Toward a Dynamical Model of Power and Conflict

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Abstract

Although theory and research has taught us a great deal about the conditions that foster constructive versus destructive conflicts, there is currently a lack of understanding about conflict dynamics between parties of unequal power. In fact, the findings from research in this area are replete with contradictions. This paper presents a dynamical framework for power and conflict, which offers the potential to reconcile these contradictions and provide new insights into conflict dynamics. It builds on prior scholarship on interdependence and power, and begins to integrate it through the lens of dynamical systems theory, a new paradigm for the study of social conflict. The article presents a summary of findings from research on power and conflict, a presentation of the dynamical framework, and a brief discussion of its implications for future theory and research.
Toward a Dynamical Model of Power and Conflict

Understanding the conditions and processes that lead to constructive versus destructive conflict dynamics between disputants of unequal power is as important today as ever before in our history. For today, in addition to the increasing trend of high-casualty terrorist acts committed by low-power extremist groups across the globe, we see the fracturing of many ethnic groups in conflict into ever more narrow factions that struggle for power and control (Mack & Nielsen, 2005). Often, dominant groups in these settings remain insulated from the concerns of such struggle-groups (Crocker, 2005; Deutsch, 2002), use tensions between low-power groups as a means of maintaining or strengthening their power base (Staub, 2001), or respond to challenges from these groups with open hostility or superficial tolerance and appeasement (Duckitt, 1992). These trends combine to create conditions of enmity and insecurity that are all too common. For example in 2005, over one-half of the world’s nation states were classified “at risk” of conflict management failure, typically due to poor relations between states and the various minority populations residing within their borders (Marshall & Gurr, 2005).

Although there have been important advances in research on the dynamics of asymmetries of power and conflict (see Blalock, 1989; Deutsch, 1973; Gurr, 2000; Kim, Pinkley, & Fragale, 2005; Rouhana & Fiske, 1995; Rubin & Brown, 1975; Tjosvold, 1981, 1991; Zartman & Rubin, 2002), the findings in this area have been piecemeal and replete with contradictions that have resulted in a good deal of conceptual confusion (Zartman & Rubin, 2002). For example, several studies have shown that equal power relations between disputants lead to more effective negotiations than unequal relations (De Dreu, 1995; Komorita & Barnes, 1969; Lawler, Ford, & Belgen, 1988), yet others find the opposite (Zartman & Rubin, 2002; Chacon, Robinson, & Torvik, 2006), including the tendency for equal power conflicts to be more susceptible to escalation, violence and intractability (Moul, 2003; Zartman & Rubin, 2002; Bercovitch, 2005).
Power and Conflict

This paper presents a dynamical framework for power and conflict, which offers the potential to reconcile the contradictions in the literature and provide clarity and new insights into conflict dynamics between disputants of unequal power. It builds on the seminal works of Lewin (1951), Deutsch (1949a, 1949b, 1973, 1982, 1985), and Kelly and Thibaut (Thibaut & Kelly, 1959; Kelly & Thibaut, 1978; Kelly, 1979, 1984, 1991) on interdependence, and of McClelland (1975) on social power, and begins to integrate them through the lens of dynamical systems theory, a new paradigm for the study of social conflict (see Nowak & Vallacher, 1998; Vallacher & Nowak, 1994; 2006). This paper has three sections: (1) a summary of the current findings from research on social power and conflict, (2) a presentation of the dynamical framework, and (3) a discussion of its implications for future theory development and research.

Research on Power and Conflict

Power is a particularly challenging construct to work with in social science theory and research. Although it is considered by some the most basic force behind human behavior (Cartwright, 1959; Russell, 1938) and a fundamental dimension of interpersonal relations (Wish, Deutsch, & Kaplan, 1976; Deutsch, 1985), it is a vast and abstract construct that has been defined and operationalized in myriad ways (see Fiske & Berdahl, 2007). It has been conceptualized alternatively in terms of sources of power (Depret and Fiske, 1993; Emerson, 1962; Kipnis, 1976, Thibaut & Kelly, 1959), the capacity to bring about effects (Cartwright, 1965; Coleman, 2004; Follet, 1925/1973; French & Raven, 1959; Pfeffer, 1981; Rummel, 1976; Weber 1914/1978), influence actions (Deutsch, 1973; Foucault, 1984; Zartman & Rubin, 2002), and by its resultant effects (Dahl, 1957; Russell, 1938; Simon, 1957). Even once defined, its meaning often remains mercurial. For instance, if power is defined as “a capacity to produce effects”, its effects can be intentional or unintentional, it can be employed effectively or ineffectively in achieving goals, it can be associated with a wide-variety of sources, strategies, and tactics all with different qualities and consequences, and
these qualities and consequences can vary dramatically across contexts and cultures. This complexity in meaning has resulted in long list of (sometimes divergent) operationalizations of power for research, and a fair amount of confusion.

