accepts and the other rejects the offer. In this case, according to Maoz and Terris, the first party may actually lose the fight. While this is obviously true, it is incomprehensible why the authors now put the following formula in the cell of agreement outcome:  $p_m U_{ag} - (1 - p_m) C_t$  for each party. There is no reason why the costs until point in time  $t$  should be weighted by the complementary credibility score of the mediator. Therefore, I replaced  $C_t$  by  $c_{ag}$ , the cost that a party will incur in case the mediator fails to deliver what he had promised. It is this value that is reasonably weighted by the complementary credibility score.

Fifth, I added another strategy to the three existing strategies in Maoz' and Terris' approach: Threaten only. It is odd that Maoz and Terris leave it out but rather include the “carrot-and-

stick” strategy, which is a combination of the positive inducement and threat strategy, since it should be obvious that a mediator can threaten without promising anything.

### **2.3 The mediator’s task from his point of view**

Having learned about the considerations of the opponents when confronted with a mediator’s proposal and strategies we must not forget the considerations of the mediator. A mediator on the international stage, as long as he is considered a rational agent, will generally not enter mediation without expecting any benefit from his commitment. This brings up the motives behind mediation and the question what causes a mediator to initiate a mediation attempt? Which benefits does he expect? This view of mediation contrasts with the typical proclamation of mediators that their only goal is conflict reduction. Yet, in the context of power politics, other transcending motives can be found such as the desire to increase influence or to end the conflict because it threatens the mediator’s own interest (Touval & Zartman, 1989). This will be illustrated by the analysis of the October War mediation by Henry Kissinger.

These interests may not be exclusive – also humanitarian motives may play a role – but can be regarded decisive. Hence, the expected benefits of his intervention must outweigh the costs he and, as the case may be, his government have to bear. If a mediation initiative does not potentially imply any “profit”, for example enhanced prestige or power in whatever respect, a mediator is hardly going to put his efforts into it. This is one of the first things a mediator will take into account when deciding for or against a mediation initiative.<sup>8</sup>

Once a mediator has decided to intervene; what aspects of the situation does he have to consider while optimizing his efforts? In the preceding section, it became clear that the parties’ utilities of the agreement together with the mediator are weighted by the respective credibility score each party itself assigns to the mediator, which expresses the level of credibility the mediator has in the eyes of one particular party. This means that the lower the credibility of the mediator, the higher must the utility of the agreement be if the product of these two values shall remain the same.

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<sup>8</sup> This also speaks against the idea that a mediator is generally “invited” by the parties as Maoz and Terris figure it

If we now assume that the utility of the mediated agreement for each party grows proportionally with the “intrusiveness” of the strategy, that is, if  $EU_{ag,m}(in) < EU_{ag,m}(pi) < EU_{ag,m}(c\&s)$ <sup>9</sup>, then what we are facing now is a trade-off between the costs for the employed strategy and assumed credibility. For example, if the mediator believes that he is regarded as highly credible by the parties, he may employ the least intrusive strategy in order to save money, time and energy, and simply serve as an information source for the opponents. However, if he fears that his credibility is quite low he might directly provide some assets for the settlement of the conflict and additionally threaten with military force in the case of continued fighting. Conclusively, the assumed credibility score must enter the mediator’s considerations about the offer for one or the other party.

Further, let us recall the mediation game in the preceding section (Figure 5). Assuming that the parties have been fighting until point in time  $t-1$ , now at  $t$  they can either listen to the mediator or go on fighting. However, if for one player the expected utility of the mediator’s proposal ( $EU_{ag,m}$ ) is smaller than  $EU_{F,m}$  the parties will not come to an agreement. Now we can specify in more detail what the mediator’s task will be.

Let  $O_m^P$  be a specific offer for player  $P \in [A,B]$ <sup>10</sup> and  $x$  a strategy employed by the mediator chosen from information provision, positive inducement, threat, and carrot-and-stick. (I define  $Ag_x = [O_m^A, O_m^B]$  as the agreement proposed by the mediator based on strategy  $x$  and consisting of two offers for the parties). The mediator’s task can now be formulated in an algorithmic way:

*For each player  $P$  and  
for the assumed credibility score  $p_m$  respectively  
minimize the offer  $O_m^P$  and choose a strategy  $x$   
such that  $EU_{ag,m} > EU_{F,m}$ .*

The mediator has to estimate two things for each party: the credibility score assigned to him by a party, and this party’s valuation of its part of the agreement. Having estimated these

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<sup>9</sup>  $EU_{ag,m}(x)$  denotes the expected utility of the mediated agreement associated with strategy  $x$  ( $x \in \{\text{information providing, positive inducement, carrot-and-stick}\}$ ) for one party (threat is left out here because it only appears in the expected utility of fight,  $EU_{ag,m}$ ).

<sup>10</sup> In this section, I will explicitly distinguish between player (or party) A and player (or party) B.



values accurately enough for both parties the mediator should be able to make an appropriate, that is, attractive enough, agreement, which the parties cannot reject if they act rationally.

To recall, the parties will at each point in time bilaterally deviate from the Cooperate to the Fight strategy and go on fighting against each other again if the payoffs are like those in a Prisoners' Dilemma. The example in Figure 6 shows that deviation takes place because for both players the payoffs for fighting given the other cooperates is higher than for (bilateral) cooperation, which is the outcome if no one deviates, resulting in bilateral fight. This seems impossible to avoid since for each player any compromise – be it together with the mediator or without – has a smaller utility than winning completely.<sup>11</sup> Yet, this is not the question.

The question is: Is the expected utility of the mediator's agreement offer larger than the expected utility of fight? That is basically the calculations the opponents have to make. What

<b>B</b>			
		<b>Cooperate</b>	<b>Fight (=Defect)</b>
<b>A</b>	<b>Cooperate</b>	3      3	-2      5
	<b>Fight (=Defect)</b>	5      -2	-1      -1

**Figure 6 Deviation in a Prisoners' Dilemma.**

they cannot do is to consider Cooperate as a reasonable action. Due to their rational utility maximization they are so to speak “bound to fight” if they face payoffs like those in the Prisoners' Dilemma.

Hence, the task of the mediator is to prevent the parties from deviating from bilateral cooperation by providing to each player an incentive to increase the expected utility of agreement ( $EU_{ag,m}$ ) so that it be larger than the expected utility of fighting ( $EU_{F,m}$ ). He could as well or additionally try to decrease  $EU_{F,m}$  by throwing in some “stick” and threaten with sanctions. If he has succeeded, then both players know that bilaterally deviating from the

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<sup>11</sup> Concerning this point, Maoz and Terris issue quite contradictory statements since on the other hand they state that the task of the mediator is to convert the conflict game into a Stag-Hunt game (a.k.a. Assurance game), which is characterized by the utility of compromise being larger than the utility of winning for each party.

Cooperate strategy results in a less attractive outcome than accepting the offer of the mediator.

As could be seen, the central idea of the mediation game is concerned with the effect of the mediator on the parties in conflict. What the mediator basically has to do is to persuade both parties to move away from their Fight strategy; a task which logically results from the constellations in the conflict game. Here again, I took Maoz' and Terris idea as guideline and provided an own formalization of it.<sup>12</sup> To summarize, the whole model provides a statement on what is crucial to mediation; namely the strategy of mediation and the credibility of the mediator. Taking these aspects into account, the task of the mediator evolves. We should now try to find out to what degree this conception of conflict and mediation is correct by looking at a "real" case study of mediation.

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<sup>12</sup> The differences between their and my model mostly concern the formalization and not conceptions of how the task of the mediator looks like.

### **3 A Rational Model of Mediation: Applied**

Having learned about the model of Maoz and Terris, the questions that have to be asked – as should be the case with regard to every model – are: First, does it fit the “data”? Can real world “facts” be mapped onto parts of the model structure? In other words, one has to find out if and to what extent the features of the model have a real world counterpart in a given scenario. If this is given, one should ask, second, if *all essential* aspects of the real world situation are captured within the model. If this is not the case, it will be another effort to find out how the model has to be extended or changed further to make it more suitable. Further, we are interested in models because they ideally contribute to a better understanding of a situation. Therefore, one should ask which insights into conflict and international mediation the model provides. In the course of the next sections I will address these questions.

#### **3.1 Mediation in the Middle East**

##### **3.1.1 Motivation**

I picked the Arab-Israeli conflict and Henry Kissinger’s mediation attempts – more specifically his involvement in the development of the Six-Point Agreement subsequent to the October War 1973 between Egypt and Israel – to be a touch-stone for Maoz’ and Terris’ model for several reasons:

1. Maoz and Terris themselves apply their model to events in the Arab-Israeli conflict, namely William Rogers’ mediation attempts between Israel and Egypt during the War of Attrition between 1969 and 1970.
2. I am very much interested in this conflict due to its topicality: These days, the Israeli-Palestinian conflict often enough, unfortunately, attracts the world’s attention.

Why Kissinger?

3. Henry Kissinger, being Secretary of State between 1973 and 1976, was one of the key officials in the U.S. administration with regard to promoting peace between Israel and the Arab states, especially Egypt. His insights that I predominantly extracted from his memoirs contribute to a comprehensive analysis of the conflict at great length.

4. Kissinger was the U.S. official under whom Egypt and Israel after four wars came together at one bargaining table. There were no major military encounters after his intervention; in contrast, six years later, the conflicting parties signed the Egyptian-Israeli peace treaty. This means, it possibly was his intervention that made a difference.
5. There is comparably thorough analytic literature *on* Kissinger as a mediator with regard to his strategies and styles of mediation, their effectiveness, his relationships with the parties etc.

### **3.1.2 Historical background**

It has to be mentioned that during my research on the historical background of the Arab-Israeli conflict I comparably often hit on literature which often seemed biased towards one or the other side making it quite difficult to judge by myself how the conflict arose and what happened. These often extremely polarized positions may reflect the nature of this conflict, which seems intractable since the involved parties have their own interpretation of the crucial historical episodes. However, I try to give a broad overview on the conflict's genesis to convey to the reader the roots of the conflict, the involved issues and events leading to the particular situation I am going to analyze.

The struggle between Israel and Arab states has as its centerpiece the Israeli-Palestinian conflict, which arose at the end of the 19<sup>th</sup> century when the first Jewish immigrants came to what was then Palestine<sup>13</sup> as part of the Zionist movement. During the first half of the 20<sup>th</sup> century, there were major waves of immigration of Jews from Europe and from the Arab countries back to Israel due to the increasing discrimination and persecution of Jews in these countries. In 1917, when the British mandate over Palestine began, the population was dominated by Arabs, which amounted to 90% compared to 10% Jewish population (United Nations, 1980). In 1923, according to Wolf (1995), the population ratio between Moslems and Jews was about 7 : 1; in 1931 it had changed to a ratio of about 4.3 : 1.

In the early 1920s, clashes between Arabs and Jews broke out in Palestine, and the British government, which then had a mandate over Palestine, guaranteed the establishment of an

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<sup>13</sup> Present day Israel, West Bank and Gaza. It is not uncontroversial to speak of former Israel as Palestine. There are people who claim that the name 'Palestine' is a term invented by the Zionists (Bard, 2004)

“independent Arab state”<sup>14</sup> in the Arab provinces to the Arabs on the one hand, and a “Jewish national home in Palestine”<sup>15</sup> to the Jews on the other hand; contradictory promises, which of course exacerbated the situation. The British White Paper in 1939 was issued to limit future Jewish immigration, which experienced increasing Arab resistance. This was the end of the British/Zionist alliance.

At this time, the idea of creating a Jewish state was not far away. In 1947, the United Nations proposed a Plan of Partition dividing the country into a Jewish state embracing 56% of Palestine, and a Palestinian state embracing 43%.<sup>14</sup> This plan was accepted by the Israelis but was rejected by the Palestinian Arabs. In 1948, in the middle of the Arab-Israeli war, Zionist leaders proclaimed the state of Israel, which led neighboring Arab states to invade Israel in order to ‘save’ Palestine from the Zionist. Their true intentions, according to MERIP (2004), were to assert their territorial claims over Palestine. After the war had ended with a ceasefire in 1949, only about 150,000 Palestinian Arabs remained in Israel. Over 700,000 Palestinian Arabs became refugees.<sup>16</sup>

Although there was an armistice between Israel and the Arab states, all parties rearmed and prepared for a future confrontation. In 1956, Israel, together with Britain and France, attacked Egypt, apparently to reverse an Egyptian nationalization of the Suez Canal. Yet, Israel drew back due to U.S. and Soviet pressure.

