

Bilateral Deterrence and Conflict Spiral:  
A Theoretical Analysis

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## Abstract

The major question addressed by this paper is: When each actor in a conflict or bargaining relationship has a power *capability*, how does the level of power capability in the relationship affect the likelihood of actors *using* coercive tactics? This paper explicates two theories that offer contradictory answers to this question. One theory, termed “deterrence,” predicts that (a) where actors have *equal* levels of power capability, the larger the mutual capability the lower the likelihood of using coercive tactics, and (b) conditions of *unequal* power capability produce more use of coercive tactics than conditions of *equal* power. A second theory, termed “conflict spiral,” makes the opposite predictions: Larger power capabilities increase use and relationships with equal power produce more coercive tactics than ones containing unequal power. The theoretical formulations suggest the importance of distinguishing relative power (power difference between actors) from the total power (sum of each actor’s power) in a relationship and stress the cognitive processes that mediate the relationship of power capability and power use.

## I. INTRODUCTION

This paper examines the connection between power and its use in conflict. Coercive or punitive capability is the form of power of primary concern (see Bacharach and Lawler, 1980:Chap. 2, for a further discussion of “forms” of power). Punitive capabilities are part of the social structure underlying conflict and represent the potential damage that actors can levy on each others outcomes (e.g., French and Raven, 1959; Bacharach and Lawler, 1980: Chap. 8). Coercive tactics are the type of power *use* of concern to this paper. Such tactics refer to social action that involves either a threat to reduce or an actual reduction in an opponent’s outcomes (e.g., Deutsch, 1965; Tedeschi, 1970). The conflict setting of concern to this paper is “explicit bargaining,” i.e., a situation where actors consent to bargain and to exchange offers and counteroffers (see Schelling, 1960; Chertkoff and Esser, 1976; Bacharach and Lawler, 1980, 1981).

This paper explicates theories that stem from two divergent viewpoints on the impact of power capabilities: deterrence and conflict spiral arguments. These arguments are implicit in and scattered throughout the social psychological literature on threat and damage tactics (Deutsch and Krauss, 1962; Shomer et al., 1966; Brown, 1968; Horai and Tedeschi, 1969; Horn-stein, 1965; Michner and Cohen, 1973; Tedeschi et al., 1973; Rubin and Brown, 1975:Chap. 9; Bacharach and Lawler, 1981:Chap. 4; Wilier and Anderson, 1981), and they are typically a part of public-policy debates on nuclear power (Deutsch, 1961; Morgan, 1977). In brief, the deterrence argument stipulates that larger levels of power (i.e., punitive) capability in a conflict relationship will reduce the use of coercive tactics and thereby create more harmonious, cooperative bargaining. From the deterrence argument, actors have little to lose and much to gain

by increasing their capability to damage the opponent. Such action may produce a power advantage but, failing that, will at least avoid any power disadvantage and create an environment within which the other will bargain more cooperatively. In contrast, the “conflict spiral” (my term) argument suggests that larger power capabilities (assuming equal power) will heighten the level of tension in the relationship and increase the use of coercive tactics. The result is more hostile, competitive interaction. The conflict spiral notion suggests that an increase in the level of punitive capability available to actors will reduce the effectiveness with which actors deal with their conflict. These contrasting arguments provide the starting point for the theoretical work encompassed herein.

Variants of these arguments are often heard in debates about the nuclear arms race and about the deterrent effects of legal codes and their enforcement. However, it should be emphasized that this paper is not designed to deal specifically with either of these contexts. My purposes are more general—namely, to elaborate the most basic ideas encompassed by deterrence and conflict spiral arguments. The nuclear arms race is a unique situation that treats only one facet (nuclear power) of the punitive capabilities available to nations, and criminological work on deterrence (see Zimring and Hawkins, 1973) adopts an emphasis that is only of peripheral concern to theories developed herein. Criminological work, of necessity, stresses conditions of “unilateral” capability, whereas the present paper is concerned with mutual or bilateral deterrence, i.e., situations where *both* actors in a relationship have the capability to damage each other’s outcomes (Michner and Cohen, 1973; Bacharach and Lawler, 1981: Chap. 4).

The theoretical formulations presented herein address issues left implicit or unresolved in social psychological work on threat and damage tactics (for reviews, see Rubin and Brown,

1975; Morley and Stephanson, 1977; Tedeschi and Bonoma, 1977; Pruitt, 1981). Two primary emphases are evident in this prior social psychological work: *Threat-counterthreat behavior*, exemplified by the work of Deutsch and Krauss (1962; see also Krauss and Deutsch, 1966; Brown, 1968) and *compliance to threats*, exemplified by the work of Tedeschi and associates (see Tedeschi et al., 1973; Tedeschi and Bonoma, 1977). Despite somewhat different foci, these traditions contain the basic theoretical themes of importance to this paper. The Deutsch and Krauss tradition adopts what the present paper terms a “conflict spiral” theme, while the Tedeschi tradition implicitly adopts a deterrence theme. A brief review of each tradition will make clear the issues and problems that this paper seeks to resolve.

### The Conflict Spiral Theme

Deutsch and Krauss (1962) organize their classic research on threats around two hypotheses: first, the mere availability of a punitive capability leads to its use; second, the use of threats by one actor will beget counteruse by the other. The implication is that when actors have the capability to do each other damage the result is a threat-counterthreat spiral in which both actors lose. The rationale for the first hypothesis is that the mere presence of a punitive capability creates a *temptation* to use that capability; the rationale for the second hypothesis is that compliance to a threat entails a loss of face and, therefore, the response to threats is likely to be counterthreats rather than compliance.

Deutsch and Krauss (1962) utilized the famous trucking game in their research. This game pits two actors with conflicting interests against one another. The actors represent different trucking companies and the goal of each actor is to transfer cargo to a destination. Their profit

depends on the amount of time it takes, and each actor has a choice of a short route vs. a long route. However, the short route is common to both actors, and only one of them can use it at a time. If both try to use the route at the same time, they will meet head on and each will face a difficult decision: yield to the other by backing up or attempt to get the other to yield.