Complicating the task of theory development further is the intimate relationship between power and conflict. It can be described as a figure-ground relationship in that power and conflict almost always affect and are affected by one another, depending on your point-of-view. For example, Lewin (1936), defined conflict as a situation in which oppositely directed forces of about equal strength play upon the person simultaneously. Here, the character of conflict is determined by the relative power of forces (opposing beliefs, goals, feelings, people, groups, nations, etc.). Deutsch’s (1973) characterization of conflict as existing whenever incompatible activities occur, and Pruitt and Kim’s (2004) perceived divergence of interest, are logical extensions of this. Alternatively, Rummel (1991) defined conflict as a balancing of vectors of power. For Rummel, conflict behavior describes any behavior associated with the balancing of social power in its many forms. Thus, in every conflict we negotiate power, and whenever we negotiate power, there is likely to be conflict.

The findings from laboratory and case-based research on power and conflict tell an equally nuanced and often contradictory story (see Coleman, 2006; Kim & Fragale, 2005; Rubin & Brown, 1975; Rouhana & Fiske, 1995; Tjosvold, 1991; Zartman & Rubin, 2002). The following is a summary of the findings directly relevant to the current discussion.

How do power asymmetries affect conflict negotiations? A variety of laboratory studies have found that conditions of equal power between parties in conflict tend to result in more effective and constructive negotiations than when the parties are of unequal power (De Dreu, 1995; Rubin & Brown, 1975, see also Curle, 1971). Equal-power parties reached agreement more often, required fewer trials to do so, made larger concessions, and used fewer “damage tactics” such as threats than unequal-power parties (De Dreu, 1995; Komorita & Barnes, 1969; Lawler, et al., 1988). However, a few lab studies and analyses of case
studies of international negotiations found the opposite: equal power relations did not lead to more effective negotiations than those with unequal power, and at times led to worse outcomes (Zartman & Rubin, 2002; Chacon, et al., 2006). The case analyses suggested that power symmetry tended to produce deadlock for both high-equal power parties and low-equal power parties, but for different reasons. High-equal power parties were experienced in dominating behaviors and so employed them more readily, and appeared more concerned with maintaining their relative status vis-à-vis the other party than with reaching an agreement. Low-equal power parties felt powerless to affect the other’s behavior, and thus became primarily concerned with defending the little status they had relative to their opponents. It is important to note, however, that perceptions of equality were never directly measured in these studies but were either manipulated (in experiments) or coded (in cases). Thus, differences in perceptions of relative equality, as well as in degrees of equality-inequality of power, may account for the contradictions found between these studies (Zartman & Rubin, 2002).

How do power asymmetries affect conflict escalation? Research suggests that situations where there exist significant imbalances of power between parties are more likely to discourage open expressions of conflict and conflict escalation, than situations of relatively balanced power. For instance, in a historical analysis of wars between 1816 and 1989, Moul (2003) found that approximate parity in power capabilities (abilities to oppose individual states) encouraged wars between great power disputants. Sidanis and Pratto (1999) have argued that this dynamic may account for the utility and ubiquity of asymmetrical group status hierarchies worldwide. In other words, asymmetrical group relations may be pervasive in societies, despite their negative consequences, because they serve to constrain open conflict between groups. However, research in the interpersonal realm has shown that the relationship between power symmetry and escalation is moderated by trust; when parties of
equal power are trusting of each other they will choose more cooperative strategies to resolve their differences (Davidson, McElwee, & Hannan, 2004).

*How do cooperative and competitive forms of goal interdependence interact with power asymmetries in conflict?* Research on cooperative and competitive goal interdependence under equal power conditions has regularly demonstrated the contrasting effects of cooperation versus competition in conflict (see Deutsch, 1973; Johnson & Johnson, 1989). Decades of research have shown that the perception of cooperative goals between people and between groups, when compared to competitive goals, leads to more friendliness, helpfulness, respect, better communication, better coordination, a sense of similarity in values and beliefs, a willingness to enhance the other’s power, and the framing of conflicting interests as mutual problems to be solved together (Deutsch, 1949a, 1973; 2006; Johnson & Johnson, 1989, 2005). A few empirical studies on negotiation have found that when parties perceive themselves to be of equal power and share a cooperative orientation, they function more effectively than if they share a competitive orientation (Rubin & Brown, 1975). Similar effects have been found with prosocial versus competitive social value orientations (see Van Lange, Otten, DeBruin, & Joireman; 1997; Van Lange, 1999). In addition, several studies in the organizational realm have demonstrated the critical role of cooperative interdependence in fostering more constructive power dynamics between unequal-power employees and managers (Coleman, 2004; Tjosvold, 1981; 1985a, 1985b, Tjosvold, at al., 2003; Tjosvold, Johnson & Johnson, 1984). Cooperative goals, when compared to competitive and independent goals, were found to induce “higher expectations of assistance, more assistance, greater support, more persuasion and less coercion and more trusting and friendly attitudes” between superiors and subordinates (Tjosvold, 1997, p. 297).

