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Tacit Cooperation Between Enemies: Two Case Studies

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Tacit Cooperation Between Enemies:

Two Case Studies

A Thesis

Presented to the

David M. Kennedy Center for International and Area Studies

Brigham Young University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

Kristina Handy

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This thesis by Kristina Handy is accepted in its present form by the David M. Kennedy Center for International and Area Studies of Brigham Young University as satisfying the thesis requirement for the degree of Master of Arts.

Valerie M. Hudson, Committee Chair

Stan A. Taylor, Committee Member

10 March 94

Date

Valerie M. Hudson, Graduate Program Coordinator
CHAPTER 1
TACIT COOPERATION

Introduction

In the research that follows, I attempt to form a framework to contextualize two case studies of cooperation that are born from situations of conflict like war. It seems that in studying war, conflict or competition, players uniformly team up on opposing sides - such as the intricate alliances of the Axis and Allied powers of World War II or the more elegant black and white on a chess board. But considering the complexities of human motivation, what would happen if a black-suited "pawn" saw more eye-to-eye with its white counterpart than it did with its own king, queen or leader. The uniforms are still the same color, but the dynamics of the game and how it is played have changed. It is in these changes, particularly in the context of war and international conflict, where my interests begin.

War is a tool for conquest, liberation and defense. It is a means of promoting ideologies, a way to gain economic strength, a show of national honor. To the politician, war is both opportunity and doom; to the poet, "the eternal
reciprocity of tears."¹ In 1985, John Stoessinger compared war to Nietzsche's great abyss that had a life of its own. War is the subject of volumes of works from political scientists and philosophers to painters and poets. And it is by far the most common thread in studies of international politics.

The rules and weapons of war change as its case studies increase with each passing year. While prediction and prescriptions too often elude students of national and international conflict, we find our peace in controlling the variables in our own war studies.

In my research I assert that cooperation can spring from conflict and war. More specifically, I propose that when an international conflictual relationship occurs that resembles an iterated Prisoner's Dilemma, and that meets certain conditions, cooperation can emerge. Cooperation and conflict are the variables in this research project.

The Parameters of Cooperation

While I will wait until the next section of this chapter to define cooperation in detail, I want to explain that I will be looking for incidents of lower-level bureaucratic cooperation. I do this because of the question of authority. This question is, who is controlling the

¹This is taken from the final line of Wilfred Owen's poem "Insensibility." Owen was a British poet killed in action during World War I.
policies that are propelling two or more states into a situation of conflict or war, or who is maintaining the conflict? I will avoid this very large tangent by selecting the lower-level bureaucrat as the actor/instigator of cooperation. Lower-level bureaucrats are in the position to be *agents* of national policy--not to make policies themselves.

Conflict, on the other hand, originates from a higher source, to be maintained at all levels, including the "pawns" in the field. In other words, a national authority creates and maintains conflict and cooperation emerges illicitly from the lower ranks. This is why I will use the term "tacit" cooperation. It is cooperation that is mostly unsanctioned and that emerges at the source and not from authoritative command.

As stated above, the conflictual situation from which cooperation emerges will resemble an iterated Prisoner's Dilemma. Because I will be using a game to describe conflict, I will borrow from game theory literature. The initial idea to use game theory comes from Robert Axelrod's *Evolution of Cooperation*. *Evolution of Cooperation* is a major source for the development and definition of what I term tacit cooperation. It is also in this book where I am introduced to Tony Ashworth's research on World War I trench warfare, my first case study of tacit cooperation. The second case study I will use is the relationship that
developed between Paul Nitze and Yuli Kvitsinsky during the Intermediate Nuclear Forces (INF) talks, 1981-1983. I will utilize Strobe Talbott's many chronicles of the talks to piece together the events which led to tacit cooperation between the two negotiators.

Though the world seems far removed from a war like World War I and the superpower Cold War conflicts have passed away with Soviet communist rule and the Berlin Wall, conflict and war is nevertheless an incessant part of the human experience. In the introduction to his work, War and Change in World Politics, Robert Gilpin notes that although we have evolved through centuries of technological developments and those developments "have altered relations among states," war is a "continuing unsolved problem" (7) and ergo, fundamental change in world politics has not taken place (213). James Rosenau takes Gilpin to task saying that he neglects "the possibility that similar outcomes [i.e. war] may result from vastly different structures and processes" (73). Whether the structures of international relations have changed or not, and whether or not war and conflict are inevitable outcomes in human relations, the world system historically and currently is filled with incidents of conflict and war. Until that changes, the topics of cooperation and conflict will be high on many people's agendas to study and understand.
Definitions

Tacit cooperation, the lower level bureaucrat and how they are defined in terms of Game theory

Robert Keohane defines cooperation as the "mutual adjustment of state policies to one another" (1984, 31). Another scholar, Jerome Bernstein disagrees, arguing that cooperation is forced. Cooperation is not so much the result of decisive policy as it is the "realization of the limits of power politics and the policies and strategies that ensue therefrom" (1989, 97).

Most of these definitions, not discounting the many others attributed to political literature, have, for the most part, involved cooperation among political or ideological allies. Therefore, how does one define a collaborative association between hostile rivals or enemies?

As mentioned above, the cooperation that I seek in this case study analysis, and that I develop the framework to contextualize, occurs among lower-level bureaucrats that lack the power to form and implement policies that could change the structure of the conflictual relationship in which they are involved. In other words, privates in an army cannot make the decision to either end or escalate a battle they are participating in. Tacit cooperation would therefore be an unsanctioned or even illicit act or form of
agreement sometimes spoken, sometimes symbolized, known and developed by the agreeing parties involved.

Tacit cooperation can, but does not necessarily demand, altruistic reasons for taking place. It is reasonable to assume that cooperation occurs when two or more individuals or groups see a benefit involved in the collaborative process, and as a result, cooperate for the reason of gaining personal benefit. The nature of payoffs and strategies are described in the field of game theory.

In the "classic" *Fights, Games, and Debates*, Rapoport delineates the difference between a fight and a game stating that

the essential difference, as we see it, is that a fight can be idealized as devoid of the rationality of the opponents, while a game, on the contrary, is idealized as a struggle in which complete "rationality" of the opponents is assumed (Rapoport 1960, 10).

I emphasize, rationality is indispensable for a game theorist. In the body of this research, relations between opposing entities, such as two nations at war, will be analyzed as a "game" and not a "fight." Furthermore, Rapoport states that in a game, opponents cooperate because they follow the rules of the game absolutely. Also, "... there is a 'community' between the opponents. The opponent speaks the same language; he is seen not as a nuisance but as a mirror image of self, whose interests may be
diametrically opposed, but who nevertheless exist as a rational being" (1960, 9).

In certain games such as Prisoner's Dilemma or Stag Hunt, cooperation may not be the primary choice but could be considered to be the highest payoff strategy over time. The point is to make cooperation the "rational" choice. Cooperation, therefore, is the strategy that will yield the highest mutual payoff. This definition is based on a Prisoner's Dilemma\(^2\), which will be the framework for my case study analysis. The next chapter will contain a description of its use in this research.

Conflict and Conflictual Relationships

As conflict is defined in terms of a game in this research, it is important to begin understanding how payoffs motivate or define players' interactions. I mentioned that conflict begins at the authoritative level of a nation's government. The game for the policy-makers involves a zero-sum payoff system: Win=10, Lose=0. To the lower-level bureaucrat involved in the heat of conflict, I submit the

\(^2\)Below is the payoff matrix of a prisoner's dilemma

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Cooperate</td>
<td>Defect</td>
</tr>
<tr>
<td>Cooperate</td>
<td>3,3</td>
<td>0,5</td>
</tr>
<tr>
<td>Defect</td>
<td>5,0</td>
<td>1,1</td>
</tr>
</tbody>
</table>

Table I
game can resemble a Prisoner's Dilemma with a pay-off matrix that could yield positive pay-offs for those who wish to cooperate (refer to footnote 2). Therefore, "conflict" is the dilemma in the Prisoner's Dilemma that can be broken with a proper conditional strategy.

**Focus & Scope of Research**

Robert Axelrod has developed a theory of the evolution of cooperation which describes the emergence of cooperation among contending entities. It is from this theory that I will create a more specific framework in which to reference collusion among political rivals and/or "enemies." Axelrod argues that an iterated Prisoner's Dilemma, the game called tit-for-tat, is the most fit to promote cooperation, and that cooperation will occur under a given set of necessary conditions.

Other pieces of "cooperation" literature will also provide fundamental theoretical background material to form the tacit cooperation framework. Michael Taylor's *Possibility of Cooperation*, describes the emergence of cooperation similarly to Axelrod, yet he delineates more strategies than just tit-for-tat as being able to support cooperation as an equilibrium\(^3\). One contribution that

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\(^3\)An equilibrium is a saddle point. It is the place in a payoff matrix that both player's strategies rationally fall into. In a prisoner's dilemma, the equilibrium strategy will be \((D,D)\). See footnote 2 to see the Prisoner's Dilemma payoff structure--\(D,D\) or 1,1 shows the equilibrium strategy.
Taylor makes specifically is his notion of altruism. He defines altruism as not being zero-sum based. Payoffs are interdependent (111).

A further scholarly input will be Kenneth Oye's *Cooperation Under Anarchy*. His contribution will be to enhance and widen the necessary conditions of emergent cooperation. An important point that Oye makes is that a conditional strategy is only effective if it is easily recognized by all playing the game. Black and white choices such as cooperation or defect make strategies more transparent. Furthermore, Oye discusses the number of game players and how size will affect the outcome of a game.

**Methodology**

I will explicate two historical episodes using a game theoretic framework of cooperation. I will use a case study approach to show that at least twice in the international setting tacit cooperation emerged. The theory of tacit cooperation will be drafted in Chapters 2 and 3, followed by the case studies. A set of necessary conditions will be extracted which will describe what sorts of structures will, in theory, promote and possibly eventuate cooperation among players in the game. The information for the case studies will be taken, primarily, from secondary sources and the explication of each will depend upon an inescapably subjective interpretation of events. However, as the
framework that I am attempting to examine is not an explicit factor in the interpretation and description of events from these sources, there is a sort of "check and balance" in using these materials. A small portion of my research will come from primary sources--mostly memoirs.

**Literature Review**

Steven Brams in *Superpower Games: Applying Games to Superpower Conflict* states that conditional game theory would involve the following implicit conversation, "if you cooperate, so will I (with certainty); but if you do not, my response without saying what it is--will be appropriate (1985, 14-14). The conditional strategy described in this research is a tit-for-tat that can break the Prisoner's Dilemma. As Axelrod states, "tit-for-tat" is a "policy of cooperation on the first move and then doing whatever the other player did on the previous move (1981, 308). Axelrod is cited repeatedly in the game-theory cooperation literature as testing the durability and success of strategies like tit-for-tat that lead to cooperation. Axelrod has become my window to the field of game theory.

Without going into too much detail, the study of games received widespread attention in 1944 with the publication of von Neumann and Morgenstern's *Theory of Games and Economic Behavior*. As Robert Leonard notes in the edited book, *Toward a History of Game Theory*, though game theory
"now plays a central role in economic theory...," the ideas of 1944 were primarily appropriated and developed...by mathematicians (Weintraub 1992, 29). Now, game theory has become so interdisciplinary that the British biologist Richard Dawkins can devote an entire chapter in The Selfish Gene (1989) to describing ways in which Robert Axelrod, an American political scientist, has taken the mathematical theory "in exciting new directions" (202).

But what does game theory do for a political scientist? As James Schellenberg (1982) wrote in The Science of Conflict, game theory was created especially to analyze situations involving conflicts of interest (167). He continues explaining that to a social scientist, a mathematical approach such as games is useful in constructing theories. It is clear with such titles as The Big Two: Soviet American Perception of Foreign Policy (Rapoport, 1971) and Superpower Games: Applying Game Theory to Superpower Conflict (Brams, 1985) that many political scientists have found a niche with this theory. Because game theory almost exclusively examines conflict and cooperation, the international political pundit has much to gain by its elegance. Robert Axelrod is no exception.

In my research, I start in the Axelrod school of evolutionary cooperation and apply the conditional strategy, tit-for-tat, to explain two very different international situations where cooperation develops. The thrust of my
research is in describing cooperation amidst conflict. While cooperation literature has existed in political studies, particularly but not exclusively with the use of game theory, the study of tacit cooperation as defined in this research has not. Axelrod has given me a theory and strategy to reference cooperation that develops during conflict, but he has left open as to which level the cooperation can occur. With further research and the use of two other political scientists' game theoretic approaches (Oye and Taylor), I am able to select who I want to study as the agents of cooperation—the lower-level bureaucrat.

International political studies in cooperation have never wholly involved the individual actor unless that actor was the authority symbolically representing the state. Most studies of cooperation between rivals or enemies involve wartime alliances or other state-centric approaches, such as studying why the Soviets signed the non-aggression pact with the Nazis in 1939. And of course, a systemic approach is commonly used to look at how the bi-polar political world was a form of U.S.-Soviet cooperation. Many who utilize this systemic approach view the U.S.-Soviet rivalry as two nations with identical fates (Yanov 1989). Several scholars note that the superpowers used the rivalry to gain international superiority, especially over lesser developed nations (Bernstein 1989 and Metz 1989). Other scholars view Cold War politics as cooperation because a hot war between
the United States and Soviet Union never broke out (Craig 1990 and Kremenyuk in Midlarsky et al 1994).

Game theory has often been utilized in describing Cold War superpower relations, as Rapoport did in 1971 with The Big Two: Soviet American Perception of Foreign Policy. And recently Manus Midlarsky uses Axelrod's tit-for-tat to explain in part why "the great powers [did not] learn to cooperate prior to 1914, as they appear to have done during the Cold War era" (Midlarsky et al 1994, 26). Research involving cooperation among individuals has not received as much attention in international studies. In many cases, however, the level at which cooperation is analyzed is ambiguous or left to the reader to determine, as in Axelrod (1984) and Robert Kuenne (1988 and 1989). Also, outcomes of cooperation are more readily studied than causes. As one group of scholars notes in 1962, "the important question of the antecedent of cooperative relationships has receive relatively little consideration [compared to its consequences]" (Kelly et al, 1). Particularly in studies of international politics, this statement remains somewhat true. However, with the onset of the post Cold War era taking everyone by surprise, many scholars such as Rosenau (1990) are suggesting radical new approaches to describe what is happening in the world today.

