Power in Sibling Conflict: Types, Effectiveness, and Outcomes

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ABSTRACT

Power in Sibling Conflict: Types, Effectiveness, and Outcomes

Shireen Abuhatoum

This study examined sibling conflict interactions in early and middle childhood as reflecting distinct sources of power (French & Raven, 1959). Data was based upon observations of naturalistic conflicts identified in videotaped play sessions from a sample of 66 dyads. Each dyad included an older (M = 81.8 mos., SD = 14.48 mos.) and younger (M = 56.2 mos., SD =13.03 mos.) sibling. Conflict sequences were coded for (1) conflict issues, (2) types of power, (3) power effectiveness, and (4) power outcomes. Findings revealed that when siblings fought about objects they used coercive power and when they fought about procedural issues they employed information power. Younger siblings displayed consistent patterns in their use of legitimate power across procedural and object issues and in conflicts ending in win/lose resolutions and compromise, whereas older siblings used coercive power in win/lose conflict resolutions. Younger and older siblings did not differ in their overall success rate in power, but were most successful when employing the use of coercive power as opposed to information power and legitimate power. Although older siblings won more conflicts, younger siblings' overall success rate in power was more strongly related to their chances at overthrowing their older siblings' efforts. Findings are discussed in light of power theory and in terms of sibling influences in the development of conflict management skills.

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Introduction

Children's cognitive and emotional development have been shown to emerge from the close relationships they form in early childhood (Dunn, 1983; Hartup, 1989; Volling, 2003). Specifically, the interactions that take place amongst siblings during the early childhood years are fundamental contexts that have the potential to either thwart or support children's development and social competencies (Dunn & Munn, 1985; Hughes & Dunn, 2007). Due to the enduring social bond and the vast amount of time siblings spend with one another, the sibling relationship provides an important context in which to study children's development (Howe, Ross, & Recchia, 2011; Vandell & Bailey, 1992). A review of the literature indicates that sibling conflict, in particular, is a critical context for the development of social understanding and adjustment (Dunn, 2002; Howe & Recchia, 2008; Howe et al., 2011). Children, who have poor conflict resolution skills or lack the ability to resolve conflicts amicably, are at risk for maladjustment and poor interpersonal relationships (Ross, Ross, Stein, & Trabasso, 2006). Thus, analysis of the factors and processes that underlie the interactions that characterize sibling conflict is a critical step in understanding how the sibling relationship, as a social context, is essential for healthy development.

Various studies have examined associations between children's understanding of their social world and the individual differences observed within sibling conflict. Nonetheless, to date few studies have examined the concept of power in sibling conflict and no studies have empirically investigated the presence and function of power in sibling conflict according to French and Raven's (1959) typology of power. In terms of the theoretical relevance of power in social relationships, reference is frequently made to

social exchange theorists who posit that all relationships involve reciprocal interactions (e.g., give and take exchanges) that are not always equal or balanced (Hinde, 1979). This balance or imbalance is determined by each partner's ability to influence the behaviour of the other by determining his or her rewards and punishments (Hinde, 1979). Social exchange theorists share in the assumption that social behaviour is largely determined by the reciprocal interactions and interdependent nature of social relationships (Hinde, 1979). Thus, power in this respect plays an important role in the reciprocal exchanges that characterize social relationships.

In an effort to bridge the gap in knowledge regarding issues of power in sibling conflict, the aims of this thesis were threefold. First, to provide a review of the literature concerning sibling conflict; second, to highlight how power in sibling conflict are manifested and worthy of investigation; and third, to examine: (a) the types of power siblings use in conflict, (b) the effectiveness of the types of power siblings employ, and (c) power outcomes. However, prior to delving into the topic of sibling conflict, the relevant features characteristic of social relationships and, more specifically, sibling relationships must first be addressed.

Sibling Relationships

Hinde (1979) highlights a critical distinction between two types of interactions that characterize social relationships, thus providing a useful framework to understand how the mechanisms of development within the sibling relationship operate. Accordingly, reciprocal interactions refer to mutual exchanges whereby both partners are on a fairly equal footing and can contribute to the interaction in a similar way (e.g., child-child relationships). Complementary interactions, on the other hand, refer to hierarchal

exchanges, whereby one partner possesses greater knowledge or authority than the other partner, as typically seen in child-adult relationships.

In terms of the sibling relationship, children's interactions are comprised of both reciprocal and complementary features (DeHart, 1999; Howe & Recchia, 2008). Factors that contribute to the complementary nature of siblings' interactions include that of age and birth order, which in turn produce differences in size, strength, power, knowledge, skills, and developmental status (DeHart, 1999). These differences in turn result in interactions that include sibling caretaking, sibling teaching, and forms of sibling attachment, all of which can be found to play a role in the development of important sociocognitive skills (Dunn, 1983). According to Dunn (1983), the reciprocal nature of the sibling relationship, in particular, plays a significant role in the development of children's social understanding. For example, Dunn contends that exchanges such as imitation help foster the development of communication sequences that take place between children.

In addition, both positive and negative affective exchanges between siblings contribute to the development of affective perspective taking abilities (Dunn, 1983). Sibling relationships thus reflect a combination of complementary and reciprocal features. However, one context that is of particular developmental significance and is viewed to be a product of both reciprocal and complementary interactions in the sibling relationship is that of conflict (Howe et al., 2011). For example, during conflict siblings engage in mutual and returned exchanges that facilitate the co-construction of shared meanings; however, there may also be opportunities within the conflict for the older child to teach the younger (e.g., how to build a wooden farm set; Howe & Recchia, 2008). As

such, the reciprocal and complementary interactions that take place between siblings during conflict may vary in degree and type, but nonetheless highlight important developmental considerations critical to understanding sibling dynamics.

Conflict

Conflicts between children represent a critical developmental challenge and an opportunity for growth (Hartup & Laursen, 1993). Conflict is defined as incompatible behaviours, goals, or activities that are expressed when an individual opposes another person's actions or statements (Deutsch, 1973; Shantz, 1987; Vandell & Bailey, 1992). In the past, conflict has been difficult to distinguish from both aggression and competition (Hartup & Laursen, 1993). For clarity purposes, aggression involves behaviour that aims to harm or injure another person, but is considered to be only one type of behaviour that may occur in conflict (Shantz, 1987). Conflict can also involve non-aggressive acts and can even be resolved through humour (Hartup & Laursen, 1993). Competition, on the other hand, refers to incompatible actions that reflect incompatible goals (Deutsch, 1973). Although competition produces conflict, conflict can occur without the perception of incompatible goals and can also occur within a cooperative context (Deutsch, 1973). Conflict is thus not always easily distinguishable from other structural terms, but as depicted here is a separate concept from aggression and competition. Given that conflict is not always aggressive and competitive, the difference between constructive and destructive conflict must also be considered.

Destructive conflicts are characterized by high negative affect (Vandell & Bailey, 1992), a tendency to expand and escalate (Deutsch, 1973), and are associated with discontinued interaction (Hartup & Laursen, 1993) and unresolved issues whereby one or

both parties are dissatisfied with the outcome (Howe & Recchia, 2008; Vandell & Bailey, 1992). In contrast, constructive conflicts are characterized by controlled affect, continued social interaction (Hartup & Laursen, 1993), and are likely to be resolved through the means of negotiation and reasoning, whereby both parties deem the outcome to be acceptable (Howe & Recchia, 2008; Vandell & Bailey, 1992). In light of destructive and constructive conflicts, the conflict episode can be viewed as "time-distributed" sequences of social interaction that encompass issues (what the conflict is about), instigating tactics (how the conflict starts), conflict strategies (what the partner says or does), and outcomes (how the conflict ends; Hartup & Laursen, 1993; Shantz, 1987).

The interrelations among these elements have been studied extensively and numerous theorists consider such components to contribute significantly to children's understanding of their social worlds. Piaget (1965) and Sullivan (1953) are two theorists who argue that the nature of the opponents' relationships is such that defending one's position and negotiating solutions to resolve conflicts provides children with the opportunity to learn how to deal with social problems, develop interpersonal skills such as perspective taking abilities, and develop an understanding of the social and moral rules that guide behaviour. Bridging from this theoretical viewpoint are empirical findings that provide support for the practical implications associated with the relevance of conflict in children's lives. Identifying the reasons as to why children fight may be the first step in unveiling the developmental significance associated with siblings' disputes.

Sibling Conflict

Conflict issues. The nature of siblings' disputes varies from early to middle childhood and then onwards to adolescence. In the early childhood period, Dunn and

Munn (1987) revealed that over 50% of siblings disputes were based on issues of rights, possession, and property. Ross (1996) found that ownership over property disputes was cited most frequently in siblings' justifications and was the principle by which property disputes were resolved. Furthermore, Hay and Ross (1982) revealed that in addition to the desire for control over objects being the issue at hand, 21-month-old children were also provoked by the social significance of the objects. In other words, once a child comes into contact with a toy, the toy's attractiveness to the other child suddenly increases. As children enter the middle childhood period, the issues that provoke conflict tend to move away from that of object and space and towards issues concerning control over the social environment (e.g., actions, inactions, ideas, beliefs; Shantz, 1987). Furthermore, although a particular issue may give rise to a conflict, the nature of a conflict can change, as single issues often shift to multiple issues within the span of a conflict episode (Howe et al., 2002; Shantz, 1987).

Conflict resolution strategies. The types of strategies and tactics that children employ in order to reach their goals when in conflict also vary and are influenced by a number of factors (Shantz, 1987). Dehart (1999) identified four major types of strategies: (1) destructive or adversarial strategies (e.g., coercion, physical, verbal aggression), (2) constructive strategies (e.g., negotiation, compromise), (3) passive disengagement strategies (e.g., distraction, ignoring), and (4) reliance on adults. Longitudinal studies suggest that developmental shifts may contribute to some of the individual differences observed in the strategies noted above. For instance, a study conducted by Martin and Ross (1995) found that older siblings were aggressive more frequently than younger siblings, but over time aggression declined with the difference being more apparent when

children were approximately 2½ and 4½ years of age, than when children were 4½ and 6½ years old.

In addition to aggression, the claims and counterclaims children use during conflict also reflect the individual differences observed in sibling conflict (Shantz, 1987). For example, in a study conducted by Dunn and Munn (1986), conflict behaviour between 18- to 24-month-old children and their older siblings revealed that first-borns were more likely to distract, conciliate, prohibit with justification, and refer to rules at both time points, but by 24 months several of the younger siblings likewise referred to rules, conciliated, and teased their older sibling. Furthermore, in a second study, Dunn and Munn (1987) examined children's developing use of verbal justification in disputes at 18, 24, and 36 months. The authors found that by 36 months children were using justifications in disputes with their older sibling, which occurred mainly through reference to their own feelings and to social rules.

Despite the developmental changes that occur when siblings fight, they rarely use strategies that lead to outcomes that end in conciliatory ways (Howe et al., 2002; Siddiqui & Ross, 1999). In a study conducted by DeHart (1999) over 80% of conflicts among sibling dyads between the approximate ages of 2 ½ and 6 ½ were found to end with a clear winner. Similarly, Howe et al. (2003) found that siblings between the ages of 2 and 7 were more likely to use destructive strategies (e.g., win/loss scenarios) and employ aggressive behaviours, as opposed to the contrary. In addition, there is evidence to suggest that sibling conflict does not necessarily become more harmonious over time (Rinaldi & Howe, 1998). Tesla and Dunn (1992) found that the proportion of non-conciliatory arguments used by siblings did not change across the two time points of

observations. Results revealed that children were less likely to argue for conciliatory ends at 47 months and at 33 months when disputes began by their own oppositional moves (Tesla & Dunn, 1992). Although compromises are desirable outcomes, they are rarely observed, however, the reasoning and communicative skills children develop and use to gain their own ends and to defeat their opponents when in conflict have been shown to contribute to children's social understanding of the world (Dunn, Slomkowski, Donelan, & Herrera, 1995)

Overall, the factors and processes that characterize siblings' interactions during episodes of conflict provide valuable insights into how the sibling relationship functions as a social and developmental phenomenon in children's lives. Specifically, the issues that siblings fight over, the conflict resolution strategies they employ to end the disputes, and the sociocognitive skills that are cultivated as a result, each play an important role in the facilitation for optimal development. In light of these highlights, a critical component that has been rather under researched within the context of social relationships and the sub-context of sibling conflict is that of power.

Power in Social Relationships

Power imbalances are evident in most relationships and occur at an interpersonal level (Wolf & McGinn, 2005; Punch, 2005). Power is a multidimensional construct that has been recognized to play an important role in social relationships. However despite this recognition, the term has been used interchangeably with words such as influence, dominance, submission, authority, and status, which in turn has led to much confusion (Emerson, 1962). In the context of social relationships, power is a property of the social relation and not an attribute of the individual (Emerson, 1962; Hinde, 1979). In other

words, to state that an individual has power is meaningless unless you specify over whom (Emerson, 1962). Given the interdependent nature of power in this context, an operational definition must refer to the relational features that characterize the very essence of social relationships. In this sense, social power is defined as the available resources person A has so that he or she can influence person B (French & Raven, 1959; Raven, Schwarzwald, & Koslowsky, 1998), whereas influence is defined as the change in belief, attitude, or behaviour of person B that results from the action or presence of person A (Erchul & Raven, 1997; French & Raven, 1959). Complementary with the above definition, the power of A is not only dependent on the availability of resources, but as Emerson (1962) contends, is also based on the dependence of B upon A, insofar as B has a demand for those resources, or insofar as the amount of resistance on the part of B can be overcome by A. Power in social relationships, is therefore, conceptualized in terms of the availability of resources and of the reciprocal interactions that take place between person A and person B.

Furthermore, in light of the reciprocal nature of power relations, the distribution of power within a dyad can be one of balance or imbalance (Emerson, 1962). In the case where A has a power advantage over B, conditions of dominance and submission are brought to the forefront. Dominance and submission reflect the asymmetrical nature of power that exists within pairs of individuals (Strayer & Strayer, 1977). However, it is important to note that dominance is not a necessary condition of power relations and a lack of dominance does not imply that power is lacking in either or both directions (Emerson, 1962).