*What are the general tendencies evident for high-power and low-power actors in situations of conflict?* In contrast to the research on cooperation and conflict cited above, laboratory research has found that under conditions of asymmetrical power, high-power
parties tend to behave more coercively and exploitatively in conflicts, whereas low-power parties tend to behave more submissively, unless special conditions prevail (such as low-power party access to other sources of power; Rubin & Brown, 1975). Case study analyses of international conflicts found strong additional support for the dominating tendencies of those in high power, but found that low-power parties, rather than acting submissively, tended to adopt effective counter-strategies such as acting ingratiatingly cooperative, knavishly evasive, or ideologically aggressive (Zartman & Rubin, 2002). Also, research has shown that high-power parties often neglect to analyze—as well as underestimate—the power of low-power parties (Salacuse, 1999, 2002). In related laboratory research, Fiske (1993) has demonstrated that powerful people tend to pay less attention to those in low power since they view them as not affecting their outcomes, are often too busy to pay attention, and are particularly motivated by their own high need to dominate others.

*What are the effects of relative dependence and independence on power in negotiations?* Research on negotiations indicates that negotiators who hold more attractive BATNAs (Best Alternatives to a Negotiated Agreement - or the possibility of achieving desired outcomes through alternative means) are less dependent on their negotiation partners and thus possess greater power and obtain better outcomes in negotiations (Pinkley, Neale, & Bennett, 1994). Other related research has shown that negotiators who can increase the other party’s dependence on their relationship consequently increase their own power and obtain better rewards (Kim, 1997; Kim & Fragale, 2005; Mannix, 1993). However, it is important to note that these studies have typically been conducted under conditions of scarce-resource bargaining, and thus under conditions of competitive or competitively-weighted mixed-motive interdependence. In fact, strong BATNAs have been associated with relatively weak incentives for cooperation in negotiation (Pinkley, 1995; Giebels, De Dreu, & Van de Vliert, 2000).
The contradictions and questions raised in the empirical research on power asymmetries and conflict speak to the need for a theoretical model that can help us to reconcile our understanding of these differences. For example, what are the factors that determine when equal power relations lead to more constructive negotiations between parties than unequal relations – and when the opposite is true? How do unequal power relations affect parties’ experiences of goal interdependence? Are conflicting interests under cooperative interdependence still framed as mutual problems to be solved together when in low versus high power? Do BATNAs and increases in dependencies lead to qualitatively different outcomes in conflict under conditions of cooperative interdependence as they do under competitive interdependence? Also, what are the factors that account for the variations found in low-power party behaviors of submissiveness versus clever assertiveness? Or similarly, what determines whether high-power parties take a more dominant, exploitive approach versus a more supportive, collaborative approach?

Currently, our understanding of the dynamics of power asymmetries and conflict are piecemeal, contradictory and confusing. Below, we outline a conceptual framework for power and conflict, which offers the potential to address these contradictions and provide new insights and clarity into conflict dynamics between disputants of unequal power.

A Dynamical Framework for Power and Conflict

Over the past several years, scholars have been studying conflict and conflict-related processes through the lens of dynamical systems theory, an increasingly influential paradigm in many areas of science (cf. Johnson, 2001; Nowak & Vallacher, 1998; Schuster, 1984; Strogatz, 2003; Weisbuch, 1992; Vallacher, Read, & Nowak, 2002). Dynamical systems share a few basic characteristics, including: 1) they are composed of a set of elements (such as beliefs, feelings, behaviors, and norms) that evolve in time through interactions with other elements in the system, 2) they often display stable patterns overtime, and 3) qualitative differences in these patterns may be determined by a few basic parameters (Liebovitch, 1998;
Nowak & Vallacher, 1998; Nowak, 2004). The principles defining the evolution of
dynamical systems have wide generality and have been employed to conceptualize and
investigate a highly diverse set of conflict-related phenomena including emotion (Thagard &
Nerb, 2002), stereotype change (Queller, 2002), attitude change (Nowak, Szamrej, & Latane,
1990), cooperation and competition (Axelrod, Riolo, Cohn, 2002; Liebovitch, Vallacher,
Nowak, Bui- Wrzosinska and Coleman, 2007), marital conflict and divorce (Gottman,
Swanson, & Swanson, 2002), and conflict intractability (Coleman, Vallacher, Nowak, & Bui-
Wrzosinska, 2007; Coleman, Bui- Wrzosinska, Nowak, & Vallacher, 2006; Vallacher,
Nowak, Bui- Wrzosinska, & Coleman, 2006).