The United States of America and the Soviet Union became quite important actors in this region, with interests that exceeded the mere aversion of further conflict in the Middle East. In the early 1950s, Egypt under president Gamal Abdel Nasser had evolved into the leading power in the Middle East and approached the Soviet Union. The U.S. feared the alleged communist threat and tried to keep Soviet influence at low level. Moreover, other interests were followed by the U.S. according to Hacke (1985):

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<sup>14</sup> MERIP (2004). Original documents are available from <http://www.mideastweb.org/history.htm> (retrieved 03/31/04)

<sup>15</sup> Balfour Declaration, issued in 1917 by British Foreign Minister Lord Arthur Balfour

<sup>16</sup> Today, many Palestinians live in Jordan, Saudi Arabia, Lebanon and other Arab gulf states, where they, however, are not granted citizenship (except for Jordan). (MERIP, 2004)

1. Assure political and economic influence of U.S. and access to oil,
2. guarantee territorial and political integrity of the state Israel, and
3. promote a peaceful settlement of the Arab-Israeli conflict.

In safeguarding these interests, the U.S. in the 1960s supplied Israel with arms in order to counterbalance Soviet arms deliveries to Egypt and Syria. However, this turned Israel into a militarily strong nation, which it had not been before.

In 1967, Egypt was called for assistance by Syria, which feared that Israel was invading from the south. Egyptian troops entered the Sinai Peninsula and occupied important strategic sites in the south. Fearing danger of annihilation, Israel preemptively attacked Egypt, Syria and Jordan, which had joined in the fighting, and defeated them decisively capturing three key areas: the Sinai Peninsula from Egypt, the Golan Heights from Syria and the West Bank from Jordan. These areas became and remained occupied territories after the war although Resolution 242 was adopted by the UN Security Council in November 1967, which notes the “inadmissibility of the acquisition of territory by force”.<sup>17</sup> Moreover, the resolution required Israel to withdraw “from territories occupied in the recent conflict”<sup>17</sup>; a phrase which is still controversial since in the French version<sup>18</sup> of the resolution a withdrawal from *all* occupied territories is demanded.

Israel, which accepted the resolution, referred to the English version to argue that Israeli withdrawal from some, but not all, of the territory occupied in the 1967 war would comply with the resolution. It defended the status quo of the occupied territories with three arguments: First, Israel would need strategic and military depth, second, the occupied territories were of economic importance, and third, the West Bank was historical Jewish territory where the Jews would have to settle (Watzal, 2001). In other words, Israel refused to withdraw to the borders before the 1967 war.

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<sup>17</sup> Resolution 242 (United Nations, 1967)

<sup>18</sup> And all other official versions apart from the English one (Watzal, 2001).

On the Arab side, Egypt and seven other Arab head states, though still committed to Resolution 242, issued the Khartoum resolutions, proclaiming “no peace with Israel, no recognition of Israel, no negotiations with it.”<sup>19</sup> Further,

[t]he conference has agreed on the need to consolidate all efforts to eliminate the effects of the aggression on the basis that the occupied lands are Arab lands and that the burden of regaining these lands falls on all the Arab States.<sup>20</sup>

To sum up, Israel demanded the occupied territory predominantly for security reasons; Egypt demanded it for sovereignty reasons. Conclusively, it can be put on record that at this point in time the conflict was essentially a struggle over land and the location of borders respectively. Yet, it seems that these two nations were not the only participants in the conflict. As already illustrated, the U.S. did become more and more involved; in the end not only as mediator.<sup>21</sup>

### **3.1.3 Mediation attempts by the United States of America**

In the late 1960s, the U.S. regarded the Arab-Israeli conflict as potentially more dangerous than the Vietnam “problem” since a large-scale superpower confrontation seemed possible. President Nixon said in one of his first presidential speeches:

I consider [the Middle East] a powder keg, very explosive, it needs to be defused. I am open to suggestions that may cool it off and reduce the possibility of another explosion, because the next explosion in the Mideast, I think, could involve very well a confrontation between the nuclear powers, which we want to avoid. (Parker, 1989, p.15)

After the mission of United Nations mediator Gunnar Jarring from Sweden had failed, the U.S. sent in Secretary of State William Rogers so that he would concentrate his efforts on Egypt since the War of Attrition between Israel and Egypt along the Suez Canal went on with increasing intensity. Together with the Soviet Union, Rogers and his colleagues developed a joint position resulting in a comprehensive peace plan, which became known as the Rogers Plan. It suggested a comprehensive peace accord between Israel and Egypt demanding Israel to withdraw to the 1967 borders in return for Egyptian measures to end the state of war.

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<sup>19</sup> Khartoum Resolutions, paragraph 3 (<http://www.mideastweb.org/khartoum.htm>)

<sup>20</sup> Khartoum Resolutions, Paragraph 2 (<http://www.mideastweb.org/khartoum.htm>)

None of the parties accepted this proposal. The Arab side blamed the U.S. for intending to create only the impression of impartiality and in particular rejected a separate Egyptian-Israeli peace; the Israeli side called Rogers “moralizing” and assumed that the major powers seemed to make peace on behalf of others (Parker, 1989, p.21). The negotiations got stuck. The fact that Israel’s military capacity had grown due to arms supplies by the U.S. presented a particular barrier to negotiations: Now Israel’s army belonged to the ten largest in the world, and Israel could act much more independently from the U.S. than was the case earlier (Parker, 1989).

The lesson the United States learned from the results of Roger’s initiative was that more modest approaches would possibly increase the chances of success. Therefore, the U.S. called on Israel and the Arabs to agree to a cease-fire of 90 days and linked it to a reaffirmation of Resolution 242. Both Israel and Egypt accepted; Israel, only after it was assured that this plan was not the basis of future negotiations, and Egypt, because now there was time to finish a missile defense system and prepare for an invasion of the Sinai.

The following negotiations made clear again that Israel was willing to withdraw from some of the occupied territory but rejected any claims that a partial withdrawal would be a step towards a complete implementation of Resolution 242. Egypt, in contrast, stated repeatedly that any interim withdrawal had to be linked to the 1967 borders<sup>22</sup> (Parker, 1989).

### **3.1.4 Kissinger: October War 1973 and Six-Point Agreement**

Now we are approaching the crucial point in time that will be modeled. When Kissinger took office in 1973, Israel’s interests had remained the same. It was still seeking security, which it wanted to achieve with a territory buffer and/or by possessing more and more arms – preferably delivered by the U.S. – to be “invincible”. Egypt, on the other hand, still wanted to get the Sinai back. Moreover, it was looking for a new policy that would not involve the Soviet Union but the United States of America.

At that time however, Kissinger was not interested in mediating in the Middle East although he was considered to be endowed with the “real power” in the Nixon Administration by a few

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<sup>21</sup> The same goes for the Soviet Union but this aspect will be excluded to not exceed the scope of this thesis.

<sup>22</sup> Rogers’ mediation attempts are also described in Maoz’ and Terris’ paper which takes this episode as an application of the model. However, the evaluation of the model with regard to the given scenario is missing: it is not clear in what points the model fails and where it succeeds to catch the essential aspects of the situation.



Arab diplomats who had tried to persuade him to take initiative in seeking a settlement between the Arab states and Israel. However, he turned them down although he was a harsh critic of Rogers' proposals, which he considered unrealistic because in his opinion Israel could not be expected to withdraw from all occupied territories in return for mere promises about peace by the Arab nations (Parker, 1989).

Yet, when in 1972 Sadat evicted a good deal of his Soviet technicians, the U.S. government, who perceived this action as a cry for American help, promised to concentrate on the Middle East as soon as possible (Sheehan, 1976). For the U.S. government, this came in handy, since, as already mentioned, Soviet influence on Egypt was better kept at a low level. At the same time, the expulsion of Soviets meant a possibility for the U.S. to increase its own influence. Especially Kissinger was astonished, asking "Why has Sadat done me this favor?" (p.49).

In October 1973 – and now we have arrived at the situation of interest – Egypt started the fourth Middle East war by attacking Israel on Sinai territory. While being totally surprised by this step of the Arabs but at the same time expecting that Israel would win and end the war quickly, Kissinger, now becoming increasingly involved, withheld arms deliveries to Israel since the U.S. government was not interested in a possibly resulting Arab oil embargo or anti-American sentiment. Furthermore, Kissinger's intent was to allow

neither side to win decisively [in order to be able to] manipulate the result to launch negotiations, and – ultimately – to compose the Arab-Israeli quarrel (Sheehan, 1976, p.51)

However, Kissinger's expectations about the duration of the war proved wrong. The war went on so long that Kissinger tried and succeeded to achieve a cease-fire. As a reward for agreeing to the cease-fire and as American reply to Soviet airlift to Egypt and Syria, Israel received immense quantities of arms. Yet, after one of the parties, most likely Israel, violated the cease-fire ten days later, the hostilities resumed.

The Six-Point Agreement (also called November Agreement since it was brought about on November 11<sup>th</sup>, 1973) can well be understood in terms of an exchange of several bargaining chips. Meanwhile, Egypt saw parts of the western bank of the Suez Canal occupied by Israeli troops, and one of its military units, the Third Army, surrounded by them. On the other side, Israel worried about its prisoners of war kept by Egypt. This situation was taken advantage of by Kissinger, who met Sadat on November 7<sup>th</sup> for the first time. He proposed a draft of six points:

1. Egypt and Israel agree to observe scrupulously the cease-fire called for by the UN Security Council.
2. Both sides agree that discussions between them will begin immediately to settle the question of the return to the 22 October positions in the framework of agreement on the disengagement and separation of forces under the auspices of the United Nations.
3. The town of Suez will receive daily supplies of food, water and medicines. All wounded civilians in the town of Suez will be evacuated.
4. There shall be no impediment to the movement of non-military supplies to the east bank of the Suez Canal.
5. The Israeli check-points on the Cairo-Suez road will be replaced by UN checkpoints. At the Suez end of the road, Israeli officers can participate with the UN in supervising the non-military nature of the cargo at the bank of the Canal.
6. As soon as the UN check-points are established on the Cairo-Suez road, there will be an exchange of all prisoners of war, including wounded.

(Source: Israel Ministry of Foreign Affairs)<sup>23</sup>

Sadat agreed. Israel, after some quibbling over details, also accepted the proposal, and the agreement was signed by both sides on November 11<sup>th</sup>, 1973 at Kilometer 101 on the Suez-Cairo road, which led to the Third Army.

So far, the events in October 1973 have roughly been described, but to thoroughly understand the dynamics of this situation we have to go into more detail. This will happen in the course of the next sections with the application of the game-theoretic model presented in the first part of this text to the October War and Six Point Agreement in 1973.

## **3.2 Modeling the October War situation**

### **3.2.1 Modeling October War – The Conflict Game**

In recalling the conflict game (compare Figure 4) and its assumptions (compare Section 2.1.1) the question I want to answer is this: Is it possible to match the conflict situation, that is, the October War 1973, to the structure in Figure 7?

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<sup>23</sup> Available from <http://www.us-israel.org/jsource/History/sixpts.html> (retrieved 03/31/04))

		<b>B</b>	
		<b>Cooperate (t)</b>	<b>Fight (t)</b>
<b>A</b>	<b>Cooperate (t)</b>	$U_{ag,t}$	$U_{w,t} - C_{t-1}$
	<b>Fight (t)</b>	$U_{l,t} - C_{t-1}$	$EU_{F,t+s}$
		$U_{w,t} - C_{t-1}$	$EU_{F,t+s}$

**Figure 7 Conflict game at point in time t. (For generic structure see Figure 4 Figure 4)**

Let actor A and actor B stand for Israel and Egypt, respectively. Now let us define the outcomes. If both Egypt and Israel choose to cooperate, then at this point in time cooperation can at most mean that each party gets a share of the territory since giving up the whole Sinai is not an option for either side (see below). If Egypt (actor B) chooses to cooperate while Israel (actor A) is occupying Sinai, Egypt obviously loses the territory for the time being. If, the other way around, Israel remains calm while Egypt enters the Sinai to reclaim it, it is Israel which loses it. If both choose to fight, they are at war. Considering these outcomes it has to be investigated if the current situation is correctly reflected by a Prisoners' Dilemma.