Lastly, although social power can be defined as the "available resources" or "potential resources" a person has so that he or she can influence another individual (French & Raven, 1959; Raven et al., 1998), this definition does not adequately lend itself as an empirical means to identify uses of power within a social relationship. For this purpose, potential power must be distinguished from actualized power. Potential power refers to all of the resources available to person A in relation to all of the resources available to person B, whereas actualized power refers to the entire resources person A utilizes in conjunction with the resources utilized by person B (Krause & Kearney, 2006). In sum, by incorporating various features regarding the concept of power, power in social relationships and in the social sciences can be defined as the resources person A utilizes so that he or she can influence person B (French & Raven, 1959; Krause & Kearney, 2006; Raven et al., 1998) and is based upon the co-dependence that characterizes the reciprocal interactions that take place between both individuals (Emerson, 1962).

Power in Sibling Conflict

In addition to the definition of social power provided above, the analysis of power varies in relation to respective sub-contexts. Specifically, in the context of conflict, power is negotiated through interactions between two or more individuals. Although, person A has access to resources that can potentially exert an influence to produce a change in person B, person B also has access to similar or alternative resources that could oppose person A, and possibly be of value to person A (Krause & Kearney, 2006). This instance illustrates two important points. First, by virtue of such opposition, power is exercised within the context of conflict. As was mentioned previously, conflict is defined as mutual opposition between two individuals (Shantz, 1987). Second, as person B

opposes person A, the power relations may shift, which in turn demonstrates that power is fluid and rarely absolute (Hinde, 1979).

In terms of sibling conflict, power can be identified, obtained, and exercised in a variety of ways. To understand how power functions in siblings' disputes, the types of power evident in sibling conflict and the strategies siblings' employ in order to obtain power when they fight must be addressed, as well as distinguished. In doing so, emphasis will be given to French and Raven's (1959) typology of power, which differentiates between six bases of power: reward, coercion, legitimate, expert, and referent, with the later addition of information power (Raven, 1965). Bases of power such as those outlined by French and Raven refer to resources that are accessible to family members and form the basis by which influence over another person is exercised (Dunbar, 2009). Power processes, however, refer to conflict strategies that children for example use to exercise power and consequently reflect corresponding bases of power (Dunbar, 2009; Recchia, Vickar, & Ross, 2010).

First, reward power as it stands refers to one's ability to reward another. Reward power can occur through personal means such as receiving approval from someone we like or impersonal means such as the withdrawal of privileges (Raven, 1993; Perlman, Siddiqui, Ram, & Ross, 1999). Furthermore, the strength of a reward is viewed as dependent upon the magnitude of the reward (French & Raven, 1959). Second, coercive power refers to the threat of punishment, whereby the target of influence anticipates punishment by the agent of influence when he or she fails to conform to the expectation(s) imposed by the agent (French & Raven, 1959). Similar to reward power,

coercive power can occur through personal means such as physical or verbal threats (Raven, 1993).

In sibling conflict, both types of power, as well as the strategies siblings employ in order to obtain such power have been documented. In terms of coercive power, findings reveal that physical and verbal aggression between siblings are often used as a strategy to acquire power and to obtain one's end goal (Dunn & Munn, 1986; Howe et al., 2002; Martin & Ross, 1995). For instance, Perlman, Garfinkel, and Turrell (2007) found that older siblings showed consistency in their use of verbal power (threats and teasing) over time, whereas younger siblings' use of threats and teasing strategies doubled over time. In addition, Punch (2005) notes that due to the lack of disciplinary power siblings have over one another, sibling power struggles are more likely to involve the use of coercive exchanges such as physical force.

In light of the studies that have demonstrated the presence of coercive tactics between siblings when in conflict, there is also evidence to suggest that siblings may possess and exercise reward power during their disputes. For instance, sibling structural variables such as age, sex, or birth interval have been shown to contribute to older siblings having a developmental advantage over their younger siblings (Vandell & Bailey, 1992; Volling, 2003). This in turn may grant firstborns with more power to not only reward their younger sibling, but also to deprive them of certain privileges (Perlman et al., 1999).

Third, legitimate power refers to a person's rights and obligations (French & Raven, 1959). Legitimate power stems from a set of internalized values embedded within the target of influence (French & Raven, 1959). These values in turn, dictate that

the agent of influence has a legitimate right to influence the recipient, and that the recipient has an obligation to accept this influence (French & Raven, 1959). Raven (1993) further differentiates between legitimate reciprocity (e.g., "I did that for you, so you should feel obliged to do this for me"), legitimate equity (e.g., "I have worked hard and suffered, so I have a right to ask you to do something to make up for it"), and legitimate dependence, which refers to one's obligation to help others who cannot help themselves. At the very crux of this base of power is the idea that social norms and moral rules guide behaviour (Perlman et al., 1999).

In terms of sibling conflict, Perlman et al. (1999) makes note that disputes over property rights and object ownership may be the earliest signs of power struggles between siblings that are based on legitimacy. As mentioned previously, property rights and object possession were found to be one of the most common cited issues that drive siblings' disputes in early childhood followed by issues concerning the invasion of space and destruction (Dunn & Munn, 1987; Hay & Ross, 1982; Ross, 1996). Alongside the topic of dispute, Dunn and Munn (1987) investigated dispute justifications among sibling dyads. Of the various categories of justification, children most commonly referred to their own feelings, but also referred to social rules and material consequences. In light of these findings, it is thus reasonable to make the claim that children refer to their own rights and feelings and/or to social rules in the attempt to support their actions and to assert their legitimate sense of power.

Fourth, siblings' verbal justifications are considered to reflect the resource of information power. Information power refers to the act of persuasion based on information or logical argument (Raven, 1965). Consequently, information power in

sibling conflict relies on the reasoning and argumentative abilities that take place during the negotiation process. For example, Phinney (1986) found that when in conflict, older siblings (6-9 years old) used more elaborated moves (e.g., reasons and explanations), whereas younger siblings (2-4 years old) used more simple moves (e.g., counter assertions that deny, reject, or contradict the assertion). Thus, with increasing age and improvements in development, children not only expand their repertoire of tactics used in conflict, such as strategies related to the use of information power (e.g., verbal justification), but they also use more sophisticated forms of argumentation (e.g., elaborated moves) as well.

Furthermore, researchers have also demonstrated how siblings' arguments can be used in conciliatory and non-conciliatory ways. For instance, Dunn and Herrera (1997) investigated whether siblings' use of self-oriented arguments (offered in the service of the speaker's own interest), other-oriented arguments (turns that take into account the needs/desires of the other), or no arguments during the preschool years predict later differences in children's conflict resolution skills with friends. Findings revealed that children whose older siblings had frequently used other-oriented strategies with them at 33 months were more likely to compromise or submit so as to resolve conflicts with their close friends at age six. In an earlier study, Slomkowski and Dunn (1992) also found that when one sibling used other-oriented arguments, the other sibling also tended to use this type of argument. Thus, these studies not only reveal the interrelations of argumentation that exist within and across the sibling relationship, but that such tactics can be applied in the interests of both parties, and simultaneously reflect how information power can be used to end the conflict in a constructive way.

Building upon the use of information power is fifth, expert power, which refers to one's superior knowledge or ability in comparison to that of another (French & Raven, 1959). With respect to conflict, the person with more knowledge or know-how regarding the topic of dispute will be the individual who determines what will be the best outcome of the conflict (Perlman et al., 1999). As a result, this type of power base is more likely to be evident among older siblings, who by virtue of age and developmental progression have more experience and knowledge than their younger sibling.

French and Raven's (1959) sixth power base is that of referent power, which is based on the target's identification with the influencing agent. Identification of person B with person A means that person B may either feel a sense of oneness with person A, or desire to have the same identity as person A (French & Raven, 1959). In contrast, referent power can also be grounded in one's desire to de-identify with another person (Raven, 1993). In this sense, referent power has both positive and negative manifestations. An example of referent power includes a child doing what their sibling asks because the sibling is someone admirable, or alternatively, not doing what is requested of them because their sibling is not perceived as someone admirable (Raven, 1993).

Of importance here, is to determine when do children yield in favour of their sibling's interests and more precisely, when do children utilize referent power as a function of their identification with their sibling? These questions are not easily answered, but some literature suggests there is evidence of referent power in sibling conflict. Perlman et al. (1999) highlight the role of affect and emotion when discussing siblings' identifications with one another in the context of conflict. First, when children

use other-oriented types of reasoning, they may be employing their resource of information power in their attempts to influence the other individual (e.g., we should share the crayons), but they may also be employing their resource of referent power. As Perlman et al. (1999) notes, children's use of other-oriented types of reasoning and verbal expression of concern for other's feelings is often associated with less negative and more positive feelings towards one's opponent. This element of concern, in turn, produces more conciliatory outcomes and can be associated with the identification process of one sibling with the other, thus employing referent power as a source of influence.

The Present Study

Although the sibling relationship has been the focus of much research in the recent years, a particular area of interest and relevance that has not yet been explored in depth includes that of power in sibling conflict. Theorists such as Hinde (1979), Hartup (1989), and Dunn (2002) have identified power to be a significant component of social relationships. In order to gain a comprehensive understanding of what factors and processes guide cognitive, emotional, and behavioural development among children in sibling relationships, the interactions that occur during sibling conflict must be studied from all angles and points of view. Thus, conceptualizing the construct of power and evaluating the role of power in siblings' negotiations is an important consideration that must not be overlooked. In order to study power in social relationships and, more specifically, in sibling relationships, French and Raven's (1959) typology of power provides a useful framework. The review of the literature suggests the use of the six power bases in sibling conflict; however, no studies to date have investigated and

empirically identified the presence and function of French and Raven's (1959) six power bases in siblings' disputes.

Therefore, to recap, the purpose of the present study was to investigate the nature of power in sibling conflict by examining the types of power siblings' use in conflict, issues regarding the effectiveness of the types of power employed, and power outcomes. In light of this plan, a distinctive set of research questions were raised in conjunction with a corresponding set of hypotheses that were derived from the literature. However, due to the lack of research conducted in this area, some of the research questions will also be addressed through an exploratory approach.

(1) Power types and conflict issues. The goal of the first research question was to investigate what types of power siblings were more or less likely to use in different kinds of conflicts (for definitions and examples, see Appendix A). By virtue of the nature of destructive acts, it was hypothesized that when siblings fight over issues based on obnoxious behaviour and physical contact, they would be significantly more likely to employ coercive power. Next, based on a positive association that was found between aggression and both procedural and concrete conflict issues (Howe et al., 2002), it was hypothesized that younger and older siblings would be significantly more likely to use coercive power in conflicts based on concrete and procedural issues. Furthermore, it was hypothesized that when siblings fight over object conflict issues, they would be significantly more likely to employ legitimate power. Support for this prediction was based on the types of justifications siblings provide in their disputes over the use of objects or space. For instance, Ross (1996) found that when older siblings were both owners and possessors they were more likely to mention their ownership rights (e.g.,

"That is mine"), whereas the transgressors were more likely to use arguments based solely on possession (e.g., "I had it first").

Moreover, when dyads fight over conflict issues based on information, plans for play, and procedures, older siblings were expected to be significantly more likely to employ information power than younger siblings. This prediction was based on Phinney's (1986) study that examined how the topic of dispute may influence the structure of children's naturally occurring disputes. Specifically, Phinney reported that older siblings used more elaborated moves (e.g., use of reasons, explanations, or use of justifications) when engaged in disputes over facts, whereas younger siblings used more simple moves (e.g., counter assertions that deny, reject, or contradict the assertion). Thus, conflict issues that involve facts, rules, or ideas (e.g., information, plans for play, procedure) may influence older siblings to draw upon their resource of information power in attempt to handle the dispute. Lastly, due to the literature that depicts older siblings as having a developmental advantage over their younger sibling (Vandell & Bailey, 1992; Volling, 2003), it was predicted that when siblings fight over procedures, older siblings would be significantly more likely than younger siblings to use expert power.

(2) Effectiveness of power. The second research question aimed to inquire into how successful was siblings' attempts at using power? As was mentioned previously, over 80% of sibling conflicts are found to end through win/loss scenarios (DeHart, 1999). Based on findings in the literature that designate the older sibling to more often be the initiators of conflict (Howe et al., 2002), as well as the winners (Howe et al., 2011), it was predicted that older siblings would have a significantly higher overall success rate than younger siblings. Third, due to the literature that depicts older siblings as having a

developmental advantage over their younger sibling (Vandell & Bailey, 1992; Volling, 2003), it was further predicted that older siblings would be significantly more successful at using expert power, coercive, and information power than younger siblings, whereas younger siblings would be significantly more successful at using negative reward power than older siblings. Lastly, due to the literature that depicts older and younger siblings as making references to one's own rights when faced with a threat, it was predicted that siblings will not differ in the success rate of their attempts when using legitimate power (Ross, 1996).

(3) Power types and power outcomes. The third research question sought to inquire into what types of power siblings were more or less likely to employ given the outcome of a conflict (e.g., win/lose, compromise). In other words, what types of power do siblings use to win a conflict? Given that aggressive exchanges such as hitting or yelling constitute a form of coercive tactics, it was predicted that siblings would be significantly more likely to employ the use of coercive power in conflict scenarios that end in win/loss outcomes. Support for this prediction was found in the literature that highlighted the presence of aggressive acts in siblings' disputes (Punch, 2005; Dunn & Munn, 1986; Martin & Ross, 1995). Next, since legitimate power requires one to exercise or defend one's right in the interest of the self and not the other, it was predicted that siblings would be significantly more likely to use legitimate power in conflict scenarios that also end in win/loss outcomes. Support for this hypothesis was found in the literature that links the use of other-oriented as opposed self-oriented arguments to an increased likelihood of resolving conflicts through compromise (Dunn & Herrera, 1997).

Moreover, based on the uncompromising and negotiation-free aspects that characterize expert power, it was expected that this type of power would be employed significantly more often in conflict sequences that end in win/loss outcomes. Next, due to the flexible nature of reasoning (e.g., negotiation) and to the literature that links problem-solving negotiations with increased information-sharing (Ram & Ross, 2008), it was predicted that siblings would be significantly more likely to use information power in conflict scenarios that end in compromise (win/win).

(4) Power effectiveness and power outcomes. The fourth research question aimed to ascertain the relationship between the overall success rate of power and power outcomes. As was highlighted in a previous set of hypotheses, older siblings are identified to most often be the winner of conflicts (Howe et al., 2011). Thus, it was first predicted that older siblings would win significantly more conflicts than younger siblings. Following from here, it was consequently predicted that younger siblings' overall success rate in power would be more strongly related to younger siblings' winnings, than would be older siblings' overall success rate to older siblings' winnings.