Although dynamical-systems theory offers a rich array of heuristics which could be
applied productively to the study of conflict (see Nowak & Vallacher, 1998; Vallacher &
Nowak, 1994; Vallacher & Nowak, 2007), this paper will employ two basic dynamical
constructs in its characterization of power and conflict dynamics: State spaces and attractors.
A state space is a representation of the variety of potential states that a system will allow (see
Figure 1). In terms of conflict it can represent, for example, the potential of a system
involving disputants for different degrees of intensity, violence, positive or negative
emotions, and so on. Thus, a state space can be used to characterize patterns of behavior in a
conflict system after it has been measured on multiple occasions. Theoretically, state spaces
can represent an infinite number of dimensions, but are typically limited to fewer dimensions,
such as Figure 1 which displays three (x, y and z). Attractors are regions of a state space that
a system tends to occupy or approach more frequently than others (see R5 in Figure 1). In a
sense, they are regions of the space that the system is “attracted to”. In conflict terms,
attractors are a way to describe different patterns that people or groups fall into when they
engage in conflict, such as when people display a chronic reliance on avoidance strategies or
when the hostile dynamics that characterize a person’s conflicts with their siblings prove
difficult to change.
Attractors tend to evidence some degree of stability over time (Liebovitch, 1998; Nowak & Vallacher, 1994). They are similar to the notion of equilibrium; they are a state or a reliable pattern of changes toward which a system evolves over time, and to which it returns after it has been perturbed (Nowak & Vallacher, 1994). They are thought to be stable because they are the result of interactions between a wide variety of variables in a system that both drive and constrain the evolving patterns of the system. Thus, a stable attractor for two people in conflict (such as a pattern of hostility between them), depends on influences of various other elements (each partner’s attitudes, actions, other relationships, group norms, etc.), which interact and evolve over time to affect the general pattern of sentiment in the system. A change in any one element in the conflict (such as a conciliatory gesture made by either party) is unlikely to have more than a temporary affect on the general pattern of sentiment because the other elements in the system may remain mostly unchanged.

Although the types of attractors that will manifest in conflict involve a complex set of interactions between many variables at multiple levels, dynamical research attempts to identify the basic parameters which can account for qualitative differences in these dynamics (Nowak, 2004). This is considered the most important and difficult step in the specification of dynamical models (Vallacher and Nowak, 2007). Our long-term objective is to develop a formal dynamical model of constructive versus destructive conflict dynamics between disputants of unequal power. Explaining these dynamics in conflict systems requires identification of 1) the central parameters determining the systems behavior, 2) the nature of the relations between the parameters, and 3) a specification of the time scale relevant for the behaviors of interest (Svyantek & Brown, 2000). Below, we offer a preliminary description of each of these components.
Parameters

Our framework is composed of three first-order parameters (which constitute the initial conditions of the system): 1) type of goal interdependence, 2) relative power, and 3) degree of goal interdependence, and one second-order parameter: 4) ratio of accumulated positivity-negativity. They are each described below:

1) Type of goal interdependence. Lewin (1936, 1948) proposed that the essence of group processes were determined by the interdependence of member’s goals. Deutsch (1949a; 1949b) extended Lewin’s work by specifying different types of goal interdependence: positive (where goals are seen as positively linked) or negative (where goals are seen as negatively linked). Research has demonstrated that cooperative (positively-linked) goals between people, when compared to competitive (negatively-linked) goals, lead to the framing of conflicting interests as mutual problems to be solved together (Deutsch, 1949a, 1973). It suggested that constructive processes of conflict resolution were similar to cooperative problem-solving processes where the conflict is seen as a mutual problem, and that destructive processes of conflict resolution were similar to competitive processes where the conflict is framed as a win-lose struggle.

2) Relative power. Consistent with Weber (1914/1978), Follett, (1925/1973), and others (Cartwright, 1965; French & Raven, 1959; Pfeffer, 1981; Rummel, 1976) we define power generally as the perceived capacity to affect goals (one’s own and others). However, Deutsch (1985) suggests that the basic schema for situations of interdependence has to do with the parties’ relative power to “benefit, harm, or persuade each other and, hence, their relative power to influence each other” (p. 86). Thus, for the current model power is defined as A’s capacity to influence B’s goals relative to B’s capacity to influence A’s.