First, the issue that both parties are fighting over at point in time  $t = October\ 1973$  seems to be the territory of the Sinai Peninsula at first glance. Its utility is high for both parties: Egypt's pressing urge to get its territories back, and Israel's need for security by getting a buffer zone between itself and Egypt leave  $U_{w,t}$  (and therefore  $U_{w,t} - C_{t-1}$  also) a large value for both parties compared to  $U_{ag,t}$ , the utility of agreement. Any compromise with the opponent would mean to pass on a part of the desired territorial "cake" but Egypt simply could not give up its own territory, and the current situation was not only intolerable for Egypt but for the Arab world as well. Israel, likewise, could make no step back. Shortly before the war, Kissinger had the opinion that

the Israelis would never make concessions until they had confidence, and they could not have confidence until they achieved invincibility. (Sheehan 1976, p.48)

Therefore, a complete withdrawal to the 1967 borders was unconceivable but was something the Arabs would not do without in the framework of a comprehensive peace with Israel.

However, this is only half the truth. As Kissinger (1982) points out, the only thing that Egypt could expect to get hold of in the October War was a psychological advantage over the seemingly unbeatable opponent Israel and diplomatic flexibility in future dialogues. The current situation had been disadvantageous to Egypt in this respect since the military strength of Israel rendered any balanced negotiations impossible.<sup>24</sup> For this reason, compromise at this point in time had a remarkably low utility for Egypt, but fighting in order to unhinge Israel's military superiority seemed to be quite tempting and, equally important, accomplishable. Israel, the attacked, had no alternative but to defend itself. Additionally, Israel's expectation that the Egyptian troops would quickly be defeated shows that the costs for fighting were estimated quite low leaving  $U_{w,t} - C_{t-1}$  a large value also for Israel. Therefore, we can assume that  $U_{w,t} - C_{t-1}$  is larger than  $U_{ag,t}$  for both parties so that they rather mutually "defect", that is fight, when confronted with the possibility to cooperate at point in time  $t$ .

Second, although Egypt's prospects in a war with Israel were quite dismal considering Israel's military superiority, it seemed at least better for Egypt to fight ( $EU_{F,t+s}$ ) than to let Israel have the whole cake ( $U_{l,t} - C_{t-1}$ ) and go without its own territory. Similarly, Israel could not just sit and watch Egypt regain parts of the Sinai and herewith let go both occupied territory and the air of invulnerability at the same time. Thus, each party has a dominant strategy of fighting, and we arrive at the FF outcome which is in line with the FF equilibrium in a Prisoners' Dilemma.

These aspects support a Prisoners' Dilemma-like game structure as it was suggested above. Replacing the payoff variables in Figure 7 by ordinal numbers, the game in Figure 8 evolves. The payoffs are chosen with regard to the preferences of the opponents. The CC outcome, for example, was possibly less attractive for Egypt than for Israel since, first, any agreement would deprive Egypt of territory regarded as its own property, and second, as mentioned above, any agreement would most likely have been disadvantageous for Egypt because of the unbalanced relationship between Egypt and Israel. The FF outcome describes the case of war, which is actually taking place. Egypt could not expect to prevail in a long militarily battle,

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<sup>24</sup> At this point in time, it was clear that Egypt was widely inferior to Israel with regard to military capacity, which was a fact that was thought to prevent any military quarrel between them (Kissinger, 1982).

which is why its payoff of FF is so low compared to Israel's. However, winning by achieving a psychological advantage over Israel (for later negotiations) looked favorable to Egypt but of course less favorable to Israel. As indicated, Egypt could not expect to regain the whole

		Egypt	
		Cooperate (t)	Fight (t)
Israel	Fight (t) Egypt has psychological advantage / gets whole territory	4	0
	Cooperate (t) Fight over territory	10	6

Figure 8 Conflict game between Egypt and Israel during the October War 1973. A Prisoners' Dilemma.<sup>25</sup>

territory. The fourth case, in which Israel "fights" and Egypt "cooperates", would have been nothing else than the status ante war; unbearable for Egypt but advantageous to Israel since the Sinai Peninsula guaranteed a certain amount of security.

### 3.2.2 Modeling Six-Point Agreement – The Mediation Game

Now we come to the mediation phase of the war. In this paragraph, I will show how Kissinger's initiative contributed to move the opponent parties from fight to cooperation, of which the Six-Point Agreement, a draft including regulations concerning six issues, can surely be considered a consequence.

As mentioned above, Israel violated a ceasefire on October 22<sup>nd</sup>, and subsequently surrounded the Egyptian Third Army. Egypt, meanwhile, had taken a large number of Israeli soldiers to prison. This situation enabled Kissinger to intervene by contacting the parties personally and eventually to propose the Six-Point Agreement. In talks with Sadat, Kissinger additionally promised to him that the U.S. would try to arrange a genuine disengagement of forces moving

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<sup>25</sup> As already remarked above, in a Prisoners' Dilemma, the two parties choose their action simultaneously. In the situation in hand, Israel knows Egypt's move, that is, the surprise attack (Fight). Nevertheless, this does not affect the payoffs.

the Israelis back across the canal<sup>26</sup>. On the other hand, the Egyptians seemed to have noticed a hidden threat by Kissinger to

unleash the Israelis on the Third Army if Sadat did not defer to his suggestions. (Sheehan, 1976, p.54)

Egypt, as already mentioned, accepted the proposal, as well as Israel did. This means in game-theoretic terms that in the mediation game (see Figure 5),  $EU_{ag,m}$  was larger than  $EU_{F,m}$  for both parties. If we keep this in mind for the next sections it will be easier to follow how Kissinger achieved this settlement. I will investigate the strategies he employed towards the two parties and estimate his credibility score assigned to him by both sides.

### 3.2.2.1 Egypt

The utility of the Six-Point Agreement ( $U_{ag}$ ) was at this point in time extraordinarily high for Egypt – and we are considering Egypt exclusively right now – since Sadat was

under intense pressure in his own camp to rescue Suez and the Third Army. (Sheehan, 1976, p.53)

The Third Army was practically trapped by Israeli troops, who had surrounded the city of Suez so that the Third Army sat entrenched on the east bank of the canal with its main supply route, the Cairo-Suez road, occupied by Israel.

Additionally,  $U_{ag}$ , and hence  $EU_{ag,m}$ , was enhanced by Kissinger's promise to plead for a thorough disengagement of Egyptian and Israeli troops – which meant further Israeli withdrawal in the Sinai – in future negotiations leaving  $U_{ag,c}$ , the utility of “carrots”, a larger value than merely  $U_{ag}$ . In the same way, Kissinger decreased the attractiveness of fighting ( $EU_{F,m}$ ) by introducing a “sticks” factor ( $U_s$ ), which put at stake the Egyptian Third Army.

This supports the finding that Kissinger employed a carrot-and-stick strategy in convincing Sadat to agree to his proposal. For Egypt, hence, the following formulas have to be considered (compare Section 2.2.4):

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<sup>26</sup> In this context, Egypt originally demanded an Israeli withdrawal to the ceasefire (October 22) lines only. This would allow Israel troops on the west bank of the canal.

$$EU_{ag,m} = p_m U_{ag,c} - (1 - p_m) c_{ag} - C_{t-1}$$

$$EU_{F,m} = p_w U_w + p_l U_l - p_c C_{t+s} + p_m U_s$$

- $p_m$  : credibility score of mediator
- $U_{ag,c}$  : utility of agreement weighted by “carrots” ( $\geq 0$ )
- $U_s$  : utility of “sticks” ( $\leq 0$ )
- $c_{ag}$  : cost (risk) for trusting the mediator

Kissinger enjoyed extraordinarily much confidence and reliance on the part of Sadat; an observation which could appear perplexing since the two politicians first met only two days before Kissinger’s Six-Point Agreement was clinched. The reasons for this I will not delve into deeply but it is a fact that since 1972 Egypt was openly approaching the U.S. because – as Kissinger supposes – Egypt believed that the Soviets could deliver arms but not peace; in contrast to the U.S.

During the October War, Kissinger told Sadat that the U.S. would acknowledge that the conditions were intolerable for Egypt:

The United States wishes to emphasize again that it recognizes the unacceptability to the Egyptian side of the conditions which existed prior to the outbreak of recent hostilities. (Kissinger, 1982, p.523)

and herewith expressed his empathy with Egypt, which certainly contributed to Sadat’s positive perception of Kissinger. Likewise, in a letter to Egypt on October 16<sup>th</sup>, Kissinger already promised to spare no effort after a cease-fire to arrive at a just and final solution to the conflict, a step which probably had a similar effect.

Even when the U.S. built up its airlift to Israel, the fresh and new U.S.-Egyptian relations were not considerably damaged; Sadat rather called the American policy ““constructive”” (Sheehan, 1976, p.52). Moreover, although President Nixon was under attack in his own country in the Watergate context, Egypt repeatedly stated that it trusted in him to play a positive role in a settlement in the Middle East (Kissinger, 1982). This is not an evaluation of Kissinger the person but emphasizes Egypt’s trusting attitude towards the U.S. in general.

Another interesting aspect in this context might be the fact that Kissinger is Jewish himself. Yet, I could not find any indication of whatever kind that would allow conclusions about a possible bias against him. As well I did not find an indication of Kissinger being biased himself although one might assume that Kissinger as a representative of the U.S. and being Jewish would have been rather Israel-sympathetic. Yet, if he was then apparently this bias did not negatively affect his credibility in the eyes of Egypt.

### 3.2.2.2 Israel

Israel, equally, was in a situation to highly value a cease-fire. Although it had received a huge amount of U.S. weapons, Israel's losses were high enough to accept an ending of the military conflict.<sup>27</sup> Furthermore, an agreement which would include regulations about the exchange of prisoners of war had paramount utility for Israel. Kissinger reports that the Israelis attached greatest importance to the solution of this problem.

The U.S. also promised to enable and foster direct Israeli-Egyptian talks; a goal strived for by Israel ever since the three No's of the Arab nations in Khartoum (see above) had come into effect. Significantly, on November 7<sup>th</sup>, Israel was in a better negotiation position than earlier, on October 22<sup>nd</sup>, when the first cease-fire of the October War came into operation. At that time, the Egyptian Third Army was not yet completely enclosed by Israeli troops, which changed when the fights soon began again. Thus, Israel could consider itself holding a stronger negotiation stance than before, which, of course, would only unfold in a phase of diplomatic approaches following a cease-fire.

Additionally, as Sack (1988) points out, generally, the U.S. used several "instruments" to realize its interests in the Middle East, among them the (threat of) restriction of civil and military support. Touval (1982) mentions that particularly in the October War situation, U.S. pressure on Israel was successful in preventing it from destroying the Egyptian Third Army by military action or simply by not allowing the transfer of supplies. Through the threat of slowing down the airlift of military aid Kissinger "saved" the Third Army. This threat was not exactly articulated to finally make Israel agree to his proposal but it was a step in this direction since the supply of the Third Army was part of the Six-Point Agreement. We can conclude that Kissinger also employed a carrot-and-stick strategy towards Israel and, hence the same formulas as for Egypt come into effect.