To test their hypotheses, Deutsch and Krauss (1962) gave actors a gate (threat) which they could use to prevent the other from reaching their destination through the short route. They included three experimental conditions: no threat (neither actor had a gate), unilateral threat (only one actor had a gate), and bilateral threat (both actors had a gate). The results indicated that actors in the *bilateral* threat condition earned fewer (joint) payoffs than actors in the other conditions. In the bilateral condition, the gates were used frequently and there were numerous standoffs within the short route. Deutsch and Krauss interpret these results as support for their hypotheses. A threat potential leads to its use, and its use leads to counteruse resulting in substantial joint losses over time. On the surface, these results contradict the deterrence argument and suggest that power capabilities accentuate conflict and undermine bargaining.

The early work of Deutsch and Krauss was subjected to substantial criticism on both conceptual and methodological grounds. The major problems center around the conceptualization and operationalization of “threats.” It is not clear what the “gates” in the experiment represent, and it can be argued that they are damage tactics rather than threat tactics (see Shomer et al., 1966; Tedeschi et al., 1970). Most conceptions of threat tactics define them as behavior which communicates an “if-then” contingency, e.g., “If you do X, I’ll do Y.” The gates in the trucking game do not clearly imply such a contingency and, therefore, either a threat-counterthreat or damage-counterdamage spiral is a viable interpretation of their results.

This conceptual problem was the focus of considerable later work (see Shomer et al., 1966; Tedeschi et al., 1970; Nardin, 1968; Cheney et al., 1972; Youngs, 1981). However, subsequent research produced mixed results. Both threat-counterthreat and punishment-counterpunishment spirals have been observed, but the generality of these patterns remains an open question. Tedeschi et al. (1970) clearly separated threat from damage tactics and found that actors were most likely to use threat and damage tactics when the other also had a punitive capability. In contrast, Shomer et al. (1966) transformed the gates of the original Deutsch and Krauss experiment into warning systems that could be used for cooperative or competitive purposes. They found that there was no longer a threat-counterthreat spiral under these conditions, suggesting that the results of the original Deutsch and Krauss experiment are due to a damage-counterdamage spiral. Finally, Nardin (1968) found support for the threat-counterthreat spiral where the actors perceive a competitive intent underlying the use of threats. The intent may be critical and may distinguish those studies that suggest only a damage-counterdamage spiral from those that suggest both damage-counterdamage and threat-counterthreat spirals. Damage tactics are clearly competitive in intent, whereas the intent underlying threats is likely to vary with the social context.

The Deutsch and Krauss tradition suggests the plausibility of the conflict spiral argument outlined in the introduction to this proposal. Unfortunately, the connection of the research to this argument was never developed and, therefore, the implicit conflict spiral theory never explicated. Because of this lack of theoretical development, the tradition generated by Deutsch and Krauss (1962) raises as many questions as it answers. One example is that research in this tradition did not manipulate the magnitude of the punitive capability but only compared bilateral with unilateral or no-capability conditions. Yet the conflict spiral argument suggests that the *greater*

the punitive capabilities held by *both* actors, the greater the use of threat and/or damage tactics. Had the underlying theory been developed this would have been a logical issue to address. Such issues would also have been suggested by a comparison to deterrence notions which posit a negative relationship between varying levels of punitive capability and tactical use of that capability. Overall, failure to explicate the theory produced research of less relevance to it and led to a neglect of key questions raised by the implicit theory.<sup>1</sup>

### The Deterrence Theme

Deterrence has been treated in the following ways: (a) as a single (dependent) variable under which to subsume the “prevention of aggression” (Schelling, 1960; Snyder, 1961); (b) as a theory that relates *either* punitive capabilities or threats to *compliance* (Zimring and Hawkins, 1973; Tedeschi et al., 1973); or (c) as a theory that relates punitive capabilities to damage and threat tactics (Morgan, 1977; Bacharach and Lawler, 1981:Chap. 4). Each use of the term implies a different theoretical focus. The present paper treats deterrence in manner, (c) that is, as a theory that should specify and explain the link between punitive capabilities and coercive tactics (i.e., threat and damage tactics).

Deterrence writings typically focus on how one actor prevents aggression by another actor (see, especially, Schelling, 1960) rather than on how both actors simultaneously and mutually deter each other. Morgan (1977) distinguishes two foci that approximate this distinction: “immediate” deterrence and “general” deterrence. Immediate deterrence applies to a context where there is an imminent attack by B which A attempts to prevent via a threat tactic. “General” deterrence applies to a context where each actor is maintaining high levels of coercive

capability in an effort to limit the tendency of the other to attack. Morgan (1977) is concerned primarily with “general” deterrence, whereas Schelling (1960) stresses “immediate” deterrence. This project adopts the emphasis of Morgan (1977) and takes this to mean, among other things, a dyadic level of analysis in which mutual deterrence and the level of aggression *in the relationship* is of greatest importance.

Morgan’s (1977) distinction between “immediate” vs. “general” deterrence also happens to correspond to the two strains of social psychological work mentioned earlier. An emphasis on “immediate” deterrence is found in research on threat tactics and compliance (see Tedeschi et al., 1972, 1973; Tedeschi and Bonoma, 1972, 1977). Tedeschi and associates posit that the effectiveness of a threat tactic is grounded in the magnitude of potential damage the threatener can do to the target, weighted by the credibility of the threat (i.e., the targets’s perception of how likely it is that the threatener will follow through on the threat). These ideas were the basis for a large number of experiments (see Tedeschi and Bonoma, 1977) utilizing a prisoner’s dilemma game in which subjects *without* a punitive capability faced a programmed other with such a capability. The experiments supported the notion that both the magnitude and credibility of threats affect the tendency of targets to comply (see Tedeschi and Bonoma, 1977).

Several points must be made about the work by Tedeschi and associates. First, only one actor had a punitive capability (i.e., the programmed other). Second, and related, the dependent variable is compliance rather than the use of threat and damage tactics. Third, the prisoner’s dilemma setting does not allow for an exchange of offers and counteroffers like that which typically occurs in real-world explicit bargaining (see Nemeth, 1972, for related criticisms of the prisoner’s dilemma). Overall, the emphasis of the work of Tedeschi and colleagues is similar to

work on deterrence in criminology in that it involves a unilateral-threat situation in which the primary issue is the compliance of the low-power target.

A second, less developed, line of work adopts a focus similar to this proposal and to what Morgan (1977) calls “general deterrence”: the impact of punitive capabilities on the use of threat and damage tactics in explicit bargaining. While there are several studies with widely disparate power manipulations that could be placed here (see Rubin and Brown, 1975:Chap. 8), we will stress studies that (a) explicitly manipulate the magnitude of punitive power, and (b) incorporate bargaining that involves an exchange of offers and counteroffers (i.e., explicit bargaining).