3) Degree of goal interdependence. Kelly and Thibaut (Thibaut & Kelly, 1959; Kelly & Thibaut, 1978; Kelly, 1979) emphasized the importance of different degrees of interdependence for shaping social relations. Different degrees or strengths of goal linkage
(dependence versus independence) have been shown to have direct implications for conflict behaviors (Kim, 1997; Kim & Fragale, 2005; Mannix, 1993; Pinkley, et al., 1994). This research is based on power-dependence theory which states that “the power of A over B is equal to and based upon the dependence of B on A” (Emerson, 1962, pp. 32-33). Dependence is based on two dimensions: 1) it is directly proportional to the value attributed to the outcome at stake, and 2) it is inversely proportional to the availability of this outcome through alternative sources (BATNAs).

4) Ratio of accumulated positivity to negativity. Recent dynamical-systems research on social interactions has highlighted the critical importance of emotional reservoirs of positivity and negativity for determining outcomes in social relations. For example, Gottman and colleagues’ (Gottman, Murray, Swanson, Tyson, & Swanson, 2002; Gottman, Swanson & Swanson, 2002; Gottman, Ryan, Swanson & Swanson, 2005) have found consistently that the relational phase-space of couples whose relationships end in divorce tend to be characterized by relatively strong attractors for negative emotions and weak attractors for positive emotions. Their research found that unless couples are able to maintain a high ratio of positivity to negativity during conflict (typically a 5:1 ratio), it is highly likely the relationship will end in divorce or in a state of stable misery. Similarly, Losada (Losada, 1999; Losada & Heaphy, 2004) has found that the emotional patterns of high- versus low-functioning business strategy groups evidence similar positivity-negativity ratios.

Structure and First-Order Dynamics

Following Deutsch (1982, 1985), Kelly and Thibaut (Thibaut & Kelly, 1959; Kelly & Thibaut, 1978; Kelly, 1979), and Rouhana and Fiske (1995), we suggest that the three first-order parameters (type of interdependence, relative power, and degree of interdependence) work in concert to situate parties psychologically within different regions of the conflict state-space (Proposition 1). Differences in the three parameters may be due to situational conditions (such as objective differences in resources between parties) and/or the
psychological construal of situations (perceived differences), which may or may not be congruent (Proposition 2). Different regions of the state-space induce distinct psychological orientations to conflict (Proposition 3), which affects parties’ aspirations, expectations, rules of behavior, and behavioral response options (Proposition 4). These orientations set in motion behavioral dynamics with the other parties to the conflict that result in positive and/or negative emotional reactions to events (Proposition 5). If the conflict persists, these emotions can accumulate overtime, establishing the context for future encounters by establishing new attractors for conflict (Proposition 6). Below, we elaborate on each aspect of the model.

Conflict state-space. Figure 1 presents a graphic characterization of the basic state space for a conflict situation for party A with party B. The x-axis in Figure 1 represents the dimension of cooperation-competition; with pure positive interdependence (cooperation) located on the far left of the figure and pure negative interdependence (competition) on the far right. Thus, relations of a more purely cooperative nature (such as members of a mountain rescue team) are located on the left, and those of a more competitive nature (political or military opponents) on the right. Along the span of this dimension we have various forms of mixed-motive interdependence, from those weighted more positively (on the left side of the continuum) to those weighted more negatively (on the right side of the continuum), with relatively balanced forms of positive and negative interdependence located in the middle.\(^1\)

On the y-axis, we have the relative distribution of power between A and B. The top of the axis represents situations where A has unilateral capacities to affect the goals of B (e.g. adult-infant), and at the bottom of the axis, B’s unilateral capacity over A (e.g. infant-adult). Again, along this continuum, we have various forms of mixed-influence between A and B, with relatively equal influence between A and B at the center of the dimension. Finally, on the z-axis we have differing degrees of dependence-independence of A on B, with high degrees of

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\(^1\) The relative weights of positive and negative interdependence are thought to be asymmetrical, with negatively-linked goals having a stronger impact on behavior than positively-linked goals (see Gottman, Swanson & Swanson, 2002). Thus, more “balanced” relations would be located to the left side of center of the dimension.
dependence located towards the front of the figure, high degrees of independence of A located at the rear, and mixed forms of dependence-independence (with multiple goals) located in between.

Party A’s location in the conflict state-space is determined by both situational conditions and the psychological construal of the situation. As Lewin (1946) suggested, it is a function of the person and the environment \(B_f(P \times E)\). Under extreme conditions of unequal power and interdependence (positive or negative), the situation will tend to have a stronger influence on behaviors than individual orientations; whereas conditions of relatively equal power and mixed-motive interdependence will introduce greater ambiguity into the situation, which will allow for individual differences in psychological orientations to play a stronger role in determining behaviors (Deutsch, 1985; Mischel, 1977). However, conflict tends to induce anxiety in people (Deutsch, 1993), and when it intensifies it will tend to move people automatically toward their more chronic orientations.