Kissinger's relation to Israel's highest representatives can only be evaluated in the context of the broader and historical U.S.-Israel relationship, which was and is a quite unique one. According to Sack (1988), this relationship has a twofold basis: First, each president of the U.S. since Truman had reassured to guard the existence of the state Israel and the well-being

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<sup>27</sup> Kissinger speaks about 2,000 killed Israeli soldiers by October 22<sup>nd</sup>, 1973, which roughly corresponds to 200,000 Americans in comparison with the Israeli and American population respectively. (p.561)



of its population. Second, there is the influence of the Jewish community on the formation of opinion and decision processes. Yet, the level of its influence is controversial.<sup>28</sup>

In this atmosphere, the U.S. proved its friendship during the October War by massively delivering arms and military equipment to Israel to guarantee its victory.<sup>29</sup> Hence, Israel could consider itself being under the patronage of the U.S. making Kissinger a representative to be trusted to a large extent. This is supported by the fact that by January 1974, as Zartman (1981) reports, the Israelis “were reportedly ‘convinced that Kissinger played straight with them and fairly represented their views to the other side’” (p.160). A huge opinion shift from October 1973 to January 1974 seems unlikely.

Yet, the picture is not complete. Israel had not forgotten that the U.S., at the beginning of the war, had withheld arms deliveries for several reasons.<sup>30</sup> On account of this, Israel was “forced” into the ceasefire on October 22<sup>nd</sup> (which it apparently violated later). Additionally, in this new era of “Arab policies” of the U.S., Israel noticed that the U.S. was not unilaterally committed to Israel – not anymore if that had ever been the case. This situation evoked irritations and a clear cooling of the relationship. Even further, since Israel was so dependent on the U.S., it did not want to appear arbitrarily controllable, which explains some of the obstacles Kissinger had to face with regard to negotiations with Israel.

Having identified two of the most important aspects of the model – strategy of mediator and credibility score in the eyes of the two opponent parties respectively – in the October War situation, we will now turn to the mediator’s point of view.

### **3.2.3 Modeling the mediator’s task**

Why did the U.S. and Kissinger, respectively, become involved and serve as mediator? As mentioned above, a mediator can and should also be considered a rational agent just like the parties in conflict. For Kissinger then, being a rational agent, a cost-benefit analysis of his intervention was indispensable as he himself recognized:

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<sup>28</sup> As Sack (1988) reports, no Jewish campaign has ever managed to make the U.S. government deviate to a policy in line with the interests of Israel but contradicting U.S. interests.

<sup>29</sup> Yet, not only altruistic reasons played a role here but this will be dealt with in a later section.

<sup>30</sup> As already stated, the U.S. government was convinced that arms deliveries to Israel were not necessary. Moreover, it feared an escalation of the conflict and anti-American sentiment. However, the U.S. prepared for this measure secretly (Sack, 1988).

The statesman must weigh the rewards of success against the penalties of failure. (p.615)

We have also seen that the more active the mediator is the more costs he incurs. The U.S. displayed high military and diplomatic activity during the October War, so we can conclude that the expected benefits must have been just as enormous to make up for the costs that this activity entailed. So we should have a closer look at the considerations of the U.S. from the beginning of the October War to the Six-Point Agreement in November.

When the October War broke out, the whole world expected the Israeli troops to win. However, after three days of fighting the Egyptians had not been defeated yet, so Kissinger was caused to worry that Egypt could remain superior and win. Yet, this would mean for the U.S. to acknowledge the superiority of the *Soviet Union* since the Egyptian army was fighting with Soviet weapons – just like the Israeli army was fighting with U.S. weapons. Obviously, the U.S. could not let this happen. Kissinger did not doubt that

a defeat of Israel by Soviet arms would be a geopolitical disaster for the United States. (p.493)

Hence and first, one of the most crucial reasons for the U.S to intervene was the fear that the Soviets could gain too much influence in the region, militarily and diplomatically. The prevention of this, however, would mean a “profit” justifying almost any cost and disadvantages that would follow in the course of related measures.

Likewise, as stated above repeatedly, an *increase* of *U.S.* influence was wanted at the same time. Sack (1988) and Hacke (1985) agree that one of the basic interests of the U.S. in the Middle East was to improve the own status and to maintain political and commercial access to the resources and the economic markets to an increasing degree. Second, the U.S. could not sit and watch a country attack and defeat a “traditional friend” of the U.S. (Kissinger, 1982, p.486). Third, the U.S. had to protect its ability to guarantee peace and hope to the free world, as Kissinger put it (p.486). To summarize, these reasons called for intervention, which first expressed itself in supplying Israel with arms.

Obviously, there were disadvantages associated with this kind of intervention since at the same time, the U.S sought to improve relations with Egypt and other Arab states. Its goal was to “be in contact” (Kissinger, 1982, p.508) with all parties after the hostilities had ended to be

able to control the negotiations. But each cartload of weaponry was legitimately expected to decrease the trust of the Arabs.<sup>31</sup> Equally important, Egypt was holding a trump that the U.S. was aware of: The Arab states could always impose an oil embargo on America and the rest of the world.<sup>32</sup> Exactly this fear later caused the U.S. to engage in peace efforts since, as Touval (1982) notes, mediation was thought to prevent oil boycotts to the same extent as it would prevent Arab-Israeli warfare.

As can be seen, the U.S. had several interests to pursue, which on the first glance seem incompatible. But in any case did an intervention promise a decrease of Soviet as well as an increase of U.S. influence; an asset which would justify a lot.

Let us now explore Kissinger's specific task as a mediator. In order to answer the question if the subsequent phase in the war dominated by Kissinger's mediation can be matched to the model, we have to consider the algorithmic mediator's task from the first part of this thesis:

*For each player  $P$  and  
for the assumed credibility score  $p_m$  respectively  
minimize the offer  $O_m^P$  and choose a strategy  $x$   
such that  $EU_{ag,m} > EU_{F,m}$ .*

The included variables, that is, the credibility score of Egypt and of Israel, the offers and the strategies Kissinger employed, are already mentioned above but shall be pinpointed again to clarify the structure of the mediator's task.

### **3.2.3.1 Estimate credibility: Egypt**

We have already heard about the relationship between Kissinger and Israel and Egypt respectively. Most of the information is extracted from Kissinger's memoirs meaning that the description predominantly expresses his evaluation of the relationship, which, fortunately, is in the focus of our interest. So, there is not much new information left; it should, however, be stressed that Kissinger had the impression of Sadat acting quite courageously by almost unconditionally accepting Kissinger's proposal. This would have been inconceivable if Sadat

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<sup>31</sup> Paradoxically, this did not happen. Despite the airlift, American policy was considered "constructive" as already mentioned.

<sup>32</sup> The oil embargo finally came into effect on October 17<sup>th</sup>, 1973.

had not trusted Kissinger to a large extent in achieving a disengagement of troops and an Israeli withdrawal back to the east bank of the canal – a promise by Kissinger which apparently accelerated negotiations. Moreover, the fact that Sadat also left large parts of the decision about specific Egyptian demands on Israel to Kissinger shows that he seemed to trust him also in that Kissinger could better judge Israel's concession-making ability. The general impression is that Kissinger was amazed at Sadat's obliging behavior towards him, which can certainly correctly be interpreted as an expression of trust.

### **3.2.3.2 Estimate credibility: Israel**

Israel did not seem as forthcoming as Egypt. Shortly before the ceasefire on Kissinger's Jerusalem visit, Golda Meir, Israel's Prime Minister, asked Kissinger if there was

a secret U.S.-Soviet deal to impose the 1967 borders. When [Kissinger] denied this forcefully, she asked whether there was a deal to impose any other frontiers. (p.564)

In gross words, Israel tried to find out in what way it might be deceived by the U.S., which is obviously a sign of decreased level of trust. This could probably have contributed to the fact that despite – or possibly due to – Israel's close relationship with the U.S., he experienced further difficulties during his negotiation, which appeared predominantly in Israel's quibbling over concessions and details of the agreement as already mentioned. Compared to Egypt's attitude, Israel's behavior is described as more stubborn in Kissinger's memoirs. Therefore, Kissinger was without a doubt aware of Israel's insecurity so that he most likely could roughly assess his credibility score.

### **3.2.3.3 Choose an offer and a strategy for each side**

The offers for each party can be extracted from the Six-Point Agreement: In short, Egypt had on its side

1. the supply of the enclosed city of Suez and the Third Army on the east bank,
2. U.N. instead of Israeli checkpoints on the Cairo-Suez road,
3. the return of all prisoners of war, and
4. negotiations on a disengagement of troops with the prospect of a further Israeli withdrawal

whereas Israel had on its side

1. the return of all prisoners of war,
2. negotiations with Egypt under U.N. surveillance, and
3. Israeli co-control of supplies to the Egyptian civilians and military in Suez.

Towards both Israel and Egypt, Kissinger employed a carrot-and-stick strategy.

### 3.3 Results

How did Kissinger achieve that, given the credibility scores, the offers and the strategy, both parties agreed to his proposal? Actually, the question is not quite correct. What we really have to ask is: Why did it work? When focusing on Kissinger's mediation activity, one can easily forget that Kissinger's influence on the parties was not exclusive. Other factors like the people's suffering due to war, that is the cost for fighting, which is included in the expected utilities of fighting and agreement, might play a major role here as indicated above.

If the model presented above has any predictive value, we should be able – given the values for the variables for credibility, utility of agreement etc. – to foresee the course of Kissinger's intervention if we pretend not to know the outcome of it. However, it seems to be impossible to justifiably assign concrete values to all the variables. If that was possible, the next step would be calculating  $EU_{ag,m}$  and  $EU_{F,m}$ , from these values, compare them, and predict agreement if  $EU_{ag,m} > EU_{F,m}$  and fighting otherwise.

Although we cannot use concrete values in determining the outcome, we can investigate the variables in terms of what I call “mathematical influence”. E.g., let us consider the formula

$$EU_{ag,m} = p_m U_{ag,c} - (1 - p_m) c_{ag} - C_{t-1}$$

If, between two points in time,  $p_m$  goes down, the term  $p_m U_{ag,c}$  goes also down. At the same time,  $(1 - p_m) c_{ag}$  goes up. Whether or not  $EU_{ag,m}$  increases or decreases therefore depends on the values of  $U_{ag,c}$  and  $c_{ag}$ . Further, if in the formula

$$EU_{F,m} = p_w U_w + p_l U_l - p_c C_{t+s}$$

$p_w$  increases,  $p_l$  decreases to the same degree since  $p_w = 1 - p_l$ . If we assume that  $U_w$  is always larger than  $U_l$ , then  $EU_{F,m}$  increases also.

In this sense we can try to find out where the values of the variables range “in words” (in contrast to numbers) and determine the changes in the outcomes, that is  $EU_{ag,m}$  and  $EU_{F,m}$  respectively. Let us recall the expected utility formulas for Egypt and for Israel:

$$EU_{ag,m} = p_m U_{ag,c} - (1 - p_m) c_{ag} - C_{t-1}$$

$$EU_{F,m} = p_w U_w + p_l U_l - p_c C_{t+s} + p_m U_s$$

For both Egypt and Israel, the utility of agreement ( $U_{ag,c}$ ) is at this point in time quite high since the fighting had exhausted each side as reported above.

With regard to Egypt, Kissinger estimates in this sense that

what looked like a negotiation break-through to outsiders was in fact the merging of Egyptian and American perceptions that had been approaching each other for many years. (p.646)

This supports the fact that Kissinger’s proposal had high utility for Egypt. Additionally, Sadat obviously trusted Kissinger to achieve peace, meaning that  $c_{ag}$ , the risk for trusting the mediator and – in case the opponent rejects the mediator’s offer – losing the fight, is small. This, together with a high credibility score  $p_m$ , speaks in favor of a quite high value of the Egyptian  $EU_{ag,m}$ . Moreover, Egypt’s probability of winning had decreased after the U.S. had delivered a huge amount of weapons to Israel. In combination with Kissinger’s almost invisible threat to unleash the Israelis on the Third Army ( $U_s$ ), we arrive at a quite low  $EU_{F,m}$  for Egypt.