The earliest and most often cited study is one by Hornstein (1965). He gave both actors punitive capabilities manipulating the percentage of the opponent’s outcomes that they could destroy. There were three equal power conditions, 10-10, 50-50, and 90-90, and three unequal power conditions, 20-10, 50-10, and 90-10. In this context, Hornstein tested two key hypotheses labeled “deterrence” ones; (1) under unequal power, larger power differences will produce less aggression by the lower-power actor; (2) under equal power, the larger the total level of power, the lower the use of threat and damage tactics by both actors. These hypotheses imply a distinction between the *relative* power of the actors (i.e., the power difference between them) and the *total* power (i.e., the sum of each actor’s power) in the relationship.

The results of Hornstein (1965) do not support the hypotheses. In the case of unequal power, the results indicate that the frequency of threat and damage tactics by the lower-power actors was relatively constant across the power difference conditions, but that (1) given small power differences (e.g., 20-10 vs. 90-10), the low-power actor was actually more likely to initiate threats *than the high-power actor*, and (2) under larger power differences, the lower-power actor was more likely to follow through on threats with damage. Overall, the results

suggest that unequal power does not necessarily deter aggression by the lower-power actor—in fact, there is some evidence that lower-power actors are likely to be more hostile than the higher-power actors. Some other research, not on deterrence, also supports the notion that unequal (but still bilateral) power conditions can create more competitive action by lower-power actors than is suggested by their power level (Komorita et al., 1968). One interpretation for this is that a power difference leads the lower-power actor to expect power use by the higher-power other to and demonstrate that s/he can not be intimidated. We will return to this idea later.

Turning to the equal-power hypothesis, Hornstein's results indicate that the 90-90 condition produced the lowest frequency of threat and damage tactics. However, it is the 50-50 rather than the 10-10 condition that produced the highest level of aggression. Hornstein (1965) treats this as contrary to deterrence, but the differences between the 10-10 and 90-90 condition are significant and in the right direction. There may be a curvilinear relationship, or perhaps only the extreme conditions show the deterrence effect.

Most studies of bilateral threat capability, Hornstein included, confound *relative* and *total* power. Relative power refers to the difference between one actor's power and the other's, while total power refers to the sum of each actor's power capability (see Bacharach and Lawler, 1981, for further discussion). Hornstein's (1965) unequal-power conditions (i.e., 20-10, 50-10, 90-10) differ in both relative and total power, making interpretation of the power-difference conditions difficult and comparisons of unequal vs. equal conditions virtually meaningless. Only the equal-power conditions separate total from relative power (i.e., by holding relative power at zero). Thus, while the Hornstein (1965) study does provide some information on equal-power conditions, it does not adequately examine the deterrence notion.

Other studies have examined deterrence phenomena in bilateral—*but unequal*—power conditions (Smith and Leginski, 1970; Michener and Cohen, 1973). The most direct and thorough examination of deterrence in unequal-power conditions was done by Michener and Cohen (1973). They included a wide range of relative power conditions, thereby manipulating both actor's punitive capability. The results offer support to the deterrence notion within unequal, but still bilateral, power relationships. That is, the deterrence pattern is found for the impact of the HP's (high- power other's) punitive capability on the LP's (low-power actor's) use of damage tactics.

A recent study by Bacharach and Lawler (1981:Chap. 5) offers a direct test of the deterrence argument in bilateral *and equal* capability conditions. This study utilized an experimental setting analogous to Michener and Cohen's (1973) but held relative owner constant at zero while manipulating the total power in the relationship (i.e., 10-10, 30-30, 50-50, 70-70, or 90-90). The results offer support to the notion that higher levels of punitive capability produce less use of *both* threat and damage tactics. The curvilinear pattern suggested in Hornstein (1965) was not replicated, but as in the Hornstein study the primary difference was between the 10-10 and 90- 90 conditions.

## Summary

Social psychological research on the deterrence and conflict spiral in bargaining can be summarized with reference to four questions raised by that theme:

1. Does the *total* punitive capability in a relationship have a negative impact on the level of use by actors within that relationship? Research by Hornstein (1965) and Bacharach and Lawler (1981) offer a qualified “yes.” However, among other things, neither study examined the impact of total power within different levels of relative power.

2. Do unequal-power relationships produce more or less use of coercive tactics than equal-power relationships? The research cannot adequately answer this question because unequal-power conditions were confounded with the total power. Differences between the unequal-power conditions could be attributed to relative power, total power, or some combination of both. However, the next two questions provide some indirect evidence on unequal punitive capabilities.

3. Given a power difference, do greater levels of power difference increase or decrease the use of coercive tactics by the lower-power actor? Some parts of Hornstein (1965) indicate an increase by the lower-power actor, and some other research tends to corroborate this (see Rubin and Brown, 1975, for a review); however, a decrease is indicated by Michener and Cohen (1973).

4. Does the degree of power difference increase or decrease the use of the coercive tactics by the high-power person. Smith and Leginski (1970) suggest an increase, Hornstein (1965) a decrease, and Michener and Cohen (1973) no difference.<sup>2</sup>

The key questions raised by the deterrence theme also happen to be implied by the conflict spiral theme. While some implications might be developed from the larger literature on power in bargaining (see Rubin and Brown, 1975; Cook and Emerson, 1978; Bacharach and Lawler, 1981), there is surprisingly little direct evidence on these questions and the evidence that does exist is inconclusive. More important, there are no theories that make explicit the basic tenets of the deterrence and conflict spiral traditions and thereby facilitate a comparison. To this end, the next section develops a theory of deterrence and a theory of conflict spiral.