This research does not have such a lofty goal. It attempts simply to funnel an international situation of
conflict down to the individual level to see what can happen given a set of circumstances. It is accounting for the small personal choices in the big picture of international exchange.
CHAPTER 2

THE FRAMEWORK: TACIT COOPERATION

"By understanding the conditions that allow [cooperation] to emerge, appropriate actions can be taken to foster the development of cooperation in a specific setting"

Axelrod 1984, 6

Introduction

"Under what conditions will cooperation emerge in a world of egoists without central authority" (Axelrod 1981, 306)? This is the question that Robert Axelrod studies in his book The Evolution of Cooperation and it is through answering this question that a theory of tacit cooperation, in part, can begin to take shape. In The Evolution of Cooperation, Axelrod uses game theory and builds upon its assumptions. He explains why he utilizes game theory in developing his ideas on cooperation:

... a way is needed to represent what is common to ... situations without becoming bogged down in the details unique to each. Fortunately, there is such a representation available: the famous Prisoners' Dilemma game (1984, 7).\(^1\)

Axelrod uses game theory's Prisoners' Dilemma to create a pithy explanation of his study into cooperation. Though it

\(^1\) The game of Prisoner's Dilemma was created in the early 1950s by Merrill Flood and Melvin Dresher.
is clear that details of specific cooperative relationships are lost in the process of simplification, strength comes in the ability to identify common factors in different instances of emerging cooperation.

Because the study of cooperation is not solely a deliberation of the social sciences, I must therefore borrow from various fields which have already established mathematical, philosophical and theoretical proofs of the utility of cooperation theories. As the literature stands, the study of cooperation is a multi-disciplinary inquiry, Axelrod and Taylor being two of few political scientists quoted in this body of literature. The following section will consist of a rather generic explanation of game theory and its application here in this research.

Game Theory and Prisoners' Dilemma

Game theory has mathematical origins. As stated previously, the theory of games was not formalized until the late 1940s and early 1950s\(^2\) by von Neumann and Morgenstern (Smith 1982, 1). Though originating as a mathematical concept, game theory's progeny quickly became useful to economists. Today, it is used by not only mathematicians and

\(^2\) Game theory is generally attributed to von Neumann in his papers of 1928 and 1937; although recently Frechet has raised a question of priority by suggesting that several papers by Borel [1953] in the early '20s really laid the foundations of game theory" (Luce and Raiffa 1957, 2).
economists, but also political and other social scientists and hard scientists such as microbiologists and geneticists.

As Luce and Raiffa have stated, "In all of man's written record there has been a preoccupation with conflict of interest; possibly only the topics of God, Love and inner struggle have received comparable attention" (1957, 1). As Luce and Raiffa note further, the study of "conflict of interest" is so vast and diverse that one must "attempt to abstract . . . certain large class[es]. . . into a mathematical system" (2). By abstracting, the two theorists warn, important details will be lost, limiting the utility of the theory of games to specific fields and research.

One scholar notes that:

In the decades that followed von Neumann and Morgenstern's creation, the mathematical theory has matured and the applications have multiplied--you need only to look under the heading "game theory" or "prisoner's dilemma" in the abstracts of psychology, sociology, or political science journals to see the proliferation (Davis 1983, xiii-xvi).

The study of game theory has expanded dramatically since the 50s when Luce and Raiffa wrote their classic Games and Decisions. Game theory has offered many scientists a terse description of the oft confusing decision-making process.

The study of game theory is concerned with the interaction of decisions. These interactions are what define the game. The theory "considers how one should make decisions and, to a lesser extent, how one does make them"
(Davis 1983, 3). The decisions may depend, of course, upon not only the game being played but also the strategies selected by the number of players entering the specified game.

Game theory's major goal, according to Andrew Colman, is to find a solution to the game at hand. He states:

A solution is a specification of the decisions which will be made and the outcome which will therefore be reached if the decision makers are rational according to criteria laid down by the theory (1982, 5).

Using game theory as a framework, one can research the interactions of participants under a given set of circumstances. Colman states that the behavior of decision makers, in or not in accordance with the "normative prescriptions" of the theory is a problem for empirical research. The theory merely tells the outcomes of game interactions and strategies if and when they are played under the given set of conditions. It does not attempt to guess why a player or players behave certain ways.

Tangential to this line of reasoning is the discussion of game theory's elemental assumption: the notion of rationality. Bertrand Russell states "Reason has a perfectly clear and precise meaning. It signifies the choice of the right means to an end that you wish to achieve" (1954, 8). According to many game theory scholars,

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3 The use of game theory in this research will be limited to two-party as opposed to the n-person games.
however, "the term rational is far from precise, and it certainly means different things in the different theories that have been developed" (Luce and Raiffa 1957, 5). Nonetheless, the concept of rationality used here is that the persons playing the game will use a strategy that will coincide with their desires, fears or needs; that is, every player will minimize the potential for maximum loss (as in a Prisoners' Dilemma game). Axelrod adheres to this assumption of rationality (1984, 18).

A Prisoners' Dilemma is a game which defines rationality, in essence, very positivistically. The scenario by which the game gleans its title is presented thusly:

Imagine that you and your accomplice have been charged with having committed a crime and are now prisoners, sitting in separate cells, unable to communicate, and awaiting trial . . . There is enough circumstantial evidence to convict both of you, so even if you both remain silent you both will be convicted and locked up for a year. But if you admit your guilt and help to convict your silent partner, you will be free and he will be put away for ten years. The reverse happens, of course, if he confesses and you remain silent; and if you both confess, then unfortunately you both will get nine years (Campbell 1985, 4).

The rules are, you want the minimal amount of years in jail possible, you don't care about how many years your accomplice gets, you both know the other knows the scenario, and neither of you know how the other will decide. The choices, according to a Prisoner's Dilemma, are either to
confess guilt, which is defined as non-cooperation or "defecting" or (D), or to be silent which is defined as cooperation (C). If you confess (D) and your partner remains silent (C), you will receive the highest payoff—to go free. If you don't confess but your partner does, you will get the lowest payoff—10 years in prison. The second highest payoff is when both of you remain silent (C,C)—only one year in prison. The dilemma is derived from the suspense of uncertainty. Though it is better not to take the risk of unilaterally defecting, to remain cooperative may leave you with a "sucker's payoff (in this case, 10 years in prison)."

In their book, Prisoners' Dilemma: A Study in Conflict and Cooperation, Rapoport and Chammah add insight into the problem of rationality in game theory. They note how the definition of rationality specifically affects the interpretation of a Prisoners' Dilemma. They state:

In...Prisoners' Dilemma, the rational choice of strategy by both players leads to an outcome which is worse for both than if they had chosen their strategies "irrationally." The paradox remains unresolved as long as we insist on adhering to the concept of rationality which makes perfect sense in zero-sum games but which makes questionable sense in non-zero-sum games (1965, 13).

The result that Rapoport and Chammah derive from their experimentation with the Prisoners' Dilemma is that rationality changes when the game is played over a long period of time. That is, in an iterated Prisoners' Dilemma,
the rational choice becomes, predominantly, *all cooperate*, as opposed to *all defect*.

It is through looking at a Prisoners' Dilemma-based game that a theory of tacit cooperation can be constructed. If lower level bureaucratic interaction can be seen as representing a Prisoners' Dilemma game, and showing how the paradox of this game can be broken in theory,\(^4\) a framework can be fabricated to understand the emergence of tacit cooperation.

Robert Axelrod and The Evolution of Cooperation

In his book *The Evolution of Cooperation*, Robert Axelrod explores the notion of breaking the rationality paradox in the Prisoners' Dilemma game. His argumentation is based on one particular strategy, tit-for-tat, and how the use of this strategy in the Prisoners' Dilemma brings the emergence and evolution of cooperation.

As Axelrod notes, there are four areas of inquiry in which Prisoner's Dilemma is used as an analytical tool. First of all, in the study of social psychology, it is used to understand and examine human behavior. Axelrod states,

\(^4\) The idea of paradox works together with the definition of rationality. According to the Prisoner's Dilemma game, the only rational strategy is to defect, in which case, the payoff is comparatively low (low compared to mutual cooperation but not as low as unrequited cooperation). The paradox is that the best strategy is not the rational strategy. It is not until the paradox is broken that the best strategy becomes the one that yields the highest payoff. "Best" is defined here, noticeably, as the strategy which has the highest mutual payoff.
"The iterated Prisoners' Dilemma has become the *E. coli of social psychology*" (1980, 5-6). A second use of the Prisoners' Dilemma has been for the purpose of conceptualizing social processes. "Many of the best-developed models of important political, social and economic processes have the Prisoners' Dilemma as their foundation" (1980, 6). The third body of literature discusses how the Prisoners' Dilemma, as an abstract game, aids the scholar to analyze characteristics of elemental universal issues (not specifically related to any field, like psychology or economics), such as why people do or do not cooperate, and what is rationality (as Luce and Raiffa discuss) etc. Finally, a fourth body of literature concentrates on how to eliminate the dilemma. Such writers as Rapoport and Axelrod have discussed this issue at length. This is the realm that my research will focus on, although as Axelrod states, none of these fields "reveal very much about how to play the {Prisoners' Dilemma] very well" (1980, 6).

Axelrod's thesis is that a new approach is needed which will allow players to learn more about choosing the strategy in a way that the dilemma will be broken, and as such, he proposes a new strategy. The strategy comes from a test he performed by way of tournament.

In the second chapter of *The Evolution of Cooperation* Axelrod describes a tournament which he arranged to find the most fit strategy that would break this Prisoners' Dilemma
and would support the emergence as well as maintain cooperation. The tournament was designed in the form of a round robin, and over sixty people from many disciplines, countries and ages participated in it. The overall winner of the tournament was a strategy by the name of tit-for-tat created by Anatol Rapoport.

A tit-for-tat strategy is defined by Axelrod thusly, "TIT FOR TAT, starts with a cooperative choice, and thereafter does what the other player did on the previous move" (31). The success of tit-for-tat is dependent upon the following proposition, Axelrod's first: "If the discount parameter, \( w \), is sufficiently high, there is no best strategy independent of the strategy used by the other player" (15). The "discount parameter" refers to the weight \( (w) \) of future moves (particularly the next move) relative to the current move. Therefore, \( w \) refers to the percentage of the payoff that is lost on each consecutive move (this constitutes the rate of discount). Assuming, for example, that 1 is the current status of payoff (being 100 percent), \( w \) (a number greater than 0 but less than 1) will be subtracted from 1, giving the discount parameter.\(^5\) The point Axelrod makes is that the future is important enough to

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\(^5\) The discount parameter is part of the mathematical formulae that test the viability of the theory of games. Its use here in this research will be purely metaphorical. In other words, the discount parameter will not be used in mathematical formula (as this is not a quantitative research), but will be used in an abstracted sense, as Axelrod does, describing in certain instances of conflict whether or not the discount parameter is high or low.
"cast a shadow back upon the present and thereby affect the current strategic situation" (12).

According to Axelrod, the discount parameter must be high in order for a tit-for-tat scenario to function. The terminology "discount parameter" can be substituted for the more poetic words: shadow of the future. As Oye questions, "how does the shadow of the future affect the likelihood of cooperation" (Oye 1986, 13)? According to the first proposition noted above, there is no better strategy than that of your opponent if the shadow of the future in the relationship is relatively high. Consequently, in partial answer to Oye, cooperation will not emerge if future play is either not important or, of course, if there is no future play. In a single play Prisoners' Dilemma, it is obvious that a situation of all D (that is, all defect) would emerge because no expectation or ability to predict (and subsequent trust) has yet been learned by each player. Therefore, a first condition noted is that the shadow of the future must be high.

Martin Shubik states this indirectly by showing that in infinite games (supergames, or iterated games), the

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6 A single play game--that is, each player only makes one move will not lead to agreement in the absence of a sovereign (Oye 1986, 12). Because there is not sufficient time or moves for players to utilize a conditional strategy, if cooperation were to emerge, it would have to be forced by some sort of authority having power over all players involved.
equilibrium can fall into another category than just all defect. He states,

Suppose the game . . . is repeated endlessly. Then the payoffs could become unboundedly large. However, the average payoff per period will remain bounded. It can be argued that it is reasonable to assume that the players will consider their payoffs per period and will also take into account that, if they manage to achieve any temporary stationary state better than (0,0) [all defect], this can be enforced as an equilibrium point. . . Suppose each [player] has chosen [his or her] first move in the initial subgame; then if each thought that the other would switch to [his or her] second move forever in retaliation for a violation of the status quo, this would be enough to run the joint maximum into an equilibrium.

Of course, a stationary state better than all defect (1,1) would either be all cooperate (3,3) or perfect exploitation (5, 0). However, according to Shubik's reasoning, perfect exploitation could not be an equilibrium because it entails a worse stationary state than (1,1) for one of the players. Therefore, the only other equilibrium state better than all defect (D,D) or (1,1) is all cooperate (C,C) or (3,3).  

The problem is, how do we know if the "shadow of the future" is high? Logically, when two parties come together with a very sublime purpose the discount parameter will be high. Empirically, however, the matter is more complex. If two bureaucrats or "players" representing the rationalities of conflicting entities interact, who is to say that their understanding of the "shadow of the future" will be the same?

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7 See Chapter 1, footnote 2 for the example payoff matrix.
or is even present? The shadow of the future could be high because of the personalities involved in the situation (meaning that they have interacted over a long period of time and knowledge makes mutual behavior patterns more easily predictable--i.e., trust), or because the ambiance of the situation makes decisions more portentous (namely, with the threat of nuclear war or death etc. . . .). The discount parameter will have to be argued rather than empirically tested, though analysis should present a strong case one way or the other.