On the side of Israel, things are not laid out so clearly. As described above, negotiations with Israel were more difficult. The trust towards Kissinger had decreased and the probability of winning had increased due to the U.S. arms deliveries leaving  $EU_{ag,m}$  comparably low and  $EU_{F,m}$  comparably high. The factor that might have turned the balance was possibly Israel’s suffering during the war increasing the expected utility of agreement. Its losses by October 22<sup>nd</sup> were such that “its endurance was reaching the breaking point” (p.560). Hence, peace was (and is) necessary for Israel as Kissinger stresses (p.565). Yet, I estimate that the difference between Israel’s  $EU_{ag,m}$  and  $EU_{F,m}$  is not as large as between Egypt’s  $EU_{ag,m}$  and

$EU_{F,m}$ , which finds its reflection in Israel’s quibbling during the negotiations. Figure 9 is an example of how the mediation game might look like in our case.

To sum up, both sides realized that they had a grip on each other which prevented them from attaining their goals militarily. This was recognized by Kissinger to be fruitful for

		Egypt	
		Cooperate	Fight
Israel	Cooperate	10	2
	Fight	2	1

Back to Conflict Game  
=> Fight over territory

Back to Conflict Game  
=> Fight over territory

**Figure 9 Mediation game between Egypt and Israel. Gray: Six-Point Agreement (equilibrium).**

negotiations: “Stalemate is the most propitious condition for settlement” (Zartman, 1981, p.149). Both sides wanted the agreement badly enough at this point in time so that both finally accepted and signed the proposal when Kissinger put it to paper. In game-theoretic terms: Although it might be difficult to assign concrete values to the variables in  $EU_{ag,m}$  and  $EU_{F,m}$  respectively, we can conclude that the circumstance including Kissinger’s proposal were of a kind that it is plausible that  $EU_{ag,m}$  was larger than  $EU_{F,m}$ , rather than vice versa, for both parties.

At this point, it becomes clear that the mediator’s strategy (carrot-and-stick including pressure) is no exclusive factor in moving the parties away from fighting. Touval (1982) stresses the importance of situational pressure such as the suffering due to the military encounter or other circumstances like the stalemate that Kissinger created. This insight might have implications for other factors that could influence the outcome; for example, the timing of an intervention.

From the assumptions made in Section 2.1.1 I have to mention that the party’s ability to foresee the course of the conflict to a certain degree is addressed nowhere in the literature which I have consulted. Nevertheless, this seems to be a reasonable common-sense-based assumption that Maoz and Terris – and I – make.

## **4 Mediation assessment**

If we have a look at the game-theoretic model analyzed above, we could conclude that the job of the mediator is done successfully if he or she managed to move the parties away from the dominant strategy of fighting towards agreement to a proposal of the mediator for example. In this respect, the application of the model to the conflict and Kissinger's mediation attempt has shown that – at least – two important factors increase or reduce the conflicting parties' willingness to commit to a settlement, namely first, the strategy of the mediator including, for example, positive incentives if applicable, and second, the credibility of the mediator. Since these are actually conditions that in principle can be influenced the conclusions drawn from the model could serve – to a limited extent of course – as an advice-giving source for future mediators.

But is this really the case? Can we actually tell a mediator: “If you take into account your credibility score and choose a strategy and an offer accordingly for both parties then you will lead them towards a successful settlement”? Of course, this is exaggerated; what I do not want to express with this question is neither that the strategy of mediation and credibility score etc. might not be exclusive factors for mediation success – this which will be shown later – nor that it might be very difficult to actually realize this task. The question I want to address is, if it is given that the mediator has succeeded in having both parties agree to what the mediator proposed with whatever strategy and offer, can this settlement at any circumstance be called “successful”?

Before I will address this question in the conclusive part of this thesis, let us have a look at notions of success and conditions that should be fulfilled if we speak of a successful mediation attempt.

### **4.1 A successful settlement**

The question if we “know a successful settlement when we see one” has to be dealt with. What do we mean if we say “the mediation attempt was successful”? In the course of this purpose, I will first present theoretical approaches in the literature on mediation to the notion and conditions of mediation success; then, I will use this “leveling board” to evaluate



Kissinger's mediation initiative during the October War 1973 and also include mediation activities of his in the Middle East at later or earlier points in time.

Bercovitch, who systematically investigates the effectiveness of mediation, points out that devising an index of successful mediation outcomes is not as straightforward as it might look like since it is not at all clear what constitutes the "outcome" and what "successful" actually means (Bercovitch & Houston, 1996). Different participants in the conflict such as the parties involved, the international community and the mediator himself might perceive the outcome differently. In the following I will present a few approaches to the notion of success in international mediation.

#### **4.1.1 The notion of success**

##### **4.1.1.1 Robustness**

Wood (2003) chooses a mathematical approach to investigate negotiated settlements of civil wars with regard to the question about what characteristics of the conflict parties and negotiated settlements would increase the robustness of the settlement, resulting in enduring peace. She stresses her assumption that the settlement must not have been enforced by a third party, which makes her work not directly applicable to mediation settlements, which are of interest here.

Nevertheless, we get a first hint of what is regarded as a "good settlement"; namely, a "robust" and enduring one. Although Wood lacks a definition of these terms, they can most certainly be interpreted as referring to the non-existence of military encounters in the time phase after the settlement. We can conclude in her sense that the longer these are absent, the better was the settlement. Wood investigates factors that lead to a robust settlement; among them the characteristics of the distributional settlement. The important point in this context is that she assumes that a particular division will be optimal for the robustness of the settlement. According to Wood, this optimal division, the "optimal distributional settlement", depends on the belief of both parties how likely it is that the respective opponent will resume hostilities. Another factor which influences the robustness of the settlement is the perceived indivisibility of the stakes. To sum up, Wood concludes that the more the issue at stake is perceived as indivisible by the parties and the more the parties mistrust each other, the less robust will be the agreement.

#### 4.1.1.2 Fairness

Another notion regarding the definition of “successful settlement” is the notion of “justness” or “fairness” of the agreement. This notion mostly denotes a particular division of the conflict issue(s) and is therefore related to Wood’s approach. Yet, what is addressed here is the “fairness” aspect of the *agreement*, of which the implementation is not a (mathematical) result of the parties’ characteristics such as trust like in Wood’s approach.

For example, Rubinstein (1982) and Susskind and Cruickshank (1987)<sup>33</sup> seek an outcome that is fair, efficient, wise and stable and even link the fairness of the outcome to mediation success. Others also use the notion of a “fair solution” (Brams & Taylor, 1999) or “fair division” (Raiffa, 1982). What is meant by “just” and “fair” will be addressed in a section further down (4.1.2.1) but it is worth noting that the goal of finding a just and fair solution seems to be quite common. However, this is not an exclusive, though appealing, perspective on the success of conflict outcomes or agreements.

#### 4.1.1.3 Behavioral changes

Bercovitch and Houston (1996) reject the definition of success of a settlement by normative criteria (for example, greater fairness – as outlined above – and satisfaction, efficiency, short or long term success, which is again related to the robustness of a settlement) but focus on the behavioral consequences of mediation. In this sense they state that

mediation is defined as successful when it has made a considerable and positive difference to the management of a conflict and the subsequent interaction between the parties. (1996, p.4)

Here, mediation is evaluated in terms of behavioral indicators that ideally differ in the pre-mediation and post-mediation stages. For example, a reduction of hostilities can be regarded a success as well as a complete cease-fire, which might be easier to achieve than to conclude the following negotiations but may be seen as a great success by all participants, whereas failure means that the mediator failed to alter the behavior of the parties. Finally, Bercovitch and Regan (2002) define that the period of “behavioral changes” should be at least two weeks before concluding a successful mediation attempt from this.

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<sup>33</sup> Quoted in Bercovitch and Regan (2002)

#### 4.1.1.4 Conclusion

It becomes clear that there seems to be no general measure for a successful outcome of mediation. The notion of fairness is widely used but has the disadvantages of being quite fuzzy if it is not defined more precisely. Yet, in principle and if applicable, fairness can be judged quite quickly once the agreement is implemented. In contrast, behavioral changes need time to unfold in the time periods *subsequent* to the agreement.

Other people see mediation success already in a “situation in which both parties to the conflict formally or informally accept a mediator” (Frei, 1976, p.69)<sup>34</sup>. According to Bercovitch, yet others

define mediation success in terms of resolving the underlying issues of conflict and *creating a durable self-supporting structure* (2002, p. 4, italics by me)

One could as well have a notion of success that is linked solely to the mediator’s or the parties’ objectives.

Nevertheless, it is without a doubt useful to specify what is called “successful mediation” before starting it. Defining one’s goals can hardly be disadvantageous. Further, if the intent is to investigate mediation events with regard to their potential use for improving future mediation attempts, it is indispensable that we identify and evaluate mediation outcomes in the past and present.

#### 4.1.2 Conditions for successful mediation

This normative question about the – or at least *a* – just agreement reached in a bargaining situation, is asked quite frequently as we have seen above, but usually difficult to answer. If it were not, all mediators might – as one could assume – have a walk-over and settle conflicts in no time. Particularly, the challenge is that primarily the parties in conflict should regard the settlement a just one – and not the mediator only. In the next sections I will investigate an approach from the field of mathematics and game theory, and one from political science to answer the question what could actually constitute a successful settlement.

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<sup>34</sup> Quoted in Bercovitch and Regan (2002)

#### 4.1.2.1 Brams and Taylor (1999): A fair solution

Brams and Taylor approach the question about a successful settlement by investigating the fairness of a solution to a division problem, for example, the division of goods or items. They suggest that the fairness of a solution depends on the degree to which that solution satisfies three properties: Envy-freeness, equitability and efficiency. They argue that a particular procedure, the “Adjusted Winner” procedure, yields a solution which has these properties. Suitably, they focus on two-party disputes because, first, as they say, many of the most significant conflicts today such as divorce or international conflicts involve two parties or two coalitions. Further, it is more practical to only deal with two-party conflicts because of the growing complexity faced with if the number of conflict participants increases.

The announced properties of a “fair” solution are the following:

1. *Envy-freeness* is the property of a solution if no party wants to have the portion of the other party in exchange for its own portion. For example, if I think that I received at least half of the total value of all items, say 51%, I would never want to exchange my portion with the portion of my opponent since in my opinion he/she received only 49%. Envy-freeness is given if this is the case for *both* parties.
2. The criterion *equitability* is fulfilled if both parties believe they received the same fraction of the total with regard to how they value the different items. For example, if I believe having received 51% of the total value of all items, and my opponent believes he/she received 90% of the total value, I might not envy him/her for his/her portion but for his/her greater happiness about his/her portion. Hence, if a solution is called equitable, both parties believe they received (roughly) the same fraction of the total, be it 51%, 70% or 90%.
3. A solution is *efficient* if there is no other solution which brings more benefit to one party without being worse for the other party. For example, if I get the total amount of the items, and my opponent gets nothing, then this division is efficient since whenever my opponent benefits, i.e., gets an item, I am worse off.<sup>35</sup> This example also makes

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<sup>35</sup> A non-efficient solution would be implemented if there is some benefit left to be “spread around” (Brams & Taylor, 1999, p.15).

clear that efficiency alone does not guarantee fairness. (Examples from Brams & Taylor, 1999).

These three criteria Brams and Taylor consider crucial to a solution of a conflict if this solution is to be fair.

Now for the Adjusted Winner procedure.<sup>36</sup> Imagine two children, Sarah and Tom, conflicting about some issues, for example, dolls, toy cars and sweets. Both children have 100 points that they distribute among the issues such that the allocation reflects their evaluation of them. The allocation could look as follows:

<i>Item</i>	<i>Sarah</i>	<i>Tom</i>
dolls	0	56
toy cars	60	0
sweets	40	44

Initially, the items are assigned to the person who values it more meaning that Tom gets the dolls and the sweets, and Sarah gets the toy cars. Obviously, this is far away from a fair solution since Sarah “has” only 60 points of her allocation, whereas Tom has 100. Now the “adjustment” takes place. By transferring items or fractions of items from Tom to Sarah until their total points are equal, the procedure is claimed to guarantee a fair allocation. What is important here is the order in which the items are transferred. Starting point is the item with the smallest ratio between the number of points Tom (the initial winner) assigned to the item, and the number of points Sarah (the initial loser) assigned to the item; in our case that would be the sweets with a ratio of 44/40. Now we should not transfer the *whole* item to Sarah – which would mean 40 more points for her so that subsequently the score would be as unbalanced as before – but only a fraction of it.