**Psychological orientations** are a more or less consistent complex of cognitive, motivational, moral, and action orientations to a given situation that serve to guide one’s behaviors and responses (Deutsch, 1982, 2007; Kelly, 1997; McClelland, 1975). Research by Salacuse (1999, 2002), based on the work of McClelland (1975), suggests that people and groups often employ a discrete set of orientations to situations of unequal power and conflict. These include orientations of **support** (obtaining assistance and support from others, often through a dependence relationship), **autonomy** (establishing one’s autonomy and independence from others), **dominance** (assertively acting on, influencing, and dominating others), and **cooperation** (functioning as part of a team, organization, group, or coalition). These orientations function like vectors or distinct psychological attractors within the state space with regard to the psychological processing of conflict situations (see R2 in Figure 1). As McClelland (1975) has indicated, the relative strength of each orientation will be determined by the particular stage of development of an individual at a given time, with
support and autonomy being more pronounced in early development and dominance and cooperation in later phases. However, the strength of these orientations will also be influenced by combinations of cultural (e.g. power-distance, individualism-collectivism), social (local rules, roles and customs), and individual (authoritarianism, social dominance orientation, attachment style, etc.) factors. Once situated psychologically in the region of a strong power-conflict attractor, it can become difficult to change one’s orientation, even when it fails to satisfy one’s goals, the intensity of the conflict dissipates, or social conditions change (see Coleman, Vallacher, Nowak, & Bui-Wrzosinska, 2007). Together with the structure of situations, psychological orientations determine tendencies to gravitate towards certain regions of the state space and away from others.²

For theoretical purposes, it is useful to begin our discussion of the conflict state space in terms of 5 distinct regions (see Figure 1): R1 (high-power, cooperative), R2 (high-power, competitive), R3 (low-power, cooperative), R4 (low-power, competitive), and R5 (equal-power, mixed-motive), each with high degrees of interdependence. Consistent with Deutsch (1982) and Kelly (1997), we propose that each of these regions induces certain psychological orientations and affords only particular valuational and behavioral rules that are relevant to that type of situation (see also Van Lange, et. al., 1997). In other words, the different regions partially determine what is to be valued by A in a particular conflict situation (sharing benefits with B versus conquering B), how to best go about obtaining these values (through respectful dialogue versus forceful dominance), and which psychological orientation best fits the situation (e.g., cooperation).

Thus, in Region 1 (high-power, cooperative), we could expect a benign, cooperative orientation to conflict from A towards B, where A values altruism, generosity and enhancing and sharing mutual outcomes, and engages in constructive processes of dialogue, persuasion.

² Psychological systems can also evidence repellers, or regions of the phase space that are rarely occupied due to forces within the system that prevent movement toward this region (Nowak and Vallacher, 1994).
and joint problem-solving with B. In Region 2 (high-power, competitive) we could expect an exploitive, domineering orientation to conflict where A values winning at all costs, maximizing their own outcomes, and perhaps inflicting harm on B, and uses tactics of force, control, deceit and oppression. In Region 3 (low-power, cooperative) we would expect an orientation to conflict of appreciative support, where A values good leadership and benefits from B, and engages in respectful followership and assistance. In Region 4 (low-power, competitive), we could expect to see an orientation of suffering and victimization, where A values avoiding as much harm as possible, escape or rebellion (if conditions change), and engages in suppression, self-blame, denial and, if possible, sabotage. Finally, in Region 5 (equal-power, mixed-motive), we would be likely to see either an integrated, mixed-motive orientation and response (see Pruitt and Kim, 2004 for a discussion of such combined strategies) or vacillations between dominance, cooperation, and support orientations and strategies.

However, the third property of the state space, *degree of interdependence*, is likely to be equally important in determining orientations and behaviors in situations of conflict. For instance, differing degrees of interdependence between A and B would significantly determine whether, under conditions of high-power, cooperative interdependence (R1), A would be more likely to adopt an orientation of benign cooperation toward B (high interdependence) or one of autonomy (low interdependence) where they choose to seek alternatives outside the relationship. Similarly, low levels of interdependence would be likely to affect the orientations induced and strategies employed in R2 (autonomy versus dominance), R3 (autonomy versus support), and R4 (escape versus suffering). Thus, low degrees of interdependence establish a sixth region (R6, see Figure 1) where the attractor for autonomy or flight from B will be particularly strong.