Merely because egoists recognize the fact that their futures will be interactive does not mean that cooperation will emerge. A high discount parameter is a necessary condition, but by no means does it constitute a sufficient condition. Nevertheless, an essential conclusion is that cooperation emerges over an evolutionary process and not spontaneously. The argument is that cooperation has the ability to emerge in a world dominated by conditions of unconditional defection, if and only if small clusters of individuals are able to interact cooperatively (Axelrod 1986, 145-50). Furthermore, the only way cooperation can emerge is if it is conditional, or in other words, echoing Axelrod, if interaction is based on reciprocity. Herein lies a second necessary condition.

The effectiveness of strategies based on reciprocity is argued in the context of Axelrod's tournament where tit-for-
tat won. Tit-for-tat is a strategy of conditional play that should naturally emerge under the first necessary condition: if there is a large shadow of the future. It becomes clear that these two necessary conditions are intrinsically linked.

A further condition that Axelrod noted when he tallied up the tournament scores was that a strategy to compete well had to be "nice," that is, not being the first to defect and being willing to forgive limited defection by the other player. One of the major reasons these "nice" strategies did so well in Axelrod's tournament (the eight top-ranking strategies were "nice" strategies) was because they scored extremely well in playing each other. The true test of strength then was to see how well the nice strategies did against the "meanies." And in the Tournament, tit-for-tat was the most prosperous. Axelrod warns against strategies that are not considered to be nice. In defining a "nice" strategy, there are three points which he discusses.

First of all, a strategy should not allow a player to defect early in the game without provocation. This could and probably will lead to mutual defection. Secondly, the most fit strategies in the tournament were the most forgiving. Axelrod states, "Forgiveness of a rule is its propensity to cooperate in the moves after the other player

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8 The term "meanies" is defined here as one that does not forgive and that begins play with defection and not cooperation.
has defected" (1980, 14). In other words, once provoked, a nice strategy will allow the provoker to make amends--cooperation is still, therefore, possible. Axelrod's tournament showed that certain strategies did not do well because they were not forgiving. If a strategy is not forgiving, then it is impossible for cooperation to develop after the first defection. Thirdly, a strategy should not be overly pessimistic about the prospects of its opponent defecting on the initial move. Some strategies try to create a probabilistic model of their opponent's strategy. A strategy like tit-for-tat does not care about the likelihood of its opponent defecting and in fact, it is very "optimistic" about its opponent's initial moves because it unconditionally cooperates on the first move. In sum, "nice" strategies must be employed in order for cooperation to evolve. This is the third necessary condition.

A rather implicit assumption (which also becomes a fourth necessary condition of emerging cooperation) is that the system in which entities interact is anarchic. If a hierarchy of authority is present, forcing cooperation or defection, then logically, cooperation or defection does not naturally emerge and are not naturally sustained. When two nations or entities are conflicting or at war, there is no central authority as such.9 However, lower-level

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9 Some would argue that the United Nations has some power as a central authority figure. While this may be the case between national
bureaucratic activity may be determined by a hierarchical authority. As discussed in chapter 1, it is when the 'lesser' bureaucrats disobey authority that they become their own central authority. But even at this 'sub' level of activity, there is no authority overseeing both sides of conflict, God notwithstanding.

A central authority, such as a head of state or governing body, can thwart the emergence of cooperation if it sees the cooperative effort as undermining the sanctity of its power. This idea is directly opposing traditional Hobbesian thought on the state which says that the state is necessary because humans naturally exist in a state of Prisoners' Dilemma. Because cooperation will not emerge, it must be coerced.10 The U.N. developed from this type of analysis. However, Axelrod is breaking the canon and stating that a central authority is not only non-existent but it is also not necessary and in most cases, detrimental for 'natural' cooperative interaction to emerge.

Axelrod notes that "a variety of ways to resolve the dilemma of the Prisoners' Dilemma have been developed" (1981, 308). He states further that in these various solutions the strategy is to allow an additional activity to

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10 See Taylor (1987) for further insight into the theoretical fundamentals of Hobbes and Hume, and their theoretical relations to Prisoner's Dilemma.
alter the "strategic" interaction between or among the players so that the initial problem that needs to be solved no longer exists, or the very nature of the problem has changed fundamentally. Under normal conditions in which a Prisoners' Dilemma would exist, however, these types of remedies are not available (Axelrod 1981, 307-8).

These "normal conditions" are constituted in four parts according to Axelrod. First of all, when "there is no mechanism available to the players to make enforceable threats or commitments," (1981, 308) then the players must know every other possibility open to themselves and their opponents in order to receive optimal payoffs. In conditions of anarchy (or no central authority) there is no way that threats or commitments can be ensured. Only the player has the power to guarantee the move he or she makes (by, of course, making that move); as Axelrod state, "words not backed by actions are so cheap as to be meaningless" (1981, 308).

A second condition is that it is virtually impossible to predict an opponent's strategy, particularly on each subsequent move. This means that a player must make his or her move according to a move that is already made and not according to a move that could be made (no second-guessing the opponent). Also, as Axelrod notes concerning the existence of this condition, "it eliminates the possibility of reliable reputations such as might be based on watching
the other player interact with third parties" (1981, 308). As a result, strict attention must be paid by each player to interpret moves by the other player. Moves must be made so that there is clarity.

A third condition is that the players cannot get rid of their opponents nor can they run away from the interaction (Axelrod 1984, 11). A player cannot decide who his or her opponent will be. For this reason, strategy is not based on personality, but the type of interaction and the type of game. Players will behave accordingly.

Finally, there is no way to change the opponents' payoffs. Once the payoffs are changed, the game changes. For example, a Prisoners' Dilemma is defined by its payoff matrix. Even a slight change in the payoff structure may change the game to chicken or something else. "The utilities [or payoffs] already include whatever consideration each player has for the interests of the other" (Axelrod 1981, 308).

With these four conditions occurring naturally in a Prisoners' Dilemma, Axelrod presents his theory of evolutionary cooperation, and the conditions necessary for cooperation to emerge.
Axelrod's critics

Hirshleifler and Coll\textsuperscript{11}

According to these authors, unless Axelrod's exact assumptions are present in a Prisoners' Dilemma situation, then his theory of evolutionary cooperation using a tit-for-tat strategy does not function as he states it will. Hirshleifler and Coll claim that Axelrod's tournament analysis "had . . . idiosyncratic features that ought to make analysts cautious about drawing very sweeping conclusions" (370). First of all, they note that assuming that a Prisoners' Dilemma corresponds to very many real-life settings can be hazardous. They state that there are a "host of other significant classes of mixed-motive interaction patterns" such as Chicken, Battle of the Sexes and so forth. The most damaging criticism here is whether or not one can assume that a Prisoners' Dilemma actually coincides with a physical or real-to-life situation.

While all forms of conflict may not be "real-life" Prisoners' Dilemmas, I argue that the case studies developed in chapters 4 and 5 do resemble Prisoner's Dilemmas. As for the trenches of World War I, the two sides are given a choice: 1) to kill (D) and 2) shoot and miss to avoid dispensing damage (C). In a one-play game, "D" would be the

\textsuperscript{11} Hirshleifler and Coll's critique of Axelrod is taken from their article in the \textit{Journal of Conflict Resolution}, June 1988.
rational choice because as Axelrod states, "weakening the enemy is an important value, [as] it will promote survival if a major battle is ordered in the sector" (1984, 75). It is a Prisoners' Dilemma because the payoff equation and set of choices are ordered thusly ("\( > \)" represents "greater than"):

1. Shooting to kill while your enemy does not (D,C) \( > \)
2. Neither side shoots to kill (C,C) \( > \)
3. Both sides shooting to kill each other (D,D) \( > \)
4. Your enemy shoots to kill but you do not (C,D) \( > \)

For the Intermediate Nuclear Forces talks the choices for the negotiators are 1) To make no concessions (D) and 2) To compromise and make an arms control deal. The set of choices would be ordered like this:

1. Your negotiating counterpart makes all concessions while you make none. You please yourself and your bosses (D,C). \( > \)
2. Both sides make concession. You both do your job well. Your bosses are not pleased (C,C). \( > \)
3. Neither side makes concessions. You both do the job you were assigned to do (D,D) \( > \)
4. You make all concessions and look like a poor negotiator. You may lose your job. Your counterpart makes no concessions.

These two cases neatly fit a Prisoners' Dilemma scenario. It is true that this game does not explain all human interactions, as Hirshleifler and Coll state, but it can
arguably explain some situations, such as the two identified here.

A second argument Hirshleifler and Coll make is that Axelrod impetuously assumes that interaction would be random. In other words, he did not allow for social stratification. Perhaps under certain circumstances, only men, for example, will interact with other men, or doctors with other doctors etc., which according to the critics will change the nature of the model. Axelrod's tournament was randomly tested. That is, every strategy played every other strategy. Hirshleifler and Coll are arguing that under some interactive situations certain strategy combinations will always be at play and that there is no way for a tit-for-tat strategy to invade these strategy combinations (therefore, evolution is not possible). In the article, however, Hirshleifler and Coll never prove this point. In fact, they run their experimentation using the same assumption that Axelrod uses, namely that populations interact randomly. They state,

> Our analysis will be conducted solely within an underlying Prisoners' Dilemma payoff environment, and we will be assuming a homogeneous, unstructured population of individuals (371).

Whether or not their criticism is sound, the authors do not validate their own claim on this point. They do not even address this point once they made it. In the two cases I research here, this point becomes moot anyway because the
players interacting are arbitrarily assigned to each other. In other words, they must interact, either to defect or cooperate.

A third and cogent argument they make is that the results of the tournament are dependent upon the structure of the tournament itself. Axelrod's tournament was conducted as a round robin which allowed all strategies to play each other. Hirshleifler and Coll show that if it had been an elimination tournament and not a round robin, then the results would have been quite different. As they state, "Tit-for-tat does poorly in elimination contests, as it is essentially never able to defeat any competing strategy in a one-to-one encounter" (1988, 370). It is a difficult argument to deflect because in an interactive situation where Axelrod claims cooperation can evolve, does the assembly of participants more resemble a round robin or an elimination tournament (or neither)? While this may have little bearing on any given interactive situation, the argument stands on paper.

Finally, Hirshleifler and Coll argue that the strategies that were presented in the tournament were representative of a limited number of experts and that even such basic strategies such as All Cooperate and All Defect were overlooked. They state,

[T]here are two other strategies, not entered into his contests, that are simpler still. These are the archetypical Prisoners' Dilemma options: always play
**COOPERATE** and always play **DEFECT**. It turns out that there are important circumstances in which . . . these "archetype" strategies can defeat **TIT-FOR-TAT** and displace it in evolutionary competition (371).

Axelrod readily admits that the strategies were limited. He even describes a strategy that would beat tit-for-tat, namely tit-for-two-tats, which defects only when the opponent defects twice (1984, 38-40). Tit-for-two-tats is a more forgiving strategy. Axelrod's assumptions are based on how certain strategies fared in his tournaments; he derived general principles from the tournament results, not absolute answers about the tit-for-tat strategy. His point was to show how and under what conditions cooperation can evolve, not why a tit-for-tat should be used in all Prisoners' Dilemma situations.

Rapoport responds to Hirshleifer's and Coll's argument by stating that, "it would be futile to conclude that because TIT-FOR-TAT performed best in the contests and simulations, an eye-for-an-eye policy 'works,' or that it is most effective in eliciting cooperation" (1988, 399). He continues on this point by noting that the most important lesson to learn from a Prisoners' Dilemma strategy is not what "will happen" or even what is "likely to happen," but what "can logically happen." The most consequential fact to look at in Axelrod's tournament, according to Rapoport, is that tit-for-tat, while doing very poorly in the one-to-one contest, excelled in the round robin. Thus a general notion that is logically reached is that when tit-for-tat and other
"nice" strategies are played, everyone is better off (Rapoport 1988, 400). The fact that tit-for-tat can be thwarted by another "nice" strategy defends Axelrod's evolutionary theory more than it adds to Hirshleifer's and Coll's critique.

Michael Taylor

Taylor, in his book *The Possibility of Cooperation* (1987), critiques Axelrod on a point of interaction. Taylor states,

Even where, in the real world interactions are truly pairwise, they are most unlikely to take the strange form assumed by Axelrod: his analysis hinges on the assumption that an individual will play out the whole of an infinite supergame with one other player . . . (1987, 70).

While this may be the case in general real-life situations in an iterated Prisoners' Dilemma, it is precisely Axelrod's perspective that could explain (at least in part) interaction between lower-level bureaucrats and the tacit institutions of cooperation that develop because of long-standing and/or sublime interaction. As tournaments go (for Axelrod), the socialization that is examined takes place in pairs. This, according to Taylor, is a limit in and of itself, because, as stated above, this could very well be a misinterpretation of real-life interactions which tend to be more flexible than Axelrod asserts in *Evolution of Cooperation*. The actual critique is not of the results of
the tournament,\textsuperscript{12} but of the assumptions that can be made in practical use of these results. The fact remains that under these conditions of pairwise interactions, the results of Axelrod's tournaments show general but substantial theoretical matter. This "theoretical matter" will be the substance of this thesis and its relevance to actual occurrences of tacit cooperation. Nevertheless, in response to Taylor, I will use Axelrod's theory to describe pairwise interactions.