The important task is now to find the fraction of this item so that Tom and Sarah come out to have equally many points. This can be done easily in our case since the problem is not very complex. At the moment, the score is 60 to 100, meaning that the difference between Tom and Sarah is 40 points. By transferring the amount of sweets that correspond to 20 points, that is 20/44 or a bit less than one half of the total amount of sweets, both children now have items

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<sup>36</sup> Raiffa (1982) also proposes some mechanisms for solving division problems in, for example, financial disputes.

that correspond to 80 points, and we are done. If the transfer does not happen so smoothly, we would have to go on to the item with the next higher score ratio as described above until the children's score would be balanced.

According to Brams and Taylor, this procedure guarantees that the three criteria are satisfied. However, I doubt that this procedure is applicable in the October War situation. This will be dealt with in Section 4.2.2.

#### **4.1.2.2 Bercovitch: Clusters of factors**

A statistical approach and one of the most thorough and systematic analyses of mediation can be found in Bercovitch (1989, 1996, 2002). His and his colleagues' ultimate goal is to suggest ways and means of making mediation more effective by studying numerous mediation events; having this perspective he wishes to develop a

framework that is sensitive to the context of a conflict, [that] can deal, in a dynamic fashion, with interactive and reciprocal behaviors [, that] permits reproducibility and generalization, and can address the conditions that make mediation more effective in an empirical fashion." (Bercovitch & Regan, 2002, p.4)<sup>37</sup>

In his approach, an international dispute is defined as "an organized and continuous militarized conflict involving at least one state and resulting in at least 100 fatalities" (Bercovitch & Houston, 1996). From the data set of cases in a 50-year period<sup>38</sup>, Bercovitch tries to extract and analyze factors that determine whether or not (or to what degree) the mediation attempt was successful.

In the focus of interest are specific operational criteria, which may have an impact on the effectiveness of mediation; most importantly two clusters that describe the *context* and *process* of mediation. First, regarding the parties' political context for example, Bercovitch and Houston conclude that mediation has a better chance of success when each disputant is accorded legitimacy, meaning that each party's authority is accepted by internal as well as external groups. Further, regarding power differences between the parties, the authors state that the smaller these are the greater are the effectiveness of international mediation. Second, concerning the process of mediation, the strategy of the mediator is considered the most

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<sup>37</sup> Page number counted from beginning of article (I did not have access to the book in which the article was published)

crucial variable affecting mediation outcomes (Touval, 1982)<sup>39</sup>. As already mentioned briefly at the beginning of this thesis, Bercovitch and Houston found out that the more “directive” the strategy, the larger the likelihood of achieving a successful mediation outcome – in spite of communication strategies being the most commonly used strategies.

A third large cluster is “nature of the mediator”. Does the personality of the mediator have an influence on the effectiveness of mediation? Or are his personal traits mostly irrelevant? Bercovitch and Houston note that a mediator must be

*perceived* as reasonable, acceptable, knowledgeable, and able to secure the trust and cooperation of the disputants (p.7, italics by me)

In this context, the authors reject the requirement that the mediator is impartial because this characteristic would prevent him from being able to influence or use “leverage” and resources like political support or economic resources to move the parties away from their positions – for example, by counter-balancing power differences, a measure which is hardly impartial. Kydd (2003) goes a step further when he states that a certain degree of bias is not only acceptable but is actually necessary for some roles that mediators play.

#### **4.1.2.3 Discussion**

These two quite different approaches provide insights into and give hints about what could improve mediation. One of them concentrates on patterns in mediation events and identifies mediation-specific factors like the strategy of the mediator, while the other focuses on the details of a solution to be implemented. The advantage of Bercovitch’s work is that by relying on a large number of mediation events<sup>40</sup>, generalizations on mediation are possible which is not the case when looking at one single case study; however, concrete prescriptions what a mediator is to do are (therefore) lacking. Concerning Brams’ and Taylor’s approach, providing a concrete technique to a division problem helps a lot – as long as the conflict at hand is about a divisible issue and, therefore, allows the application of this technique.

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<sup>38</sup> 1945-1995 (Bercovitch & Regan, 2002) and 1945-1990 (Bercovitch & Houston, 1996)

<sup>39</sup> Quoted in Bercovitch and Regan (2002)

<sup>40</sup> 241 cases (Bercovitch & Houston, 1996)

In the next sections will be further clarified how far the October War mediation by Kissinger and his Six-Point Agreement was a “success”. I will show that this agreement can be understood in terms of the notions of success that I just presented.

## **4.2 An assessment of the Six-Point Agreement**

### **4.2.1 Success of the settlement in terms of robustness**

After the fighting had ended in November 1973, it did not start anew. Between 1973 and 1979, the year of the Camp David accords, no major military encounter between Israel and Egypt took place. In contrast, this period was characterized by peace-promoting events including the Geneva conference, the First and the Second Sinai Agreement and President Sadat’s first visit to Jerusalem, not to mention the numerous incidents of direct addresses and negotiations, which were a result and at the same time a precondition of the increased trust between Israel and Egypt. The Camp David peace treaty between the two states mediated by U.S. President Jimmy Carter and signed in 1979 is unbroken until today.

We can conclude that the peace which the agreement brought was robust. Therefore, if we take this notion of success and apply it to the historical events in autumn 1973, we can say that the Six-Point Agreement was in this sense successful.

### **4.2.2 Success of the settlement in terms of fairness**

Brams and Taylor (1999) would argue that in order to assess the fairness of the Six-Point Agreement one would have to run the Adjusted Winner procedure with the items at hand, that is, “supply of the city of Suez and the enclosed Third Army”, “U.N. checkpoints on the Cairo-Suez road”, “return of prisoners of war”, and first and foremost: “negotiations”. These were the “items” that the Six-Point Agreement included. It would in principle be possible to let Egypt and Israel assign their 100 points to each of these issues, or to do oneself the assignment with reference to indications in the literature. Now, the “Adjusted Winner” procedure is based on the assumption that the issues in conflict are divisible since the next step of this procedure would be to shift fractions of certain items to one or the other party in case that the initial allocation did not render a balanced score. As mentioned above, on a larger level the conflict issue was the sovereignty of the Sinai Peninsula, yet Sadat’s primary goal in the war was to achieve a psychological advantage presumably for future negotiations; he merely wanted to restore Arab self-respect and possibly annihilate the humiliation inflicted



upon Egypt by Israel in the June 1967 war. However, regardless of whether or not this goal was achieved, it is obvious that the issue in conflict as well as the concrete agreement both parties signed, did not include divisible items that could partially be shifted to the other side.

Therefore, unfortunately, it seems impossible to directly apply this procedure to the Six-Point Agreement. Still, we can try to evaluate the Six-Point Agreement in terms of fairness without a particular procedure leading to it. In the view of Brams and Taylor, fairness means, first, that no party envies the share of the other party, second, that the parties value their share approximately the same, and third, that the issues are allocated completely.

While point 1 and point 3 are hardly applicable in our case<sup>41</sup>, point 2 might be of interest. We can say that each side got something that was of paramount importance. For Egypt, this was surely the urgent supply of the Third Army at Suez; for Israel it was the returning of all prisoners of war and the prospect of negotiations with Egypt, and the latter would possibly provide a way to permanent security. As mentioned above several times, the agreement can be understood in terms of bargaining chips, and the bargaining chips each side got seem to have been worth approximately the same – in their eyes. In the words of Parker (1989) “[the] agreement was held together because both sides gained something important” (p.49).

#### **4.2.3 Success of the settlement in terms of behavioral changes**

I found Bercovitch’s notion of success of the mediation process and outcome most suitable and insightful for the evaluation of the Six-Point Agreement. In Bercovitch’s sense it should be asked: Can we observe a behavioral change in the parties’ relationship with each other after the agreement was implemented? I think indeed.

Most obvious was the interim cease-fire that later evolved into a permanent state in the negotiation period. The lack of hostilities was well perceivable and might provide the most evident indication of a behavioral change. Not so clear-cut but maybe more important was the diplomatic approach between the two conflicting parties themselves rather than their respective relationship with the mediator, which I discussed thoroughly above. The Six-Point Agreement seems to have been the starting point for Egypt’s and Israel’s peaceful relations in

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<sup>41</sup> It is odd to imagine that Israel would have envied Egypt for being able to supply the Third Army, for example, or that Egypt would have envied Israel for entering negotiations since this is also what Egypt “got”. Further, the notion of “more benefit to be spread around” (p.15) is linked to the notion of “divisibility” of the conflict issue, which we have already discarded.

the following years leading to Camp David. Here, we recognize two already mentioned factors, the non-existence of hostilities (to be equated with the robustness of the settlement) and the trust between the parties that Wood (2003) found out to be related to each other. One could speculate that also in this case the increasing trust prevented the parties from defecting and breaking the agreement.

### **4.3 An assessment of Kissinger's role**

So far it has been an undoubted assumption that the mediator is somebody who can and does affect the parties in a way that they commit to a settlement. Yet, it is a very important question whether the conclusion of agreements, behavioral changes in the relationship between the parties or any other form and aspect of conflict resolution can be credited to the mediator at all, or whether that would have happened irrespective of the mediator. I will address this question in the following sections knowing that in the scope of this thesis such an evaluation must remain superficial. Yet, it has to be answered when investigating third-party intervention.

#### **4.3.1 Behavioral changes and changes in attitude**

Obviously, Kissinger's strategy in 1973 and the following years contributed to the increase in mutual trust between the parties. His partial approach made small but important progress possible and set precedents for the future. The very implementation of the Six-Point Agreement surprised both Egypt and Israel, who "thought that fighting would resume any moment" (Parker, 1989, p.49). It was his announced goal to

build confidence; to conceive a negotiating dynamic. We must set in motion small agreements. We must proceed step by step (Sheehan, 1976, p.53).

Yet, Kissinger has been criticized for having prevented Israel from going forward with direct bilateral disengagement talks in November 1973; further, he presumably discouraged Israel repeatedly from being too forthcoming in negotiations (Fisher, 1981). This might have been unavoidable in the course of step-by-step diplomacy but such a proceeding can without a doubt be an obstacle to progress.

##### **4.3.1.1 Kissinger as communicator increases trust**

A good deal of Kissinger's actions consisted of communicative measures. Kissinger served as a communication channel between Israel and Egypt, whose head of states did not talk to each

other until Sadat visited Jerusalem in 1974. In talks with Sadat and Golda Meir, respectively, he “explained persuasively to either side the constraints upon the other” (Fisher, 1981, p.100). For example, with regard to the general political constellation, Meir, in contrast to Sadat, could not make decisions all by herself but had to consider the opinion of the Knesset, Israeli’s cabinet. Yet, Sadat, on the other hand, had to take into account possible reactions of the other Arab states when making concessions – he just could not risk a rupture with them. More specifically, before the Geneva conference, Kissinger in fact explained to Meir Sadat’s constraint that “he [Sadat] can’t afford to withdraw from his own territory which he has reconquered” (Sheehan, 1976, p. 63). In talks with Sadat, prior to the Six-Point Agreement, Kissinger pointed to Israel’s need of and insistence on security, which would prevent it from being able to withdraw to the 1967 borders.

This aspect of Kissinger’s mediation initiative seems insofar important as it ideally increases mutual trust and understanding between the parties. According to Fisher (1981), the effective communication of an opposing side’s interest and ideas is one of the most useful functions a third party can perform. On the other hand, a third party as a communicator might prevent the parties themselves from talking to each other. Many negotiations were done with Kissinger and one of the parties exclusively; the other party was not present. While, finally, Kissinger helped the parties to communicate with each other, he did not so until he deemed it necessary.

Being the linking element between the parties, Kissinger also controlled the pace of the negotiations by holding back demands and concessions made by one party as already indicated. Shortly before the January 1974 accords he did not convey all of Israel’s demands about political conditions to Sadat when he visited him. In the same way, he did not always convey all of Israel’s concessions to Egypt in order to be able to exploit these with regard to Egypt’s concession-making in the future. Whatever motive he had to do so; as already mentioned, he has been criticized for this style of mediation.