Method

Participants

Participants included 66 sibling dyads selected from a larger sample of 70 dyads that came from Caucasian, middle-class, English-speaking families. Based upon the sample size of 66 dyads, the ages of the first-born children ranged between 59 and 119 months (M = 81.8 mos., SD = 14.48 mos.) and the ages of the second-born children ranged between 35 and 79 months (M = 56.2 mos., SD =13.03 mos.). Participants lived in a bilingual (English/French) urban city and were recruited through daycare centers, schools, and by word of mouth. The gender composition was evenly distributed with 17 female–female, 14 male–male, 19 female–male, and 16 male–female pairs. Ethical approval for this study was previously given to Nina Howe by the Concordia University Human Research Ethics Committee (protocol number, 87-047).

Procedure

The sibling pairs were given a wooden farm set (large and small barn, silo, animals, and people, trees, fences) intended to promote pretend play. Children were observed in the home and participated in two counter-balanced videotaped sessions of play and teaching. Only the 10-15 minute videotaped play sessions were used in the present study and the unit of analysis for the measures described below was based on the children's verbal narratives. Conflict sequences for 40 of the 66 dyads that were drawn from the larger sample had been previously identified and coded in the Howe et al. (2002) study that examined sibling conflict. In the present study, conflict sequences were identified in 26 of the remaining 30 dyads and were coded for (1) instigator, (2) conflict issue, and (3) turns. Following this step, the use of power in the conflict sequences was

identified in the 66 dyads and was coded for (1) types of power, (2) effectiveness of power, and (3) power outcomes.

Measures

Conflict. Conflicts were defined as mutually opposed behaviour whereby an individual opposes another person's actions or statements (Vandell & Bailey, 1992). The transcripts of the videotaped play sessions that had previously been coded for conflict in the Howe et al. (2002) study for 40 of the 70 sibling dyads was based on a modification of DeHart's (1999) coding scheme. Using the same coding scheme for 26 of the remaining 30 dyads, conflict sequences were first identified and then coded for (1) instigator (e.g., first partner to make an oppositional move within the conflict sequence), (2) conflict issue (e.g., information, procedures, plans for play, concrete, obnoxious behaviour), which was identified once per conflict sequence, and (3) turns, which was defined as the number of behavioural or verbal exchanges that alternate between the partners in the conflict sequence (for definitions and examples, see Appendix A).

As reported in Howe et al. (2002), reliability was first established with 40 of the 70 transcripts for 15% (6/40) of the transcripts. Percent agreement for the identification of the conflict sequences and turns averaged 97%, meanwhile Cohen's *kappa* revealed high levels of agreement for coding of the instigator and conflict issue (k = .92). Second, interrater reliability was established with a second coder (Nina Howe, who had been involved in the coding of the first 40 dyads) for 20% of the remaining 26 transcripts (5/26) and percent agreement for identification of the conflict sequence and turns averaged, 85% and Cohen's *kappa* further revealed high levels of agreement for coding of the instigator and issue (k = .83).

Power. Given that power is a multidimensional construct, the coding schemes developed for the present study differentiated between: (a) types or bases of power that are made up of power processe, (b) power effectiveness, and (c) power outcomes. As was previously noted, the term power processes refers to specific conflict strategies (Dunbar, 2009; Recchia, et al., 2010) that reflect power bases such as those outlined by French and Raven (1959) and Raven's (1965) six types of power. Interrater reliability was established with a second coder (a new coder) for 20% (13/66) of the transcripts and Cohen's *kappa* revealed high levels of agreement for the coding of all power variables (k = .93), meanwhile *kappas* for each category are reported below.

Types of power. Conflict sequences were coded for types of power (coercive, reward, legitimate, referent, expert, and information; French & Raven, 1959; Raven, 1965) that were identified as either present or absent on each turn in the conflict sequence. The coding scheme for types of power was initially developed by Sandra Dellaporta for use in her Master's thesis; however, in order to meet the purposes of this study, the coding scheme was adapted. All power types were based upon mutually exclusive criteria that were generated through an examination of the transcripts and through a review of the literature that highlight specific conflict strategies (power processes) used by siblings (Perlman & Ross, 2005; Phinney, 1986, Ross, 1996). These strategies were then grouped according to the corresponding types of power with which they reflected (for definitions and examples, see Appendix B). In addition to the six types of power, a seventh subcategory under power called "appeals to third parties" was created to account for instances when siblings made appeals a third party such as a parent

or an observer to intervene in the conflict. Inter-rater agreement was established and Cohen's *kappa* for types of power was .95.

Power effectiveness. Once the types of power were identified, the effective use of each type of power was assessed according to a coding scheme that was developed by the present author (for definitions and examples, see Appendix B). Power effectiveness refers to the degree to which siblings' attempts at using power were successful or not. This coding scheme outlined specific conditions required for each type of power to be identified as either (a) an attempt or (b) a success. An attempt occurs when one child tries to effectively employ the use of power as a means to achieve a desired outcome or influence the behaviour of the other child, but is not successful in doing so. In contrast, a success occurs when one child effectively employs the use of power as a means to achieve a desired outcome or influence the behaviour of the other child. Attempts and successes were determined by two-step behavioural contingencies, whereby specific behaviours are followed by specific responses.

For instance, if child A used a power strategy, then the effectiveness of that power strategy (attempt or success) depended upon conditions that detailed child B's response (whether or not child B's behaviour was successfully influenced/changed) or whether the desired outcome on behalf of child A was achieved. Cohen's *kappa* for power effectiveness (the identification of each type of power as an attempt or success) was .85. Following the coding of each type of power as either an attempt or a success, the success rate for each type of power was calculated according to the total number of successes divided by the sum of the attempts and successes per child [e.g., 2 successes / (3 attempts + 2 successes) = 40% success rate]. This measure is considered to be an indication of the

balance of power shared among dyads during the process of the conflict, as opposed to the end of a conflict. This step was conducted during the analyses stage of the study.

Power outcomes. Power outcomes (e.g., win/lose, compromise, lose/lose, indeterminate; for definitions and examples see Appendix B) were determined according to a child achieving what they wanted at the end of a conflict sequence. Conflict outcomes that resulted in a win/lose scenario were characterized by a winner and a loser, whereas conflict outcomes ending in a compromise (e.g., win/win) or a lose/lose scenario were characterized by conditions that were deemed acceptable or unacceptable by both parties. In addition, for cases where power outcomes were characterized by an indeterminate resolution, whereby no party succeeded in winning or losing, the outcome of the conflict was considered to be indeterminate. All power outcome variables were identified once per conflict sequence and Cohen's *kappa* was .99.

Results

Preliminary Analyses

A report of descriptive statistics concerning all variables in the study is included in the following section. However, it is important to note that in order to control for individual differences in the frequency of power moves, data analyses regarding power variables were conducted with proportionalized data. Due to the low frequencies, some of the variables in the study were dropped from the analyses (outlined below) because they were no longer statistically meaningful to examine.

Conflict. Means, standard deviations, frequencies, percentages, and range of the conflict variables for the non-proportionalized data are found in Table 1 (all Tables are found at the end of the Results section). In total, the 66 sibling pairs engaged in 246 conflicts that consisted of a fairly wide range across dyads (M = 3.7, SD = 2.1, *range* = 1 - 9). In terms of who started the conflict (identified as either the younger or older sibling per conflict sequence), older siblings' instigated conflicts 57% of the time and younger siblings 43% of the time. In terms of conflict issues (identified as the first issue during the conflict sequence and coded only once), dyads fought over issues concerning objects 37% of the time and procedures 33% of the time. Conflicts based on plans for play, information, physical contact, general obnoxiousness, plans to terminate play, space, and indeterminate issues occurred least frequently and were dropped from the analyses.

Power. Descriptive statistics for power variables on the non-proportionalized data are found under Power Types in Table 2. With regards to the types of power sibling dyads employed most often (identified as absent or present per line in the conflict sequence), information power was used 42.3% of time, followed by coercive power

(35%), and legitimate power (15%). In contrast, negative reward power (3.4%), expert power (2.1%), third party appeals (1.6%), and referent power (.4%) were employed least often and were excluded from the analyses with the exception of calculating younger and older siblings overall success rate in power. In terms of power effectiveness, dyads together employed more attempts (65.1%) than successes (34.9%).

Descriptive statistics of power variables according to each child are reported as follows (see Power Types in Table 3). Older siblings used all types of power more frequently than younger siblings with the exception of legitimate power and appeals made to third parties. In terms of power effectiveness (see Power Effectiveness in Table 3), older and younger siblings did not differ in the proportion of attempts they employed (32.7% vs. 32.4%), but differed in the proportion of successes employed, with older siblings exceeding that of younger siblings (19.6% vs. 15.2%). In comparison to the success rate for each type of power (see Power Effectiveness in Table 3), older and younger siblings means did not differ very much in terms of coercive power, but on average older siblings had a higher success rate than younger siblings when it came to information power, expert power, and appeals made to third parties. Contrary to older siblings' using reward and referent power more often than younger siblings (see Power Types in Table 3), on average younger siblings' success rate for reward and referent power was greater than that of older siblings, including that of legitimate power. In terms of overall success rate, older siblings appeared to have a higher success rate than that of younger siblings.

Lastly, with regards to power outcomes, 80.9% of all conflicts ended in win/loss scenarios, 12.2% ended in compromise, 2.2% ended in lose/lose, and 4.9% were

indeterminate (see Power Outcomes in Table 2). Lose/lose and indeterminate outcomes were dropped from the analyses. In terms of who was the winner of conflict scenarios, older siblings were found to be the winners of conflicts 60% of the time and conversely younger siblings won conflicts 40% of the time (see Power Outcomes in Table 3).

Age and Gender Differences

Pearson correlations were conducted to determine the associations between age gap and mean age with all the variables analyzed for significance in the data set. A few age differences were found. Age gap was negatively correlated with conflict issues based on information ($r = -.27$, $p < .05$) and was positively correlated with older siblings' winnings ($r = .32$, $p < .05$), but conversely negatively correlated with younger's winnings ($r = .32$, $p < .05$). Siblings' mean age ($r = -.40$, $p < .05$) was negatively correlated with older siblings' success rate of legitimate power, whereas age gap ($r = .42$, $p < .05$) was positively correlated with older siblings' success rate of legitimate power. Lastly, siblings' mean age ($r = -.30$, $p < .05$) was negatively correlated with older siblings' overall success rate of power.

In order to determine whether age variables mentioned above had an effect in the analyses, the age variables were first controlled for, but this step did not yield a significant difference in the results. As a result, the analyses are reported without age controlled. Furthermore, to check for gender effects, a series of 2 (gender of older) X 2 (gender of younger) between subject analysis of variances (ANOVA) were conducted with gender as the independent variables and conflict issues, types of power, success rate, and power outcomes as the dependent variables. There were no main effects or interactions for the ANOVAs found.

Hypothesis 1: Power Types and Conflict Issues

To test the hypotheses concerning what types of power siblings used in different kinds of conflict, a series of ANOVAs was conducted with birth order and conflict issues as the independent variables and types of power as the dependent variables. The results reported below were statistically significant and post hoc tests were conducted using the Bonferroni correction. Since proportion scores were used to analyze the data, only two types of conflict issues (objects and procedures) were examined. As a result, in order to determine if there was a difference in siblings' use of coercive power across both types of issues, an exploratory analysis was performed. A 2 (siblings) X 2 (conflict issues) repeated measures ANOVA with coercive power as the dependent variable indicated a main effect of conflict issues, $F(1, 25) = 10.61$, $p < .05$, $\eta^2 = .30$, indicating that siblings' mean use of coercive power differed between conflict issues based on objects and procedures. Post hoc tests revealed that when siblings fought about objects ($M = .80$, $SD = .07$), they were more likely to employ coercive power than during disputes based on procedures ($M = .49$, $SD = .08$). A main effect for siblings was not found, $F(1, 40) = 10.61$, *ns*, and interaction effects between siblings and conflict issues were nonsignificant, $F(1, 25) = .025$, *ns*.

Second, a 2 (siblings) X 2 (conflict issues) repeated measures ANOVA with legitimate power as the dependent variable was conducted to test whether siblings were more likely to use legitimate power in conflicts issues based on objects versus other types conflicts (procedures). The hypothesis was not supported. A main effect for conflict issues was not found, $F(1, 40) = 1.57$, *ns*, however, a main effect for siblings was revealed, $F(1, 40) = 7.55$, $p < .05$, $\eta^2 = .16$, thus, indicating an overall mean difference in

younger and older siblings' use of legitimate power across both conflicts issues. Post hoc tests indicated that younger siblings (M = .33, SD = .05) were more likely than older siblings (M = .19, SD = .04) to employ the use of legitimate power. Interaction effects between siblings and conflict issues were nonsignificant, $F(1, 40) = .80$, *ns*.

Third, a 2 (siblings) X 2 (conflict issues) repeated measures ANOVA with information power as the dependent variable was conducted to test the hypothesis that expected older siblings to be more likely than younger siblings to employ the use of information power in conflicts based on procedures. This hypothesis was partially supported. Results revealed a main effect for conflict issues, $F(1, 25) = 4.29$, $p = .05$, $\eta^2 = .15$, indicating that siblings' mean use of information power differed between conflict issues based on objects and procedures. Post hoc tests revealed that when siblings fought about procedural issues (M = .77, SD = .06), they were more likely to employ information power than during disputes based on objects (M = .56, SD = .06). In contrast, a main effect for siblings was not found, $F(1, 25) = .05$, *ns*, and interaction effects between siblings and conflict issues were nonsignificant, $F(1, 25) = .45$, *ns*.

Hypothesis 2: Power Effectiveness

First, a paired sample *t*-test was performed to assess the hypothesis that predicted older siblings as having a significantly higher overall success rate of power than younger siblings. This hypothesis was not supported, $t(65) = -1.168$, *ns*. Second, a 2 (siblings) X 3 (type of power success rate) repeated measures ANOVA was conducted to test the hypothesis that predicted older siblings would be more successful at using coercive power and information power than younger siblings. Lastly, siblings were not expected to differ in their success rate of legitimate power. Most of these hypotheses were not

supported. Results revealed a main effect of power success rate, $F(2, 50) = 10.02$, $p < .05$, $\eta^2 = .29$, indicating that siblings' mean success rate of coercive, legitimate, and information power differed. Post hoc tests revealed that when siblings employed the use of coercive power ($M = .47$, $SD = .04$), their success rate was higher than when they employed the use of legitimate power ($M = .33$, $SD = .05$), or information power ($M = .32$, $SD = .04$). These findings appear to indicate that younger and older siblings' attempts and successes at using power were similar.