## II. THEORY

The theories contain three basic elements: scope conditions, core propositions, and auxiliary propositions (Cohen, 1980). The scope conditions identify the properties of the situation to which the theories apply. Both theories have the same scope conditions. Core propositions are the most central ideas of a theory, those around which other ideas tend to revolve. Auxiliary propositions are extensions of the core notions to topics or issues not directly addressed by the core propositions. It is the core and auxiliary propositions that differentiate the two theories. Following earlier work (Bacharach and Lawler, 1981), the purpose of the formulation presented herein is to highlight the *contrast* between deterrence and conflict spiral notions rather than to analyze complementarities and attempt to integrate them under one theory. While there are several areas of complementarity (see Bacharach and Lawler, 1981:Chaps. 4 and 5), the contrast must be sharpened and investigated before completing the integrative task.<sup>3</sup>

The dependent variable for each theory is the “use of punitive tactics.” Theoretically, this includes both threats as well as damaging behavior. These two types of punitive tactics are

lumped together primarily because of tradition and a lack of clear evidence that different processes or determinants apply to each. Within the conflict spiral tradition, there is some evidence suggesting that what was originally termed a threat-counterthreat spiral was a damage-counterdamage spiral, and one can argue that the deterrence notions refer to damage more than threats because only damage involves actual aggression. There is mounting evidence (see also Bacharach and Lawler, 1981) suggesting that the theories might apply better to damage than threat tactics, but the evidence is not yet conclusive enough to separate damage from threat tactics.

### Scope of the Theories

There are five primary scope conditions for each of the theories, deterrence and conflict spiral:

1. *There are two actors involved in explicit bargaining.* Explicit bargaining refers to a situation with the following properties: (a) a conflict of interest between actors over an issue or set of issues; (b) the issue(s) encompasses a range of possible agreement points; (c) actors make offers and counteroffers that propose agreement points. Theoretically, there is no reason why the ideas in each theory can not be applied to contexts with more than two actors, but the dyad is the starting point (see Cook and Emerson, 1978, and Wilier and Anderson, 1981, for relevant analyses of larger units).

2. *Both actors have the capability to damage their opponent's outcomes i. e., there are bilateral punitive capabilities.* Capabilities are bilateral if each actor can do more than trivial

damage to the other (Michener and Cohen, 1973; Bacharach and Lawler, 1981). Thus, power need not be equal, though power inequality cannot be so large as to produce a “unilateral” power situation.

3. *Actors have knowledge of their own and their opponent’s punitive capability.* They are aware of how much damage they can do to one another, but they need not have perfect information. They must only be aware that such capabilities exist and have a general idea of how large or small they are in an absolute sense and with reference to each other.

4. *Actors perceive each other as equally able to use their punitive capability.* That is, the opportunities for use are equal for both actors. Any obstacles to use are common for each actor.

5. *Each actor has at least two tactics for using the coercive or punitive capability: threat tactics and damage tactics.* Threats warn of prospective damage without producing that damage, whereas damage tactics involve an actual reduction in the other’s outcomes.

(The following subsections will (1) explicate the most central notions of each theory—those dealing with varying levels of *total* power within equal-power relationships; (2) extend the theory to deal with unequal vs. equal power; and (3) extrapolate conditions under which the predictions of each theory will occur.

### Total Power

The major difference between the core ideas of deterrence and conflict spiral is the cognitive mechanisms assumed to mediate the impact of punitive capability on tactical action. The simplest theories of deterrence and conflict spiral, implied by prior literature, are depicted in

Figure 1. From deterrence theory, it is the “fear of retaliation” that ultimately determines an actor’s propensity to use coercive tactics (see Schelling, 1960; Michener and Cohen, 1973; Morgan, 1977; Bacharach and Lawler, 1981). Fear of retaliation refers to the perceived ability of the opponent to respond in kind to punitive action. An actor’s fear of retaliation is based on the magnitude of the *opponent’s* level of punitive capability: A’s fear of retaliation is based on B’s punitive capability, while B’s fear of retaliation is based on A’s punitive capability. With relative power held constant, the greater both actors’ level of punitive capability the lower the frequency of coercive tactics in the relationship. In contrast, conflict spiral theory stipulates that an actor’s “temptation” to use the punitive capability is most critical. Temptation refers to the actor’s disposition to use punitive tactics independent of the actions of the opponent, and this is based on his/her own rather than the other’s punitive capability—A’s temptation is based on A’s own capability, and B’s temptation is based on B’s own capability. The larger A’s own punitive capability, the more A is likely to use punitive tactics, and the same applies to B. In sum, according to deterrence, the *opponent’s* punitive capability determines the frequency with which an actor utilizes coercive tactics; and, according to the conflict spiral theory, it is the actor’s *own* punitive capability that determines the frequency of use. Both formulations lead to the anomalous conclusion that a given actor’s use of punitive tactics is a function of *either* but *not both* his/her own and the opponent’s power capability.

The major problem with the formulations presented in Figure 1 is that both theories deal only with “what the actor thinks” and neglect “what the actor thinks the other thinks.” Specifically, neither theory incorporates the degree that a given actor expects the other to initiate an attack. From a conflict spiral standpoint, why wouldn’t actor A, aside from responding to his/her own temptation, assess the degree that the other would also be tempted? From a

deterrence standpoint, why wouldn't action be based on both the actor's own fear of retaliation and his/her perception of the other's fear? These processes are captured if we include "the expectation of attack" by the opponent in both theories. We will define *expectation of attack* as the perceived probability that the opponent will attack regardless of whether or not the actor attacks.

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Insert Figure 1 Here

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Theoretical treatments of deterrence in international relations make fairly direct references to the expectation of attack. From writers such as Schelling (1960) and Morgan (1977), one can argue that successful deterrence is contingent on actors (a) perceiving a reciprocal and high fear of attack and (b) expecting that because of this fear the opponent will not attack except in response to an attack. In other words, the fear of retaliation may prevent aggression more effectively when combined with a low expectation of attack by the opponent. Similarly, a lower expectation of attack may help us understand situations where actors do not attack each other despite minimal fear of retaliation. The expectation of attack may accentuate or weaken the behavioral tendencies unleashed by a given level of punitive capability.

Social psychological literature makes little direct reference to the expectation of attack. However, this aspect of the actor's perception might account, in part, for some anomalous findings on the relationship between punitive capability and its use in unequal power circumstances. Given unequal power, high-power actors may have a low expectation of attack by the lower-power actors, whereas lower-power actors may have a high expectation of attack by the higher-power actors. Perhaps this explains evidence from some studies that higher-power

actors are less likely to use their power than lower-power actors (Hornstein, 1965; Komorita et al., 1968; Rubin and Brown, 1975). Higher-power actors may use punitive tactics less than suggested by their advantageous power position and lower-power actors may use them more than suggested by their disadvantageous power position because of differing expectations of attack. While there is minimal direct evidence on the expectation of attack in deterrence and conflict spiral processes, its importance is quite plausible.<sup>4</sup>

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Insert Figure 2 Here

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Incorporating the expectation of attack by the opponent creates modifications as shown in Figure 2. Expectations of attack could be produced by any number of structural conditions or behavioral events. The theories of deterrence and conflict spiral deal only with the impact of punitive capabilities on such expectations.