#### **4.3.2 Power Differences**

Among the factors that Bercovitch and his colleagues investigate with regard to their influence on international mediation outcomes<sup>42</sup> I found the parties’ power or power differences to be of particular interest and easily applicable. Bercovitch found out that the

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<sup>42</sup> I will not analyze each factor in every cluster but I will pick out some factors to demonstrate their existence in the current case.

smaller power differences between the parties are, the greater is the effectiveness of the mediation attempt. This also seems to be an acceptable assumption since an unbalanced power relationship between the parties could prevent the stronger party from making concessions or compromises that are beneficial to mediation success.<sup>43</sup>

During the October War, this seems to be exactly what Kissinger took to heart. Before Egypt attacked, the military power lay in the hands of Israel. As mentioned above, it possessed such an arsenal of (mostly) American weapons that it had one of the ten largest armies in the world. Due to the Egyptian attack on October 6<sup>th</sup>, 1973, the Israelis lost numerous tanks and aircraft while observing that Egypt had crossed the Suez Canal and progressed into the Sinai desert. Kissinger, who sensed that the balance of power was shifting, took the chance to “use the war as an extension of diplomacy” (Sheehan, 1976, p.51) and tried to achieve a stalemate having the Egyptian Third Army trapped and preventing the Israelis from destroying them. Moreover, Israel’s defeats, even though they were finally reversed, signaled to each participant that Israel was not infallible in war – Sadat had achieved his goal in the war. According to Hopmann and Druckman (1981), this enhanced Israel’s willingness to negotiate with greater flexibility than before.

Concerning the other clusters mentioned in Bercovitch’s work, I will not say much new. The strategy Kissinger employed was persuading and directive: he used both “carrot” and “stick” to direct the parties towards each other. Yet, I will not delve into detail here since it was analyzed in another section. The same goes for the nature of the mediator: We already learned that the Kissinger’s credibility was a crucial factor in the calculations of the parties. Along with Bercovitch we can say that the more he was *perceived* as reasonable, acceptable and knowledgeable, in other words, credible with respect to his actions, the better for the mediation outcome.

In addition, the October War illustrated why Bercovitch rejects the requirement of the mediator’s impartiality so much. Kissinger’s measure of withholding arms supplies to Israel invoked the impression of disloyalty towards the Israelis; however, as mentioned above, Kissinger pursued this line of action for the purpose of counter-balancing power differences (among other things) between Israel and Egypt.

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<sup>43</sup> Other people argue that the very existence of power differences would contribute to a quick conflict settlement. (Deutsch, 1973)

### 4.3.3 Conclusion

It can be seen that it was Kissinger largely contributed to moving the parties in one or the other direction. This is in line with the evaluation of Touval (1982) that “admirers and critics alike agree that Kissinger was the moving spirit in these negotiations” and that he played a “decisive role” (p.226). Interesting questions that arise from this insight are, for example, to what extent his achievements could be contributed to his personality and to what extent his status as Secretary of State of a superpower did him favor. Yet, this and other questions should be and are investigated elsewhere. Kissinger’s achievements in the Middle East are summed up by Touval (1982):

Kissinger was a successful mediator not only because he brought about the conclusion of five agreements, but also because his mediation produced some of the political consequences at which his efforts were ultimately aimed. The elimination of Soviet influence in Egypt and the establishment of American dominance there was one. But more important in a historical perspective, the Egyptian-Israeli agreements that he helped to negotiate initiated the evolutionary process that led to the conclusion of the Egyptian-Israeli peace treaty. (p. 283)

However, we should not forget to turn to the more controversial aspects of Kissinger’s mediation. I have already indicated some points of criticism with Kissinger’s work since this section would not be an evaluation of Kissinger’s mediation attempt if it did not include more critical comments as well. Although it will be hard to apply the following issues to more formal concepts that we heard about earlier and although the criticism is again far from comprehensive, I will nevertheless not neglect them in order to give the reader a more balanced view on Kissinger’s mediation initiative during and after the October War.

Much of the criticism on Kissinger in the literature is related to his style of mediation, the so-called and well-known step-by-step diplomacy or partial approach. Step-by-step diplomacy concentrates on the less crucial and smaller problems first while postponing the bigger or whole problem.

The November Agreement proved this strategy to be at least partially successful: Egypt and Israel learned that it was possible to come to an agreement with the enemy; minor accords set precedents. In this sense, mutual trust grew. Second, Kissinger seemed to have an idea of

what was possible at the current time. Since a withdrawal deep into the Sinai was unconceivable for Israel, there was no other choice than to stick to small steps of progress.

Yet, these small steps make Kissinger look like he did not have “a clear idea of what positive goals might be attainable this time” (Quandt, 1977)<sup>44</sup> beyond the sole avoidance of an escalation of the war by arbitrary steps. However, being able to judge what is possible at the very moment is surely a skill that marks a good mediator.

On the other hand, a drawback of Kissinger’s strategy was most certainly his neglecting of the heart of the Arab-Israeli quarrel, that is, the Palestinian question. As we can see today, this problem is far from solved and still threatens the stability of the region. As Hopmann and Druckman (1981) point out,

conflicts may be even more difficult to resolve and opportunities to settle the fundamental conflicts may become even more elusive in the years ahead (p.224).

This was written in 1981 and has not been proved wrong. In this context, also, Kissinger is accused of duplicity with regard to his assurances to Arabs regarding a role for the Palestinians (Fisher, 1981).

Further, it already might have become clear that Kissinger’s prevalent interest in the conflict seems to have been the increase of U.S. influence and power in the Middle East<sup>45</sup> rather than concentrating solely on the resolution of the conflict. Indeed, Fisher (1981) notes that his priority goal was “to produce a personal success so that, in theory, at some later time he could do something more important” (p.102). This is in accordance with his step-by-step approach, which would prove, “step by step”, that he was able to move things. And again, this would increase not only his credibility but also his influence and power. However, focusing only on the power aspect of a conflict might mean to neglect the more important issue of bringing durable peace to the Middle East.

In order to keep and increase power, Kissinger wanted to keep the U.S. “in the game”. Related to his activities as a “communicator” as outlined above is the fact that first, in

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<sup>44</sup> Quoted in Kochan (1981).

<sup>45</sup> The order of Kissinger’s or U.S. interests as these are listed in the literature (see, e.g, Hacke, 1985, and Sack, 1988) reflects exactly that.

November 1973, he apparently discouraged Israel from directly meeting Egypt in disengagement talks. However, ideally, the mediator will

have the parties recognize that their basic task [is] to reach agreement with each other, [and] not to strike bargains with the [mediator] (Fisher, 1981, p.102)

As already indicated, a mediator might become so involved in the conflict that he becomes a third party in the conflict and misses out leading the parties towards each other. In this desired case, however, the mediator would have become dispensable.

## 5 Conclusion

### 5.1 Summary

We have seen how the concepts of the game-theoretic model find their counterpart in the conflict in October 1973 and mediation attempt by Kissinger in 1973. It was shown that a specific situation (October War mediation and Six-Point Agreement) can be understood in the above specified terms:

1. An Iterated Prisoners' Dilemma seems to be a suitable model to reflect the characteristics of an enduring conflict between two nations such as Egypt and Israel in 1973. In this respect, particularly the dominant strategy of fighting is a central concept.
2. The mediation game models two important aspects of mediation: The strategy of mediation and the credibility of the mediator. Both are identified as being relevant to the mediation outcome by the theoretical literature on mediation and could also be identified as being part of Kissinger's mediation attempt. Therefore, the game-theoretic model can be considered to reflect these aspects of the mediation process correctly.

The mediator's task from his point of view is addressed in the theoretical literature but there is no general consensus on it, which is obvious regarding the numerous and diverse mediation events. Yet, the game-theoretic model allows its formalization, which follows from the mediation game and the mediator's assumed rationality. This aspect seems to be a bit more difficult to evaluate in terms of whether or not Kissinger adhered to it since it is formulated rather prescriptively. Whether or not Kissinger followed this prescription in the course of his mediation initiative I cannot judge. However, *given* the mediation game and the rationality assumption, the definition of the mediator's task is certainly legitimized.

Further, the quality of mediation outcomes was discussed. Among several notions of success of mediation, the concept of behavioral change seems most useful and fruitful since it focuses on the relationship between the parties *after* an agreement and does not limit itself to the agreement solely. Again, it was shown that some behavioral changes did occur subsequent to Kissinger's intervention.



## 5.2 Criticism

However, the game-theoretic model of Maoz and Terris that I altered and re-formalized fails on several levels:

1. It lacks a weighting of the mediator's strategies in terms of influence on the outcome.
2. It does not capture important aspects of mediation.
3. It is impossible to evaluate the outcome in terms of important notions of success.

Let us discuss this criticism in detail: First, the game-theoretic model does incorporate several strategies, like information provision etc. but fails to weigh these in terms of influence on the outcome. All strategies are handled equally. In contrast, Bercovitch's analysis reveals that some strategies do not result in as successful outcomes as others, for example more "directive" strategies, do. A model on mediation should allow this grading.

Second, an obvious question is if the model is sufficiently complex to reflect the mediation structure and process. Does the model do justice to the essence of mediation? Does it incorporate many if not all aspects we find crucial for mediation success? What these aspects were I tried to find out by looking at the factors which the theoretical literature on mediation considers to be generally contributing to mediation success. In particular, I tried to identify reasons for the success of Kissinger's mediation attempt during the October War and the subsequent period; hence, the focus in the last section was on aspects of mediation I extracted from the literature on Kissinger's mediation and mediation in general but which are not part of the presented model.

Having done this, it can be seen, unfortunately but maybe not surprisingly, that the model does not capture the diversity of mediation styles and measures on the international stage. We have seen that some aspects of Kissinger's mediation were not incorporated in the model but were taken into account by the less formal approaches. Yet, these aspects were crucial to mediation success. Take, for example, communication measures that go beyond the pure delivering of messages to the other party.<sup>46</sup> Kissinger's services as a communicator may not directly influence the parties' willingness to agree to a proposal. This might be the reason why this aspect does not *per se* occur in the model; Kissinger's communication measures were not

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<sup>46</sup> If that is possible at all without distorting the message in one way or the other.

an asset itself that could direct the parties towards a settlement. However, being visible for the conflicting parties and central for his work as a mediator, this aspect should be included in a model in one way or the other.

Other factors like situational pressure and Kissinger's measures to increase trust between parties most likely influence the conflicting parties' decisions (since this factor was identified to influence the success of mediation) and should also enter the model. On the other hand, all sorts of personal qualities of the mediator like tact, intelligence, persuasiveness, humility, etc. (Touval, 1982), for example, as well as reputation and earlier experience can be considered to be contained in the notion of credibility and do not need to be modeled as separate factors.

But the gravest point in my opinion is the following: The game-theoretic approach itself does not allow a *qualitative judgment* on the outcome of mediation. In order to evaluate this statement consider the following: Game theory is a formalism that models decisions and outcomes but does not evaluate the outcomes *except* in terms of whether or not they are the result of "rational" decisions. Behaving rationally does not automatically result in mutually "good" outcomes, especially not in conflict situations like the Prisoners' Dilemma, which has an FF equilibrium that leaves each party with its second worst payoff. In contrast, when a mediator intervenes he wants to create a situation in which the parties, if they behave "rationally" arrive at the desired outcome, that is, cooperation in the framework of a mediated settlement, and modeling the mediation game has to reflect this; this is why, ideally, the equilibrium in the mediation game lies in the CC outcome. But this outcome, once it is implemented, hardly allows more than one conclusion: The parties have stopped fighting and do cooperate with each other and the mediator, and this decision is based on rational considerations.