Hypothesis 3: Power Types and Power Outcomes

In order to test the hypotheses concerning to what ends siblings' employ different types of power, a series of ANOVAs was performed with birth order and power outcomes as the independent variables and types of power as the dependent variables. First, a 2 (siblings) X 2 (power outcomes) repeated measures ANOVA with coercive power as the dependent variable was conducted to assess whether siblings used more coercive power in conflict scenarios ending in win/lose outcomes than those ending in win/win (compromise) outcomes. Partial support for this hypothesis was found. Results revealed an interaction between siblings and power outcomes, $F(1, 22) = 6.3$, $p < .05$, $\eta^2 = .22$. Post hoc tests illustrated that when conflicts ended in win/lose outcomes, older siblings' ($M = .74$, $SD = .06$) were more likely than younger siblings ($M = .58$, $SD = .07$) to employ the use of coercive power (see Figure 1). In contrast, younger ($M = .77$, $SD = .08$) and older ($M = .61$, $SD = .10$) siblings were not found to differ in their use of coercive power in outcomes ending in compromise (win/win).

Second, a 2 (siblings) X 2 (power outcomes) repeated measures ANOVA with legitimate power as the dependent variable was performed to assess whether siblings used

more legitimate power in conflict scenarios that ended in win/lose outcomes than those that ended in win/win outcomes. Support for this hypothesis was not found. Results showed a main effect for sibling $F(1, 22) = 9.08$, $p < .05$, $\eta^2 = .30$, indicating an overall mean difference in younger and older siblings' use of legitimate power across both outcome scenarios. Post hoc tests revealed that younger siblings ($M = .49$, $SD = .06$) were more likely than older siblings ($M = .31$, $SD = .06$) to employ the use of legitimate power in both types of outcomes. In contrast, a main effect for power outcomes was not found, $F(1, 22) = .65$, *ns*, and interaction effects between siblings and power outcomes were nonsignificant, $F(1, 22) = .17$, *ns*.

Third, a 2 (siblings) X 2 (power outcomes) repeated measures ANOVA with information power as the dependent variable was performed to assess the hypothesis that predicted siblings as using more information power in conflict scenarios ending in win/win outcomes than conflicts ending in win/lose outcomes. Support for the hypothesis was found. Results revealed a main effect for power outcomes, $F(1, 22) = 6.34$, $p < .05$, $\eta^2 = .23$, indicating that siblings' mean use of information power differed between outcomes ending in win/lose scenarios versus win/win scenarios. Post hoc tests showed that when siblings employed the use of information power they were more likely to end conflicts in compromise ($M = .81$, $SD = .07$) than in win/lose outcomes ($M = .70$, $SD = .06$). In contrast, a main effect for siblings was not found, $F(1, 22) = .28$, *ns*, and interaction effects between siblings and conflict issues were nonsignificant, $F(1, 22) = .23$, *ns*.

Hypothesis 4: Power Effectiveness and Power Outcomes

To test the hypothesis concerning who in the dyad was more likely to win more conflicts, a one sample *t*-test was performed and support for the hypothesis was found. Results, revealed older siblings (M = .63, SD = .36) to win more conflicts than younger siblings (M = .37, SD = .36), $t(63) = 2.84$, $p < .05$, d = .35. The second step entailed testing the hypothesis that expected younger siblings' overall success rate in power to be more strongly associated with younger siblings' winnings, than would be older siblings' overall success rate to older siblings' winnings. Support for the hypothesis was found. Pearson correlations (see Table 4) indicated a negative correlation between younger siblings' overall success rate in power and older siblings' winnings, which revealed that as younger siblings became more successful in their attempts at using power, older siblings became less likely to win conflicts. Conversely, a negative correlation was found between older siblings' overall success rate in power and younger siblings' winnings, indicating that as older siblings' success rate in power increased, younger siblings became less likely to win conflicts.

Table 1

Descriptive Statistics for Conflict Issues

Issues	*Minimum*	*Maximum*	*M* (*SD*)	*Frequency*	*Percentage*
Object	0	6	1.39 (1.37)	91	37
Procedure	0	4	1.23 (1.28)	81	33
Plans for Play	0	5	.33 (.82)	22	8.9
Physical	0	3	.24 (.55)	16	6.5
Information	0	2	.24 (.52)	16	6.5
Obnoxiousness	0	2	.12 (.37)	8	3.3
Plans to Terminate Play	0	2	.11 (.35)	7	2.8
Social Appropriateness	0	1	.03 (.17)	2	0.8
Indeterminate	0	1	.03 (.17)	2	0.8
Space	0	1	.02 (.12)	1	0.4

Note. Scores reported above are based on the total number of conflict sequences observed in each play session per dyad. Proportion scores were calculated using the total number of conflict sequences (246) as the denominator.

Table 2

Descriptive Statistics for Power Types, Effectiveness, and Outcome

Power Types	*M* (*SD*)	*Frequency*	*Percentage*
Coercive	9.41 (8.54)	621	35
Information	11.36 (11.47)	750	42.3
Legitimate	4.06 (6.27)	268	15
Reward	0.94 (1.86)	62	3.4
Referent	.11 (.40)	7	0.4
Expert	.58 (1.59)	38	2.1
Appeals to third party	.42 (1.35)	28	1.6
Power Effectiveness			
Attempts	13.39 (16.48)	884	65.1
Successes	7.28 (5.25)	473	34.9
Power Outcomes			
Win/Lose	3.02 (1.85)	199	80.9
Win/Win	.45 (.70)	30	12.2
Lose/Lose	.08 (.31)	5	2.0
Indeterminate	.18 (.42)	12	4.9

Note. Frequencies reported above are the total scores identified as present or absent per line in the conflict sequence. Means and standard deviations are based on these frequencies. Proportion scores were calculated using the total number of power moves (1774) as the denominator.

Table 3

Descriptive Statistics for Power Types, Effectiveness, Outcomes, and Success Rate

	Younger Sibling			Older Sibling		
Power Types	*M (SD)*	*Frequency*	*Percentage*	*M (SD)*	*Frequency*	*Percentage*
Coercive	4.32 (4.34)	285	16	5.09 (4.58)	336	19
Information	5.23 (5.83)	345	19.4	6.14 (5.87)	405	22.8
Legitimate	2.55 (3.65)	168	9.5	1.52 (3.14)	100	5.6
Reward	0.33 (.84)	22	1.2	0.61 (1.38)	40	2.3
Referent	0.03 (.17)	2	0.1	0.08 (.31)	5	0.3
Expert	0.12 (.32)	8	0.5	0.45 (1.57)	30	1.7
Third Party appeals	0.26 (1.19)	17	1.0	0.17 (.51)	11	0.6
Power Effectiveness						
Total Attempts	6.67 (8.55)	440	32.4	6.73 (8.17)	444	32.7
Total Successes	3.14 (3.10)	207	15.2	4.03 (3.09)	266	19.6
Coercive success rate	.51 (.36)	--	--	.52 (.31)	--	--
Reward success rate	.44 (.45)	--	--	.25 (.32)	--	--
Legitimate success rate	.31 (.36)	--	--	.43 (.38)	--	--
Information success rate	.28 (.30)	--	--	.34 (.29)	--	--
Referent success rate	.50 (.71)	--	--	--	--	--
Expert	.38 (.52)	--	--	.42 (.50)	--	--

success rate						
Third Party appeals success rate	.02 (.05)	--	--	.21 (.40)	--	--
Overall success rate	.37 (.29)	--	--	.43 (.27)	--	--
Power Outcomes						
Winner	.37 (.36)	79	40	.63 (.36)	120	60
Loser	.63 (.36)	120	60	.37 (.36)	79	40

Note. Frequencies reported for Power Types are the total scores identified as present or absent per line in the conflict sequence. Means and standard deviations are based on these frequencies and proportion scores were calculated using the total number of power moves (1774) as the denominator. Frequencies reported for Total Attempts and Total Successes are the total scores identified as present or absent per line in the conflict sequence. Means and standard deviations are based on these frequencies and proportion scores were calculated using the total number of attempts and successes (1357) as the denominator. Means and standard deviations for Power Effectiveness are based on the total number of successes divided by the sum of the attempts and successes per child. Scores reported for Outcomes are based on proportionalized data using the total number of win/loss outcomes (199) as the denominator.

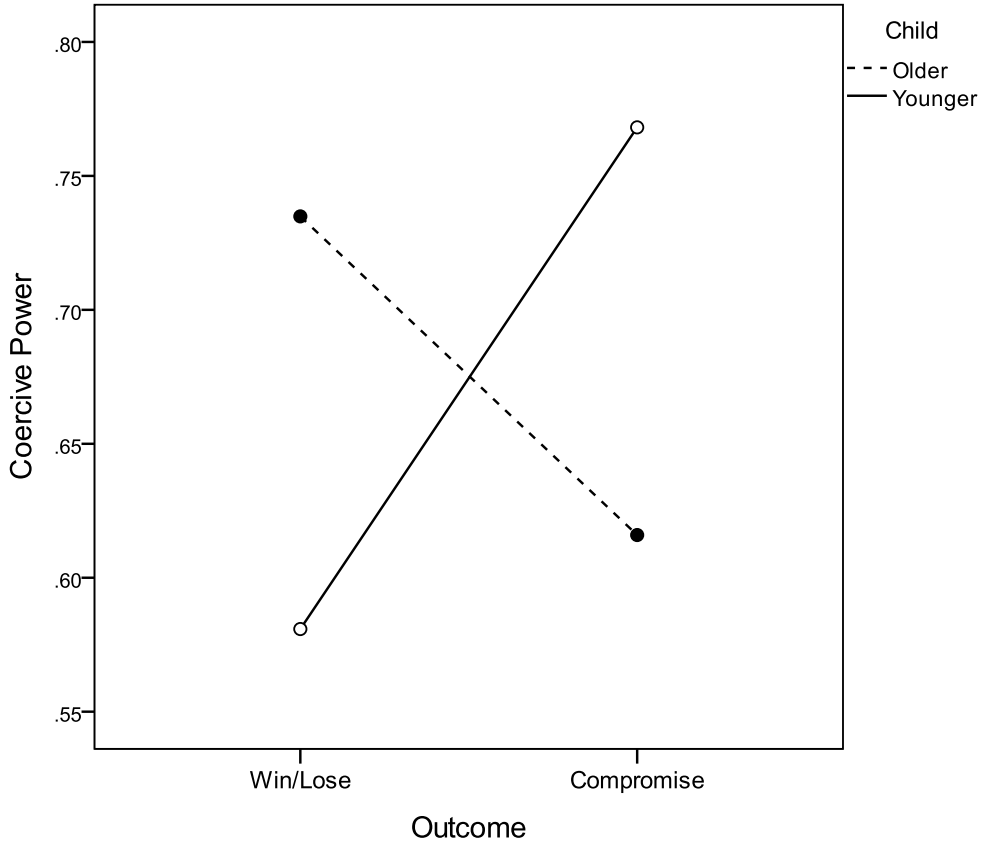
Table 4

Associations between Winnings and Overall Success Rate in Power

	Winnings	
Overall Success Rate in Power	Younger	Older
Younger	.52**	-.52**
Older	-.27*	.27*

*$p < .05$. ** $p < .01$.

Figure 1. Outcome by Child ANOVA Interaction



Discussion

The overall purpose of this study was to identify siblings' use of power in the process and outcome of a conflict by examining the types of power siblings employ, their effectiveness in using power, and associations with power outcomes. A discussion of the findings detailed above will ensue according to themes and patterns that are identified in the data. Following from here, sections outlining the limitations of the study, directions for future research, and implications will be presented.

Power in the Process of a Conflict

Types of power and issues. In satisfying the first goal of the present study, the types of power employed by siblings for the most part were found to differ according to the topic of dispute. Specifically, an exploratory analysis revealed that when siblings fought over issues based on objects as opposed to procedures, children were more likely to employ the use of coercive power (e.g., physical and verbal aggression). Not surprisingly, topics based on possession or ownership were characterized by coercive exchanges, whereby the transgressor or victim of the transgression employed or elicited strategies (e.g., grabbing a toy from another child) that entailed a form of threat, thus the use of force was imposed upon another. Similar patterns were also found with respect to siblings' use of information power. Contrary to expectations, siblings did not differ in their use of information power; however, as expected when siblings fought over issues based on procedures as opposed to objects, they were more likely to employ the use of information power. These findings are in line with work that has found disputes based on possession to be less often resolved by discussion (reasoning, explanation) versus disputes based on information (Phinney, 1986).

Furthermore, given that siblings did not differ in their use of coercive or information power when analyzed from the standpoint of the issue as opposed to the outcome, these findings suggest that when siblings fight about concrete and procedural issues they may be more likely to engage in a series of reciprocated moves that draw upon specific resources of power. This speculation may build upon findings obtained by Perlman and Ross (2005) who found reciprocity of power (physical and verbal aggression) and reasoning were more evident for the older siblings' response to their younger siblings' use of power and reasoning.

However, in contrast to the similarities noted above, siblings differed in terms of their use of legitimate power. Contrary to expectations, younger siblings were more likely than older siblings to employ the use of legitimate power across both types of conflict. To recap, legitimate power stems from internalized values in the recipient, which dictate that the child has a right to influence the behaviour of another. Examples of legitimate power include references made to moral principles (e.g., "I had it first"), authority (e.g., "You're not the boss"), and preferences (e.g., "I want it"). Given that older siblings are often the more dominant partner in the dyad (Volling, 2003), perhaps younger siblings employ the resource of legitimate power, irrespective of the topic at hand, as a means to defend their rights and interests when threatened by or in competition with their older sibling. These findings support Perlman et al.'s (1999) argument that principles of entitlement restore the balance of power, thus suggesting that when younger siblings employ the resource of legitimate power they may be more equipped to alleviate the dominance of their older sibling.