Several points are suggested by Figure 2. First, now each actor's use of punitive tactics is a function of *both* his/her own and the opponent's capability. The original version (Figure 1) led to the conclusion that *only* the actor's own (conflict spiral) or the opponent's capability (deterrence) determines the actor's use of punitive tactics. This gap is resolved in the modified version. Second, while expectations of an attack play a role in each theory, the theories take different positions on the cause of those expectations. From a deterrence standpoint, actors will infer the expectation of attack from the opponent's fear of retaliation, which is in turn based on the *actor's* own capability, not the opponent's capability. From a conflict spiral standpoint, the expectation of attack will be inferred from an evaluation of the opponent's temptation, which is in turn based on the *opponent's* capability. Thus, expectations of attack are determined by the

actor's own capability in deterrence theory and by the opponent's capability in conflict spiral theory.

The general implications of these theories for *equal-power* relationships are as follows. From the deterrence standpoint, higher total power will lead actors to have (a) a higher fear of retaliation and (b) lower expectations of attack; these, in turn, will lower the frequency with which each actor will use punitive tactics. From the conflict spiral standpoint, higher total power in the relationship (a) creates more temptation for both and (b) leads both to infer higher expectations of attack. The confluence of higher temptation levels and higher expectations of attack yield a greater frequency of punitive tactics. The core propositions of each theory<sup>5</sup> are as follows:

#### Deterrence

**Assumption 1:** *Under conditions of equal power, the frequency of an actor using punitive tactics is (a) a negative function of his/her own fear of retaliation and (b) a positive function of his/her expectation of attack by the opponent.*

**Assumption 2:** *Each actor's fear of retaliation is a positive function of the opponent's punitive capability.*

**Assumption 3:** *Each actor's expectation of attack by the opponent is a negative function of the actor's own punitive capability.*

**Core Deterrence Proposition:** *Under conditions of equal power, an increase in the total power in the relationship will decrease the use of punitive tactics in the relationship.*

#### Conflict Spiral

**Assumption 1:** *Under conditions of equal power, the frequency of an actor using punitive tactics is positive function of (a) his/her own temptation to attack and (b) his/her expectation of attack by the opponent.*

**Assumption 2:** *Each actor's temptation is a positive function of his/her own capability.*

**Assumption 3:** *Each actor's expectation of attack by the opponent is a positive function of the opponent's punitive capability.*

**Core Conflict Spiral Proposition:** *Under conditions of equal power, an increase in the total power in the relationship will increase the use of punitive tactics in the relationship.*

## Unequal-Power Relationships

A straightforward application of the theories to conditions where actors have unequal punitive capability leads to the conclusion of no difference in the rate of punitive tactics *at the dyad level*. For example, compare a condition where both A and B have the capacity to reduce each other's outcomes by 70% with one where A has a 90% and B a 50% capability (note that this example holds the total power constant at "140" to avoid the confound of relative and total power). The deterrence approach indicates that in the 90-50 condition, A's expectation of attack as well as his/her fear of retaliation will go down; conversely, B's expectation of attack and fear of retaliation will rise. Assuming that the changes in fear and expectation are proportional, the resulting increase in A's use of punitive tactics should be counterbalanced by a comparable decrease in B's use of punitive tactics. Hence, there should be no difference in the overall use of punitive tactics in the relationship (A's + B's) across equal vs. unequal power conditions. An application of conflict spiral theory to this example leads to the same conclusion.

This hypothesis of no difference between equal vs. unequal power relationships is problematic on two grounds. First, social psychological research—though not necessarily on punitive tactics—suggests that equal- power relationships produce more cooperative bargaining, ostensibly because equal power encourages actors to come to grips with the conflict rather than resort to exploitation or submission (see Rubin and Brown, 1975; Bacharach and Lawler, 1981). Second, the hypothesis of no difference is inconsistent with *implicit* hypotheses in the deterrence and conflict spiral traditions. The deterrence tradition implicitly suggests that deterrence at a collective level (i.e., mutual deterrence) is most likely when actors have equal power (see Morgan, 1977). In contrast, the conflict spiral tradition implies that the problems created by

power capability are accentuated under conditions of equal power because neither actor can be intimidated, though each will attempt to intimidate the other. For example, Deutsch and Krauss (1962) found that low-power actors in the unequal- power condition actually earned more payoff than those in the equal-power condition.

The solution to the above problems can be derived from the theoretical formulation in Figure 2. The implicit hypotheses of the deterrence and conflict spiral traditions can be derived from the weight actors give to the expectation of attack vs. *either* the fear of retaliation or temptation. Under conditions of equal power, we assume equal weight. Under unequal power, however, the relationship undergoes a qualitative change and it is plausible to anticipate that actors shift the weight given to the cognitive dimensions in Figure 2. In the case of deterrence theory, the following assumption and proposition is suggested:

**Auxiliary Deterrence Assumption:** *Under conditions of unequal power, the punitive tactics of the advantaged actor will be a function of that actor's own fear of retaliation, while the punitive tactics of the disadvantaged actor will be a function of that actor's expectation of attack.*

**Unequal-Power (Deterrence) Proposition:** *The rate of punitive tactics in the relationship will be higher under unequal power than under equal power.*

From the standpoint of deterrence theory, why might these differential weights emerge? Given a power difference, high-power actors will be more inclined to exploit their power because the only real obstacle to this— retaliation—appears less likely given B's lower

capability. In other words, the higher-power actor's fear of retaliation is reduced by the power difference, and this stimulates more power use by that actor. In contrast, while the low-power actor's fear of retaliation is greater, that actor will use punitive tactics in order to demonstrate that s/he cannot be intimidated or to communicate to the opponent that an attack will involve some retaliation costs. Overall, deterrence theory suggests that departures from equal power will begin to erode the deterrence processes. The higher- and lower-power actors will both increase their use of punitive tactics.