\textbf{Conclusion}

Axelrod's assumptions become a point of reference to framework this notion of tacit cooperation. With his conditions (among other conditions which will be the focus of chapters 2 and 3), we can begin to index the phenomenon of tacit cooperation. Though the "proofs" that Axelrod makes in his book and in various articles, may or may not test his theory (according to the critics), the sketch he provides for the emergence of cooperation is very useful and will, as noted, be used here in this research. He has laid out several conditions that if in place, may lead to cooperation. These conditions are (briefly in reiteration): 1) a large shadow of the future (or a high discount parameter), 2) a reciprocal or conditional relationship, 3)

\footnote{\textsuperscript{12} Taylor's calculations actually coincide with Axelrod's. See Taylor 1987, 69.}
The strategy used in playing the game must be "nice," and 4) a lack of central authority (or a degree of anarchy). If it can be speculated that these are in place at the time of a 2-party conflict, then a definition, both conceptual and tangible can be made for tacit cooperation. Chapters 4 and 5 contain two different historical incidents that resemble cases of cooperation. I will abstract both cases using this framework to identify the emergence of tacit cooperation.
CHAPTER 3
FRAMEWORK II: ADDITIONS TO AXELROD

Introduction

This section will examine two other theorists who have contributed to cooperation literature. Both theorists, Michael Taylor and Kenneth Oye, use the principles of game theory (in Prisoners' Dilemma and other two-person games) as their framework just as Axelrod does. Their contribution to this research will show that there are other conditions which will allow cooperation to emerge in a Prisoners' Dilemma. When some or all of these conditions (including Axelrod's) are present in interactive situations, or naturally come because of interaction, cooperation can emerge, or, as Axelrod would say, evolve. It must be noted that no formula can be made to decide how many of these conditions are necessary for cooperation to emerge. Some conditions, such as a high discount parameter, hold more importance than others. However, by the same reasoning, the personalities and how they interact may have more to do with resulting cooperation than any present condition in the interactive situation. Taylor and Oye add insight into less tangible conditions, such as altruism, that might allow cooperation to emerge.
Michael Taylor's The Possibility of Cooperation

Michael Taylor, in his book The Possibility of Cooperation\(^1\), attempts to inspect how well a Prisoners' Dilemma correctly represents public goods interactions. He claims that if a Prisoners' Dilemma does accurately represent these interactions, then he wants to examine "the prospects for voluntary cooperation in this game" (1987, ix). It is this examination that will shed some more light on potential cooperation in settings of enmity, mutual mistrust and probable defection.

Taylor critiques the "liberal" justification of the state which asserts that human nature is as diverse as the number of people on the planet. And as such, a social structure--the state--must be set up in order to force people into cooperation. Taylor utilizes issues such as collective action, externalizes, and/or the problem of public goods as the case studies in his research. Though his critique of Hobbes' and Hume's "liberal" thoughts on the state is very stimulating, for this research, Taylor's discussion of cooperation and definition of altruism is more illustrative.

His deliberations on cooperation are similar to Axelrod's in that he presents a set of proofs which show

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\(^1\)The Possibility of Cooperation is the second and revised edition of Anarchy and Cooperation, 1976.
that certain conditions promote cooperation (such as a large shadow of the future), yet he describes more strategies than just a tit-for-tat and an "all defect" as being able to reach an equilibrium.² Another strategy which reaches an equilibrium is when tit-for-tat (called B) plays a mutated tit-for-tat (Called B'). The mutated tat-for-tat is exactly the same except it does not unconditionally cooperate on the first move, it unconditionally defects. The result of this strategy brings about an alternating cooperate, defect, cooperate, defect, etc. This is, of course, not an ideal cooperative situation, yet as Axelrod would argue, it adheres to some of the principles of being a "nice" strategy. However, because B' does not follow rule #3 of Axelrod's nice strategy guidelines, "all cooperate" does not emerge. In this sense, Taylor manufactures a convenient proof for Axelrod's proposition of nice strategies. It seems, however, that in a real dog-eat-dog world a nice strategy would not be likely. Yet, as individuals are confronted with the enemy's face resembling their own, nice strategies are more common as the case studies will demonstrate.

Taylor's major contribution is the notion of altruism. Altruism is defined by him in the following:

²An equilibrium is a saddle point. It is the place in the payoff matrix into which both player's strategies rationally fall. In a simple Prisoners' Dilemma the equilibrium strategy will be (D,D). See Table I for reference--Chapter 1, footnote 2.
The altruism considered here takes a very simple form. Each player is assumed to maximize an additive function of his [or her] own payoff and the other players' payoffs. Just as long as the weight attached to any other player's payoff is non-zero, I shall say that the individual acts altruistically. I shall also consider briefly what I will call "Sophisticated altruism," where a player's utility depends upon the other players' utilities (which might incorporate some form of altruism) as well as their payoffs (111).

Altruism is a difficult phenomenon to trace. It occurs when two players realize their future payoffs are dependent upon each other. In other words, as players strive for the best payoff, by default they end up helping their opponent also reach their best payoff. Taylor continues in this light by noting that it is not assumed individuals can be altruistic only at the expense of being egoistic. Pure altruism denotes a player who wishes to maximize the other person's payoff (115), but cares little or nothing about her or his own. This simply does not happen in relationships among states and frankly, it seldom happens in any setting. Nevertheless, it is a possibility under conditional circumstances (as we shall see later with Tony Ashworth's research and the INF negotiations case study). For the altruist, the Prisoners' Dilemma looks like this:
<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperate</td>
<td>Cooperate</td>
</tr>
<tr>
<td>Cooperate</td>
<td>1,1</td>
</tr>
<tr>
<td>Defect</td>
<td>2,-1</td>
</tr>
</tbody>
</table>

Table II

Though this is not a Prisoners' Dilemma pay-off matrix, it shows how altruists would react to a given Prisoners' Dilemma. Altruists cooperate not because they realize it will be the most beneficial, but because they do not want to exploit the other player. Accordingly, the strategy all cooperate will emerge as the equilibrium, satisfying both players' consciences.

In a Prisoners' Dilemma between conflicting players or actors, pure altruism is not present. However, altruism, as defined here by Taylor, may play an important part in lower-level bureaucratic decision making and negotiation. Its importance, perhaps, is found in the concept that an altruistic attitude can help initiate cooperation. If nothing else, altruism allows rivals and enemies to break through a zero-sum philosophy to allow them to understand

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3See Taylor (1987), page 119 for a full explanation of the different altruist matrices.
that mutual cooperation will yield higher payoffs than mutual defection.

Taylor makes the point that defining all players of a Prisoners' Dilemma as being pure egoists (that is, concerned only with maximizing only his or her own payoff at all costs) is probably not a clear approximation of reality (109). Most people in most situations tend to be a mix of altruist and egoist. Taylor states that there is a way in which altruism can make a difference in a typical Prisoners' Dilemma setting (a setting where it is "rational" to defect). He declares that "if some individuals contribute because they are sufficiently altruistic, then they might thereby provide a 'starter' around which conditional cooperation by others who are rational egoists can develop" (110). In other words, altruism is a condition which, if present, nourishes the seeds of cooperation into sprouting. Once two people began to understand that their futures are even slightly interdependent, then cooperation will see the first signs of spring. In the next chapter, Tony Ashworth's case study of emergent and sustainable cooperation in World War I trench warfare develops the concept of altruism less abstractly.

4It must be noted that when analyzing national conflict, it is safer to assume that people are pure egoists. This, of course, is the problem of the Prisoners' Dilemma—you must assume that people will defect. Rationally, altruism coexists with egoism, though it is the fear of pure egoism that creates this Prisoners' Dilemma.
Kenneth Oye's Cooperation Under Anarchy

Oye states,

Nations dwell in perpetual anarchy, for no central authority imposes limits on the pursuit of sovereign interests. At times, the absence of centralized international authority precludes attainment of common goals. The possibility of a breach of promise can impede cooperation even when cooperation would leave all better off. Yet, at other times, states do realize common goals through cooperation under anarchy (1986, 1).

Again, with the words of Kenneth Oye, there is a sense of paradox as is so common in discussions of cooperation emerging from a Prisoners' Dilemma. He states that even the "possibility" of defection from a promise is enough to "impede cooperation." Oye states that cooperation is not necessarily forced through a sort of "Hobbesian state of nature" or "Lockean civil society." Cooperation is a possibility where chaos or disorder are the rule.

In his analysis, Oye makes three points which he calls "circumstantial dimensions" that explain cooperation as it exists and how it can be promoted in the long term. He first of all notes that by changing the payoff structure of a game, cooperation can be enhanced. His question is stated thusly, "How does the payoff structure determine the significance of cooperation?" Simplified, the answer is when the payoff is high enough to boost a mutual cooperative outcome, then the players will want to
cooperate. In a Prisoners' Dilemma, if the payoff structure is changed so that it is easier to cooperate (and unrequited cooperation does not become the "sucker's payoff") then cooperation will emerge, but, at the same time, the game will change. Conversely, if mutual cooperation (all C) receives a lower payoff than mutual defection (all D), then in all probability, the game will not yield a cooperative outcome. Though Oye's first point is somewhat off the mark for this research, as I am describing a Prisoner's Dilemma configuration, it does become useful for describing the point at which a cooperation strategy is abandoned for a defection strategy.

In his second section Oye discusses the "shadow of the future" that Axelrod, Taylor, and so many other scholars have addressed. His conclusions are, of course, the same:

Under iterated Prisoners' Dilemma, a potential defector compares the immediate gain from squealing with the possible sacrifice of future gains that may result from squealing. In single-play Stag Hunt, each hunter is tempted to defect in order to defend himself against the possibility of defection by others. A reputation for reliability, for resisting temptation, reduces the likelihood of defection (14).

This sense of reliability comes from the mutual realization that the future has a hold on the present in that decisions made in every move of every game are qualified by the shadow of eventuality. Present and future are interdependent. This notion is reiterated and reinforced
in cooperation literature to the point of conviction. While a large shadow of the future does not constitute a sufficient condition of emergent cooperation, it represents a condition that will, logically, lend itself perhaps more than any other condition to the lessening of mutual defection. And even more logically, the more "cooperative" conditions present in an iterative interactive event, the more likely cooperation will emerge. Oye's third point adds another dimension to the likelihood of evolving cooperative.

He states that the number of players in the Prisoners' Dilemma game also affects the trend towards cooperation or defection. Oye's thesis is that as the number of player diminishes, the more likely cooperation will emerge. He begins with the assumption of altruism stating that "cooperation requires recognition of opportunities for the advancement of mutual interests" (19). The smaller the number of players, the easier this recognition comes—interaction is more varied and can be more familiar (trust will come more easily).

Secondly, as the number of players increases, the more likely one player will defect. Predictability becomes harder and more haphazard and the strategy will more than likely default to "all defect." Thirdly, "as the number of players increases, the feasibility of sanctioning defectors diminishes" (19). A system of free-riding will take place
which in many circumstances can break down cooperative efforts. The smaller the number, the easier it is for team players to focus the punishment on the defector; with more players it is difficult to retaliate without destroying all forms of cooperation.

While a small number of players does not particularly constitute a necessary condition, it is a trend that can be watched in various case studies to see if it is a factor leading to cooperation.

An additional point that Oye makes is that a conditional strategy is only effective if it is easily recognized by all playing the game. He states that black-and-white choices such as cooperation and defect make strategies more transparent. A further necessary condition is that the strategies employed by each or all player must be recognized. In other words, if player A cooperates but player B thinks the opposite, then player A may as well have defected in the first place. Cooperation will not emerge under these conditions of misinterpretation. As a side note, it may be enlightening to note how communication of defection or cooperation is correctly determined by one's foe. Again, Ashworth will enlighten us on this point.
Conclusion

Oye, while reinforcing some fundamental components of this theory of tacit cooperation, adds the new dimensions of number of game players as well as transparency of strategy. All of these ingredients will come together in the following two sections on Tony Ashworth's look at trench warfare and a study of the INF talks. With real-to-life situations represented in these case studies, some of these abstract cooperation conditions can be viewed in the concrete.
CHAPTER 4

WORLD WAR I TRENCH TRUCES AND OTHER FORMS OF COOPERATION

In trench war, a structure of ritualised aggression was a ceremony where antagonists participated in regular, reciprocal discharges of missiles, that is, bombs, bullets and so forth, which symbolized and strengthened, at one and the same time, both sentiments of fellow-feelings, and beliefs that the enemy was a fellow sufferer.

Ashworth 1980, 144

Introduction

Ashworth's study on World War I trench warfare will be the subject of this section. His book represents a case study of tacit cooperation (not defined as such by him) and his analysis when describing the awakening of cooperation provides theoretical insight into how the cooperation began and was sustained.

Robert Axelrod devotes a whole chapter to Ashworth's book in Evolution of Cooperation. Axelrod asks four pertinent questions as he explicates Ashworth's findings: 1) How is it possible that the live and let live system ever started? 2) How did it continue? 3) Why, towards the end of the war, did it break down? and 4) Why was the live and let live system common to World War I but uncommon to other trench wars (74)? All of these questions, if answered by Ashworth's research, might substantiate Axelrod's
assumptions about the evolution of cooperation. These questions will be discussed in further detail in this section.

Axelrod continues to point out that although Ashworth himself never quite states the situation as such, the trench fighting of World War I was an iterated Prisoners' Dilemma. In the short term it was much more logical to destroy the enemy in the far trench than to wait and see whether or not they would kill first. This logic is typical of a Prisoners' Dilemma and in the language of war is stated as, "kill or be killed." Though not a zero-sum game, the Prisoners' Dilemma initially pushes players to opine for the highest possible payoff—assuring the opponent's defeat. It doesn't necessarily occur to the players that, at the same time, both could win or both could lose. It is through this realization that cooperation can begin. But this is one of Axelrod's questions: how does cooperation get started, especially in the situation of war? Ashworth's explanation follows.

Tony Ashworth's Trench Warfare

Ashworth illustrates the title of his book:

Live and let live was a truce where enemies stopped fighting by agreement for a period of time: the British let the Germans live provided the Germans let them live in return. Essentially, the term live and let live denoted a process of reciprocal exchange among antagonists, where each diminished the other's risk of
death, discomfort and injury by a deliberate restriction of aggressive activity, but only on condition that the other requited the restraint (1980, 19).

Other terms used to denote the same mutual behavior were, laissez-faire, rest and let rest, let sleeping dogs lie, tacit truces, mutual obligation element, and many others.¹ Continuing his description of these implicit agreements, Ashworth states that while truces were not always tacit (though they usually were tacit), they were always "unofficial and illicit." He states,

The agreement between antagonists was unspoken and expressed in certain actions—or non-actions—which were meaningful to front fighters but not always to others. Truces were illegal at all times for they were neither created nor legitimated by authority but explicitly forbidden. The unofficial policy of live and let live was the antithesis of the official kill or be killed (19). (emphasis added)

Ashworth continues in his description to further define tacit cooperation and its setting. Truces could occur among few or many troops. He states that truces could occur between just two people, as between two direct adversaries chatting after dinner in no man's land, or could occur among hundreds of troops in an infinite number of ways. His investigation begins with the question: How did cooperation begin? Ashworth states,

¹These terms were not coined by Ashworth himself, but by actual soldiers and officers whose records Ashworth studied for his research. For example, the term "principle of laissez-faire" comes from the war memoirs of Siegfried Sassoon.
At the outset of this study, we must distinguish between problems of the origins of truces, and problems of their persistence through time. Concerning origins, we want to know when and where tacit understandings first occurred, and also how they happened during battle, where each antagonist was ostensibly intent upon killing the other (24).