Power effectiveness. The types of power children employed are especially interesting given that their attempts at using power were not always successful, but even when their attempts were successful their success rate of power did not differ from one another. These findings constituted the second goal of the present study. Contrary to expectations, siblings did not differ in their overall success rate of power and nor did they differ in their success rate of coercive, information, or legitimate power. Strikingly, these findings revealed that younger siblings' attempts at using power are just as effective as older siblings' attempts at using power. These findings indicate that power between younger and older siblings can be viewed to be relatively equal, particularly when the effectiveness of power is examined at the level of the process of a conflict (i.e., degree to which the success of children's power moves influence each other during the turns within the conflict). Accordingly, these findings corroborate previous literature that reported changes in the balance of power between siblings as the second-born transitioned from being a toddler to a preschooler (Dunn et al., 1995; Martin & Ross, 1995).

Specifically, Perlman et al. (2007) examined the development of siblings' conflict behaviour at time one when siblings were 2 and 4 years old and at time two when siblings were 4 and 6 years old. Across the two time points, older siblings' use of physical power marginally predicted their later use of physical power, whereas their use of verbal power was stable. In contrast, younger siblings were found to display consistent patterns in their use of physical power, whereas their use of verbal power was found to double, which was accompanied by increases in opposition between 2 and 4 years of age. In light of current and past research that has examined siblings through early and middle childhood, it may

be that through time younger siblings begin to play an increasingly active role, as their competencies of understanding and communication skills develop (Dunn, 2002).

The lack of power differentials observed in siblings' success rate of power also provides support for the bidirectional nature of conflict interactions emphasized by dyadic power theory (Dunbar, 2004). For instance, as child A employs strategies to influence the behaviour of child B, child B likewise employs strategies to influence the behaviour of child A. This interaction is indicative of a power struggle that is operative within a reciprocal framework, whereby younger and older siblings are shown to be equally successful in their attempts at using power.

Furthermore, although siblings did not differ in their relative success rates of power, when siblings employed the use of coercive power; their success rate was higher than when they employed the use of legitimate power or information power. Coercive power appears to be an effective means by which siblings are able to get what they want, which helps to explain why children may be quick to resort to such methods. The use and effectiveness of coercive power are sometimes noted to be maladaptive, but not always. Perlman (1999) notes that positive outcomes can be achieved by contentious strategies, particularly when those means force reluctant parties to negotiate. However, in light of siblings being more likely to use coercive power in object conflicts as opposed to procedural conflicts, perhaps the nature of the conflict also plays an important role in determining when and how children are more likely to employ coercive tactics. Certainly, when assessing sibling interactions in the context of conflict, both positive and negative dimensions of the relationship are revealed.

In light of the types of power siblings' used and their success at using power, it is also important to note the types of power children did not employ frequently enough to be considered statistically meaningful. First, the instances in which siblings exercised reward power were in relation to negative reward power only. This was captured by children's whining or pleading as a means to influence their siblings' behaviour. Although negative reward power was at times instrumental, when compared to coercive, information, and legitimate power, this resource may be a less assertive form of power and, therefore, was used less often. Positive reward power, on the other hand, may be too sophisticated of a resource for children in early and middle childhood to use, especially in the moment of an emotionally charged conflict. Second, expert power was used most often by older siblings and this makes sense given their status and cognitive abilities, however, perhaps the knowledge gap between younger and older siblings was not large enough for this resource to have been used more often. Lastly, given that referent power was used most infrequently with no instances of success, perhaps this resource might also be too sophisticated for children of this age to use or perhaps the nature of this resource is more reflective of another measure such as sibling relationship quality.

The patterns of the findings highlight important differences that occur when examining the nature of power in the process of a conflict. First, the topic of dispute was shown to play an important role in determining what resources of power children were more or less likely to use. Second, although individual differences were not observed in siblings' overall success rate of power or in their success rate of coercive, legitimate, and information power, findings revealed that siblings' attempts at using power were most successful when coercive power was employed. Apart from the effectiveness of coercive

power over all other types of power, the findings indicated that younger and older siblings' attempts and successes at using power were for the most part similar. In view of such findings, the types of power siblings were not observed to employ were also discussed.

Power in the Outcome of a Conflict

Types of power and outcomes. Given that power can be examined at the level of the process (i.e., degree to which children's strategies influence each other during each turn of the conflict) and the level of the outcome (i.e., achieving personal goals), gaining insight into the types of power siblings used and the ends to which they used them was the third goal of the study. As expected, the use of coercive power was linked to outcomes ending in win/lose scenarios as opposed to win/win (compromise) scenarios, however contrary to expectations, the use of coercive power differed by child. Specifically, older siblings were more likely than younger siblings to employ the use of coercive power when conflicts ended in win/lose scenarios. This finding replicates past research first in the view that first-born children are more aggressive than second-born children (Martin & Ross, 1995; Perlman & Ross, 2005) and second, in the view that aggressive behaviour has been linked to destructive conflict resolutions (Howe et al., 2002).

A notable distinction that must be made is that when conflict was analyzed from the standpoint of the outcome as opposed to the process, the balance of power in win/lose outcomes was no longer viewed to be equal and the asymmetrical nature of the sibling relationship was reinstated. As expected, older siblings were also found to win more conflicts than younger siblings. These findings together suggest that coercive power is an

effective means by which older siblings are able to control the outcome of a conflict and control over the outcome was clearly an important facet that differentiated the power structure in the sibling relationship. Support for these findings can also be found by conflict theorists who note conflict resolutions to be reflective of the power differentials that exist between siblings (Perlman, Siddiqui, Ram, & Ross, 2000).

Where the outcome of a conflict was concerned, children also differed in their displays of legitimate power. Consistent with earlier findings, but contrary to expectations younger siblings were more likely than older siblings to employ the use of legitimate power not only in conflicts ending in win/lose outcomes, but also in conflicts ending in compromise. This finding can be discussed at two levels. First, in light of such uniform patterns, concerns with legitimacy as source of power appear to be a mechanism unique to younger siblings. This suggests that when children fight, younger siblings employ resources that are readily available to them and that which are reflective of their cognitive abilities. Whether or not younger siblings' efforts during the process of a conflict were directed towards achieving a constructive or destructive ending, the use of legitimate power was employed. Using legitimate power may be an adaptive way for younger siblings to defend or assert their autonomy when faced by the opposition of their older siblings.

Second, given that legitimate power was employed by younger siblings in conflicts ending in win/win scenarios, further attention must be placed on why this may be so. Initially, it was predicted that siblings would use legitimate power in conflicts ending in win/lose outcomes only. This hypothesis was based on links that were made between exercising one's right in the interest of the self and previous research that has

linked the use of other-oriented reasoning and not self-oriented arguments to compromise (Dunn & Herrera, 1997). Given the lack of support found for the prediction, perhaps the nature of legitimate power, which is focused on principles of right and wrong, fairness, autonomy, and preferences, constitutes a higher order level of thinking that is of inherent value to both parties. Although younger siblings may be more adept at defending or asserting their rights when faced with the opposition of their older siblings, legitimate power appears to have properties that do not preclude opportunities to engage in compromise and may, in fact, play an important role in helping older siblings consider the rights of their younger siblings. Clearly, this speculation requires further research.

In contrast to the above finding, siblings did not differ in relation to the outcome of a conflict where the use of information power was concerned. As expected, when siblings employed the use of information power they were more likely to end conflicts in compromise than in win/lose outcomes. Siblings' use of reasoning in relation to compromise signifies an important finding that has been well documented in the literature (Eisenberg & Garvey, 1981; Ross et al., 2006; Ram & Ross, 2008) and is replicated in the present study. Positive qualities that emerge from conflict such as negotiation are classified as constructive and have the potential to contribute significantly to children's perspective taking abilities (Dunn, 1983). Indeed, it has been shown that children use arguments for a variety of goals, some of which are aimed at achieving conciliation, while others are oriented towards satisfying one's own desires (Dunn, 1988; Dunn & Herrera, 1997). Information power as a resource captures both ends to which argumentation can be used and, clearly in the present study, children's reasoning was used more in relation to outcomes ending in compromise.

Power effectiveness and outcomes. In light of the current emphasis on within-family differences in both the process and outcome of a conflict, between-family differences in power with respect to the process and outcome of a conflict were also found to vary and as such constitute the fourth goal of this study. As expected, when younger siblings became more successful in their attempts at using power, older siblings became less likely to win conflicts. Despite similar patterns found for older siblings, whereby younger siblings were less likely to win conflicts when older siblings' success rate in power increased, a stronger association was found for the former finding. Thus, younger siblings' chances at winning conflicts (e.g., obtaining their goal) was found to rely more heavily upon the success of their power moves during the process of a conflict.

The above finding builds upon Perlman et al.'s (2007) study that found the opposition of younger siblings to predict decreases in older siblings' use of verbal aggression, as well as increases in the likelihood that older siblings would use justifications. These two distinct, but related findings portray a complementary picture in that it is not only a matter of what strategies siblings use in a conflict, but it is also a matter of how well children execute their attempts at using power and to what end. Although, younger siblings' overall success rate in using power was not linked to outcomes ending in compromise, this divergence from constructiveness does not preclude notions of developmental significance. As younger siblings became more skillful in their attempts at using power, older siblings in turn may have been forced to step down from using more power assertive moves, which in the long run may lead to more constructive management strategies. This speculation also requires further investigation.

When examining the nature of power in the outcome of a conflict, the patterns of the findings highlight several important points. First, there was a considerable degree of consistency in younger siblings' use of legitimate power, as they were also shown to use this type of power in conflicts ending in compromise and win/lose scenarios. Second, the findings also illustrated important individual differences that reflect the asymmetrical nature of the sibling relationship, along with more or less constructive means to resolve a conflict. Last, although the overall effectiveness of power was not shown to differ by child in the process of a conflict, it was shown to differ by child in the degree to which it was linked to the outcome of a conflict, particularly for younger siblings. Altogether, the results of this study not only replicated or built upon findings of past research in sibling conflict, but it also provided insights into the dynamics of power operating within context of conflict.

Limitations

Although, the sample size in the present study consisted of a fairly large number that was based on observations of 246 conflicts, some noteworthy limitations have arisen. First, due to the middle-class status and Caucasian background of the participants, the variability of the participants' characteristics and the generalizability of the findings may have been limited.

Second, there were also challenges present in the coding stages of the methodology. Although all power codes were comprised of mutually exclusive criteria that corresponded to specific types of power, the process of distinguishing between the constructs was not an easy task at times. For instance, if a child stated, "I said don't make another barn", this statement could be interpreted to be assertive and/or forceful,

which denotes coercive power (verbal aggression). However, this statement can also be interpreted as a demand intended to convince the other child to do as they are told thus denoting the use of information power. To avoid any inconsistencies in coding or overlap in the constructs, several examples of what to code and what not to code were included in the coding scheme and videotaped sessions were referred to when tone of voice needed to be assessed.

Third, due to how the data was coded (per line versus per conflict sequence) steps were taken to simplify the analyses. Specifically, the frequency of power moves originally identified as present or absent per line in the conflict sequence were simplified by scoring the frequencies as either present or absent per conflict sequence. In doing so, the variability of the data may have been limited, which in turn may have provided a limited representation of the findings. Furthermore, in order to control for individual differences in the frequency of power moves, proportion scores were used. However, due to the low rate of frequency in which the dyads could be compared in some of the categories, some of the variables were dropped. The analyses, therefore, only focused on two conflict issues (objects and procedures), three types of power (coercive, information, and legitimate), and two outcomes (win/lose and compromise).

Future Directions

Despite the limitations noted above, the results of the present study provide strong evidence for additional future research considerations. First, given that coercive, information, and legitimate power may not have captured an exhaustive picture of power dynamics in sibling conflict, future studies can examine other dimensions of power that are sensitive to the early and middle childhood period. Affect and emotion as captured

by sibling relationship quality as a covariate of power may also be a fruitful area to explore in sibling conflict.

Second, younger siblings were found to use legitimate power in conflicts ending in win/lose scenarios and compromise. In light of this finding, a more focused and detailed investigation of whether the use of legitimate power may increase opportunities for siblings to engage in more constructive forms of conflict remain to be explored. In addition, another avenue that may guide future directions is to investigate the presence of internal state language in siblings' efforts to obtain and exercise power.

Furthermore, this study also revealed insightful findings that were examined at the level of between-family differences. In particular, this study identified younger siblings' success rate in power to be more strongly associated with their chances at winning conflicts than was evident for older siblings. Interestingly, birth order effects for siblings in terms of age gap and mean age appeared to be line with this finding. Perhaps a more nuanced investigation into how structural variables impact siblings' attempts and successes at using power would prove to be a worthwhile undertaking.

Implications

The findings of the present study provide insights into how siblings used power to manage conflict. As a result, issues of power in the sibling relationship have been shown to constitute an important facet in children's lives. Consequently, the knowledge gained from this investigation provides parents with pertinent information that inform child-rearing beliefs and practices in early and middle childhood.

Firstly, the power struggle siblings engage in when they fight can be viewed to play a significant role in the development of children's conflict management skills.

Whereas the balance of power between siblings in the outcome of a conflict was shown to be unequal, the balance of power in terms of success rate in power outlined in the process of a conflict was shown to be equal. This difference implies that although there are clear power differentials that characterize the sibling relationship in the context of conflict, younger and older siblings in early and middle childhood prove to be challenging partners that provide one another with opportunities for growth and learning.

Secondly, the results of this study suggest that the power imbalance between siblings was characterized by aggressive older siblings who used coercive power as a means to overthrow their younger siblings' efforts to assert themselves. These findings suggest that when parents intervene in siblings' disputes they may want to place an emphasis on helping older siblings develop constructive ways to resolve conflicts with their younger siblings. Older siblings' superior age, size, strength, and abilities make coercive power an easily accessible resource and so in order to refrain from using this resource, older siblings appear to require more self-restraint and self-discipline than younger siblings. Furthermore, when parents are aware of the power imbalances that exist in the sibling relationship and are attuned to how power imbalances are formed, they can recognize who in the dyad has a power advantage or disadvantage and why. Knowledge of such power attributes can provide parents with the tools needed to help children learn more adaptive ways to resolve conflicts and restore a balance of power.

Conclusion

The mutual opposition that characterizes sibling conflict is comprised of both a behavioural and a cognitive dimension. Whether the phenomenon of power requires the preexistence of conflict or is a result of conflict is debatable, but these findings reveal that

examining the dimension of power in conflict is both a necessary and meaningful endeavor. By investigating the types of power siblings' use, their effectiveness at using power, and power outcomes, an enriched understanding of how the sibling relationship serves as a critical context for children's development is achieved.