Conflict spiral theory suggests an assumption and proposition opposite to deterrence theory:

**Auxiliary Spiral Assumption:** *Under conditions of unequal power, the punitive tactics of the advantaged actor will be a function of the "expectation of attack" (i.e., based on a perception of the opponent's temptation) whereas the punitive tactics of the disadvantaged actor will be a function of that actor's temptation.*

**Unequal Power (Conflict Spiral Proposition):** *The rate of punitive tactics in the relationship will be lower under unequal power than under equal power.*

From conflict spiral theory, unequal power will reduce both actors' use of punitive tactics. The high-power actor will respond primarily to the expectation of attack, and such expectations will be lower under unequal, rather than equal, power. The high-power actor will anticipate being able to achieve an advantage without use of the punitive capability, i.e., the power difference itself should be sufficient to generate compliant behavior by the low-power

actor. The low-power actor will fulfill the expectations of the higher-power actor for one simple reason: the perceived gain from power usage will be low, and this will undermine the temptation to use the available power. Overall, conflict spiral theory suggests that in relationships with unequal power the lower-power actor will be intimidated and the higher-power actor will perceive less need to use power.

The conventional view of unequal-power relationships is that (a) an actor will be more likely to use power if s/he is in an advantageous position within an unequal-power relationship than if s/he is in an equal-power relationship and (b) an actor in a disadvantageous position will use power less than if that actor was in an equal-power relationship (e.g., see Rubin and Brown, 1975:Chap. 9). The deterrence and conflict spiral formulations in the present paper qualify this conventional view. Deterrence theory suggests that both actors will use power more under conditions of unequal than of equal power, whereas conflict spiral theory suggests that both actors will use power less under conditions of unequal than of equal power. The source of the conventional view is primarily research in which the power differences were very large—so large that the power of disadvantaged actors was probably trivial; the primary source of the deterrence and conflict spiral predictions is research in which the power of the lower-power actor was still “significant.” For this reason, the scope condition— “bilateral power capability”—is important to an understanding of the theories and their comparison to previous work.

### An Illustration

Both theories stress the need to avoid the confounding of relative and total power, a common problem in previous work on relationships with bilateral power. The importance of this distinction to both theories suggests a brief illustration of how one might avoid such confounding or assess whether it is present in applications of the deterrence and conflict spiral propositions. To this end, consider the hypothetical power levels presented in Table 1.

The punitive capabilities of each actor are stated as the percentage of the opponent's outcomes that can be destroyed by the actor. Within each cell,  $t$  refers to the total power and  $d$  to the power difference in that condition. The capital letters provide the identification for each cell. Cells with common letters hold the power difference (absolute difference between A's and B's capability) constant while allowing the total power to vary. Thus, from A1 to A5, total power varies from 20 to 180 under conditions of equal power; from B1 to B4, total power varies with power difference held constant at 20, etc. The core propositions of deterrence and conflict spiral deal with equal-power conditions (i.e., the A conditions) and would predict the following ordering in the frequency of punitive tactics (summed across actors):

*Deterrence:* A1>A2>A3>A4>A5

*Conflict Spiral:* A5>A4>A3>A2>A1

However, a similar ordering should occur for the B, C, and D cells. The A cells would test the core propositions for total power; and the B, C, and D cells would allow an assessment of

whether the effects of total power extend to relationships with different levels of power difference.

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Insert Table 1 Here

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To examine the impact of unequal power and avoid the confounding, one would compare cells from the lower left to the diagonal (e.g., C1 vs. A2; E1 vs. C2 vs. A3). The theories would suggest the following predictions for the frequency of punitive tactics:

*Deterrence:*  $C1 > A2$ ;  $E1 > C2 > A3$ ;  $D2 > B3$

*Conflict Spiral:*  $C1 < A2$ ;  $E1 < C2 < A3$ ;  $D2 < B3$

Comparisons other than those suggested by theories would involve confounds of relative and total power.

Overall, Table 1 suggests that an ideal comparison of punitive capability would include (1) comparison of total power with relative power held constant at zero (equal power), (2) comparison of total-power levels under constant conditions of unequal power, and (3) comparison between levels of unequal power with total power held constant.

### Conditionalization of the Theories

Our discussion in previous sections was designed to sharpen the contrast of deterrence and conflict spiral theories. The result is a rather stark set of divergent predictions. The contrast between the theories compels us to ask whether there are conditions under which punitive capabilities will have the deterrence effects and other conditions where the conflict spiral effects will be observed.

A general answer to such questions can be developed from the formulation in Figure 2. Actors in “real” situations should be responsive to *both* the fear of retaliation and temptation, and therefore some combination of temptation and fear of retaliation may mediate the impact of punitive capabilities on tactical action. The likelihood of observing deterrence vs. conflict spiral effects should depend on whether the fear of retaliation or the temptation is more salient to the actors. If the fear of retaliation is more salient, then one should find deterrence effects; if the temptation is more salient, then one should find conflict spiral effects. Thus, the following auxiliary assumption can be extrapolated from Figure 2.

**Auxiliary Conditionalization Assumption:** *Any condition (other than the punitive capabilities) that increases the salience of the fear of retaliation will produce deterrence effects, whereas any condition (other than the punitive capabilities) that increases the salience of the temptation will produce conflict spiral effects.*

From this assumption, several conditions might determine whether conflict spiral or deterrence patterns occur. For example, Schelling (1960) indicates that punitive capabilities

create a temptation primarily when there is a substantial incentive attached to “first use” of the capability (i.e., a “first strike” incentive). The more general implication is that if a high incentive is attached to the use of punitive tactics (whether a first strike or not) the salience of the temptation will increase and conflict spiral effects should result. The salience of retaliation may be determined by the “certainty” of retaliation in response to a punitive tactic (i.e., “credibility” in the deterrence and threat literatures). High certainty should be more likely to produce deterrence effects than low certainty. Finally, the orientation of the actors may determine whether deterrence or conflict spiral patterns occur. If actors adopt a “go for broke” orientation, then the temptation should be more salient than the magnitude of retaliation; if they adopt a “minimize our losses” orientation, then the retaliation should be more salient than the temptation. Overall, it seems that the stark contrast developed in this paper also provides the basis for analyzing the conditions under which one pattern or the other will obtain.

### III. CONCLUSION

The purpose of this paper was to develop and make explicit two theories that have remained implicit in the social psychological literature on power and bargaining. The explication of the theories has revealed a debate between what can be termed “deterrence” and “conflict spiral” theories, suggested that inconsistent research findings (e.g., on the use of power by low-power actors) can be resolved, identified certain gaps in previous literature (e.g., regarding the “expectations of attack”), and pointed to the importance of distinguishing total power in a relationship (i.e., the sum of each actor’s power) from relative power (i.e., power difference). The theories address a classic question: How do power capabilities affect the use of power?