History has told of such occurrences as "Christmas Truces," but according to Ashworth, cooperation existed before the first Christmas truce of 1914 and in the form of many types of detailed cooperation that overshadow the Christmas truces in significance. Historians of the Great War are generally aware of the Christmas truces and tend to state that they were the beginning and the end of war cooperation. Ashworth shows that cooperation existed before the Christmas of 1914 and extended, in isolated settings, until the end of the war. "The event [of this 1914 Christmas] can be likened to the sudden surfacing of the whole of an iceberg, visible to all including non-combatants, which for most of the war remained largely submerged, invisible to all save the participants" (Ashworth 1980, 24).

It seems that the first sign of tacit cooperation began with meals in early November of 1914. Food was delivered to the trenches about the same time each evening. Both sides, hungry, would stop fighting to eat. Also, under circumstances of inclement weather conditions, the trenches would tend to mirror each other's behavior. One British combatant explains the situation thusly:
It would be child's play to shell the road behind the enemy's trenches, crowded as it must be with ration wagons and water carts, into a bloodstained wilderness . . . but on the whole there is silence. After all, if you prevent your enemy from drawing his rations, his remedy is simple: he will prevent you from drawing yours (Beith\textsuperscript{2} 1916, 224).

Ashworth notes that on "normal" fronts where fighting is constant, one of the first targets is the supply line behind the trench (26). But when reciprocal avoidance of these targets becomes the newly formed (but temporary perhaps) by-law, an unspoken agreement emerges: an agreement not created by hierarchical authority, but by the soldiers in concert themselves. These laws resemble the tit-for-tat behavior that Rapoport and Axelrod examine. Ashworth tries to explain below:

At some point in this empathic process where each antagonist learned that the other shared his needs and priorities, overt fraternisation, rather than covert trucing, was always a possible outcome as, for example, where fraternisation might be necessary to satisfy a shared need.

This line of reasoning also denotes the same sort of "altruism" that Taylor discusses in his analysis. To reiterate, Taylor states, "a player's utility depends upon the other players' utilities (which might incorporate some form of altruism) as well as their payoffs" (111). In other words, the payoff the British received from not trying to

\textsuperscript{2}Beith wrote under the pseudonym Ian Hay. Ashworth, in his book, refers to Beith entirely as Ian Hay.
destroy the Germans, depended upon the payoff the Germans received for the same action. The utilities derived from the futures of both combatants (or players) are interdependent. A quote by Captain Liddell Hart explains the significance of a trench fighter's "future:"

The remains of our battalion, which had been more than eight hundred strong at the outset, set off back across no-man's-land in three small parties--in all less than seventy men, with four officers. We were so weary after six nights with scarcely any sleep that we moved in a stupor, stumbling along painfully, until we reached 'Happy Valley'--a sheltered hollow filled with dumps--where later our dead were buried (23).

Captain Hart also noted in these memoirs that the smell of bacon in the morning "gained its conquest" over the stench of lime covered corpses in so much that, for a time, it brought "tacit truce to the battle front" as well as "preventing the insanity" of the troops.

These breakfast, mealtime, and bad-weather truces began because each side saw that whatever kind of punishment was given out to the other side, was returned equally or sometimes even more heavily as a punishment. The British, for example, by causing or even allowing the travail of the "enemy," was participating in behavior akin to self-persecution. The definition of altruism, however, does not fully allow an understanding of why cooperation emerged between trench enemies. Axelrod has more to say on this issue.
Shadow of the Future

As Axelrod notes in his book, cooperation emerges much more readily over time than it does spontaneously. Under these conditions of trench fighting, was the shadow of the future large?

According to Axelrod's interpretation, the trench troops were rotated out on an average of every eight days. This would leave soldiers very little time to experiment with cooperation. But the important factor that overcomes this time constraint is the process of socialization that Ashworth discusses:

...[T]ruces were maintained not only by British sanctioning Germans, and Germans sanctioning British, but also by British sanctioning British and Germans sanctioning Germans. The former was an interarmy process among antagonists, and the latter an intraarmy process among compatriots... (153).

This kind of "intraarmy" communication occurred on two different levels that Ashworth discusses: 1) interpersonal level and 2) relationships among different weapons groups.

"During combat the aggression of a trench fighter endangered not only the enemy but also his compatriots--especially members of his own section" (Ashworth, 153). To avoid inciting the enemy to aggressive behavior, some soldiers attempted to promote anti-hostile behavior among their comrades. Some of these practices carried on from troop to troop. For example, the troops leaving the trenches would talk to the incoming men about the tacit
accordance that existed with the enemy. Also, as Ashworth notes, (particularly for the British) soldiers would not only suggest and try to promote, but they would enforce cooperation on fellow soldiers. That is, if a soldier were to defect (defect in the sense of game theory and not in the sense of going AWOL) then he would oftentimes receive punishment from his own friends or a fellow soldier. Furthermore, if there was an aggressive soldier type, they would be socialized out of the group who wished to obey the tacit rules of live and let live. There was not only a socialization from battalion to battalion, but within battalions as well. Ashworth describes it as follows:

Consider A, B, C, D and E. At each and every point in time, A simultaneously rewards B, C, D and E by giving up aggression, as B simultaneously rewards A, C, D and E, as C simultaneously rewards A, B, D and E . . . [and so forth]. Moreover, these exchanges are not only synchronic but successive, that is, one set of exchanges follows another at immediately consecutive points of time. Both frequency and intensity of exchange are extremely high and promote strong feelings of fellowship among group members, since the certainty of each that he can rely on every other not to harm by rash action, grows with the passage of time (154).

The note here that "the passage of time" allows reliance to grow is emphasized. Thus, the larger the shadow of the future, the more reliance grows.

Concerning relationships among different weapons groups, Ashworth notes that some groups had greater interests maintaining truces than others (159). For
example, the infantry had more to lose if "live and let live deteriorated into kill and be killed" (Ashworth 1980, 159). A weapons group's interest in maintaining a live and let live system depended inversely on its capability to secure itself from harm. As Ashworth notes,

...[I]nfantry had a high commitment and heavy artillery a low commitment to live and let live. To describe the process of negative sanctions at intergroup level is largely to show how weapon groups with high vulnerability and low capability discouraged groups of low vulnerability and high capability from aggression (160).

On training and at the trench most soldiers are taught the ideology of kill and be killed. With this in mind, decisions made in the present will have a great effect on the future of the decision-makers (decision-makers being the troops choosing what type of aggression to unleash). The live and let live system was not just a convenient alternative, but it was one that would allow an encouraging future.³ This stream of thought gently merges into the next question that Axelrod asks.

How was cooperation sustained?

Ashworth's analysis of trench fighting shows how Axelrod's, Oye's and Taylor's conditions can promote the endurance of tacit/illicit cooperation.

³The shadow of the future is logically large because a decision made in the present to participate in the aggression of war could lead to either personal harm or death in the future. The alternative of promoting cooperation seemed to be quite a reasonable preference.
Ashworth notes that while the evolution of cooperation may be a complex issue, more perplexing is the question of how conditional cooperation was sustained. He seeks for an answer by looking at inter- and intraarmy communication. The question is stated, how did everyone understand the tacit rules, the rules that were never recorded and never spoken? As stated above, there was plenty of intraarmy communication. That is, new troops would come to the war front and the old troops would tell of the common peace that was held between the two sides. When new troops would come in to replace parts of the front line division, they were, in the words of Ashworth, "often instructed in the art of peace as well as war" (29). One British soldier stated to an incoming soldier, "Mr. Bosche ain't a bad feller. You leave 'im alone: 'e'll leave you alone" (MacGill 1916, 84). Many similar manuscripts show that in the "quiet" trenches 4 these sorts of dialogues were common. This is one way that the tacit truces were sustained--through a modification of the image of war that was experienced at the front line itself. However, while this shows how it was sustained because of intraarmy communications, it does not make an adequate statement on how cooperation was sustained among the antagonists themselves. How did they communicate so that each side could tell his enemy was cooperating?

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4The term "quiet" to describe a trench is used by Ashworth to characterize the trenches that were carrying on this tacit cooperation.
Communication

Ashworth states that there were direct and indirect truces in the interarmy setting. "Direct communication involved the use of either verbal or written symbols, such as the spoken word with overt fraternisation (Ashworth 1980, 32). These kinds of truces were almost immediately spoiled by high command. Punishment could include arrest and/or transfer to a very active front line battalion--but generally, troops and troop commanders were merely warned by headquarters to discontinue the truces. The most common of these were the Christmas truces where both sides would agree verbally to put the war to rest for a strict period of time in order to celebrate the holiday or whatever the occasion was. Besides exchanges of peaceful cooperation, the trench fighters would exchange news of the war, sometimes food, an occasionally polite conversation and even once, a soccer game in no man's land. Each cooperative scenario can be described as a tit-for-tat game plan. In almost all memoirs the soldiers state that their actions were dependent upon reciprocal interaction: "we did not snipe them, and they left us alone" (Raimes 1931, 79-80).

Indirect communication entails "inertia" and/or "ritualization." This type of communication was less vulnerable to high command because it was not easily recognized by outsiders (including outside troops). Inertia is defined by Ashworth:
. . . [A] suspension of hostilities happened for no conscious decision or specific agreement, but merely because each side seemed disinclined to aggress the other. Antagonists sometimes shared a vague, general and passive attitude of mind (40).

Just as firing a mortar or sniping the enemy was a very overt act of soldier communication, abstaining from these characteristic and expected actions was conversely a communication of non-aggression. Again, inertia was based on strict reciprocity:

. . . British pacivity was not unconditional, and the Germans knew that if they responded to inertia with aggression, the British would retaliate in kind. On the other hand, the Germans knew also that to reciprocate the British inertia would establish a set of mutually contingent exchanges where neither side exercised its choice to aggress the other (Ashworth 41).

The lack of fighting was, of course, obvious to high command. Their response to such action was to enforce an offensive spirit in the trenches. As Ashworth notes, in the early part of the war, circa 1915, raid orders from high command were not possible due to poor communication. Later years show, however, that with increased communication technology high command not only ordered raids, but they had quotas for numbers dead and numbers captured. All of these types of orders from above made inertia a difficult stance to maintain.

Ritualization as communication was quite different. Ritualization made the appearance of war seem real to high
command. According to Ashworth, it allowed the soldiers to follow the letter of the law without adhering to the spirit of it. Ritualization is fascinating in that the trucing process became so important to the trench fighters that they were willing to deceive top command for the sake of cooperating with the so called enemy. During these truces the enemy, in a sense, became more friendly than high command.

Ritualization was either the routinization of bombing and sniping raids, or it was "perfunctory tactic and weapon use." The haphazard use of weapons would be a signal to the other side that their "heart wasn't in it." In other words, a British soldier would aim high to miss his target, signaling to the German soldier that he did not want to kill. The German soldier, realizing that his adversary across the trench has the ability to aggress and hit his target, reciprocates the action. This is one mode of "perfunctory weapon use." Axelrod notes in his analysis of Ashworth, that the Germans would demonstrate their excellent ability to hit their target by shooting designs (such as a smiley face) in the parapet, thus telling the British that the Germans could kill them if they were so inclined, but instead refrained.

The routinization of aggression is equally as fascinating. Routinization included the larger weapons, such as mortars and larger bombs. A routine would develop
where bombs would be sent to the other side at specific times and in specific places. The schedules did not vary while the cooperative routine lasted. One memoir demonstrates this etiquette:

. . . [T]here hadn't been a single show, merely a few unexciting patrols led by the 'old hand' . . . the way the war was carried on in the Champagne was really ludicrous . . . At 7.22 a.m. half a dozen coal boxes of the six inch variety landed in a bunch on our front line; at 7.25 six of ours returned the compliment. Promptly at noon each side sent over a heavy mortar shell. By way of an evening blessing there was a mutual exchange of coal boxes beginning precisely a 7.22 . . . when the exchange of compliments was due, we retired . . . to our famous concrete shelters . . . On the other side of No-Man's-Land things were presumably just the same. It was all very comfortable (Bucher 1932, 136-7).

Ashworth states that both the Germans and the French were meticulous with their observance of live and let live. Of course tacit cooperation in this form ended when one side, for whatever reasons, broke the truce. Again, the silver rule--an eye for an eye--or tit-for-tat was the by-law.

Cooperation was sustained by these overt as well as deceptive mutual arrangements. Communication seemed to be the key in maintaining the positive tit-for-tat outcome. Also, with a large shadow of the future, cooperation not only emerged, but withstood. A feeling of reciprocal altruism also helped ignite the desire for cooperation. Axelrod's question still remains: Why did cooperation break down towards the end of the war?
How and by whose hand was cooperation terminated?

Ashworth notes that the second phase of trench warfare was more violent and aggressive than that of the first because as he states, the personal, regimental control of aggression typical of trench war of the first phase was replaced in the second phase by an impersonal control. The change was from local to central regulation where the producers of violence no longer directed its disposition (96).

Usually central command was able to force the trench fighter to be aggressive by demanding raids. A battalion commander would know whether or not this unauthorized cooperation was taking place, as noted above, if the number of their own dead were counted at significant numbers or by the number of enemy prisoners taken. At this point, under central command, the live and let live system broke down quickly. As Axelrod comments, a necessary condition for cooperation to emerge is for interaction to take place where there is no central authority inhibiting the players to develop a natural communication which could lead to some kind of cooperation. As Axelrod again notes, the proverbial straw that broke the peaceful camel's back was the "institution of a type of incessant aggression that the headquarters could monitor" (82). Ashworth defines this type of "incessant aggression" as raiding (177). Continuous raiding put an end to tacit cooperation. As Ashworth states,
Raids not only ended truces, creating background assumptions of uncertainty, thus indirectly promoting aggression, but they also generated self-sustaining and direct motives for aggression (200).