The different regions of the state space have one central implication for the cognitive processing of conflict; they affect how conflicts are initially framed. Consistent with
Deutsch’s (1949b, 1973) findings, we could expect cooperative orientations under equal-power conditions to result in perceptions of conflict as a mutual problem to be solved jointly (“it’s our problem”), and competitive orientations under equal-power to result in perceptions of conflict as a win-lose struggle (“you are the problem”). However under unequal power conditions, conflict may be viewed differently. Under cooperative conditions, those in high-power (R1) may feel obligated to solve the conflict unilaterally, albeit constructively (“it’s my problem”), and those in low-power (R3) may take less responsibility and feel entitled to a free ride (“it’s your problem”). Under competitive conditions, those in high-power (R2) are likely to still view the problem as win-lose (“you are the problem”), with those in low-power (R4) either mirroring this view or accepting blame (“I am the problem”), depending on the degrees of stability and legitimacy of the system (Tajfel, 1981). However, under conditions of low degrees of interdependence (R6), A may view the conflict with B quite differently (“it’s not my problem”), particularly when other alternatives are available for attaining desired outcomes. These differences in the initial framing of the problem can have substantial affects on parties’ immediate responses to the conflict and on the dynamics that unfold overtime (see Lewicki, Gray, & Elliot, 2003).

**Second-order emotional dynamics.** The different orientations, values and behavioral rules afforded in Regions 1-6 can set in motion behavioral dynamics between parties in conflict that will result in generally positive and/or negative emotional reactions to events. Such reactions can be the result of a wide range of factors, but will be significantly affected by the following:

- **Goal satisfaction/frustration:** The degrees to which A’s process and outcome goals in the conflict are satisfied or frustrated. This includes goals of fairness, proper use of procedures, adherence to local norms and respectful discourse, as well as short and long-term outcome goals. Generally, threatened or frustrated goals have been found to have a more substantial affect on fostering negativity than the satisfaction of goals have on
fostering positivity (Gottman, et. al, 2002; Jarymowicz & Bar-Tal, 2006; Kahneman & Tversky, 1979).

- **Power gain/loss**: The degree to which one’s relative and total power are experienced as enhanced or diminished in the process of the conflict. Again, the experience of loss of relative power in conflict has been found to have a more substantial affect on fostering negativity than the experience of gaining power has on positivity (Rubin & Brown, 1975; Van den Berghe, 1967; Zartman & Rubin, 2002), although a strong sense of power and efficacy is considered paramount to psychosocial health and happiness (Bandura, 2006). At times however, goal satisfaction and relative power can work at cross-purposes. For instance, a cooperative act initiated by a party in relative low-power, while serving the goals of the high-power party, may be experienced negatively or rejected outright by the high-power party, because of the implications of the act for changes in the balance of power or degree of interdependence – as the high-power party may expect to feel a sense of indebtedness. Similarly, communicating a strong BATNA in a negotiation, while decreasing the degree of interdependence between the parties and increasing relative power of A, may undermine the potential for cooperative or integrative solutions, as B comes to feel a relative loss of power in the relationship. Thus, any act has the potential to affect parties both positively and negatively, at times simultaneously.

- **Situation-Orientation fit**: The degree to which A’s preferred orientation(s) fit with the demands and constraints of the situation (Higgins, 2000). People can hold a strong preference for a particular orientation to conflict (such as dominance) and find it emotionally distressing when situations require a different approach (such as support; McClelland, 1975). Of course, each of the different orientations to conflict has its particular benefits, costs, and consequences, depending on the psychological makeup of A, the orientation of B (or of other parties), and the nature of the situations faced. In fact, each of the orientations, when chronic, has its associated pathologies (see Deutsch, 1985;
ultimately, as Deutsch (1982, 1985), McClelland (1975), and Zartman and Rubin (2002) suggest, what is necessary and beneficial in dynamic situations of conflict is the capacity to adapt: to move freely between the various orientations and employ their related strategies and tactics effectively as needed.

- **Situational stability**: Conflict systems with disputants of unequal power that are stable for long periods of time will tend to evidence strong attractors for interaction dynamics between the parties (Zartman & Rubin, 2002). These develop as parties come to learn their relative-power roles and play them in a complementary fashion. Zartman and Rubin (2002) write, “In asymmetrical negotiation, strong and weak work together, organizing themselves around predictable moves and responses” (p. 285). Here, satisfactory outcomes are a function of both differing expectations and strong investments in the status quo (see Jost, Banaji, & Nosek, 2004 for a related discussion of system justification theory). However, if the imbalance-of-power changes as a result of the conflict, it can unleash powerful emotions and generate new actions that may intensify the conflict. For those in low-power, such changes can awaken a “sense of injustice” (Deutsch, 1985), as they come to see the prior system as unstable and illegitimate, leading to feelings of indignation and hopes for change (Gurr, 1970, 2000, Tajfel, 1981). For those in high-power, a change in the status quo will tend to be seen as a threat to their power and experienced negatively (Deutsch, 1973; Duckitt, 1992).