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Appendix A

Conflict Coding Criteria

Conflict Coding Criteria

I. Definition of Conflict

A conflict is an exchange containing mutual opposition—in other words, each partner must do or say something oppositional to the other. Oppositional behavior includes objecting to something the other child has done or said, interfering with what the partner wants to do, disagreeing with the partner, taking or trying to take an object from the partner, accusing the partner of something, or intentionally doing something to bother the partner.

The shortest possible conflict consists of two oppositional turns, one by each partner:

Turn 1: Child A behaves oppositionally toward Child B.
Turn 2: Child B behaves oppositionally toward Child A.

Example:
Turn 1: Child A takes a toy away from Child B.
Turn 2: Child B takes it back. (No further opposition from Child A).

If Child A does something innocent (experimenter's judgment call), Child B objects, and Child A does not respond, the exchange is not a conflict. However, if Child A does object, the exchange is a conflict.

Example:
Turn 1: Child A: "I'm going to set my village up like this." [innocent remark]
Turn 2: Child B: "No, that's not how you do it." [oppositional remark]
Turn 3: Child A: "Yes, it is." [oppositional remark]

Longer conflicts are just continuations of these 2- or 3-turn conflicts.

II. Turns

A. Each conflict consists of a series of turns, more or less alternating between the partners.

A turn may consist of:
-one utterance or behavior;
-an utterance and a behavior by the same person at more or less the same time, with a common purpose; or
-a series of utterances and/or behaviors by the same person, with little pause between them, and with a common purpose.

A new turn begins when:
-the other partner says or does something;
-the current speaker/actor pauses for more than 5 seconds; or

-the current speaker/actor's utterances or behaviors show a clear change in purpose.

B. Start counting turns with the first utterance or behavior in the conflict sequence. If the conflict starts with an oppositional behavior, the oppositional behavior is counted as the first turn.

Example:
Turn 1: Child A takes toy from Child B.
Turn 2: Child B grabs toy back.
Turn 3: Child A shrieks.

If the conflict starts with an oppositional behavior in response to an innocent behavior, the innocent behavior is counted as the first turn, even though it occurred before there was any opposition.

Example:
Turn 1: Child A picks up toy that was not clearly in Child B's possession.
Turn 2: Child B protests.
Turn 3: Child A refuses to return toy.

C. Single non-oppositional turns that occur in the middle of a conflict should be counted.

D. Do not count utterances or behaviors addressed to any third parties, unless they are appeals for intervention or appear to be addressed to the partner as well as to the third party. (Include all turns involving third parties).

E. Stop counting turns with the last utterance or behavior in the conflict sequence that is clearly a response to the partner and is clearly related to the topic of the conflict. If the conflict ends with a turn indicating resolution of the conflict, include it. (This includes ignoring/disengaging behavior)

Example:
Turn 1: Child A: "Let's put the rooster on top of the fence."
Turn 2: Child B: "No."
Turn 3: Child A: "Okay, we'll put him on the barn."

Some end with oppositional turns and others with non-oppositional turns.

F. The conflict is considered over if:

1. there are two non-oppositional turns in a row (from one partner or from both partners).
2. there is a pause of 10 sec. or more.
3. one partner disengages and stops responding to the other, even if the other partner keeps trying to get a response.

III. Instigator

The instigator is the first partner to make an oppositional move, either verbal or non-verbal. Remember, the first oppositional move will not always be the first turn in the conflict.

> Examples:
> If YS grabs toy from OS and OS responds indignantly, YS would be the instigator.
> If YS says, "Can I have a duck?" and OS responds, "No, it's mine.", OS would be the instigator.

IV. Issues

For each conflict, first write a brief description of what you think the conflict is about (e.g., who gets the duck, whether it's okay to yell into the microphone, etc.). Then decide which of the following categories best represents the central issue in the conflict. If the conflict involves more than one issue simultaneously (e.g., what a toy is and who gets it), code it for whichever issue seems to be more basic reason for the argument.

If the conflict involves more than one issue in a sequence, code it for the first time, the one that started the conflict. When a new issue is brought up, code it as a new conflict only if there are at least two off-conflict (non-oppositional) turns or a pause of at least 10 seconds between the two conflicts.

Sometimes a session will include a series of conflicts about the same issue. These should be coded as separate conflicts as long as it seems clear that both partners have dropped the issue, even momentarily (i.e., two of-conflict turns or a pause of at least 10 seconds.)

The issues coded are:

A. **Object possession or use (OBJ)**
   Conflict centers on who gets to have or use an object.

B. **Partner behavior (BEH)**
   Conflict centers on disapproval of something specific partner is already doing, has just done, or is about to do:

   1) **Physical contact or threat (PHY)**
      Conflict centers on physical contact or destructive behavior; interfering with ongoing activity or results of past effort (e.g., knocking over previously set up toy); physical attack; threat of physical contact, interference, destructive behavior, or attack; can include objections to inadvertent physical contact.

   2) **Space (SP)**

Conflict centers on issue of occupying space (e.g., turf battles) during play either for self or toys.
Example: "I'm building my village here." / "No, I am." / "No, you're not."

3) **Procedures (PRO)**
This category is concerned with the objects in the play and also who gets to build with the objects. Conflict centers on how something should be completed, performed, or accomplished, where something belongs or where something is allowed to go (e.g., "People go on farms, animals go in here."). It is concerned with the general procedure for doing something. Also includes how objects should be used in the play.
Example: "That's not the way you build the barn", "Houses don't go in the water."

4) **Social appropriateness (APP)**
Conflict centers on what the child claims to be a family or experimenter rule; rule need not be explicitly cited.
Example: "You are not allowed to jump on the couch.", "She [experimenter] said not to touch the clock."

5) **General obnoxiousness/ Social intrusiveness (GO)**
Conflict centers on obnoxious, provocative behavior that does not fit the other categories; usually verbal; examples include teasing and taunting.

C. **Plans for play (PP)**
Conflict centers around plan of action for the pretend (e.g., what roles the two children will have, who will be the story teller, who will be the observer).
Example:
Older sibling: "I'll tell the story and you move the people around."
Younger sibling: "No! That's not fair. I want to tell the story!"
Older sibling: "No, I am gonna tell the story."

This category also involves the storyline in the pretend (e.g., what the characters will do, what will happen next).
Example:
Older sibling: "And then the bad guy stole all the sheep from the barn."
Younger sibling: "No, he didn't steal all the sheep."
Older sibling: "Yes, he did."

D. **Partner's ideas or facts (IF)**
Ideas of facts must be the focus of the conflict, not a tool for winning the argument. These are arguments about the identity of an object (vs. use).
Example: "This is a horse." / "It's a dog." / "It's a horse." / "It's a dog." / "Well, I'm gonna pretend."

If a child argues about facts as a means of accomplishing some other goal, the conflict is coded based on that goal. In the following example, the real issue is that Child A doesn't want Child B to put the rooster on the fence, so it is coded BEH/PRO.
Example: "Roosters don't sit on fences." / "Yes, they do." / "No, they don't." / Yes, they do." / "Well, don't put him on the fence."

E. **Plans for terminating play; Disagreements about when to stop playing (PT)**

F. **Indeterminate (IND)**
Issue does not fit any of the categories, or you cannot tell what the issue is (Use as last resort!)

V. Termination Strategies

The termination strategy is the tactic used by the children immediately before the end of a conflict; it is what apparently brings the conflict to an end. Always code which partner(s) used the tactic—depending on the tactic, it could be one or both of them.

A. **Standing firm (SF)/ Overt evidence of giving up (SURR)**
Conflict ends because partner insists on his/her original position until he/she gets what he/she wants; insistence can be verbal or physical (Used only when one partner's insistence clearly has an effect on the other partner and is the primary reason the conflict ends.)

As well, conflict ends when one partner gives in to the other and gets nothing in return; the one surrendering must make it clear this is what they are doing, either verbally or behaviorally. Behavioral indications of surrender include backing off, acknowledging a mistake, apologizing, giving up an object, moving out of partner's way, joining in partner's activity, or showing signs of passive acceptance, such as sighing, looking down, stopping play to watch partner, etc.
Example: "I want the pig." / "No, I want it." / "I want it." / "Okay, you can have it."

B. **Disengagement/Ignoring (DISN)**
Conflict ends when one partner ignores the other or both partners disengage from the interaction; in either case, each partner moves on to something new. (Can be used regardless of who gets what they want—key issue is that the interaction is broken, and this broken interaction is the primary reason the conflict ends.)

C. **Distracting partner (DIST)**
Conflict ends with one partner giving the other something unrelated to what was sought and giving up nothing her/himself, or changing the subject to distract the partner from the issue at hand.
Example: "I want a horse." / "No, I get it." / "But I want it." / "Here, you can have the cow." / "Okay."

D. **Negotiation (NEG)**
Conflict ends after clear negotiation by both partners of after one partner suggests a compromise and the other partner accepts it. There must be a satisfactory outcome for both children (there is no winner or loser). Involves sharing, taking turns with, or trading objects.
Example: Children are arguing about who gets the trees.
Older sibling suggests: "You take the apple trees and I'll take the pine trees, ok?"
Younger sibling agrees.

E. **Intervention of third party (3RD)**
Conflict ends when bystander intervenes or is asked to intervene and the intervention ends the argument.
Example: "Mom, older sibling is taking my animals!"

F. **Indeterminate (IND)**
Strategy used doesn't fit any of these categories or you can't tell what caused the conflict to end. (Use as last resort!)

VI. Aggression

Tally any occurrences of each of the following during conflict. (All must appear intentional and intended to hurt or bother partner. (Count a volley as 1 occurrence of aggression).

1. **Physical aggression (PA)**
Hitting, slapping, punching, grabbing or attempting to grab toy from partner's hand, throwing or pushing toys at partner, pushing partner or partner's hand away.

2. **Gestures/facial expression (GES)**
Threatening gestures that do not result in physical contact (e.g., making faces, glaring, threatening to throw toys).

3. **Verbal aggression (VA)**
Abusing remarks, verbal attacks, insults, threats, derogation, name calling, etc.

4. **Destructive behavior (DB)**
Destroying or messing up something the partner has been playing with; throwing toys, but not at partner.

VII. Affective Intensity

Rate affective intensity of conflict on the following 5-poing scale, based on the point of greatest affective intensity in the conflict. (All of the characteristics of a given level need not be present for it to be used. A conflict that is mostly at one level can be raised to the next level by the occurrence of just one characteristic of the next level (e.g., the

presence of physical aggression automatically makes a conflict that otherwise looks like a 2 into 3). (However, a conflict cannot be bumped up more than one level; for example, a conflict that included mild physical aggression but was otherwise a 1 would be raised only to a 2.)

1. No physical contact, voices not raised, disagreeing civilly or with very low intensity. (Children speaking in normal tones—if you heard their voices without understanding what they were saying, you wouldn't think they were arguing.)

2. Voice(s) slightly raised in annoyance, mild sarcasm, minor whining, mild gestures or negative facial expressions. (Little or no aggression; can include mild destructive behavior or very mild physical aggression.)

3. Voice(s) clearly raised or sarcastic, whininng, making faces, glaring, minor physical aggression.

4. Moderate physical aggression, major whining, yelling, screamin, crying.

5. Major physical aggression, totally out of control, extreme yellin/screaming/crying, pandemonium.

VIII. <u>Conflict outcome: Gives information about who wins</u>

A. Older sib/young sib or peer/target wins (OS/YS/P/T)
One partner gets what he or she wants. If conflict isn't about resources, one partner's position prevails, either because they connive partner they're right or because partner stops opposing them.

B. Partial equity (PE)
Both partners get part of what they want, but outcome is not equitable.

C. Compromise (COMP)
Both partners get part of what they want, and outcome is equitable; or, both partners agree on some alternate, equitable solution (i.e., one child gets what she/he wanted, other child gets something else that is equally desirable.)

D. Impasse (IMP)
Neither partner gets what they want; unable to resolve conflict.

E. Indeterminate (IND)
It is not clear what the final outcome of the conflict is (e.g., kids are fighting over toy and you can't see who gets it or camera is turned off before conflict ends.)

<u>Note (something to consider)</u>

Consider low level conflicts (low level cognitive strategies required) as OBJ, IF, DHY, SP and GO.

Consider high level conflicts (require more cognitive strategies) as PRO and PP.

Appendix B

Power Coding Scheme

Power - Coding Scheme

(French & Raven, 1959; Raven, 1965)
Developed by Shireen Abuhatoum

- This coding scheme is comprised of three sections: (1) Types of Power, (2) Power Effectiveness, and (3) Power Outcomes.
- For the purposes of this coding scheme, power is defined as the resources person A utilizes so that he or she can influence person B (French & Raven, 1959; Raven et al., 1998). The power of A is not only dependent on the utilization of resources, but is also based on the dependence of B upon A, insofar as B has a demand for those resources, or insofar as the amount of resistance on the part of B can or cannot be overcome by A (Emerson, 1962).
- Given that power is multidimensional construct, the following coding scheme differentiates between (a) power bases, (b) power processes (strategies) and their effectiveness, and (c) power outcomes, whereby power processes refer to specific strategies children use to exercise power and that which reflect French and Raven's (1959, 1965) six bases of power. Power outcomes refer to who in the dyad is the winner or loser of the conflict that is in question.
- French and Raven's (1959, 1965) typology of power differentiates between six bases of power: coercive, reward, legitimate, expert, referent, and information.
- Coding rules:
    - Not all lines in the transcripts will represent a type of power. Only those lines that fit the descriptions and conditions outlined by the power coding scheme can be identified as a type of power.
    - Non-oppositional moves within the conflict sequence are not coded
    - Turns that are directed towards a third party can be coded only if they are an appeal for intervention and only as an appeal for third party intervention.
    - More than one type of power can be identified on one line
        - e.g., O: Yes I am because you're little, you're only three years old [*puts fence area together completely*] - Expert power & Information power
    - In each conflict sequence there is a line designated to each person and a turn that corresponds to each line in the sequence. Some lines may have two turns that belong to one person. When those two turns contain the same intention then those two turns are counted as one turn (e.g., turns 5 & 6).