The end of the truces triggered the negative reciprocity that opposes tacit cooperation, which is a negative tit-for-tat—an eye for an eye, a tooth for a tooth. Also, as Ashworth notes, these raids provoked the rule of retaliation and counter-aggression, which is escalatory in nature. The evolution of cooperation is then reversed to become the evolution of confrontation and hostility into deteriorating degrees. According to the established necessary conditions of cooperation, a strategy must be "nice" to allow cooperation to continue. Once a strategy becomes unforgiving, it is no longer considered "nice." A retaliatory stance in the trenches will break the trust of the opposing trench and unforgiving strategies will ensue. This was, apparently and unfortunately (or fortunately) the fate of World War I trench fighting.

There was one French example, however, that demonstrates the persistence of cooperation even in the face of adverse authority. This event, occurring in 1917, was know as the French Mutinies. Why did cooperation prevail with the French to the point of mutiny?

The French Mutinies

According to one historian, the incident of the French Mutinies was not just a mere trifle of the Allied forces:
The crisis due to the mutinies of the French armies in the spring and early summer of 1917 brought the Allied cause to within nodding distance of defeat, and could have resulted in millions of lives having been sacrificed in vain (Spears 1966, 11).

As Ashworth notes, these mutinies "were neither isolated nor ephemeral, but widespread and persistent, involving more than half the total number of divisions in the French army" (224). The mutinies mainly consisted of French troops refusing to fire at the enemy unless being fired upon. To an even greater extreme, these troops left the battle field or, in other words, went AWOL. According to General Pétain's memoirs on the mutinies, the rebellion was caused in part by exhaustion in the troops. He states that "hopelessness and pessimism spread to [the army] from the interior, swamping as it did so the mood of superficial enthusiasm, whipped up from above, which had never really taken root" (86).

During the times of these mutinies, tacit truces were also occurring with the Germans. The Germans were not aware that the French were rebelling against their superiors, but they were participating with the French in the live and let live scenario that Ashworth portrays as being so common among the British front lines. According to several sources more than half of all of the French troops participated in these mutinies (151 recorded incidents).

\[5\]J. C. King's *The First World War* (Macmillan) and E. Spears *The Two Men Who Saved France* (Stein and Day) are quoted as references.
Above all, the mutinies show that cooperation was sustained even at the expense of lawfulness. Many were courtmarshalled and as many as 23 were executed for "crimes" pertaining to the mutinies themselves.

**Conclusion**

As cooperation began to emerge among opposing troops, it is clear that "nice" strategies were initially being used to clarify the troops' cooperative intentions. Also, Axelrod's, Oye's and Taylor's other conditions were all recognizable elements of emergent cooperation in Ashworth's study. With Axelrod's amended framework, cooperation, even during war, does not seem so impossible. The framework also gives us the ability to understand how the cooperation was thwarted. It seems that the rationality of the Prisoner's Dilemma was broken and these soldiers found the saddle point of their interaction at (C,C,) until they were directly ordered to raid. This study does not particularly demonstrate that cooperation is a by-products of war, but that concurrently, human aggression is not necessarily the only result of wartime interaction. As the game theorists would say, in a world of "all defect" where tacit cooperation conditions exist, war can then be thwarted by peace.
...[A]n arms control proposal is not an arms control process. This appears to have been the Reagan Administration's feeling. Make a good offer and head home for the holidays. A good offer, however, is not enough; it must be underwritten by a bureaucratic willingness to do the hard work of the hammering out, and by a political climate in which the good faith of a negotiation can be believed.


Kvitsinsky led me to a logging road which appeared to lead down through the woods to the right. He said that in the wintertime he and some of the members of his delegation had gone there from time to time to cross-country ski....We had planned our informal conversation for weeks (Nitze 1989, 367).

Though the negotiators were not dressed in suits and did not begin with publicized opening statements, the discussion that took place on the crest of the Jura Mountains that day was perhaps the most earnest attempt during the Geneva talks to procure an arms control deal. Nitze, prepared with 4 papers (A through D), extended
Kvitsinsky made major concessions not sanctioned by the prescribed formal U.S. stand. Kvitsinsky made the deal a joint venture as he wrote in some alterations while reading the papers. When a rain storm subverted their negotiations, they moved their partnership to the Soviet's car where Kvitsinsky copied everything down on a pad of paper. Two and a half hours and an amenable INF arms control agreement later, the parties broke and prepared for their trips home where they would meet harsher and less negotiable opposition than they did there in the wooded mountains outside Geneva. This episode, nicknamed, "the walk in the woods," is the focus of my next discussion of tacit cooperation.

The walk itself, though poetically provoking\(^1\), played a relatively minor role in the cooperative process as a whole. The actual moment of clear and identifiable cooperation is found in the proposal that Nitze presented and that Kvitsinsky co-authored on their hike. I reiterate, both parties made difficult concessions that were not sanctioned by their governments back home (the actual informal "walk in the woods" was sanctioned). It is this "stepping out," by both Kvitsinsky and Nitze, outside of their respective official negotiating positions, that constitutes mutual and tacit cooperation.

\(^{1}\)Lee Blessing created an award-winning play with the same title in 1986. The play opened on Broadway February 28, 1988.
In this chapter, I will show how the new Reagan administration was more interested in deploying missiles in Europe to "catch up with the Russians," than it was in controlling or reducing arms (unless arms control negotiations meant the U.S. could win the public opinion war by having a more politically appealing position in Europe). I will also show that although their governments were at odds, a cooperative relationship developed between Kvitsinsky and Nitze concerning Euromissiles. The fact that this unique relationship evolved in a Cold War environment makes it another worthy case study in tacit cooperation.

I will begin with an explanation of the policies and procedures that were both in place and developing at the time the INF talks began. Then I will use the framework developed in Chapters 2 and 3 to analyze the interactions of Kvitsinsky and Nitze. I will include a discussion of central authority and the part it played in both the "walk in the woods" deal and the eventual Soviet walkout of the talks late in 1983.

The Birth Defects of INF

The INF negotiations began November 1, 1981, less than one year after Reagan's oath of office. The new administration, branded as hawkish, wanted to create a positive image in the arms control arena, while disassociating itself with the SALT II blunders under
Carter. Many policies of the Carter Administration came to haunt Reagan's Defense Department, the most important case being the "dual track" initiative in Europe. "Dual Track" was a compromise policy that coupled U.S. deployment of Pershing and Tomahawk missiles in Europe with arms control talks to limit those same missiles in exchange for equal levels and/or reductions of the Soviet SS-4s, -5s, and most particularly, the newest members of the Soviet arsenal, the MIRVed SS-20s.

Reagan's Defense Secretary, Casper Weinberger, and Weinberger's advisers, Fred Iklé and Richard Perle, "felt that the dual track was a mistake" (Talbott, 1984, 43). However, their attempts to repudiate dual track were squelched by Alexander Haig and his State Department. Haig and his right hand man, Lawrence Eagleburger (Undersecretary of Political Affairs), felt the continuity between administrations regarding dual track was vital to maintaining good relations with the NATO constituency, particularly Britain, France and Germany.

I use dual track as both an example of the perpetual conflict among the National Security Council (NSC), State and Defense Departments as well as an illustration of how such conflicts were usually resolved. Bureaucratic infighting was common procedure. The agency that was able to gain the upper hand with Reagan was the agency that controlled policy. In the case of dual track, the agencies
reached an impasse which was settled only when Eagleburger padded Reagan's first address to Margaret Thatcher with its endorsement. At the moment the presidential statement was made publicly, dual track became U.S. policy. It was in this atmosphere that Nitze was selected to be the chief negotiator for the INF talks.

Enter the diplomat

It would be naïve and mendacious to say that Paul Henry Nitze could be considered a "lower level bureaucrat." As a past Deputy Secretary of Defense, Chief SALT negotiator and one of the United States' "oldest and most distinguished diplomats" (Time, Dec. 14, 1981, 45), Nitze enjoyed the power that came with the prestige of longevity.² Though certainly his leadership credentials were superior, there were several circumstances that mitigated his power at the bargaining tables in Geneva.

To begin, Nitze was a 74-year old Democrat, albeit a hawkish one, with few allies in the new Reagan government. Nitze's biggest confederate, however, was the Director of the Arms Control and Disarmament Agency, Eugene Rostow.

²Nitze served in 7 administrations and has advised every U.S. President from Truman to Bush. He helped implement the Marshall Plan in Europe; he coestablished NATO; supervised NSC-68; was a main actor in the Cuban Missile Crisis; negotiated SALT I, INF and START, blocked SALT II, and attempted compromise with SDI. He is quoted in a December 21, 1987 Time article (78) as saying, "On a number of occasions in my career I have quit jobs when I disagreed with policy. I'm not just interested in being part of Government, I'm interested in the Government being right."
Rostow's boss, Richard Allen (Director, NSC) acted on Rostow's recommendation to give Nitze the job in spite of protests by Eagleburger and his boss, the Secretary of State. Not only was Nitze disliked by the State Department, he was also mistrusted by Defense, most particularly by the Secretary for International Security Affairs, Richard Perle (one of Weinberger's closest aides). As Talbott describes the conflict,

Nitze seemed destined to be respected by hawks and doves alike, but always with strong reservations. The hawks would never entirely forgive him for his role in bringing about SALT I; the doves would never entirely forgive him for his role in bringing down SALT II (Talbott, 1984, p. 55).

Nevertheless, as the NSC prevailed in their bid to name the INF negotiator, Paul Nitze was appointed.

Because neither the Pentagon nor the State Department wholeheartedly wanted him for the job, Nitze's ability to negotiate with some amount of flexibility was compromised by his lack of support at home. This lack of support became increasingly apparent as the talks in Geneva continued. After his fateful walk with Kvitsinsky, almost everyone in Washington came down hard on Nitze. His only ally, again, seemed to be Rostow. . . but not for long. On January 12, 1983, Rostow made an appointment with George Shultz\(^3\) to go to bat for Nitze on this issue of flexibility. At that meeting, "Shultz informed Rostow that the President no

\^3\text{George Shultz replaced Aleander Haig as Secretary of State.}
longer had confidence in him [Rostow] and wanted his resignation" (Talbott 1984, 167-168). The Rostow case showed how, as a February 7, 1983 New Republic article states (7), "the White House scolded its hawks for acting like doves." With Rostow's dismissal, Nitze was left without an advocate in D.C.

Once Rostow left office, he spoke publicly about the content of Nitze's and Kvitsinsky's mountain walk. He wanted to show how Nitze's efforts were being thwarted by Reagan's bickering advisors. Instead of winning public opinion for the "walk's" outcome, Americans saw Nitze as a delinquent negotiator that was reprimanded and restricted by the President. From that point on, the U.S. negotiator lost considerable ground. Though he feared he could be discharged as well, Nitze was, on the contrary, asked by Reagan to continue his post in Geneva. During the 2 years of talks, Nitze was constantly frustrated by his lack of control over the policies framing his negotiating position with the Soviets.

As one of the United States' most seasoned career politicians, Nitze initially accepted the position of Chief INF negotiator on the condition that he would have freedom to barter an arms control deal. However, while Nitze was doing his job in Geneva, the NSC, State and Defense department bureaucrats were arguing about the policies affecting his negotiations. What became the most difficult
and seemingly impossible policy for Nitze to work with was the "zero option." It is the pursuit of this policy at the highest level of the U.S. government that demonstrates a complete lack of negotiability on the U.S. side.

Ways to Count Nil: The Zero Options

Nitze begins a chapter of his memoirs (1989, 421):

In most games, because of their structure, a gain by one side must be balanced by an equal loss by the other side, and the sum of the losses by one side and the gains by the other side is always zero. . . . In an arms control negotiation, the objective should be to arrive at a non-zero sum outcome, where both sides gain and neither side loses.

I choose this quote by Nitze because it is antithetical to the policy that came to direct him at the INF negotiations: the zero-only option. This policy, unveiled by Reagan on November 18, 1981, promised Europe that the U.S. would negotiate in Geneva to eliminate all medium range missiles in Europe. This meant that the U.S. would abrogate the Pershing II and Tomahawk deployment scheduled for the late fall of 1983 if the Soviets would destroy all of their SS-4s, -5s and -20s.4

4According to Talbott, the policy originated as the "zero solution" from Chancellor Schmidt's Social Democratic party. Schmidt was responding to the upsurgent peace movement among rival parties and numerous vociferous voters in Germany. It was clear that the U.S. adoption of the zero solution was, among many reasons, chosen to woo Europe; and in fact it did, but only for a short time.
On the Soviet side, the zero solution was rigorously disregarded as propaganda because the French and British nuclear arsenal (162 missiles worth) would remain on the continent rendering the U.S.S.R., as the Soviets said, "defenseless." This was intolerable. The Soviet position was to match this non-NATO arsenal with their SS-20s, destroying the outdated SS-4s and -5s, and then agree for the U.S. to forgo the Pershing, Tomahawk deployments. Of course, this was intolerable for the West--the tri-MIRVed SS-20s having a superiority of speed, accuracy and throw-weight over the French and British bombs.

Thus, a stalemate seemed inevitable even before talks began. However, a policy in Washington regarding the zero option was not completely decided yet. The State Department, especially Haig, was ill-disposed to accept the zero option unconditionally. While it was a pithy, easily defined and verifiable position, it certainly lacked realistic negotiating terms and the Europeans quickly became aware of this. The word "zero" became a tenacious part of the impending INF talks; the U.S. State and Defense Departments argued whether or not zero would be the only end to, or just the beginning of a U.S.-Soviet accord.

Defense, headed by Weinberger and Perle, endorsed a "zero-only" option. According to Talbott (1984, 60), Perle saw great political advantages of coming down to zero and staying there: "... an American commitment to achieving zero
as the only acceptable outcome that would 'put the Soviets on the defensive' and keep them there." A February 7, 1983 New Republic article concurs with this sentiment, but with a negative connotation: "The 'zero option' was attractive to our planners not least because it would fail. All or nothing was our excuse for all" (8). Even Burt, Haig's arms control deputy, is chronicled in a Time article concerning the zero-option as saying, "The purpose of this exercise is maximum political advantage. It's not arms control we're engaged in, it's alliance management" (Dec. 5 1983, 19). Even so, State did not want to get shut into a zero-only option that left no room for compromise or negotiation. Europe as well, with help from the Soviets, would come to realize that zero-only was not as ethically and morally motivated as at first it seemed.