When relations between conflicting parties are ongoing, positive and negative emotions resulting from these processes will accumulate overtime (with some degree of dissipation), establishing attractors for generally constructive (positive) versus destructive (negative) relations between the parties (Coleman, et. al., 2007, Gottman, et. al, 2002, Losada, 1999). In effect, this establishes a second-order state space of constructive-destructive interaction dynamics between A and B (see Gottman, et al., 2002 for an illustration). Research has shown that unless disputants are able to sustain a relatively high
ratio of positivity-to-negativity (approaching 5:1, assuming high degrees of interdependence), they will tend to be pulled into more destructive attractors. These attractors will in fact “attract” the dynamics of the relationship; establishing the emotional context for future encounters between the parties, influencing the parties’ chronic orientations in the relationship, and increasing the probabilities for destructive conflict to unfold.

Discussion

The development of the framework for power and conflict outlined in this paper was motivated by our reading of the current state of research in the area which was found to be piecemeal and at times contradictory. Accordingly, a dynamical framework was offered which builds on four basic parameters derived from seminal and current research on conflict and power. The dynamical systems perspective was employed as an integrating platform, which allows us to bring together strands of research from social interdependence theory, power dependence theory, power orientations, and emotional attractors, and to begin to envision how they work in concert over time to establish patterns of constructive and destructive conflict between high and low-power parties. Thus, the framework offers us a foundation for addressing many of the questions and contradictions which have emerged in empirical research on conflict over the last few decades.

By bringing together the four parameters of the model and orienting us to patterns of psycho-social conflict dynamics over time, we begin to gain both clarity and parsimony. For instance, the framework helps us to understand how conflicts between equal-power parties can be either constructive (when they share strong cooperative goals, are mutually interdependent, or have a generally positive history of interaction) or destructive (with competitive goals, one-sided dependence, or a history of negativity). It helps reconcile why high-power parties, despite sharing strong cooperative goals with low-power disputants, may act in a more coercive or dominating manner (due to the strong pull of a dominance orientation or concerns with loss of relative power or an increase in dependence), and why
low-power parties may evidence submissiveness (when oriented toward support or
dependence is strong) versus assertiveness (when competitive goals are strong and
dependence is weak). It sheds some light on why high-power parties may fare less well in
conflicts with low-power others (due to the cognitive deficits associated with dominance
orientations [Fiske, 1993] or the strength of cooperative goals, interdependence, and history
between the parties). More specifically, it begins to detail how the different regions of the
psychological state space may affect how conflicts are perceived and responded to, and how
the ensuing behaviors and emotions can affect long-term probabilities for constructive and
destructive relations. Importantly, the framework highlights the critical importance of
movement in constructive conflict resolution. Instead of emphasizing a particular set of
predispositions or conditions for positive conflict processes, this model stresses the
importance of adaptation: the capacity to read and reread dynamic situations of conflict and
to move between different orientations, strategies and tactics as the situation requires.

At this stage, the framework is general, and much work lies ahead to refine it and
provide it with the necessary empirical support. First, the propositions outlined in this paper
can be translated into testable hypotheses for empirical research. Many of these can be tested
by using traditional qualitative, experimental and survey methodologies. For example,
interviews and focus groups could be conducted to ascertain how situations characterized by
the different regions of the state space result in distinct values, rules, and strategies for
conflict in different domains (work, family, politics, etc.). Experimental methods could then
be employed to test the effects of particular regions of the state space (R1-R6) on inducing
different types of psychological orientations and behaviors, and survey methods or other
assessment tools (e.g., games) could be developed to examine how particularly strong
psychological orientations affect preferred rules and behaviors in conflict. Much can be
gained from this type of research.
However, further development and testing of a formal dynamical model of power and conflict will require a different level of work. This paper described three parameters which we propose define a basic psychological state space for conflict, and one second-order parameter determining of social dynamics. Our next step will be to specify the dynamical properties of the model. In other words, to describe more specifically how the basic parameters influence each other (through different types of feedback loops in different regions of the state space) to establish trajectories in the state space, and then to specify how these interactions at the psychological level lead to the emergence of particular second-order constructive-destructive social dynamics. Mathematical modeling and computer simulations will be particularly useful for better specifying the model and visualizing unpredictable dynamics in the interactions of the parameters (see Liebovitch, Vallacher, Nowak, Bui-Wrzosinska, & Coleman, 2007 for an illustration). In addition, research that addresses the dynamical aspects of the model such as adaptation of psychological orientations and the accumulation of positivity and negativity overtime, will require the development of more dynamical methodologies for conflict research (see Nowak & Vallacher, 1994; Gottman, et al, 2002, for illustrations). These methodologies present new challenges for many of us trained in traditional social science methodologies, and a ripe opportunity for the next generation of conflict scholars.

References


Figure 1: Three-dimensional state space of a conflict-system for Party A: with X-axis = type of interdependence, Y-axis = relative power, and Z-axis = degree of interdependence. Two attractors (R5 and R2) are depicted in the state space.