Part I: Types of Power

Coercive Power (C)

- Refers to the threat of punishment, whereby the recipient anticipates/receives punishment by the agent of influence when he/she fail to conform to the expectations/requests.
- Involves the physical or psychological force in imposing one's way on others, assuming that the other individual is resisting or opposed. Getting one's ways is achieved at the expense of others not getting theirs.
- Based upon: one child's perception that another child has the ability to punish them if they fail to conform to his or her expectation/request, but since exchange is dyadic O and Y can each exercise coercive power. For example, if O grabs a toy from Y and Y tries to grab the toy back from O, then O is using coercive power which is based on the following premise: When Y fails to conform to O's expectations (O's acquisition of object possession), Y encounters the threat of punishment, whereby O exercises physical force, which entails the opposition of pulling, etc.

    - **Positive punishment:** negative conditions that decrease/weaken the likelihood of an outcome/behaviour

        - **(V) Verbal Aggression (or nonverbal)**
            - Abusing remarks, verbal attacks, insults, threats, teasing (e.g., Samantha bobantha), name calling, raising voice or yelling, sarcasm (e.g., refer to Family 6, # 2, line 5 or Family 43, #6,line 1)
            - Verbal protests: expressions of objection that are said in an aggressive manner (e.g., "No, I will do it!" "Hey!" "Nooo").
                - *Note: When a child simply says "No" in response to the other child, this does not qualify as a verbal protest, unless the child says "No" aggressively ("No" vs. "No!"). When a child says "No!" there is use of verbal force that fits the description of coercive power.
            - Nonverbal: plugging ears so as to not listen to partner (Family 37, #3)

        - **(P) Physical Aggression**
            - Hitting, slapping, punching, throwing or pushing toys at partner, pushing partner or partner's hand away, destroying or messing up something the partner has been playing with
            - Grabbing or attempting to grab a toy from partner's hand or partner's set-up/play area; tugging or pulling on a toy
                - e.g., O: [***picks up a horse from Y's pen***] [PV] [*Horse sounds*]/ Y: No Kelly, that goes in the barn. [*Referring to the horse O took and* ***tries to grab horse***]/ O: ***[pulls arm back to keep horse out of younger sibling's***

reach] / Y: Back in the barn, Kelly. [***Continues to try and grab horse from older sibling***] (Family 29, #1)

- *Note: handling objects within the context of a conflict does not necessarily denote the use of CP. There needs to be a clear indication of force or threat of force.

- These are *not* examples of CP:
  - e.g., O: Megan, there are people that got to go in. **[*puts hand in barn*]** / Y: People are not allowed in there! [*in a raised voice*] / O: Yes people go on… farms. Animals, all the animals go in here **[*picks up an animal and places it in the yard*]** / Y: Nooo, some animals go in the barn **[*goes to get an animal from the yard*]**

Reward Power (RW)

- Refers to an individual's ability to influence others' behaviors by rewarding them. In conflict, it is expected that negative reinforcement, rather than positive reinforcement will be present.
  - **(P) Positive reinforcement:** positive conditions that strengthen a desired outcome/behaviour (will most likely occur during the negotiation process of a conflict)
    - e.g., verbal praise/approval, offer of material goods (bribing), positive affect (e.g., hug)

  - **(N) Negative reinforcement:** negative conditions that strengthen a desired outcome/behaviour
    - e.g., beg, complain, whine, plead (e.g., "please"), crying (Family 18, #1)
      - Y: **No [*whining*; *jumps up and down*]**
      - O: Pigs and/ Y: **Shawn – [*whining*]**
      - O: short ducks
      - Y: **Shawn – [*whining*]** (Family 73, #3)
        - *Note: ["No" in this example is differentiated by the "No" under Coercive power (verbal protests) because the "No" is characterized by a whiny voice rather than by an aggressive verbal protest]

Referent Power (RF)

- Based on the target's identification/dis-identification with the influencing agent
- An individual's ability to influence others' because he/she is respected, admired, liked
  - Admiration; points out similarities with partner; imitation; or the opposite
    - Y: Shawn, you take all the kinds [*jumps up and down*]/ O: I didn't/ Y: And I don't, I don't have any kind [*looks over table; then starts putting animals back into small barn*]/ O: Hmm. I – **that's not very**

nice of you, Daniel [*arranges pieces on table*]/ **Y: Because I hate you** [*arranges animals in small barn*] (Family 73, #3)

- *Note: "because I hate you" exemplifies referent power because the implied purpose of such a comment is to get Person B to feel bad so that Person B in turn may change their behaviour in a manner that is favorable to Person A. When some says "I hate you" they are no longer identifying with Person B in a positive manner, but rather in a negative manner that may have an influential effect on Person B

- O: You took my chick, my yellow chick. Why are you always taking my things? **You're very nasty.** (Family 56, #5)
- O: No. Doh you knocked the ducks over, you dummy/ **Y: Stephanie, that's bad manners.**/ O: Okay. I'm being mean. I'm sorry for calling you a dummy too. (Family 16, #2)

<u>Legitimate Power</u> (L)

- Refers to a person's rights and obligations.
- The person in power has a legitimate right to influence the behaviour of another.
    - *Note: When a child exercises the use of legitimate power in isolation, for example when a child says "I had it first!" (MP) or "I want to do it" (P) or "You're not the boss" (A) → although this child may be exercising their resource of legitimate power to persuade the other child to give up the toy, or allow them to do what they want, or have them back off, these instances of legitimate power should not be coded as information power unless the child explains or uses further reasoning to argue their case.

    - **(MP) Moral Principles:** having the *right* to argue your case or defend yourself; can include issues regarding possession, fairness, distributive justice, sense of right and wrong

        - e.g., "**I had it first", "that's mine!", "that's not fair", "But I'm not finished!"** (family 10, #3), **"I didn't do that!"** (family 20, #1)
        - Y: Hey, ummm. Hey we need to put them all over there. [*referring to barn pieces, which he is moving onto the couch to make more room on table*]/ O: **I'm in charge of my gates, okay!?** (Family 62, #4)
        - Y: **I know, but Lauren, you can't take them all**/ O: **Well you can't take them all either** (Family 62, #5)
        - Y: Shawn, you have a lot of animals. All kinds. [*whining*]/ O:**You can't take my animals** – [*moves over to put some animals in big barn*] (Family 73, #3)
        - O: You took my chick, my yellow chick. **Why are you always taking my things?** You're very nasty. (Family 56, #5)
        - Y: [*Pulls away roof piece from O*] **I can do it!/** O: **I can do it!** (Family 62, #3)
        - **Y: Let me do the gates!** (Family 62, #3)

    - **(A) Authority**: reference to the right of the social organization of their group or society involving hierarchy

- Y: **You're not allowed to say that you know that?**/ O: **Yes I am. I'm six years old** (Family 16)
- Y: **Shawn, you're not the boss**./ O: **Yes I am because you're little, you're only three years old** [*puts fence area together completely*]/ Y: **You're still not the boss** (Family 73, #5)
- O: No! The farmers are supposed to go in here. **You're supposed to listen what I say** [*points to herself as she says it*]. I'm the one who needs the trees Chris. (Family 19, # 2)\

- **(P) Preferences:** desire expressed towards objects, but not people (e.g., like/dislike, want, need); having the right or opportunity to so choose or to assert one's desire when faced with a threat.

  - Y: Noooo! **I need it!/** O: For what?/ **Y: I need it!** Put it on the set. (Family 23, #4)
  - **Y: Then, I wanna do another part**./ O: Kaitlin I thought you said you want… now Kaitli, what you're going to do…, K…, I thought you said you wanted to watch!?/ **Y: Well I wanna do some more.** (Family 38, #2)
  - **Y: I, I have to have a chair** cause I got the sitting guy/ O: Oh [*reaching for man to give Y, but stops*] I know but **I'm supposed to have all the men**… cause they go in the farm [*pointing at herself again*, *then reaches for sitting character and takes it from Y*] (Family 19, # 3)
  - **Y: Hey, I have to finish with the gates.** (Family 62, #5)
  - O: But that's not the way you do it Daniel/Y: **Yeah, you can do whatever you want to** (Family 73, #1)
  - O: But that's not the way you do it, Daniel. [*takes small barn away from Y and starts assembling it*]/ Y: **Yeah, you can do whatever you want to**. [*protesting against O*]/ O: Well you can't attach the roof *[referring to Y not knowing how to or being able to attach the roof]*/ Y: Shawn! [*Raises his voice*] you're not the boss! (Family 73, #1)
  - O: I know how to do it, Daniel. I said. / Y: No you don't/ O: I do/ Y: How do we do it anyways? *[goes off camera to ask Obs]* Shawn said he knows how to do it. But just look. Do we do it like that? *[comes back on screen and points to how he's set it up]/* Obs: Anything you want/ Y: ***Anything we want*** [*repeating to O what Obs said*]/ O: But we can't put the person in there [referring to person in fence]/ Y: **Anything we want to do.** [*protesting*]/ O: But we can't put the person in there**. I don't want him to go in there.** [*takes person out of fence area*]/ Y: **Anything we want to do. That's what the lady said.** (Family 73, #2)

Expert Power (E)

- Refers to one's superior knowledge or ability in comparison to that of another
- An individual's ability to influence another's behavior because of recognized competence, talents or specialized knowledge
- Based upon: (1) Person A's explicit knowledge or expertise in a designated area or (e.g., I know better than you) (2) Person A indicating implicitly that they have greater expertise.
    - Y: I gotta this… I got this [*using that "na na na" voice; grabs two more pieces from pile*]/ **O: You don't know what those are**/ Y: Yeah/ **O: What?**/ Y: Those are sheeps./ O: No./ Y: Yes!/ **O: Then what is this?** [*Holds up animal character and then places it on table in front of Y*]. (Family 23, #5)
        - *Note: [In the above example, O is testing Y's knowledge by asking Y questions. By testing Y's knowledge, O implicitly implies that Y lacks knowledge that O has]
    - Y: [*yelling to observer*] She's not letting me have a barn piece, the gate…/ **O: I know because it's supposed to go… it's supposed to go like this, like that and then the pigs go in here** [*whining and waving fence pieces*] (Family 19, #1)
    - Y: I put the people *[referring to placing the people inside the barn]/* O: [*looks into small barn*] **Is that people animal? Are people animals, Daniel? Yes or no?**/ Y:[*Y ignores him;]* (Family 73, #3)
    - O: But that's not the way you do it, Daniel. [*takes small barn away from Y and starts assembling it*]/ Y: Yeah, you can do whatever you want to. [*protesting against O*]/ O: **Well you can't attach the roof** *[referring to Y not knowing how to or being able to attach the roof]*/ Y: Shawn! [*Raises his voice*] you're not the boss!/ O: {Mumbles something like} **Cause I can put my stuff on** [*assembles small barn but has a bit of a hard time putting on roof pieces*] (Family 73, #1)
        - *Note: [In the above example O is implicitly stating that he knows better than Y when it comes to setting up the roof of the barn]
    - Y: Animals can't get out./ O: [*to* obs] Look at what I put in front./ Y: Look at my fence./ O: [*makes an exaggerated facial* expression] They can you pig brain! [*perhaps referring to the fact that the animals can escape with her fence* display] He could slide through here./ Y: No, that's my pig./ **O: I know, but he could slide through there. Okay.** (Family 56, #5)
    - Y: [*squeals because sib is not paying attention*] Where does this go? Here? [*talking about the roof piece*]/ O: Well I don't know [*takes the roof piece from sib*]/ **Y: Here, I know [*points to side of big barn*] Put it there.** No the animals go inside./ O: No, not all of them, keep them out. (Family 59, #3)
    - O: Let's not have it as a dog [*grabs silo piece*]. What's this for?/ Y**: I know what it's going to be for**. [*takes silo piece from O. sib*] (Family 63, #5)

Information Power (I)

- Refers to the act of persuasion based on information or logical argument.
- This can include providing an explanation, arguing about ideas/facts, etc., and instructing a sibling to do something. Within the bracket of instruction are instances of placing demands (or using bossy language).
    - *Note: Although instructing or demanding within the context of a conflict may entail some form of aggressive tone [e.g., O: I said don't make another barn (Family 61, #4)], these instances do not denote CP verbal aggression. Siblings' use of instructions and demands within the context of a conflict are coded as Information Power because they are used as a means to persuade their partner to do what they want, which in the process involves some kind of influence.

    - **O: Hey, Emily, give me the guy**… *[reaching for piece in her hand]* (Family 21, #3)
    - Y: What are you doing Mike? / O: What? I need the black ones. Matt. **Okay give me that black one, Matt**/ Y: I need, I want to make the barns. (Family 52, #3)
    - O: What is this?/ Y: A duckie./ **O: It's not a duck/ Y: A bird/ O: No** (Family 20, #5)
        - Note* [In the above example, "No" is considered to be an example of information power because in this context "No" means "No it is not a bird". However, if younger says "give it to me" and older responds by saying "no" then "no" in this context is not an example of information power.
    - **O: No, you shouldn't, you shouldn't put the gate over here!** *[said in reprimanding voice; picks up fence piece that was on Y's side and moves it to another place*]/ Y: I didn't. *[said in whiny voice; he had put the fence piece there though*]/ **O: You shouldn't, even if you didn't** *[moves big barn over a bit*] **because you shouldn't have taken it away** *[referring to fence piece*] **because we have to get into the barn**. (Family 62, #4)
    - Y: Oh here's the dog. [*touches it*] I think we're finished. [*looks at work they've done*]/ **O: No, we're not finished. We couldn't be because we didn't put all the animals** (Family 62, #5)
    - Y: I put the cow in there [*points to big barn*]. Hey! You took a duck! [*Y has raised his voice and points a O*]/ **O: They shouldn't go there. They should go about here** [*places ducks on other side of table*]. **That's where the pond is/** Y: Where? I didn't see any pond/ **O: A tentative pond for today**/ **Y: No there's a pond over here** [*places ducks where they were before*]/ O: Okay then put it out, put it back over there. [*O moves to couch and picks up more pieces*] There's a lot of other stuff here. That we didn't do. (Family 62, #5)

Appeals to Third Parties (3rd)

- Occurs when a third party (usually the observer or mother) is asked to intervene in the conflict to help resolve an issue.
    - Y: [*protest*] T.J.! **Mommy… I'm doing nicely.** I want to set it up again. (Family 65, # 3)

- Y: T.J., ya can't be like that [*O rolls Y's piece into other character's piece*] T.J.! **Mommy!/ O: Mommy, he's kicking everything down** [*defending his character's role, explaining why he has to do what he's doing*] (Family 65, #3)
- Y: That's a horse!/ O: It's a cow/ Y: No/ **O: Is this a horse or a cow? [*to observer*]**

Part II: Power Effectiveness

- Balance of power refers to who in the dyad has more, less, or an equal amount of power and is measured based upon the effectiveness of the power processes.
- Concerns who is the more or less powerful person in the conflict sequence
- Attempts and successes are determined by:
    - Two-step behavioural contingencies - specific behaviours are followed by specific responses
    - If person A uses a power strategy, then the effectiveness of the use of the power strategy will depend upon: (a) B's response, (b) whether the influence attempt was successfully achieved or not (whether or not B's behaviour was successfully influenced or changed) (c) desired outcome was achieved
- **More powerful** parties will have a higher overall proportion of successes and attempts relative to the other child
- **Less powerful** parties will have a lower overall proportion of successes and attempts relative to the other child
- Partners who exhibit a **balance of power** will have an equal overall proportion of successes and attempts
- Coding rules:
    - More than one type of power can be identified on the same line, but if both types of power are an attempt or both types of power are a success, then both types of power are equivalent to one instance of an attempt or one instance of a success per line
        - e.g., O: Yes I am because you're little, you're only three years old [*puts fence area together completely*] **Expert power attempt & Information power attempt = 1 attempt**
    - Since more than one type of power can identified on the same line, a success and an attempt can also be identified on the same line.
        - e.g., Family 10, #2
            - O: Excuse me! [*tries to grab bench from Y*]
            - **Y: [*pulls his hand away*] I need a bench! – C (P) success & L (P) attempt**
            - O: That's… That's Daniel, that's not a bench, it's a couch [*tries to reach for Y's hand, but knocks something over in the process*]

- **Attempt (A)**: when one party tries to effectively employ the use of power as a means to achieve a desired outcome or influence the behaviour of the other individual, but is not successful in doing so. This is determined in relation to the targets behaviour (1 point)
    1) Person A does not successfully change or influence Person B's behaviour, but is rather met with opposition or resistance.
        - e.g., Younger tries to persuade/convince Older, but does not successfully do so and at the same time is met with opposition/resistance (Family 62, #3)
            - Y: I just had two pieces.