Despite this opposition, Defense made its voice heard through Perle. On November 30, before the Senate Armed Services Committee, less than 2 weeks after the President's formal proposal, he said there was no middle ground between full deployment and zero. It was Perle's that became Reagan's voice of reason.

With dual track, the zero only option and interagency polemics as a foundation for INF, Nitze was able to maneuver between the fissures of stated policy at the beginning of his tenure in Geneva. But as both the U.S. and Soviet policies came more clearly into focus (and became less easy
to ignore), Nitze became aware, as did Kvitsinsky, Rostow, Europe and the liberal press, that an INF failure was imminent. These were the conditions that led up to the walk in the woods.

INF: At the table, across the Ocean, and into the Woods

"Nitze is elegant and urbane, with a glint of mischievous humor in his eye. The slightly pudgy Kvitsinsky is dour, outspoken and openly ambitious." This December 14, 1981 Time article (45) describes the first meeting between the "Yankee" and the "Germanist" chief INF negotiators. Nitze, considered by many as "the most experienced U.S. bargainer with the Soviets" (Time, December 17, 1984, 48), met Kvitsinsky informally for an hour and a half before the negotiations began late November 1981. Nitze's first impressions were favorable: "I found him...easy to get along with...he had a sense of humor" (1989, 370). Kvitsinsky, 30 years younger, with much less negotiating experience, was chosen because of his expertise in German studies.\(^5\) Before long, the press trumpeted the two as being friends.

The negotiations began by the U.S. tabling their position. The Soviet delegation was less direct, holding back until round 2 before presenting a comprehensive formal

\(^5\)Kvitsinsky spoke German before speaking Russian and his parents were Polish immigrants. Kvitsinsky had spent years in both East and West Germany in an official capacity. The Soviet Union chose him as chief INF negotiator to prove their sensitivity to Germany's concerns.
position. Figure 2 indicates the initial missile count and proposed reductions for both sides, including, the French and British count.

<table>
<thead>
<tr>
<th>Balance at time of negotiation</th>
<th>U.S.</th>
<th>U.S.S.R.</th>
<th>French &amp; British</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pershing IIs: 108</td>
<td>SS-20s (in Europe): 245</td>
<td>missiles: 162</td>
</tr>
<tr>
<td></td>
<td>Tomahawks: 464</td>
<td>SS-20s (in Asia): 100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total missiles: 572*</td>
<td>SS-4s, -5s: 291</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total warheads: 572*</td>
<td>Total missiles: 636</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total warheads: 572*</td>
<td>Total warheads: 1,326</td>
<td></td>
</tr>
<tr>
<td>U.S. Zero-option</td>
<td>Pershing IIs: 0</td>
<td>SS-20s (total): 0</td>
<td>missiles: 162</td>
</tr>
<tr>
<td></td>
<td>Tomahawks: 0</td>
<td>SS-4s, -5s: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total missiles: 0</td>
<td>Total missiles: 0</td>
<td></td>
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<tr>
<td></td>
<td>Total warheads: 0</td>
<td>Total warheads: 0</td>
<td></td>
</tr>
<tr>
<td>Soviet Zero-option</td>
<td>Pershing IIs: 0</td>
<td>SS-20s (in Europe): 162**</td>
<td>missiles: 162</td>
</tr>
<tr>
<td></td>
<td>Tomahawks: 0</td>
<td>SS-4s, -5s: 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total missiles: 0</td>
<td>Total Euro-missiles: 162</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total warheads: 0</td>
<td>Total Euro-warheads: 486</td>
<td></td>
</tr>
</tbody>
</table>

* based on the November 1983 scheduled deployment
** This number does not include the 100 SS-20s that would be permanently stationed in Asia. The Soviets did not count these; The U.S. did.

These figures sum up the almost impossible conflict that existed between the U.S. and Soviet zero-option positions. As a January 31, 1983 *Time* article states the Soviet position,

6 The idea for Figure 2 is taken from a *U.S. News and World Report* article, (January 31, 1983, 31). It has been revised for use in this chapter.
The SS-20, after all, is the pride of the Soviet Strategic Rocket Forces. The Kremlin has sunk billions of rubles into developing it, training its crews and getting it in place. There was no way that Moscow would agree to dismantle every one of these missiles in exchange for 'paper' reductions of missiles that the U.S. had not deployed and might not be able to deploy...(18).

This conflict, however, was primarily played out in the rhetorical wars at the highest levels. It is an important element in this study of tacit cooperation to note that while the INF negotiations were going on, the U.S. and Soviet heads of state were in open conflict. It is also telling to note that only a few months before the INF talks began, Reagan proposed a 1.3 trillion dollar defense budget that would end what Reagan saw as extreme Soviet military superiority over the U.S. It was all too clear that Reagan was primarily interested in solving this nuclear military problem by building and not reducing; arms control was not a security matter, but a public relations opportunity. On the other side, the Soviets attempted to persuade Europe not to accept the forthcoming Tomahawks and Pershing IIs. If they could convince the Europeans not to allow their government to house U.S. missiles, the Soviets could maintain nuclear superiority with very minor sacrifices. It was clearly a zero-sum situation for the leadership of both sides.
The European War: Battles of Rhetoric and Bad Press

Prior to Reagan's November 18th announcement of zero-sum, President Brezhnev announced a 5-year plan budget adjustment. A November 17, 1981 Washington Post cover story suggests that the Soviets would be diverting 42 billion dollars from infrastructure planning into defense to "meet the American challenge." The Soviets threatened to match each new U.S. weapon with an "appropriate counterbalance." This was the tone of U.S.-Soviet exchange when Reagan gave his first major foreign policy speech to the National Press Club, November 18, 1981, just 12 days before the first INF round was to begin.

In this vintage speech, Reagan took the moral high ground as he explicated U.S. foreign policy during the Cold War. He noted that in the 60s and 70s, the U.S. had decreased and reduced its military in spite of a Soviet build-up. The American zero option, Reagan said, would be "a giant step for mankind." Not surprising, Tass' response, recorded in the same front page New York Times article (November 19, 1981), states the U.S. President made "groundless allegations" and came up with "absolutely fantastic figures." The article describes Reagan's speech as a 'ploy' that would hobble the Geneva talks and "present the American course of escalating the arms race and insuring military superiority as a 'peace initiative,'"
comparable...to the first footsteps on the moon."

Brezhnev's own response to the zero option as recorded in an interview with a German Magazine Der Spiegel was:

Those in the United States who advance this kind of 'proposal' apparently do not for a minute expect that the Soviet Union might agree to them...Most probably the authors of such 'proposals' do not really want talks, let alone successful talks. What they need is a breakdown of the talks, which they can use as a sort of justification for continuing the planned arms race."7

Though Brezhnev's response was perhaps not far off from Reagan's apparent intent, the U.S. President's speech was rhetorically much softer on the Soviets than just a few months earlier. It was a significant shift from the "evil empire" rhetoric of his first few months in office. For example, at Reagan's first presidential news conference (January 29, 1981), he called the Soviets immoral as they reserved the right to "commit any crime, to lie to cheat..."

Nevertheless, his posturing in November was not to woo the U.S.S.R., but to convince Europe that he was serious about arms control.

Two days later, the Soviet government released a publication, "The Threat to Europe," which blamed the United States for all nuclear proliferation. Like Reagan's speech, the publication was intended for a Western European

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7 This was quoted in a New York Times article, Nov. 19, 1981, A16.
audience. On November 22, 2 days after the pamphlet's release and 4 days after Reagan's speech, Brezhnev visited Bonn. There, he proposed a unilateral reduction of hundreds of medium-range bombs as a good-will gesture to his European neighbors. He also attempted to persuade West German leaders, with some success, to put a moratorium on the 1983 scheduled deployment of the Tomahawks and new Pershings. Many in Schmidt's Social Democratic party were sympathetic and considered a delay in deployment. If the bombs were to arrive, or were to arrive at an indefinite time, the dual track leverage for the U.S. negotiating side would be lost. As Talbott chronicles, "American officials were aghast" (1984, 94).

These very cool political posturing battles raged intermittently during the time the INF negotiations were in process. As European opinion of the American zero option shifted from sanguine to skeptical, many policy makers felt the necessity to add credibility to the U.S. arms control policy. As a May 2, 1982 New York Times article reports, a State Department analyst stated that the zero option proposal was "not serious." And on January of the following year in a typical news conference blunder, Reagan retorted that selling the zero sum to Europe was not "propaganda," but "public relations." Reagan's plan of attack was to

8 Of course, the bombs to be destroyed were the obsolete SS-4s and -5s - a crafty ploy that won the respect of some Europeans.
visit Europe early the following summer. Of course, the rhetorical war continued in an unsurprising fashion: the Soviets blamed the U.S. for escalating the Falklands war by giving a carte blanche approval of Britain; the U.S. vehemently denounced the Soviet-based military crackdown in Poland. In 1982 while Kvitsinsky and Nitze were making concessions, the Soviet and U.S. leaders were heightening the Cold War.

But 1983 was worse. In March, Reagan calls the Soviet Union an "evil empire" and Star Wars or SDI is conceived; In May, the U.S. Congress allotts $625 million to develop the MX and Andropov tells the Germans he will decrease the number of Europe-targeted SS-20s; In July, the KGB is accused of being behind the assassination of the Pope; In September, the Soviets shoot down KAL 007 and Reagan calls it a "massacre;" Later in September, Gromyko does not attend the U.N. because Aeroflot is not allowed to land in the U.S.; In October, the U.S. invades Grenada; and in November and December, the Soviets walk out of INF and suspend both START and the Vienna talks on conventional arms. It was the first time in 14 years that some kind of arms control and/or limitation negotiation was not in progress.

The following January in two consecutive weeks of the New York Times opinion page, first Kvitsinsky then Nitze recounted their own versions of the walk in the woods and
their reasons for the Soviet walkout. By this time, with failed negotiations and public animosity between the two, the cooperation had ended.

Walk in the Woods

Though the negotiators' cooperation was not sustained because of worsening U.S.-Soviet relations, it is important to speculate how and why cooperation ever started in the first place, and how it stopped. This section will use the rationale of chapters 2 and 3 to explicate the emergence of cooperation between Nitze and Kvitsinsky.

As Talbott notes, Nitze was aware that his role in Geneva was limited:

Nitze could see that what might very well be his final appointment to government service was turning out to be not an exercise in problem-solving at all but a diversion, a smokescreen, so that others . . . . could make sure that the problem of managing the military competition between the superpowers was not solved by arms control (1988, 173).

Yet Nitze subverted the wishes of his government by proposing the walk in the woods compromise with Kvitsinsky.

Shadow of the Future

Is the shadow of the future high? The assumption behind this question is whether or not the future and future decisions to cooperate or defect are as relatively as important as they are in the present. The very nature of
any kind of U.S.-Soviet relations at that time would have a substantial shadow of the future. With a history of dangerous animosity and a future of potentially destructive clashes, any decision affecting the relationship, whether made presently or in the future was considered weighty. While this may have been a consideration for both negotiators (such matters were certainly part of their rhetoric repertoire), a perhaps more important consideration was how successful they could be at their job:9 to negotiate an arms control agreement. Nitze was doggedly optimistic:

Nitze was asked whether there was any chance the Soviets would accept [the U.S. proposal]. His reply: "It's hard to conceive that they'd accept it fast. But that's not the appropriate criterion for judging the proposal. The appropriate criterion should be, and is, 'Is it a solid basis for continuing negotiations? And the answer is yes.'" He spoke of the negotiations as a "dialectical process," hinting at an eventual synthesis in which the United States would scale back its INF deployment and the Soviets would scale down their SS-20 force, just as the NATO ministers had intended in 1979 (Talbott 1988, 170).

Nitze was a good negotiator. One of his preconditions for accepting the Geneva post was that he would be given the flexibility to negotiate. In his negotiating strategies his hope was that the future would hold compromise and eventual agreement.

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9For the most part, the only information will be coming from the American side and only inferences can be made about the Soviet reaction to the negotiating strategy. So when questions of intention are answered, they will be answered predominantly by Nitze and not Kvitsinsky.
For Kvitsinsky, the scenario is more complex and his intentions are harder to infer. In Nitze's memoirs and in Talbot's notes, Kvitsinsky is described as a very political animal. It is difficult to determine whether and when cooperation with Nitze as a negotiator or cooperation with Soviet policy as a young political appointee played the greater role. Perhaps the additional factor that prior to the "walk" they spent not only work time together but also social time, enlarged their shadow of the future. Nitze notes:

From the start we tried to expand the informal contacts between the two delegations as much as we could. Kvitsinskiy and I frequently met one on one, and my wife, Phyllis, and I would invite Kvitsinskiy and his wife Inga, to dinner, and to all manner of other social gatherings, such as outings on the lake, picnics, and formal receptions...After a period of time we came to know the Kvitsinskiys about as well as is possible to know a Senior Soviet official (1989, 370-71).

Even in his defensive January 19, 1984 letter to the New York Times opinion page, Nitze claimed, "After a period of time, I came to think I could generally...sort the true from the false in what [Kvitsinsky] said," intimating that he knew Kvitsinsky's personality rather well.

The sublimeness of the international nuclear situation and the negotiating time spent together makes a strong case for there existing a large shadow of the future.
Was the Strategy "nice?"