Each theory could actually address a multitude of issues concerning the relationship of power capabilities to power usage (e.g., see Bacharach and Lawler, 1981:Chaps. 4 and 5). The particular issues of concern to this paper were (1) how does the total power in the relationship affect the rate of punitive tactics and (2) does unequal power produce greater or lower rates of power usage than equal power. The two theories offer different answers to these questions, and the differences are due to divergent assumptions regarding the cognitive mechanisms that mediate the impact of power capability on power usage.

The basic tenets of each theory can be summarized as follows. Conflict spiral theory stipulates that (1) the larger the power capabilities of each actor the higher the rates of power usage, and (2) unequal-power conditions will produce lower rates of power usage than equal-power conditions. The explanation offered by the theory is based on the “temptation” produced by the actor’s own power capability and a positive effect of the other’s power capability on the actor’s “expectation of attack.” Deterrence theory indicates that larger power capabilities reduce the rate of power use and that unequal power will create more use of power than equal power. The explanation, in this case, is based on the “fear of retaliation” generated by the other’s power capability and the lower “expectations of attack” produced by the actor’s own power capability. The difference between the theories can be traced to assumptions about what actors will infer from power capabilities, e.g., deterrence theory indicates that an actor’s expectation of attack will be based on his/her own power capability, whereas conflict spiral theory assumes that expectations of attack are based on the opponent’s power capability.

The primary purpose of this paper was to develop the most basic ideas of each theory. While these basic ideas reveal the contrast between the theories, future work should develop the complementarities and commonalities in the theories, some of which are discussed elsewhere

(see Bacharach and Lawler, 1981:Chap. 5). Additional work is needed, for example, to analyze the dynamic implications of the theories. At this point, the theories treat the global rate of power use across time but not the pattern over time; yet, the mere idea of a “conflict spiral” suggests a upward escalation over time, that use of power at time<sub>1</sub> affects power use at time<sub>2</sub>, etc. The point is that conflict spiral theory raises questions beyond those treated in the current formulation.

## Notes

1. Another example is the relatively limited attention given to identifying, theoretically or empirically, the conditions under which the conflict spiral argument will be supported. Several experiments suggest limiting conditions: Gallo (1966) indicates that the spiral is less severe when there is more (real money) rather than less (imaginary money) at stake in the conflict; Shomer et al. (1966) indicates that there is no spiral when the alternative (long) route in the trucking game is eliminated; and Brown (1968) suggests the spiral will become more severe to the extent that opponent's use of the capability results in the actor losing face. Recognition of a competing theory (i.e., deterrence) would have made further specification of more immediate and compelling concern. In fact, research on limiting conditions (see Gallo, 1966; Shomer et al., 1966) was typically portrayed as a rejection of the original Deutsch and Krauss (1962) results rather than a specification of conditions under which they are most likely to occur.

2. Note the relationship of questions 3 and 4 to question 2. If the answer to questions 3 and 4 is "an increase," then unequal-power relationships should contain more hostility than equal-power ones; if the answer is "a decrease" then equal-power relationships should create more hostility than unequal ones. In Section II, we will show that deterrence theory posits the former and conflict spiral the latter.

3. It should be noted that the theoretical formulations ignore the dynamic qualities of punitive action over time. They do not predict whether the rate of punitive tactics will increase or decrease over time or how the use of a punitive tactic at time, will affect the use at time<sup>2</sup>. The goals of the current formulation are to take what can be considered a necessary first step toward a more dynamic analysis—namely, to assess the impact of punitive capabilities on the global rate

of punitive action in a relationship. To put it another way, the theories enable us to predict and explain the overall or global level of hostility in a relationship from the total and relative power in the social relationship.

4. Beyond research explicitly dealing with punitive capabilities, there is considerable evidence that expectations roughly analogous to those of an attack affect tactical action. Specifically, aspects of the social context (e.g., payoff structure) or the opponent's condition or stance (e.g., motivational orientation) that arouse an expectation of competition or aggression by the opponent lead actors to adjust their behavior toward competition in anticipation of such action by the other (e.g., Rubin and Brown, 1975; Nemeth, 1972; Pruitt, 1981).

5. The theories suggest that both actors will expect each other to use the same criteria for deciding on punitive tactics. That is, conflict spiral indicates actors will act on the basis of "temptation" and assume that the opponent will do likewise; deterrence indicates that actors will act on the "fear or retaliation" and expect the opponent to do likewise.