Information & Legitimate (MP) power attempt

- O: And I only had two. You had four.

Information power attempt

- Y: *[Places roof piece on big barn]* No, that is only two [*points to small barn*]. I had three.

Information & Legitimate (MP) power attempt

- O: No you did this one. [*points to big barn roof piece Y put on]*

Information power attempt

- Y: No

- e.g., Younger tries to persuade/convince Older, but does not successfully do so and at the same time is met with opposition/resistance
  (Family 62, #5)
  - Y: Oh here's the dog. [*touches it*] I think we're finished. [*looks at work they've done*]
  - O: No, we're not finished. We couldn't be because we didn't put all the animals. -
  - ***Y: Yes I did! - Information power attempt***
  - O: *[grabs duck that was on Y's side]* -
  - Y: I put the cow in there [*points to big barn*]. Hey! You took a duck! [*Y has raised his voice and points a O*]

2) Behaviour of influencing agent is an overt attempt
   - e.g.,(Family 29, #1)
     - **Y: Back in the barn, Kelly. [*Tries to grab horse from older sibling*]**
       Coercive power (P) attempt
     - O: *[taps horse on roof of big barn]*
     - **Y: *[tries to grab horse from older sibling]***
       Coercive power (P) attempt

3) Reciprocated behaviour was an appeal to a third party
   - e.g., Family 73, #8
     - Y: Shawn, they're not all yours
     - O: I had them first
     - Y: No, I had them –
     - **O: And this table's mine [*points to toy table*]**
       Legitimate power (MP) attempt
     - **Y: Shawn's taken all the animals. And he's taken all the people [*goes off camera talk to Obs*]**
     - O: No a tree. Yeah – [*talking to himself looking at a piece that's not a tree*]
     - Y: He's not even sharing the people [*Y returns on screen*]. Shawn, what happened to my, one people? Just one.
     - O: [*O looks down at big barn*] Oh, okay. Here. [*gives Y a person*]

4) Person B does not revoke/resist person A's power attempt. This may occur due to a lack of a response on the part of Person B (Person B ignoring person A) or Person B may disengage and move on to engage in something else. This will most likely occur when there is a non-oppositional move in the middle of the conflict or at the end of a conflict.
    - e.g., Older employs the use of coercive verbal power and makes an appeal to a third party, but the effectiveness of this power is an attempt because this is the last turn in the conflict sequence and Older does not further influence her brother nor does she get what she wants in the end. (Family 19, #4)
        - Y: But I wanna guy… I don't have any guy. [*O pushes Y's head to push him back from her area with three shoves to the head. Y is not deterred, keeps reaching for piece and takes what he wants while knocking over another piece*]
        - **O: Ahh Chris! He keeps wrecking my stuff. - Attempt**
    - e.g., Younger employs the use of legitimate power (A), but the effectiveness of this power is an attempt because Older does not revoke, resist, or respond to Younger's use of legitimate power, but moves on. (family 73, #5)
        - Y: Shawn, you're not the boss.
        - O: Yes I am because you're little, you're only three years old [*puts fence area together completely*]
        - **Y: You're still not the boss - Attempt**
        - O: Daniel, where's the animals, some animals to put in here? [*to put into fence area*] Do you have any animals that you can put in here? [*motions to fence area*]
        - Y: No. These are my animals – [*adjusts roof on small barn*]
        - O: No they're not. You have lots of animals, and I don't have any.

- **Success (S):** when one party effectively employs the use of power as a means to achieve a desired outcome or influence the behaviour of the other individual. This is determined in relation to the targets behaviour (2 points).
    1) Reciprocated behaviour is successfully influenced or changed, but at the same time the target of influence may oppose by other means.
        - e.g., Younger effectively persuades/convinces Older (Family 62, #2)
            - Y: This is easier.
              Innocent behaviour
            - O: Eas-IER. [*doesn't hear Y correctly and raises her voice; piece falls to ground and she picks it up*]
              Information power attempt (trying to correct Y by emphasizing "IER")
            - **Y: I said easier.**
              Information power success
            - O: It's easier but it isn't easy. I don't think!

Information power attempt
- Y: It is! Right.
  Coercive power (V) & Information power attempt
- O: It isn't too easy.
  Information power attempt
- Y: It is too easy.
  Information power success
- O: Really?
- Y: Ya.

- e.g., Younger effectively convinces Older that the toy is hers. (Family 56, #5)
  - **Y: No, that's my pig.**
    IP & LMP success
  - O: I know, but he could slide through there.

2) Desired outcome is successfully and *overtly* achieved at the expense of Person B not getting what he or she wanted in the beginning, process, or ending of a conflict.

   *Note: When a desired outcome is achieved at the end of a conflict, details regarding Person B's behaviour are not necessarily needed. When Peron A gets what he or she wanted, regardless of whether or not Person B surrenders, loses interest, or does not care, the use of Person A's power is still considered to be a success simply by virtue of Person A obtaining what he or she wanted.

   - e.g., Younger effectively employs the use of coercive power because younger obtains her goal at the expense of Older not getting what she wanted at the beginning and ending of the conflict (Family 29, #2)
     - **Y: Just figured out that has to go [*grabs a toy piece that is on O's side*]. Somewhere where she sits.**
       Coercive power (P) success
     - O: *[Grabs toy piece that is in Y's hand and pulls her arm back while younger sibling still holds onto toy]*
     - Y: I had it first *[pulls arm back while both she O hold onto toy]*
     - O: *[grabs a hold of the table with both hands and pulls back]*
     - **Y: [*pulls horse out of O's hands*] She goes to check her pets *[referring to animals in pen].* These are her pets that she wants. How does this go? *[picks up piece and looks at it]***
       Coercive power (P) success

   - e.g., Older effectively employs the use of coercive power because she obtains her goal at the expense of Younger not getting what she wanted in the middle of a conflcit (Family 29, #1)
     - Y: No Kelly, that goes in the barn. [*Referring to the horse O took and tries to grab horse from O*]
     - **O: *[pulls arm back to keep horse out of younger sibling's reach]***
       Coercive power (P) success

- Y: Back in the barn, Kelly. [*Continues to try and grab horse from older sibling*]

- e.g., Older successfully employs the use of expert power because he obtained what he wanted at the expense of Younger getting what he wanted at the end of a conflict. (family 73)
  - O: But that's not the way you do it, Daniel. [*takes small barn away from Y and starts assembling it*]
  - Y: Yeah, you can do whatever you want to. [*protesting against O*]
  - O: Well you can't attach the roof *[referring to Y not knowing how to or being able to attach the roof]*.
  - Y: Shawn! [*Raises his voice*] you're not the boss!
  - **O: {Mumbles something like} Cause I can put my stuff on [*assembles small barn but has a bit of a hard time putting on roof pieces*]**
    Expert power success

- **Attempts (A) and Successes (S):** The coding of attempts and successes can occur at the same time on the same line/turn. This tends to be the case most often when coercive power (e.g., grabbing toys from the other child) is accompanied with other types of power, but not always.

  - e.g., Older successfully employs the use of coercive power because Older obtains his goal (keeps the fences) at the expense of Younger getting what she wants; however, Older does not successfully employ the use of CV, RWN, and LMP because Younger proceeds to counter-oppose Older in the following turn.
    - **O: [*whining*] Stooop! You've got plenty of gate. [*moves hands back holding fence piece – to prevent younger sibling from grabbing them*] – CP is a <u>success</u>, but CV, RWN, & LMP is an <u>attempt</u>**
    - Y: But I need a gate to go here [*points to a particular area*] and uhh… there [*points to the same place again*]

  - e.g., Younger effectively employs the use of coercive and legitimate power (Family 56, # 1 & 4)
    - **Y: I need this 'kay Charles? [*takes a toy piece*] – LP and CP is a success**
    - O: What? [*tries to see what is in her hand*]

      or
    - **Y: [*takes piece from Older's side*] I need this. – LP and CP is a success**
    - **O: [*objectingly*] Nooo! [*grabs it from her*] I had it! – CV, CP, LMP is a success**

*Note: CP and LP are both considered to be a success because the action of taking the toy coincides with what Younger and Older both say.

Part III: Power Outcomes

- Power outcomes refer to who in the dyad is the winner or loser of the conflict. The winner or loser is determined by who gets what they want at the end of a conflict.
- **Win/lose (W/L):** One partner gets what he or she wants (winner), while the other does not (loser).
- **Win/win (W/W):**
    - Both partners get what they want and outcome is equitable; or both partners agree on some alternate, equitable solution (i.e., one child gets what she/he wanted; other child gets something else that is equally desirable).
    - Conflict ends after clear negotiation by both partners (one partner suggests a compromise and the other partner accepts it). There must be a satisfactory outcome for both children. Involves sharing, taking turns, or trading objects
    - Both partners are considered to winners of the conflict
- **Lose/lose (L/L):** Neither partner gets what they want. Both partners are considered to be losers of the conflict.
- **Indeterminate (IND):** It is not clear what the final outcome of the conflict is (e.g., kids are fighting over toy and you can't see who gets it or camera is turned off before conflict ends.)

- **Ending Issue**: In order to correctly identify who the winner or loser of the conflict sequence is the ending conflict issue on the last line of the conflict sequence needs to be identified according to the Conflict Coding Issue criteria outlined below. In some of the conflict sequences, single conflict issues change to multiple conflict issues and so the purpose of this step is to help gain clarity of what the issue is so as to more easily identify who the winner or loser may be. In single issued conflict sequences, the ending issue will be the same as the initial issue already identified in the sequence.
    - Helpful hint: when coding the ending issue, pay attention to the initial issue to help guide whether the issue has changed or not
- **Ending Power Type**: The power move that was evident in ending the conflict
    - For all outcome scenarios indicate (e.g., X) what type of power ends the conflict.

The conflict issues coded are:

6) **Object possession or use (OBJ)**
   Conflict centers on who gets to have or use an object.

7) **Physical contact or threat (PHY)**
   Conflict centers on physical contact or destructive behavior; interfering with ongoing activity or results of past effort (e.g., knocking over previously set up toy); physical attack; threat of physical contact, interference, destructive behavior, or attack; can include objections to inadvertent physical contact.

8) **Space (SP)**

Conflict centers on issue of occupying space (e.g., turf battles) during play either for self or toys. Example: "I'm building my village here." / "No, I am." / "No, you're not."

9) **Procedures (PRO)**
This category is concerned with the objects in the play and also who gets to build with the objects. Conflict centers on how something should be completed, performed, or accomplished, where something belongs or where something is allowed to go (e.g., "People go on farms, animals go in here."). It is concerned with the general procedure for doing something. Also includes how objects should be used in the play.
Example: "That's not the way you build the barn", "Houses don't go in the water."

10) **Social appropriateness (APP)**
Conflict centers on what the child claims to be a family or experimenter rule; rule need not be explicitly cited.
Example: "You are not allowed to jump on the couch," "She [experimenter] said not to touch the clock."

11) **General obnoxiousness/ Social intrusiveness (GO)**
Conflict centers on obnoxious, provocative behavior that does not fit the other categories; usually verbal; examples include teasing and taunting.

12) **Partner's ideas or facts (IF)**
Ideas of facts must be the focus of the conflict, not a tool for winning the argument. These are arguments about the identity of an object (vs. use).
Example: "This is a horse." / "It's a dog." / "It's a horse." / "It's a dog." / "Well, I'm gonna pretend."

If a child argues about facts as a means of accomplishing some other goal, the conflict is coded based on that goal. In the following example, the real issue is that Child A doesn't want Child B to put the rooster on the fence, so it is coded BEH/PRO.
Example: "Roosters don't sit on fences." / "Yes, they do." / "No, they don't." / Yes, they do." / "Well, don't put him on the fence."

13) **Plans for play (PP)**
Conflict centers around plan of action for the pretend (e.g., what roles the two children will have, who will be the story teller, who will be the observer).
Example:
Older sibling: "I'll tell the story and you move the people around."
Younger sibling: "No! That's not fair. I want to tell the story!"
Older sibling: "No, I am gonna tell the story."

This category also involves the storyline in the pretend (e.g., what the characters will do, what will happen next).

Example:
Older sibling: "And then the bad guy stole all the sheep from the barn."
Younger sibling: "No, he didn't steal all the sheep."
Older sibling: "Yes, he did."

14) **Plans for terminating play**; Disagreements about when to stop playing (PT)

15) Indeterminate (IND)
Issue does not fit any of the categories, or you cannot tell what the issue is (Use as last resort!)