A nice strategy, as a reminder, will not defect unilaterally. It is forgiving and it is not pessimistic. This is perhaps the most difficult concept to check, and perhaps impossible in the context of this study, yet there are a couple of points that can be made. First of all, Nitze made it clear that he would not be the first to defect. To defect would mean to choose conditions of an agreement that would benefit his own position at the expense of his counterpart's position. Nitze's philosophy of arms control was that it was a non-zero sum, as he states in his memoirs, "where both sides gain and neither side loses" (1989, 421). He apparently would not allow the zero option to keep him from being able to fully negotiate a deal, and he constantly fought the administration on this point. Secondly, each negotiator demonstrated a forgiving attitude of his counterpart's hard line governmental stance. Nitze proposed the plan that would enable each negotiator to blame the other for the "walk" proposal. Nitze states, "'You can blame this on me with your people.' Kvitsinsky understood. 'I'll tell them it's your scheme, and you tell them it's mine,' he said" (Talbott 1984, 129). This tacit agreement was meant to undermine authority, without the fear of reprisals that responsibility of ownership would entail.
Furthermore, Nitze was constantly sifting out and looking past Kvitsinsky's rhetoric. As he states, "In formal statements, [Kvitsinsky] had no hesitation in putting forward a continuous stream of one-sided propaganda arguments which he knew in advance were lacking in factual basis and logic...." But, Nitze continues, "In private discussion, away from the ears of his associates... he appeared to be surprisingly frank in his discussion of Moscow politics... and of speculative possibilities" (1989, 371-72). Nitze was quick to understand that Kvitsinsky's propaganda statements were inserted at Moscow's demand. And in confidential conversation, both used forgiving strategies as they looked past rhetorically antagonistic statements that were made publicly.

The Question of Altruism

According to Taylor, altruism is a phenomenon that exists when two people or two opposing sides realize that the decisions (and subsequent payoffs) made by the other player(s) will have a decided effect upon their own payoffs: their futures are linked. This sort of identifying with each other is shown in the following conversation:

"How confident are you," he asked Nitze, with forced humor, "that everything we're saying isn't being overheard?"
Playing along, Nitze replied, "Pretty confident. But somebody may have put a listening device up there"--and he gestured to a rolled-up awning. "Right," said Kvitsinsky. "Better to meet in the woods"--as Schukin and Nitze had done during SALT I.\(^\text{10}\)

The fact that both negotiators felt the need to keep their talks quiet from their chiefs shows that they understood similar fates (this is particularly telling on the Soviet side). That is why they developed the "you blame it on me, I'll blame it on you" rule. With this altruistic device, the agreement was able to take place in the woods that day.

**Clarity and Paucity**

Oye speculates that as the number of players in a game decreases, the incidence of players choosing to defect will also decrease. It is evident from the above conversation between the two negotiators that they felt they could be more candid in private. Also as Nitze writes, Kvitsinsky felt much freer to stray from Moscow's hard line when he was away from his associates. In this case, Oye's theory that cooperation will emerge more readily when the number of players is smaller is useful for the walk in the woods scenario. And as the number of players increased, the number of choices to defect also increased--thus resulting in the eventual Soviet walkout.

\(^{10}\) See Talbott, 1984, pages 121-, for more detailed conversation.
A further point of Oye's is that decisions made by all parties are recognizable. During the walk, Nitze spelled out the agreement on paper and Kvitsinsky responded in kind by amending the agreement with his own pen. The walk was made in a very extemporaneous environment. The problem with clarity came in the months following when both negotiators were in their respective countries having no way to notify each other of the success or failure of the proposal. As the Soviets heard rumors that the U.S. disapproved of Nitze's proposal, their decision was to reject it as well. When the intentions of each negotiator could not be inferred by his counterpart in private, the spoken word had to be taken at face value. It was apparent that as the informal candor between the two deteriorated, so did the success of the negotiations.

**Anarchy or Authority?**

It is very clear that hierarchical authority inhibited the negotiators efforts to make the negotiations a completely cooperative enterprise. The play of authority governed most strongly before and after the negotiations, but during the walk, the two were alone and free to parley.

Once the walk in the woods deal was made, the involvement of authority became problematic. Talbott states, "The walk-in-the-woods formula was what is called in
diplomatic parlance a 'non-paper': it could easily be
disavowed by higher authority" (1988, 175). And it not only
was disavowed, but both negotiators were reprimanded for the
parts they played in the agreement. Talbott states:

Kvitsinsky claimed that his bosses had given him a
hard time for his part in the walk in the woods.
He [Shultz] put Nitze on notice that if their
back-channel dealings were to advance further,
Nitze would have to be speaking for Secretary of
State Shultz as well as for himself: "no more
walks in the woods unless you're under
instructions, too (1988, 177).

Kvitsinsky was similarly chastised. Clearly, when authority
was present in policy and decision-making, cooperative moves
were hampered and defection became more likely.

Conclusion

Paul Nitze and Yuli Kvitsinsky cooperated to the extent
that, by themselves, they came to accord on how to reduce
Euromissiles. While their governments were in open
opposition with respect to the INF terms, the two chief
negotiators stepped out and made the game yield equal
payoffs to both sides. As the bureaucracy unavoidably
regained control, the cooperative actions of the two men
were surpassed and negotiations failed.

Axelrod's theory of cooperation, with the additions of
Taylor and Oye, presents at least one tool to describe the
conditions that may have evoked the relationship that
Kvitsinsky and Nitze developed. Just as with the live and let live system of World War I trenches, the unlikely theme of cooperation has a place to be discussed. In this light, the walk in the woods may be seen less as a circumstance of chance, and more as a fair game of good intentions.
CHAPTER 6

CONCLUSION

According to Thomas Hobbes in *Leviathan*, humankind exists in a natural state of equality, one with another. But, as he continues, "From this equality of ability, ariseth equality of hope in the attainment of our Ends" (87). And when our hopes and desires clash, we naturally evolve into a state of war. In today's vernacular, Hobbes is describing the tragedy of the commons, a problem that can be aptly explained by Prisoner's Dilemma. Hobbes' solution to the Prisoner's Dilemma was to remove the dilemma altogether by establishing a despot with absolute power to extort cooperation. In this case, individual freedoms are lost. As one scholar notes, however, "the modern liberal state is designed to be responsive to the will of the governed and to guarantee individual rights. The question is, however, whether the arrangements in the liberal state will work to solve our Prisoner's Dilemma" (Martin, 1992, 179). In the two case studies I have just explicated, the Prisoner's Dilemma did not exist in such a structured environment. Both cases existed in an anarchic realm with authority on each opposing side subverting the individual choices of the lower-lever actors who were making decisions
to break their own Prisoner's Dilemma. What Hobbes did not consider (or did not find in his own society) is that individuals may break the dilemma without coercion, as the INF and trench war cases show.

In my research I chose to address the issue of cooperation among lower-level bureaucrats, even though Axelrod was ambiguous about at which level cooperation might emerge. I do not believe it would be completely absurd to suggest that the same tit-for-tat strategy could cause cooperation to evolve at other levels (i.e. organizational, state etc.). As one group of cooperation scholars note in *Intergroup Conflict and Cooperation*, "If [the research finding] is valid, a generalization reached on a topic at one level of analysis is not contradicted and, in fact, gains support from valid generalizations reached at another level" (Sherif et al 1961, 3). And as I noted in chapter 1, many international studies scholars have used Prisoners' Dilemma to explain the 1944 - 1989 bipolar world.

One of these scholars, Midlarsky (in Midlarsky et al 1994, 35-36) uses Axelrod's tit-for-tat strategy to explain one of three types of cooperation that he develops in a continuum. The continuum begins with "primitive cooperation" that is merely the absence of conflict. A more advanced level, "reactive cooperation," is like tit-for-tat. And the most advanced type is "proactive cooperation" in which protagonists seek cooperation, in some cases without
the expectation of gain. I list Midlarsky's continuum for the purpose of contrasting the two case studies in my research.

Before I begin, however, I would argue that in this continuum, both the primitive and the reactive cooperation are based on conditional strategies. Midlarsky gives the example of the mutual assured destruction philosophy as a type of primitive cooperation. It is primitive because the protagonists do not actively seek or participate in a positive cooperative act; they merely abstain from the non-cooperative behavior that signified the conflict. What defines cooperation in this instance is, on the other hand, the absence of action. I agree that this is a more primitive type of cooperation (than the other two types), yet I will note that it does not fall outside of the limit of a conditional strategy that can break the Prisoner's Dilemma.

This primitive cooperation clearly resembles the live and let live system discussed in chapter 4. According to Ashworth's study, meal-time or ration truces were the beginning signs of cooperation. In active fronts the ration supply line was a primary target for either side. For the cooperators, however, the supply line was an area of reciprocal abstinence of aggression. Even when cooperation evolved into more advanced forms of conditional exchange, such as ritualization, it involved avoidance of direct
confrontation, not an alliance against a common foe or a treaty. Trench truces were the real-life example of mutual assured destruction.

Occasionally this primitive cooperation showed signs of advanced communication of friendliness, such as the story told by British officer Rutter (noted in Ashworth, 146) of a German grenade going off during one of these tacit truces. Though no one was hurt, both sides readied for retaliation until a German soldier bravely stood on his parapet to apologize to the English troops for the "damned Prussian artillery," hoping that no one was injured. With personal exchanges such as these and others it seemed that even this primitive cooperation had room to evolve.

As for Nitze and Kvitsinsky, they actively engaged in activities that fostered cooperation. Their interaction resembles the second form of cooperation that Midlarsky defines as reactive (35). One friendly or candid exchange was returned for another, until each negotiator stepped out on the proverbial limb to agree upon a proposal that was a priori unacceptable to both U.S. and Soviet rhetorical stances. Nitze initiated the proposal and Kvitsinsky okayed it by making additions and changes. Just before the Soviet walkout, when the cooperation noticeably broke down, a tit-for-tat defection was swapped leaving the negotiators discouraged and unfriendly. As Nitze says, "The 'walk in the park' as the episode came to be known, was mysterious,
Byzantine, and ended with my feeling some bitterness toward Kvitsinskiy" (1989, 389). Though defection between the two reached a sort of "point of no return," Nitze admits later in his memoirs that Kvitsinsky's behavior was probably motivated, "partly to save face,... but also to preserve the fiction that his masters in Moscow had gone to such pains to invent" (397). Even embittered, Nitze showed limited forgiveness. But the most important point here is that through a reciprocal cooperative effort, a private agreement was made, and for a while, Kvitsinsky and Nitze broke the Prisoner's Dilemma.

Limitations

This research and the use of game theory to understand how tacit cooperation can emerge have several fundamental limitations. First of all, game theory is only concerned with a narrow range of decision-making outcomes. It is true that descriptive strength comes from abstracting, but in the process, the details of the personalities and how decisions are arrived at are lost. This may be a critical flaw in the discussion of lower-level bureaucratic interactions where personality variables are relevant. For example, in the INF case, it is evident that Nitze had negotiated similarly with Schukin, the Soviet delegate during SALT I.

Secondly, the research's outcomes are limited further by a lack of additional case studies. Even in the INF and
trench war cases, cooperation was not sustained. It would add strength to the research to include a case study where cooperation is not completely disrupted.

Thirdly, the facts from both case studies are rather one-sided, particularly in the case of INF. The most I could do was infer intent from Kvitsinsky's camp. And Ashworth's study and other memoirs of the World War I trench experience are almost exclusively British and French biased.

While there are several limitations, results of the analysis show additional research could be taken in this direction. A further case study showing the same conditions present in a conflictual exchange where cooperation does not emerge may shed more light on whether these conditions of tacit cooperation are merely necessary or if they are sufficient. A study of unsuccessful emergent cooperation may give insight into what behaviors or attitudes would more readily elicit 'all D' rather than 'all C'.

In the trench war case study, Ashworth indicates that truces were not particularly the rule in trenches but that "the live and let live system was endemic to trench warfare"(22). The truces only occurred during small scale, ordinary, every-day trench fights and only among certain troops. In other words, these truces did not occur during large battles such as the Somme, Passchendaele, etc. Truces never occurred among elite fighting units but among more defensive units. Ashworth suggests that in some cases, many
soldiers involved in the truces were less aggressive and instinctually tended to shoot only to return fire, never offensively. Perhaps Michael Taylor's notion of altruism can make sense of such attitudes.

In the INF case cooperation deteriorated because of increasing defection of U.S.-Soviet decision-makers as well as an unwillingness by the negotiators (particularly on the Soviet side) to withstand their boss' pressures to make uncooperative moves. Certainly we see with Nitze and Kvitsinsky that under good conditions tacit cooperation emerged but then perished because the bureaucracy became involved in how the game was played. It can be speculated that if the two negotiators were left alone to implement their INF accord, that the walk in the woods proposal would have come in the early 80s and not in its almost identical form several years later.

Conclusions

As I processed my own interests in this study of cooperation through conflict, I was often concerned with justifying such research. In my analysis there is an underlying notion that cooperation is the desirable outcome. Yet, in both cases, cooperation was punished by authority because the cooperative act was against national policy. Or to use game theory jargon, the actors chose to defect against authority at the moment they chose to cooperate with
their "adversary." Certainly, policy makers, particularly during war, would not want their subordinates to undermine the security and authority of the state for the sake of the individual.

My interest was to find any sort of cooperation that could develop in the most unlikely situations - situations where it would be irrational to agree: in environments of conflict, war, animosity or a Prisoner's Dilemma. Trench war is as unlikely an environment as any, yet I would like to see the same inquiry extended to ethnic or prejudicial conflicts and wars where it seems cooperation would have even less chance to develop.

Nevertheless, this research does not show that under the given conditions, cooperation will emerge in all cases. It merely shows that tacit cooperation emerged during the INF negotiations and in a limited amount during World War I trench fighting. It is clear that in many instances and for may reasons not discussed here, cooperation will not emerge. But the fact remains that tacit cooperation can and has emerged among lower-level bureaucrats whose nations are in open conflict or war.
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Tacit Cooperation Between Enemies:

Two Case Studies

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M.A. Degree, April 1994

ABSTRACT

This research details a point of reference to understand two case studies of cooperation that developed among lower-level, or non policy-making bureaucrats during times of conflict or war. Using components of game theory, I propose that when an international conflictual relationship occurs that resembles an iterated Prisoners' Dilemma, and that meets certain conditions, tacit cooperation can emerge. Tacit cooperation consists of illicit or implied cooperation that is not sanctioned at the national policy level.

In this research I develop a framework of tacit cooperation, relying heavily upon Robert Axelrod's theory of evolutionary cooperation. With the framework in place, I then explicate two international case studies, World War I trench warfare cooperation and the INF "walk in the woods" between Kvitsinsky and Nitze, to show how the theory can be used to describe ways that cooperation can occur in a hostile or conflictual environment.