Figure 1

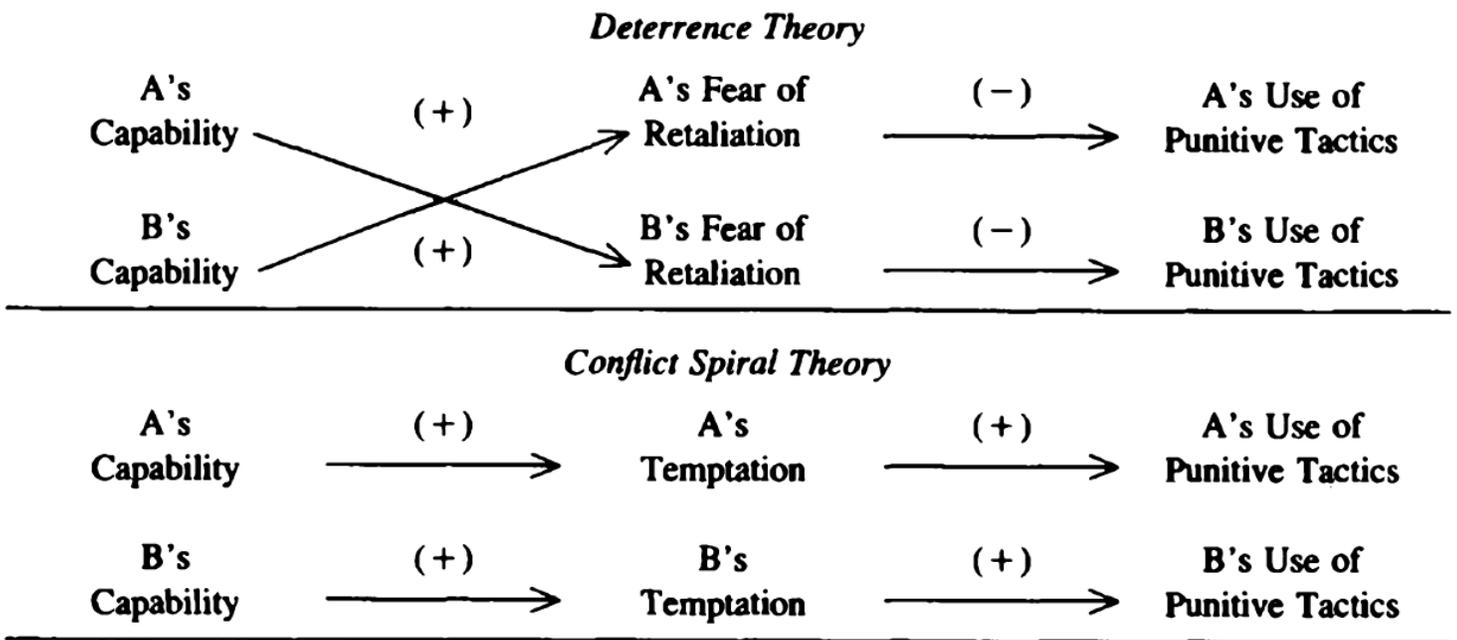
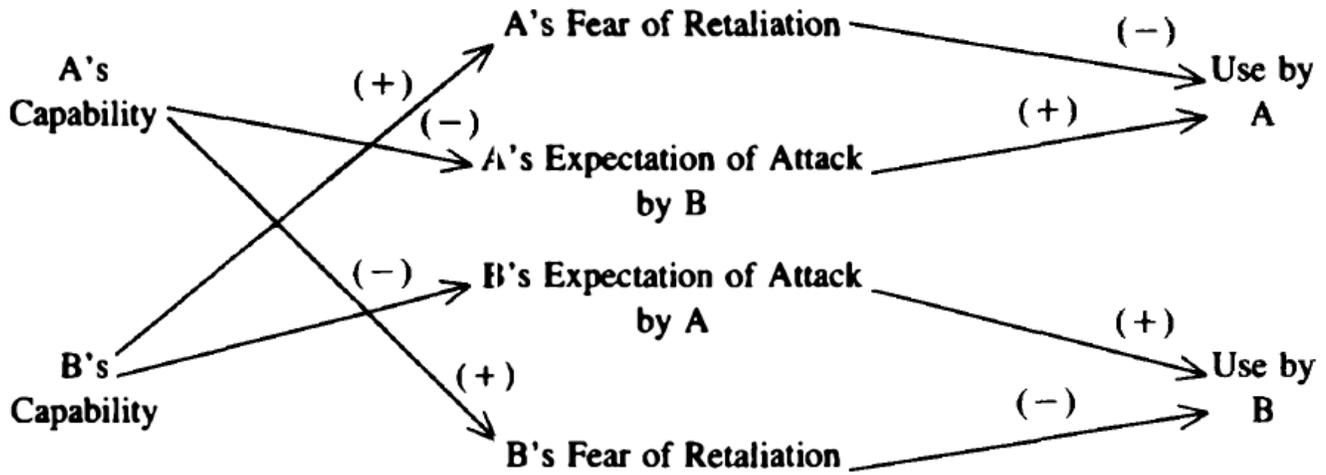


Figure 1. A simple version of deterrence and conflict spiral theories.

Figure 2

*Deterrence*



*Conflict Spiral*

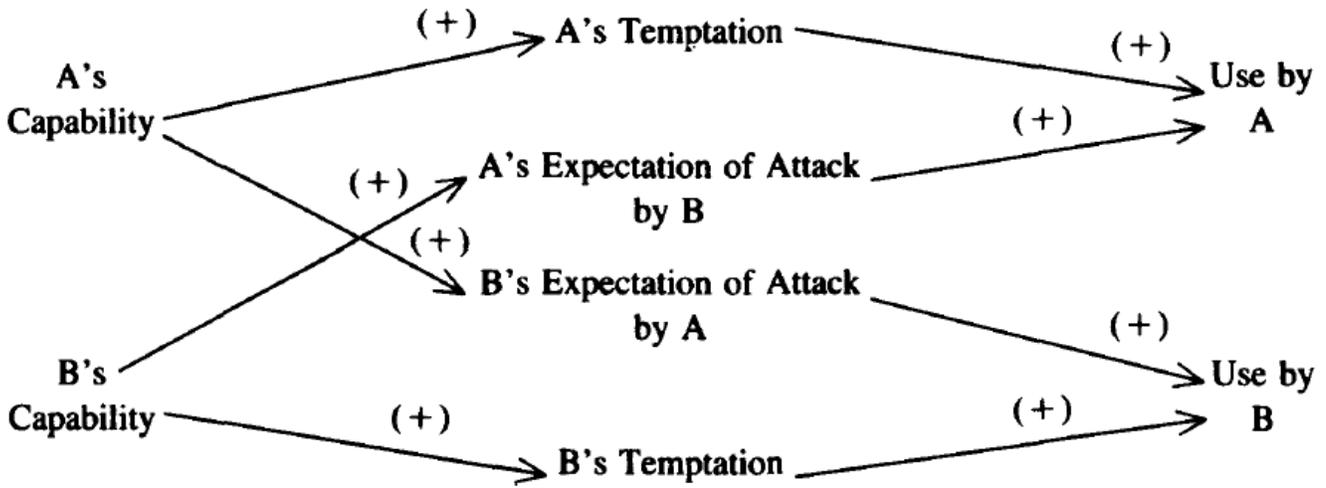


Figure 2. Modified theories of deterrence and conflict spiral.

Table 1

**Table 1. Separation of Relative and Total Power**

		<i>A's Punitive Capability</i>				
		<i>10%</i>	<i>30%</i>	<i>50%</i>	<i>70%</i>	<i>90%</i>
<i>B's Punitive Capability</i>	<i>10%</i>	A1 d = 0 t = 20				
	<i>30%</i>	B1 d = 20 t = 40	A2 d = 0 t = 60			
	<i>50%</i>	C1 d = 40 t = 60	B2 d = 20 t = 80	A3 d = 0 t = 100		
	<i>70%</i>	D1 d = 60 t = 80	C2 d = 40 t = 100	B3 d = 20 t = 120	A4 d = 0 t = 140	
	<i>90%</i>	E1 d = 80 t = 100	D2 d = 60 t = 120	C3 d = 40 t = 140	B4 d = 20 t = 160	A5 d = 0 t = 180

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