In our case, Kissinger's mediation attempt can be called successful in terms of game theory. In fact, he managed to move the parties away from the Fight-Fight outcome and agree to a settlement, of which the conditions he proposed. At the same time, he was successful in terms of other notions like behavioral changes, fairness etc what was shown above.<sup>47</sup> Yet, this can hardly be inferred or concluded from the "game-theoretic success" mentioned before. However, the evaluation of the outcome of a mediation attempt should be done not only in

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<sup>47</sup> Definitely not in terms of a comprehensive settlement; the Palestinian Problem presses for a solution at least as urgently as ever, as mentioned above.

terms of the mere absence of fight, if one wants to improve mediation. By referring to the other notions of success it should rather be evaluated how long the settlement lasts, or how satisfied the parties are, which will without a doubt influence the future relationship. Therefore, it is highly recommended to include the robustness or behavioral changes and other notions that I have not dealt with here in the notion of success of mediation. This is hardly possible within game theory but other formalisms might succeed where game theory fails. Also, other less formal approaches like Bercovitch's do take this aspect of mediation into account.

If one is familiar with the original paper of Maoz and Terris, one will notice that my approach follows their path in illustrating the model by presenting a case study, which I do, as I dare say, in more detail and care. Yet, it is questionable if just one case study can give advice on how a mediator should proceed in future conflict situations. With respect to identifying the more *general* progression and structure of mediation, I found that statistical approaches like Bercovitch's seem to be suited better since by relying on a large number of mediation attempts significant and universal conclusions can be drawn. One should question that by investigating only one case study one could generalize to all other mediation events.

Also, although the principle of the mediator's task has been specified, the prescriptive formulation of it is difficult to take as guideline for the solution of concrete conflict situations since it is rather a formal and logical consequence of the mediation game combined with game-theoretic assumptions. It will be difficult to assign values to the variables included in order to actually realize the task.

### **5.3 Prospects**

From the beginning of this thesis on the overall purpose of investigating the model and the mediation event in October 1973 has been the improvement of mediation. Did the thesis serve this purpose? Despite the criticism in the preceding section, we can indeed draw conclusions, which point to a useful aspect in game theory with regard to modeling mediation.

By investigating and applying a game-theoretic model of mediation, the thesis shows that game theory, on the one hand, can indeed be used to model certain aspects and decision problems occurring in the mediation situation. It could be illustrated that the task of a mediator consists of moving the opponents away from their mutual Fight strategy,

which they are “bound to” – given they behave rationally. It could also be shown how the strategy of the mediator is may increase or decrease the parties’ commitment to a settlement; as well as his credibility, which the mediator can in principle influence. These insights alone might contribute to an improvement of mediation, even though it should not be ignored that the game-theoretic quality assessment of the outcome, that is, the implementation of the (unique) equilibrium in the mediation game, is hardly sufficient for a general assessment of the effectiveness of mediation.

Since the presented model seems to be limited with regard to representing other quite central aspects and concepts one might discard this approach for the modeling of mediation given the objective is not only to understand the processes in mediation but also to improve them and – in terms of the question at the beginning of this thesis – to achieve the best results. Game theory is excellent in cutting complex situations down to what is the essence of a situation and enables us to capture the situation directly but it should not do so by neglecting important aspects. Possibly due to the diversity and complicity of mediation situations and measures on the international level, however, with regard to mediation, game theory succeeds only to a certain degree. One could attempt to extend the model in such a way that it includes what I found crucial for mediation. However, I doubt that this is possibly for the reasons named above.

The act of modeling mediation, be it by game theory or any other formalism, is nevertheless not in vain. By modeling mediation – and other issues as well –, detailed questions have to be answered, for example, how mediation is initiated. Again, there might be too numerous conditions that invoke mediation to actually model this process, but the mere fact that the answer to this question is necessary to model the situation ideally leads to more research on this topic. In turn, more insights provided by political scientist or historians will enable the more precise modeling of mediation situations. Also in this respect, the model can contribute to the idealistic goal of improving mediation.

## References

- Allison, G. T. (1971). *Essence of Decision: Explaining the Cuban Missile Crisis*. Boston, MA: Little, Brown & Company, Ltd.
- Bard, M.G. (2004). *Myths & Facts Online - Israel's Roots*. Jewish Virtual Library. Available from <http://www.us-israel.org> (retrieved 03/31/04).
- Bercovitch, J. (1989). International Dispute Mediation: A Comparative Empirical Analysis. In K. Kressel & D.G. Pruitt (Eds.), *Mediation Research: The Process and Effectiveness of Third-Party Intervention* (pp. 284-299). San Francisco: Jossey-Bass.
- Bercovitch, J. (1992). The Structure and Diversity of Mediation in International Relations. In J. Bercovitch, & J.Z. Rubin (Eds.), *Mediation in International Relations – Multiple Approaches to Conflict Management* (pp. 1-29). London: Macmillan Press Ltd.
- Bercovitch, J., & Houston, A. (1996). The Study of International Mediation: Theoretical Issues and Empirical Evidence. In J. Bercovitch (Ed.), *Resolving International Conflicts*. Boulder, CO: Lynne Rienner Publishers.
- Bercovitch, J., & Regan, P.M. (2002). Mediation and International Conflict Management: A Review and Analysis. In: Z. Maoz, A. Mintz, C.T. Morgan, G. Palmer, & R.J. Stoll (Eds.), *Multiple Paths to Knowledge in International Relations: Methodology in the Study of Conflict Management and Conflict Resolution*. Lanham, MD: Rowman & Littlefield.
- Brams, S.J., & Kilgour, D.M. (1988). *Game Theory and National Security*. New York: Basil Blackwell.
- Brams, S.J., & Taylor, A.D. (1999). *The Win-Win Solution – Guaranteeing Fair Shares to Everybody*. New York: W.W.Norton & Co.
- Buck, A.J. (1999). *An Introduction to Game Theory with Economic Applications*. Available from: <http://courses.temple.edu/economics/Game%20Outline/index02.htm> (retrieved 03/31/04)
- Deutsch, M. (1973). *The resolution of conflict*. New Haven: Yale University Press.
- Fisher, R. (1981). Playing the Wrong Game? In J.Z. Rubin (Ed.), *Dynamics of Third Party Intervention: Kissinger in the Middle East* (pp. 95-121). New York: Praeger Publishers.
- Frei, D. (1976). Conditions affecting the effectiveness of international mediation. *Peace Science Society (International) Papers*, 26, 67-84 (1976).
- Hacke, C. (1985). *Amerikanische Nahost-Politik – Kontinuität und Wandel von Nixon bis Reagan*. München Wien: R.Oldenburger Verlag.
- Hartung, A. (Ed.) (1979). *Zeittafel zum Nahost-Konflikt [1920-1979]*. Berlin: Berlin Verlag.
- Hopmann, P.T., & Druckman, D. (1981). Henry Kissinger as Strategist and Tactician in the Middle East Negotiations. In J.Z. Rubin (Ed.), *Dynamics of Third Party Intervention: Kissinger in the Middle East* (pp. 197-225). New York: Praeger Publishers.
- Kennedy, R.F. (1968). *Thirteen Days*. New York: W.W. Norton & Co.
- Kissinger, H. (1982). *Memoiren 1973-1974*. München: C.Bertelsmann.
- Kochan, T.A. (1981). Step-by-Step in the Middle East From the Perspective of the Labor Mediation Process. In J.Z. Rubin (Ed.), *Dynamics of Third Party Intervention: Kissinger in the Middle East* (pp. 122-135). New York: Praeger Publishers.
- Kydd, A. (2003). Which Side are You On? Bias, Credibility and Mediation. *American Journal of Political Science*, 47 (4), pp. 597-611. Available from [http://www.cefir.org/Papers/kydd\\_ps-13-10-03.pdf](http://www.cefir.org/Papers/kydd_ps-13-10-03.pdf) (retrieved 03/31/04).
- Maoz, Z., & Terris, L.G. (2002). *The Strategy of Mediation: A Rational Model of Mediator's Choices*. Unpublished manuscript, prepared for presentation at the annual meeting of the American Political Science Association, Boston MA, August 29-September 1, 2002. Tel-Aviv University. Formerly available from <http://spirit.tau.ac.il/poli/faculty/maoz/maoz.html> (retrieved May 2003).

- MERIP – The Middle East Research and Information Project (2004). Available from: <http://www.merip.org> (retrieved 03/31/04)
- O'Neill, B. (1994). Game Theory Models of Peace and War. In R.J. Aumann & S. Hart (Ed.), *Handbook of Game Theory, Vol. 2*. Amsterdam: Elsevier Science B.V.
- Osborne, M.J., & Rubinstein, A. (1994). *A Course in Game Theory*. Boston: MIT Press.
- Parker, T. (1989). *The Road to Camp David – U.S. Negotiating Strategy towards the Arab-Israel Conflict*. New York: Peter Lang Publishing.
- Quandt, W.B. (1977). *Decade of Decisions: American Policy toward the Arab-Israeli Conflict, 1967-1976*. Berkeley: University of California Press.
- Raiffa, H. (1982). *The Art and Science of Negotiation*. Cambridge, MA: Harvard University Press.
- Rubin, J.Z. (Ed.) (1981). *Dynamics of Third Party Intervention: Kissinger in the Middle East*. New York: Praeger Publishers.
- Sack, R. (1988). *Die USA im Nahost-Konflikt – Von der Intervention zur Partizipation*. Trier: Wissenschaftlicher Verlag.
- Schelling, T.C. (1980). *The Strategy of Conflict*. Cambridge, MA: Harvard University Press.
- Sheehan, E.R.F. (1976). *How Kissinger Did It: Step by Step in the Middle East*. In J.Z. Rubin (Ed.), *Dynamics of Third Party Intervention: Kissinger in the Middle East* (pp. 44-91). New York: Praeger Publishers. Reprinted from *Foreign Policy* magazine 1976, vol. 22.
- Susskind, L., & Cruickshank, J. (1987). *Breaking the impasse*. New York: Basic Books.
- Tibi, B. (1991). *Konfliktregion Naher Osten – Regionale Eigendynamik und Großmachtinteressen*. München: C.H.Beck.
- Touval, S. (1982). *The Peace Brokers – Mediators in the Arab-Israeli Conflict, 1948-1979*. Princeton NJ: Princeton University Press.
- Touval, S., & Zartman, I.W. (1989). Mediation in International Conflicts. In K. Kressel & D.G. Pruitt (Eds.), *Mediation Research: The Process and Effectiveness of Third-Party Intervention* (pp. 115-137). San Francisco: Jossey-Bass.
- Tucker, A.W. (1980). On Jargon: The Prisoners' Dilemma. *UMAP Journal*, 1, 101-103.
- United Nations (1967). Resolution 242 of 22 November 1967. Available from <http://domino.un.org/unispal.nsf/0/59210ce6d04aef61852560c3005da209?OpenDocument> (retrieved 03/31/04).
- United Nations (1980). *Die Palästinafrage – Ein kurzer historischer Überblick*. United Nations Information System on the Question of Palestine. Available from <http://domino.un.org> (retrieved 03/31/04).
- Watzal, L. (2001). *Feinde des Friedens*. Berlin: Aufbau Taschenbuch Verlag.
- Wolf, A.T. (1995). *Hydropolitics along the Jordan River – Scarce Water and its Impact on the Arab-Israeli Conflict*. Tokyo, New York, Paris: United Nations University Press. Available from <http://www.unu.edu/unupress/unupbooks/80859e/80859E00.htm#Contents> (retrieved 03/31/04).
- Wood, E. (2003). *Modeling Robust Settlements to Civil War: Indivisible Stakes and Distributional Compromises*. Santa Fe Working Paper, 03-10-056 (2003). Available from <http://www.santafe.edu/sfi/publications/wpabstract/200310056> (retrieved 03/31/04).
- Zartman, I.W. (1981). Explaining Disengagement. In J.Z. Rubin (Ed.), *Dynamics of Third Party Intervention: Kissinger in the Middle East* (pp. 148-167). New York: Praeger Publishers.
- Zartman, I.W., & Berman, M.R. (1982). *The Practical Negotiator*. New Haven, London: Yale University Press.

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## **Declaration**

I hereby declare that, except where otherwise indicated, this document is entirely my own work and has not been submitted in whole or in part to any other university.

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